Naini Papers Ltd.

FSC- Forest Management (FM)

Forest Management Plan

Version: NPL/FSC/01 V-00

Address:

Opp. Radhey Shyam Building, Kashipur-244713 Udham Singh Nagar,
Uttarakhand – India

Amendment Record:

This procedure is reviewed to ensure its continuing relevance to the systems and process that it describes. A record of contextual additions or omissions is given below:

Page No.	Context	Revision	Date
All	Management Plan	V-00	14-06-2025

Managing Partner	Prepared By:	Signature of Authorized Person
Mr.	**Basanta K. Nayak**	

Table of Content

Project Summary

Wood-based paper industries in India were historically dependent on natural forests to meet their raw material requirements. After enunciation of the National Forest Policy in 1988, these industries were required to shift away from government forests and instead develop their own raw material sources through partnerships with farmers. In line with this policy, Naini Papers Ltd (hereby referred as ‘Naini’ or the ‘Company’ or ‘We’) launched its plantation programme in 2024 across its catchment areas in Uttar Pradesh and Uttarakhand. Today, the company sources the majority of its raw material from local farmers, reflecting a successful transition to a sustainable and self-reliant supply model.

The Company is an integrated pulp and paper mill located at Uttarakhand in Kashipur. It was established in the year 1995 and one of the country's few prime paper producing facilities. Naini Papers been providing high-quality papers with better physical and optical qualities since its inception. Since 1995, Naini has gone a long way. Start with one paper machine with production capacity 30 TPD kraft paper we collaborated with technology to become more environmentally friendly and cost-effective over time. and over the years has grown to its capacity of 9200 TPM of paper. It presently requires around 10500 TPM of fibrous raw material annually consisting of the Eucalyptus (Eucalyptus), Populus (Poplar) Casuarina, Bamboo

Naini supports farmers by supplying high-yielding, disease- and pest-resistant planting material (clones), along with comprehensive technical guidance from planting to harvesting. The company also invests in research and development to identify and improve planting material, with a strong focus on enhancing productivity per unit area and reducing rotation time. This integrated approach ensures remunerative returns for farmers while securing a consistent supply of quality raw material for the paper mill, all managed through a dedicated team of professionals.

As a responsible corporate Naini would like to promote sustainable land use in plantations through a participatory approach and ensure that the wood it sources are grown and harvested in compliance with applicable legislations.

This FSC FM Project is being implemented over 404.686 Ha area (1000 acres) with approx. 310-350 farmers in few districts like Moradabad, Bijnor, Rampur, Bareilly, Pilibhit, Sitapur etc. of Uttar Pradesh and Udham Singh Nagar of Uttarakhand (India) by Naini as Forest Management Enterprise (FME). The participation of farmers belonging to indigenous communities in the Project makes it unique in promoting sustainable forestry contributing to their economic improvement through better livelihood opportunities and building their capacity to implement sustainable forestry.

Background and Rationale

Following the National Forest Policy of 1988, wood-based paper industries in India shifted from relying on natural forests to sourcing raw material through farm-based plantations. Since the 1990s, many paper mills have promoted plantation programs in partnership with farmers and now meet most of their raw material needs from these sources. Fast-growing species like Populus, Bamboo, Eucalyptus, Casuarina, Subabul, Acacia etc. are commonly planted due to their suitability for pulping.

Naini Papers Ltd is an integrated pulp and paper mill located in Kashipur, Uttarakhand. Established in 1995 with an initial production capacity of 30 TPD of kraft paper, the company has steadily expanded over the years. It now has a production capacity of 2.90 lakh tons of paper annually. To meet its raw material needs, Naini requires approximately 10,500 tons of fibrous raw material per month, primarily consisting of Eucalyptus, Poplar (Populus), Casuarina, and Bamboo.

The Company has been promoting plantation in association with farmers since 2020 in its catchment areas consisting in few districts like Moradabad, Bijnor, Rampur, Bareilly, Pilibhit, Sitapur etc. of Uttar Pradesh and Udham Singh Nagar of Uttarakhand (India) till 2025 it has promoted plantation in association with farmers on around 1200 Ha of land. The Company supplies high-yielding, disease- and pest-resistant planting material to farmers from its own nurseries. It provides technical support for planting, maintenance, and harvesting. The company also conducts research to improve planting material and increase productivity. A team of professionals carries out extension work, organizes farmer meetings and training, and helps develop agroforestry models to ensure good returns for farmers and a steady supply of raw material for the mill.

The project is being implemented in the state of Uttar Pradesh and Uttarakhand (India) by Naini as the Forest Management Enterprise (FME). The operational area of the Project comprises of few districts of UP & UK. These districts are predominantly inhabited by indigenous communities, notified as Scheduled Tribes, who mostly belong to low-income groups and are traditionally non-agriculturists. Their participation in this FSC Forest Management (FM) project is a key highlight, as it promotes sustainable forestry and land use while improving their livelihoods. The project supports economic development by creating better income opportunities and building the capacity of these communities to adopt and implement sustainable forestry practices.

As a responsible corporate Naini would like to promote sustainable land use in plantations taken up by its associated farmers and ensure that the wood it sources are grown and harvested in compliance with applicable legislations and rules.

The proposed FSC-FM project aims to mobilize farmers to establish tree plantations on their own unused or underutilized lands. It seeks to connect these farmers with wood end-users, such as Naini Paper Mill, to promote the sustainable use of land, encourage responsible wood sourcing, and reduce environmental impacts. The project also aims to create linkages between farmers, wood-based industries, agronomists, research institutes, financial institutions, and NGOs. It is being implemented on lands that are currently unutilized or used for low-yield, rainfed subsistence farming.

The objectives for implementation of the project is outlined as below:

- Promote tree plantations on marginal and degraded lands through integrated land use planning and a participatory approach to ensure a sustainable supply of wood.
- Reduce pressure on natural forests by encouraging wood production on farmers' own lands.
- Enhance the economic condition of small and marginal farmers.

- Improve soil and water conservation and encourage multiple land use through agroforestry practices.
- Build the capacity of stakeholders to benefit from global mechanisms like FSC certification.

The project contributes to sustainable development in the following ways:

- Establishing institutional mechanisms to implement FSC-FM project activities.
- Promoting local financing options to help farmers restore unutilized land and cover plantation and maintenance costs.
- Identifying and engaging farmers, and raising awareness about the benefits of tree cultivation.
- Enhancing productivity of underused lands through a participatory approach involving local farmers and Naini Paper Ltd.
- Developing, testing, and sharing best practices in plantation and agroforestry to reduce risks (fire, pests, diseases) and improve environmental and social outcomes.
- Providing farmers with high-quality seedlings developed through clonal technology.
- Supporting farmer-industry partnerships through buy-back arrangements for harvested wood.
- Building the capacity of farmers, government, and non-government organizations through training and technical support to access global certification mechanisms.
- Conserving biodiversity by reducing pressure on natural forests through plantation forestry on private lands for industrial use.
- Partnering with national and international research institutions to promote awareness and adoption of suitable agroforestry models.

Future Raw material Generate through Clonal Production :

Eucalyptus Clone

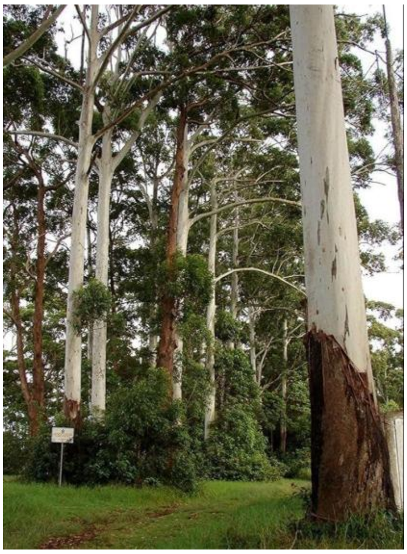
Poplar Clone

Casurina Clone

Bambusa (bamboo).

Different Pulp Wood Species Propagated at Naini

Naini uses different types of pulpwood species to ensure a stable and sustainable supply of raw material for paper production. The main species used are *Eucalyptus clones, Poplar clones, Casuarina clones, and Bambusa (bamboo)*. These species are grown in plantations managed by Naini, where they are propagated and maintained under suitable conditions to get good quality wood. Once the trees are fully grown, the wood is harvested and converted into pulp. This pulp is then used in the paper manufacturing process. By using a mix of different species, Naini ensures better availability of raw material and maintains a steady process from wood to pulp to paper.

For the purpose of FSC-FM certification, Naini is currently covering only Eucalyptus and Poplar tree species. These species are first propagated in Naini's own nursery under controlled conditions. Once the plants are fully developed and ready for plantation, they are sold to farmers who grow them on their land. After the trees mature, the wood is harvested and used as the primary raw material for paper production. This system ensures that the pulpwood used under the FSC-FM scope comes from responsibly managed sources, with traceability from nursery to paper.

Note: *Naini Paper Ltd is supplying high-quality clonal planting material to farmers at one of the subsidiary rates in the industry, making plantation establishment more affordable for small and marginal farmers.*

Area of Operation:

The state of UK is located in the northern part of India and extended from latitude to 30.0668° N to 79.0193° E longitude. It consists of few distinct regions:

- Kashipur is part of the Kumaon region, which is a mountainous area in Uttarakhand.
- The Terai region is a broad plain that extends from the foothills of the Himalayas.
- Kashipur is drained by the Dhela river, a tributary of the Ramganga.
- The area's fertile land is well-suited for agriculture.
- The Bhabar tract separates Kashipur from the Shivalik Hills.

The state of UP is India's fourth largest state by land area along with India's most populous state. It is located in the north-central part of the country and extended from latitude to 27.5706° N, 80.0982° E longitude. It consists of few distinct regions:

- Much of the state consists of flat, low-lying plains that are well-suited for rice farming.
- Hills are found only along the southern and northern borders:
  - Southern hills are part of the Vindhya range.
  - Northern hills are the foothills of the Himalayas.
- The climate varies widely across the state due to:
  - Its inland location, far from the moderating influence of the sea.
  - Cold air from western disturbances.
  - The Himalayas in the north trapping airflow.

Naini Papers Ltd has been promoting plantations in collaboration with farmers across its catchment area in Kashipur, located in the Udham Singh Nagar district of Uttarakhand. Kashipur is Kumaun's third most populous city and the sixth most populous in Uttarakhand. For the FSC-FM project only

Naini is currently procuring its raw material from one district in Udham Singh Nagar and in several districts of Uttar Pradesh, including Moradabad, Bijnor, Rampur, Bareilly, Pilibhit, and Sitapur.

The ground water fluctuates greatly in response to rainfall, with the maximum decline in the water table is between April and June and the maximum rise during November

Soil

The major soil types in Uttar Pradesh and Uttarakhand vary across regions and have different chemical properties. In Uttar Pradesh, the dominant soil is alluvial, found mainly in the Indo-Gangetic plains. This soil is generally neutral to slightly alkaline in nature, with good fertility, making it suitable for a variety of crops and plantations. In the southern and Bundelkhand regions of Uttar Pradesh, red and laterite soils are present, which tend to be slightly acidic to neutral.
In Uttarakhand, the plains such as Udham Singh Nagar also have fertile alluvial soils, mostly neutral to slightly alkaline. However, in the hilly areas, forest soils are common, and these are typically acidic due to high organic matter and leaching. The soil pH and composition in both states support a diverse range of crops and plantation activities.

Climate

Uttar Pradesh and Uttarakhand experience four main seasons: summer (March to June), monsoon (July to September), autumn (October to November), and winter (December to February). In summer, temperatures in the plains can reach up to 45°C, while hilly regions of Uttarakhand remain cooler, around 25–30°C. During winter, temperatures can drop to 4–5°C in the plains and below 0°C in higher altitudes of Uttarakhand, often with snowfall. Both states receive annual rainfall ranging from 800 mm to 2000 mm, mainly during the monsoon season. Humidity levels vary from 30% in dry months to around 90% during the monsoon.

Ecosystem

The ecosystems of **Uttar Pradesh** and **Uttarakhand** differ significantly due to variations in topography, climate, and vegetation.

Uttar Pradesh Ecosystem:

Uttar Pradesh has a predominantly **terrestrial ecosystem** characterized by fertile alluvial plains, rivers, wetlands, and agricultural landscapes. The state is part of the **Upper Gangetic Plains**, with major river ecosystems like the Ganga, Yamuna, and their tributaries. Natural vegetation includes dry deciduous forests in some parts, especially in the Terai and Vindhya regions. The ecosystem supports a variety of flora and fauna, including species like deer, wild boar, jackals, and various birds. Human activities such as intensive agriculture, urbanization, and industrialization have significantly altered natural habitats.

Uttarakhand Ecosystem:

Uttarakhand hosts diverse **mountain and forest ecosystems** due to its location in the **Himalayan region**. The ecosystem ranges from subtropical forests in the foothills to alpine meadows and snow-covered peaks in higher altitudes. The state has rich biodiversity and is home to important forest types like sal, oak, deodar, pine, and rhododendron. Protected areas like Jim Corbett National Park and Nanda Devi Biosphere Reserve conserve many species, including tigers, elephants, leopards, and Himalayan birds. The rivers originating here (like the Ganga and Yamuna) also support vital freshwater ecosystems.

In summary, while **Uttar Pradesh** has a fertile plain-based ecosystem dominated by agriculture and river systems, **Uttarakhand** is rich in forest and mountain ecosystems with high biodiversity and critical watershed areas.

Table 1: socio-economic features of project districts

SL No	District	Literacy % (2011)	Per Capita Income (₹, FY 21–22)	SC %	ST %	General %
1	Udham Singh Nagar (UK)	73.1 %	269,070 ₹ (censusindia.gov.in)	14.45 %	7.46 %	≈ 78.1 %
2	Moradabad (UP)	63.35 %	110,065 ₹	~15 %[1]	—	≈ 85 %
3	Bijnor (UP)	68.31 %	81,781 ₹	21.38 %	0.08 %	≈ 78.54 %
4	Rampur (UP)	56.00 %	78,349 ₹	13.18 %	—	≈ 86.82 %
5	Pilibhit (UP)	61.47 %	—	15.23 %	0.03 %	≈ 84.74 %
6	Sitapur (UP)	61.0 %	—	31.87 %	0.13 %	≈ 68.0 %

Source: https://www.census2011.co.in/census/district/506-moradabad.html and

https://www.indiastatpublications.com/pdf_Samples/district_factbook/Uttar_Pradesh/Bijnor.pdf

Table 2: land holding pattern in project districts:

Sl. No.	**District**	**Marginal (<1.0 ha)**		**Small (1–2 ha)**		**Semi-Medium (2–4 ha)**		**Medium (4–10 ha)**		**Large (>10 ha)**		**All Sizes**		**Avg. Size of Holding**
		No.	Area (ha)	No.	Area (ha)	No.	Area (ha)	No.	Area (ha)	No.	Area (ha)	No.	Area (ha)	
1	Udham Singh Nagar	~55,000	~46,750	~13,000	~26,200	~6,000	~26,700	~3,000	~20,000	~300	~2,300	~77,300	~121,950	1.58
2	Moradabad	212,000	151,900	35,000	86,100	12,000	61,200	4,000	35,200	250	5,650	265,250	340,050	1.28
3	Bijnor	253,000	181,300	65,000	159,500	25,000	127,500	10,000	88,000	500	9,800	353,500	566,100	1.60
4	Rampur	164,000	117,900	38,000	93,200	15,000	76,500	6,000	52,800	500	9,400	223,500	349,800	1.56
5	Pilibhit	151,000	108,800	42,000	102,300	16,000	81,600	7,000	61,900	600	11,300	216,600	365,900	1.69
6	Sitapur	538,000	387,000	89,000	216,200	27,000	137,700	11,000	97,900	2,000	37,800	667,000	876,600	1.31

Source: Census 2001, Govt of India.

Table 3: land use pattern in project districts

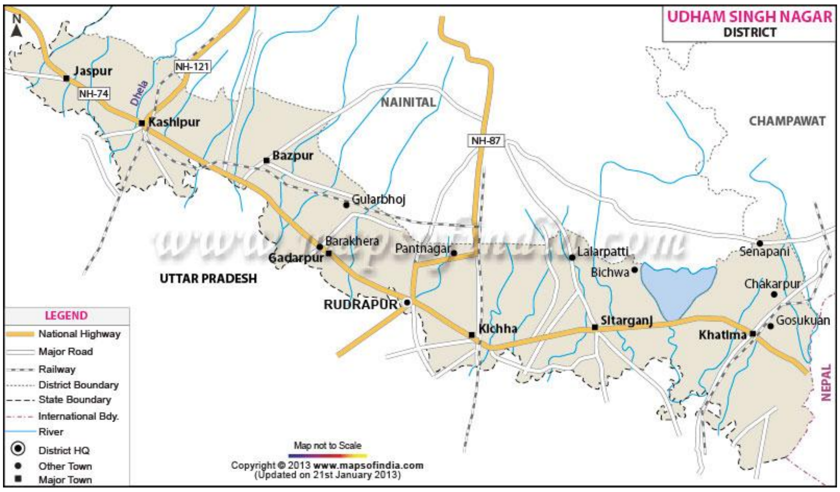
Sl. No.	District	Geo Area (ha)	Forest Area	Misc. Trees & Groves	Perm. Pasture	Culturable Waste	Land to Non-Agrl Use	Barren & Unculturable	Current Fallow	Other Fallow	Net Area Sown
1	Udham Singh Nagar (UK)	279,455	84,717	3,000	3,000	2,900	—	300–900 (0.03–0.09 kha)	19,000	200	149,523
2	Moradabad (UP)	220,378	64	1,889	70	—	33,660	1,674	3,379	—	174,177
3	Bijnor (UP)	441,941	54,451	1,794	70	4,779	52,460	2,686	2,352	—	323,419
4	Rampur (UP)	220,931	6,744	1,557	70	2,723	29,586	1,362	1,009	—	177,950
5	Pilibhit (UP)	294,202	84,076	5,445	70	4,834	39,756	4,735	2,566	—	152,790
6	Sitapur (UP)	565,258	5,772	5,407	70	6,879	61,087	5,653	38,986	—	441,474

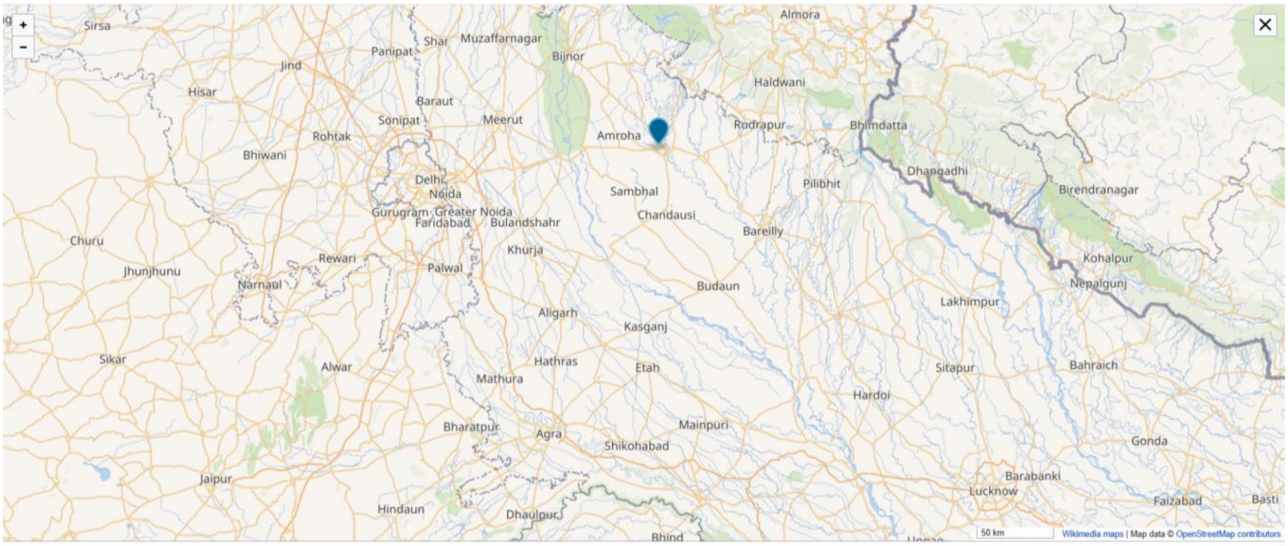
Source: https://www.cgwb.gov.in/old_website/District_Profile/Uttarakhand/UdhamSinghNagar.pdf

The FMU (Forest Management Unit) includes all discrete parcels of lands owned by different farmers in the blocks (an administrative unit) of the all mentioned districts. The lands were either not put to use earlier or intermittently used for rainfed agriculture - for cultivation of minor millets, cereals and pulses. Each parcel of land is identified using official documents and maps of the Land Administration/Revenue Department. The project area comprises of 300 FMUs (Forest Management Units) totaling to 404 Ha. (Table 4)

Table 4: District wise no of FMUs and area covered

Sl. No.	Name of District	No. of FMUs	Area in Ha.
1	Udham Singh Nagar		
2	Moradabad		
3	Bijnor		
4	Rampur		
5	Pilibhit		
6	Sitapur		
	Total		





Maps of Districts boundary covered in FSC FM project for UP and UK

Mode of Operation

Since most of the land belongs to small and marginal farmers and average land holdings, this necessitates motivating and training a large number of farmers and land owners for plantation. This is done by a team comprising of experienced extension agents who follow a set of standard guidelines and operating procedures.

Extension Methodology at Naini Paper Ltd

- **Area Identification:** Selection of suitable blocks and villages for intervention based on analysis of secondary data on land use, agro-climatic conditions, soil type, and any previous initiatives.
- **Farmer Outreach:** Direct communication with farmers through village meetings, one-on-one interactions, and phone calls to raise awareness about productive land use and its benefits.
- **Farmer Grouping:** Based on interest and involvement, farmers are organized into user groups, and where needed, supported in forming producer organizations like cooperatives.
- **Technical Guidance:** Extension personnel provide guidance and training on optimal land use and recommended practices for plantation management.
- **Exposure Visits:** Farmers are taken to demonstration plots and introduced to successful plantations and experienced farmers.
- **Mill and Facility Visits:** Visits to nurseries, and research plots are arranged to help farmers understand modern planting techniques and wood demand.
- **Soil and Plantation Training:** Soil testing is conducted, along with training in pre-planting, planting, and post-planting care.
- **Health & Safety Training:** Farmers receive training on safe handling of fertilizers and pesticides and proper harvesting methods.
- **Stakeholder Linkages:** Facilitate interactions between farmers and various stakeholders including producer organizations, banks, crop specialists, researchers, NGOs, government departments, and watershed agencies.
- **Awareness Materials:** Design, print, and distribute informational materials like leaflets, brochures, and pamphlets related to plantation practices.
- **Certification Awareness:** Educate farmers about international certification systems such as FSC Forest Management (FM) for sustainable land use.
- **Monitoring & Evaluation:** Regularly monitor plantation activities, management practices, and plantation growth to ensure the effectiveness of interventions and long-term success.

Naini Extension Team

- The team comprises of personnel with cross functional capabilities and expertise to effectively implement the agro-forestry extension programme. The main operation is divided into two Zones as per State boundaries into Uttarakhand and Uttar Pradesh (UP). Administrative blocks in Naini work area in a district is divided into operational units each headed by an Operational Unit in Charge. Based on the target of the operational unit subordinate staff are assigned for particular group of operational villages.
- Programme is implemented in **“Cluster approach”** by making a cluster of villages in a block so that implementation and intensive monitoring is possible and less time consuming.
- At present we have 4 personnel in UK and 3 personnel for operations in UP each headed by a Zonal Head who report to the Extension Head. A total of 7 nos of personnel in the Extension Wing.
- We have also introduced concept of CRP (Community Resource Person) who are engaged in grassroot level to engage with farmers and improve adherence to package of practices and build awareness amongst them.

Organization Chart

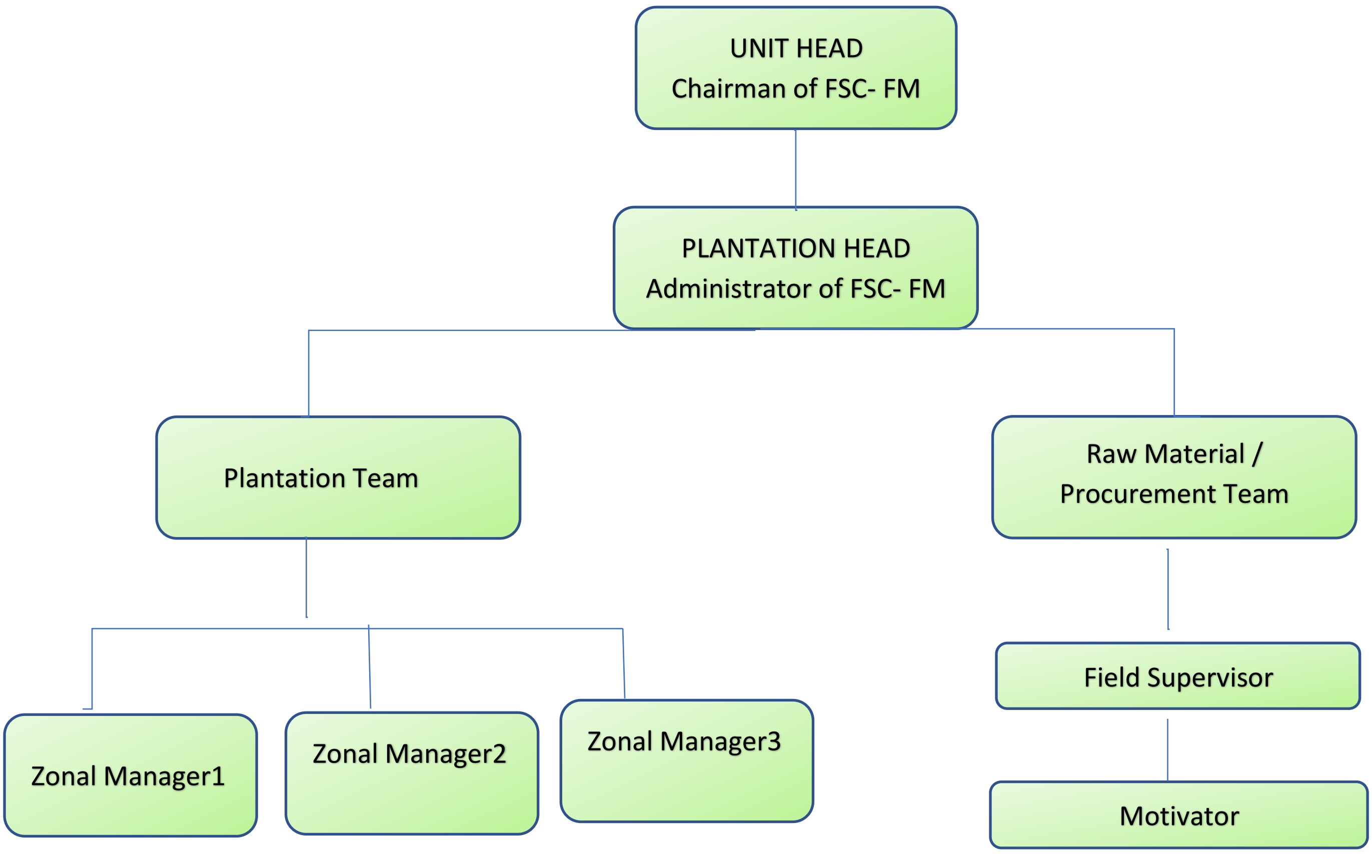


Figure 1: An illustration of the hierarchy of Operation.

A dedicated team from Naini Paper Ltd (NPL) (FME) is working for implementation of the FSC-FM Project. An illustration of the organization is given above for reference. The role and responsibility in the organization is depicted as below:

1. **Unit Head:**

- Overall responsibility for implementation of the Project from NPL (FME).
- Monitoring implementation of the Project through Group Managers and FME staff. Organizing internal audits & assessments of forest management activities for identification and timely addressing of non-compliances by group members.
- Contact person in relation to implementation of the project.
- Consultation with various stakeholders for revision and updating of management plan, formulation of administrative rules & procedures for the Project in consonance with FSC Principles & Criteria and applicable legislations.
- Design of training and capacity building programmes for effective forest management and safety aspects.

2. **FSC Administrator- Extension Head/ Deputy General Manager (Plantation)**

- Overall responsibility for implementation of Project in the field.
- Field level monitoring and Co-ordination of implementation of the Project.
- Preparation of field level training programme for effective forest management and safety requirements and training regarding FSC-FM Principles & Criteria and implementation of the programme in the field.

3. **Zonal Manager**

- FMU-wise monitoring of project activities and coordination.
- Responsible for collection of basic documents of FMUs from participating group members, such as Identity Proof and land ownership “Patta” documents.
- Training and capacity building for the participating group members, specifically awareness and training regarding FSC-FM Principles & Criteria, applicable legislations, implementation of the recommended package of practices (POP) in FMUs, soil and water conservation measures (SWC), and safety precautions for application of fertilizers, harvesting, and fire hazards.
- Identification and mitigation planning of HCVFs within FMU boundaries in their respective project areas.
- Providing required field support to Naini Papers and group members for timely operations.
- Providing feedback to Naini Papers regarding forest management activities in their area.

4. **Field Supervisor**

- Responsible for arranging basic documents from farmers/group members (FMUs), such as identity proof and land “Patta” documents.
- Implementing and monitoring project activities in the FMUs, in coordination with Naini Papers.
- Conducting training and capacity-building for group members/farmers, including collecting consent forms; specifically:
- Awareness and training on FSC-FM Principles & Criteria
- Implementation of the recommended Package of Practices (POP) in FMUs
- Soil and water conservation (SWC) measures
- Safety precautions for fertilizer application and harvesting
  • Identifying High Conservation Value Forests (HCVFs) within FMU boundaries and developing appropriate mitigation measures.
  • Providing ongoing feedback to Naini Papers on FSC-FM implementation in the project area.

5. **Raw Material & Procurement department**

- The Procurement Department is responsible for identifying and selecting vendors for planting materials, fertilizers, safety equipment, and other required inputs, ensuring they meet FSC compliance and quality standards.
- It prepares procurement plans and budgets in consultation with field teams and ensures timely procurement of materials as per project timelines.
- The department issues purchase orders with clear specifications, quantity, delivery schedule, and payment terms, and ensures proper documentation for traceability.
- It manages inventory, coordinates delivery schedules, conducts quality checks upon receipt of goods, and maintains records for audit and reporting.
- The department ensures that procurement processes follow ethical, legal, and sustainable sourcing practices aligned with FSC requirements.
- It also ensures timely payments to suppliers after successful delivery and quality verification, maintaining good supplier relations.

6. **Motivator**

- The Motivator is responsible for coordinating with farmers and group members to ensure timely receipt and distribution of project materials as per the field plan and purchase order specifications.
- The motivator must support documentation processes by ensuring availability of records such as consent forms, land ownership proof, and other required documents from farmers.
- Timely coordination with the field team and procurement department is expected to avoid delays in project implementation, along with supporting quality checks and inventory verification during distribution.
- The motivator should actively assist in awareness-building, communicate field-level challenges, and provide feedback related to the usage, handling, or any issues arising from the supplied materials.

Expenses Projected for FSC-FM Project Activities – Evaluation Audit

Particulars	Estimated April 24- March 25
Plantation area in Hectares	424 ha
No. of beneficiary to be added	318-325
No. of plant production	5.50 lakh
Estimated expenditure	137.00 lakh
Raw Material generated	12,537 Lakh MT (*Ready for harvesting)
Pulp	2,507 MT
Paper to be produced	3,134 MT

(Short Term plan- Budget 2025-26)

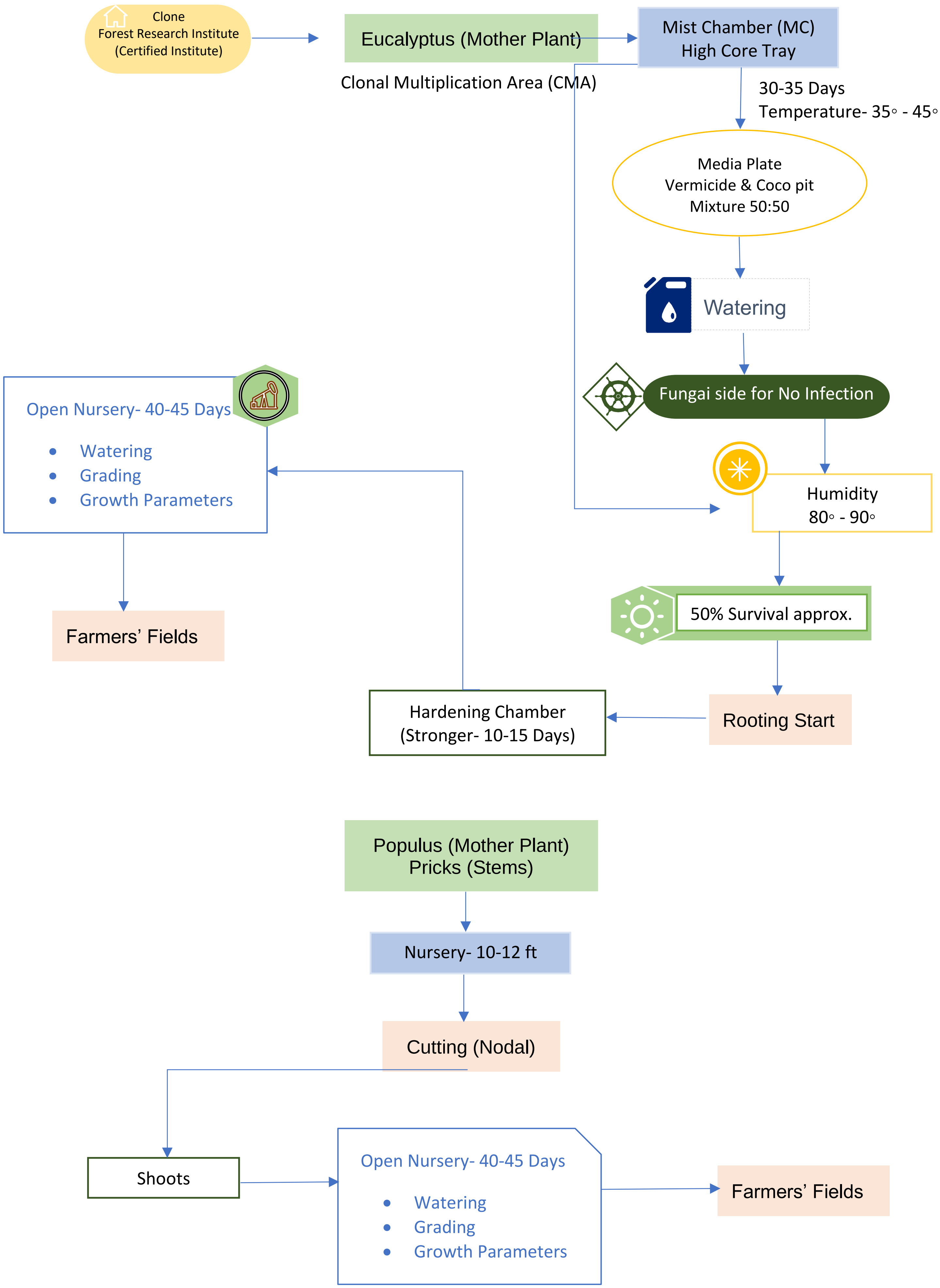
Particulars	Estimated April 25- March 26
Plantation area in Hectares	1200 ha
No. of beneficiary to be added	300-350
No. of plant production	20.34 lakh
Estimated expenditure	175.40 lakh
Raw Material generated	1.50 Lakh MT
Pulp	30,000 MT
Paper to be produced	37,500 MT

(FMUs & Area Increased (as per our Agroforestry Initiative) – Long Term Plan)

S. No	Scope of Audit	UOM	2025–26	2026–27	2027–28	2028–29	2029–30	Total (5 Years)
1	FMUs	Nos.	350	645	940	1235	1530	**4700**
2	Area	Ha.	405	1599	2793	3987	5181	**13,965**
3	Minimum Sample	Nos.	12	22	32	42	52	**161**
4	Cost of Certification	INR Cr	3.90	4.88	5.85	6.83	7.80	**29.26**
5	Manpower Requirement	Nos.	10	15	18	20	23	**86**
6	Wood Assessment (Est.)	MT	35,012	138,234	241,455	344,676	447,897	**12,07,274**
7	FSC FM Certified Pulp	MT	7,002	27,647	48,291	68,935	89,579	**2,41,455**
8	FSC-100% Certified Paper	MT	8,753	34,558	60,364	86,169	1,11,974	**3,01,819**

This above Projection is part of our 5 Years plantation programme. So, there are sufficient financial resources available for implementing and monitoring of the FSC-FM Project.

Nursery Production for Eucalyptus (Eucalyptus) & Populus (Poplar)



Training Programme and Records:

Training is an essential part for successful implementation of any Project. As the FSC-FM is a new concept the importance of training increases manifold. Training is the acquisition of knowledge, skills, and competencies as a result of teaching of skills and knowledge that relate to development of specific competencies. Training has specific goals of improving an individual's capability, capacity, productivity and performance.

We are following a 2-step approach for implementation of training programme for FSC-FM Project:
Step1: Training our Unit In-charges and Group managers.
Step2: Unit In-charges/ Group managers conduct training programmes for the farmers/growers.

Training the Unit In-Charges/ Group managers:

- We have designed one standard training module for our Field staffs
- We will conduct at least 2 training programme to our Staffs in a year.
- Every new joinee will undergone the training as a part of their orientation programme.
- The training module basically constitutes of the following aspects:
    - Basics of FSC-FM
    - FSC-FM Principles and Criteria
    - Calendar of Operation for Forest management.
    - Soil & water conservation measures to be taken by farmers in FMUs.
    - Safety precaution in application of fertilizer & pesticides if required and fire hazards.
    - Safety precaution to be taken by farmers in harvesting of Plantation.
    - Identification of High Conservation Value Forest.
    - Monitoring of forest management activities under project.

The training record to our Staffs is to be kept for 5 years. We will look into the training Module on yearly basis and will do the needful update as per the rules and regulations of FSC and applicable legislations.

Training Programme for Farmers:

- We will impart at least one training programme to each participating farmer once in a year of operation.
- The training Programme to farmers is designed in Oriya for better understanding of the farmer community and basically covers following aspects.
    - Basics of FSC-FM
    - FSC-FM Principles and Criteria
    - Calendar of Operation of Plantation
    - Water & Soil conservation measures to be taken by farmers in the field.
    - Safety precaution in application of fertilizer and insecticides and pesticides if required and fire hazards.
    - Safety precaution to be taken by farmers in harvesting of Plantation.
    - Benefits of being part of FSC-FM Project.
- The respective Unit In-charge/ Group manager will be responsible for carrying out training programme for farmers in their area.
- All the training records to be submitted by respective Unit In-charge/ Group manager and will be submitted to FME and it will be kept for 5 Years.

If needed the training module may be revised on yearly basis and update as per the rules and regulations of FSC and as per Package of Practice to be adopted by farmers.

Land use and ownership status

The land used for raising plantations and implementing the FSC-FM project activity is non-forest land legally owned by individuals and the owners have absolute right. These lands are under the control of the project participants since the individuals started the plantation activity and are also expected to remain under their control during the project period.

The land use prior to project activity was mostly rainfed subsistence agriculture or it was unutilized. The farmers own the wood and non-wood products produced on the land and therefore, the farmers have legal right to harvest and sell the wood products.

In some cases, growers are taking land on lease from the owners and participating in the project with clearly defined user rights. In such cases, a copy of the lease agreement along with the land documents and Identity proof of the farmers has been submitted along with consent form by the lessees for participation in the project.

As land under FSC-FM Project is under individual control with clear titles, no conflict of interest or disputes are expected to be raised by society at large. Regarding the conflicts under the land tenure issue first preference is given to settle it through mutual discussion or through village elders or local representatives like Panchayat, etc. If disputes do not get settled at the village level, then one can seek redressal through the judicial system. In general, no disputes are expected to arise due to any unresolved tenure claim or ambiguous user rights over the land.

An institutional mechanism has been established to specifically deal with issues related to FSC-FM Project. Farmers have given their written consent and agreed to abide by the Criteria and Indicators specified by FSC.

The wood will be sold by farmers/growers at market price to NPL as per silvicultural standards and annual allowable cut specifications and the income from the sale of wood would be entirely transferred to the concerned farmer/grower.

Indigenous Peoples' Rights

Many of the farmers under our project are from Indigenous community. They are the group members and responsible for implementing FSC - Forest Management Operation on their respective FMU with clear titles to the land under their occupation. There are no issues with respect to tenure rights of lands belonging to indigenous people. In future if any issue arises, that will be amicably resolved with intervention of FME and local representatives as specified above. Such participants have given their consent for participation in the project and to abide by all the Principles and Criteria's of FSC.

Naini as the FME respects the sensitivity to the resources and tenure rights of indigenous people who are participating in this project in their own interest. We are involving all sectors of society in our communication meetings and training programmes and identification and preservation of High Conservation Value Forest (HCVF) if available in the FMUs. The FSC Principles and Criteria and indicators have been explained to all such participating individuals through numerous training sessions and record of the same has been kept for future reference.

Sites of special cultural, ecological, economic or religious significance to indigenous people are identified through HCVF identification consultation in various villages and we are involving all sections of people/stakeholders and necessary precautions are being taken to conserve them with the help of local people. The field personnel have been trained regarding different aspects of HCVF - Identification, Recording and Preservation of such sites. The field persons during their communication meeting with farmers are identifying any significant or important aspects on such lands (FMUs) and locals are advised for preserving the same.

Profile of adjacent lands

Most of the lands are under subsistence agriculture crops and some of the lands are kept un-used by the farmers.

The project is to be taken up only on non-forest private lands with clear legal title and any land that is a reserved forest, protected forest or wildlife sanctuary or any other forest land is not part of the project activities. HCVFs are studied in the adjacent areas and endangered species are not found in the project area.

Environmental and Social Impact Assessment (EIA & SIA) and High Conservation Value Assessment (HCVA)

Overview of the **flora and fauna** found in **Uttar Pradesh** and **Uttarakhand**:
Uttar Pradesh – Flora and Fauna
Flora:
- **Common Trees**: Sal (*Shorea robusta*), Sheesham (*Dalbergia sissoo*), Neem (*Azadirachta indica*), Peepal (*Ficus religiosa*), Mango (*Mangifera indica*)
- **Crops and Plants**: Wheat, rice, sugarcane, pulses, mustard, and various fruits and vegetables dominate the agricultural landscape.
- **Wetland Plants**: Lotus, water hyacinth, and reeds in riverine and wetland areas.

Fauna:
- **Mammals**: Deer (chital, sambhar), jackals, wild boars, nilgai (blue bull), rhesus macaque
- **Birds**: Peacocks, parakeets, kingfishers, cranes, storks, vultures (especially in protected areas like Hastinapur Wildlife Sanctuary)
- **Reptiles**: Monitor lizards, cobras, and other snakes, especially near rivers and forest patches
- **Protected Areas**: Dudhwa National Park, Katarniaghat Wildlife Sanctuary, Pilibhit Tiger Reserve

Uttarakhand – Flora and Fauna
Flora:
- **Low Altitudes**: Sal, Teak, Bamboo, Sheesham
- **Mid to High Altitudes**: Pine (*Pinus roxburghii*), Oak (*Quercus spp.*), Rhododendron (*Rhododendron arboreum*), Deodar (*Cedrus deodara*)
- **Alpine Zones**: Juniper, fir, birch, and flowering herbs like Brahma Kamal (*Saussurea obvallata*)

Fauna:
- **Mammals**: Bengal tiger, Asiatic elephant, leopard, Himalayan black bear, barking deer, goral, snow leopard (in higher Himalayas)
- **Birds**: Monal (state bird), Himalayan griffon, woodpeckers, barbets, and a wide range of migratory birds
- **Reptiles & Amphibians**: Himalayan pit viper, common frogs, and lizards in forest and rocky regions
- **Protected Areas**: Jim Corbett National Park, Rajaji National Park, Nanda Devi Biosphere Reserve, Valley of Flowers National Park

Summary:
- **Uttar Pradesh** is rich in dry deciduous flora and wetland ecosystems, with animals like deer, nilgai, and jackals being common.
- **Uttarakhand** supports diverse vegetation from tropical forests to alpine flora, and is home to larger mammals like tigers, elephants, and high-altitude species such as snow leopards and Himalayan monals.

The project is to be taken up only on private lands with clear legal title and any land that is reserved forest, protected forest or wildlife sanctuary or any other forest land is not part of the project activities.

With respect to the High Conservation Value Forests (HCVFs) it is found that there is no High Conservation Value Forests found in the project area.

Operational Procedure of Group

The entire plantation work is carried out by farmers with their own expenditure from planting and maintenance to harvesting. Naini is assisting the farmers to use un-utilized degraded lands for raising plantation.

A. Eligibility for Membership in the Scheme

- The farmer/ grower should raise the plantation in districts of Uttarakhand & Uttar Pradesh state.
- The farmer/ grower should be associated with Naini and received planting material from Naini nursery.
- The farmer/ grower must raise plantation on non-forest land i.e. his own “patta” dryland, to become eligible as group member, however subject to the legal provisions in regard to land ownership.
- The farmer/ grower must submit their land documents viz., Patta (ownership document) or Sale/ lease deed of the land along with the application/ consent form in case of ancestral property he can submit proof of linkage with the registered property owner to prove his land ownership. He should also submit his photo ID proof along with above documents.

B. Rules Regarding Withdrawal/Suspension of Members from the Group

The group member can be withdrawn / suspended under the following circumstances in the project.

- During the existence of this agreement the tree grower shall not sell, enter into a sale agreement, alienate the land or encumber the land without the consent of the group. If anything done in violation of this agreement the tree grower is liable to compensate the company. The group entity also reserves its rights to initiate action for “Breach of Contract” against the grower and also the group member is suspended from the group. The group member may withdraw from the project if he/she fails to protect the plantation from above said factors.
- The group member commits any act(s) that violate the principles and criteria of FSC or applicable legislations.
- If there is any change in the membership; it will be intimated to *certification body (Preferred by Nature)* within 30 days.

C. Procedures for Entry / Inclusion of New Member in the Project

- Printed application form is issued to the identified tree grower by the FME.
- The application/ consent form along with proof of ownership such as “patta”, Sale/ lease deed of the land, in case of ancestral property he can submit proof of linkage with the registered property owner to prove his ownership.
- The group member agrees to raise the tree crop as per FSC principles and criteria and applicable legislations also pay the required amount as membership fee as may be specified.
- There is any change in the membership; it will be intimated to certification body within 30 days.
- A code will be provided at the time of inclusion into the group, consisting of the district in which plantation has been done, the year of plantation and the serial number for that particular year for the FMU.

D. Complaints Procedure for Group Members

Group members may register complaints about Project activities by one of the followings means:

- By phone call to concern Unit Incharge/ Group manager giving details of the complaint.
- Complaints will be registered in the Complaint Register available with the Unit Incharge/ Group manager.
- By sending mail to the Unit Incharge/ Group manager/ Group entity.
- The contact address, Mobile/Telephone number, Email address is given by leaflet designed by project entity.

E. Group Manager & Group Members

NPL, Units located at district of Uttarakhand and Uttar Pradesh are the Group manager and the FMU owners are the group members.

<u>The key responsibilities of group manager are listed as below:</u>

- Admit/ Withdraw/ Suspend members from the Project.
- Arrange for audit and group certification on behalf of group members.
- Acts as contact point for the Certification Body.
- Inform the group about their responsibilities.
- Monitoring and audits to ensure that FSC Forest Management requirements are being met by all the group members.
- Keep all the relevant documents with respect to the Forest Management Certificate for e.g. list of group members, FMUs, reports on harvesting, safety, complaints.
- Design and deliver of training programmes for better plantation management as per FSC Standard and applicable legislations.
- Ensure updating and relevance of the Management plan in consultation with stakeholders and FSC Standard and applicable legislations.

<u>The responsibilities of the group members are listed as below:</u>

- Manage their Forests/ Plantations according to FSC requirements and applicable legislations.
- Agree to the rules of the group scheme and agree that the group manager will apply for an FSC Certificate and deal with FSC authorities and auditors on their behalf.

Legal ownership and arrangement between group members and group entity

All the lands where plantation operation is going on (FSC-FM Project) belongs to individual farmers. There is a consent form signed by farmer/grower to participate in the project and abide by rules and regulations of FSC. On their behalf, Group entity Naini is applying for FSC-FM Certification.

Species Used for Plantation

<u>Rationale for selection of species</u>

We are promoting the species of Eucalyptus and Populus in our operational areas.

Eucalyptus and Populus species are used in the plantations under the FSC-FM project reflecting the preference of farmers/growers and the suitability of the species for the landuse and agro-climatic conditions in the project area. The wood is extremely versatile and can be used as pulpwood, firewood, poles in construction and even for furniture.

The two categories of stand models covered in the project include: Eucalyptus Clones and seedling-based Eucalyptus.

Ecology and growth habits of Eucalyptus spp:

Eucalyptus is a fast-growing species and belongs to the Myrtaceae family. It reaches a maximum height of 75 ft. However, the average height ranges from 35 to 55 ft. It is evergreen hardy species, predominantly blooms in winter and tolerates cold weather but not frost. Considering the dry climate and frequent drought recurrences, this species is preferred in the project because of its high drought tolerance and also due to its fast growth which ensures short harvesting cycles. It also grows under a wide range of climate and soil conditions and well adapted to the semi-arid conditions of the project area. Furthermore, Naini through its research has identified superior genotypes and also through hybridization between E. camaldulensis and E. urophylla, E. deglupta and E. teriticornis developed clones that grow better under such conditions. Seeds have also been collected from these superior hybrids developed in the R&D facilities are used for development of planting material.

The wood is used to meet the needs of fuelwood, construction and pulp production. The widely used species of Eucalyptus include: E. grandis, E. camaldulensis, and E. tereticornis.

Stem cuttings/ apical cuttings from clonal mother plants planted in hedge orchards specifically established for the purpose of clone multiplication are collected and planted in the root trainers. These ramets are placed in specially designed climate control chambers called mist houses for around 15-20 days, once the roots & shoot, of the plant develops the plants are transferred to open areas for hardening. After about 2-3 months they are ready for out planting and are transported to the planting sites.

Package of Practices for Eucalyptus Plantation

I. Site Selection and Preparation

- Study soil profiles, pH, electrical conductivity and fertility status of soils before deciding to plant clonal Eucalyptus. Shallow rocky soils or saline and alkaline soils have serious limitations for optimum tree growth and high productivity. Many clones are not tolerant to saline / alkaline soils. There should be clone and site matching to ensure high productivity.
- Areas with shallow soils less than 1M in depth or those with strong calcareous or lateritic pans must be avoided. Likewise, areas with high alkalinity or salinity must not be planted. Highly eroded sites or lands subjected to heavy water logging must also be avoided.
- Generally, the pH should be between 6 to 8 and electric conductivity less than 1 milliohms / cm. Plants will suffer from chlorosis on saline, alkaline or calcareous soils.
- Planting sites must be extremely well prepared by deep ploughing in either direction followed by harrowing. In case, ploughing is not possible then larger size pits of 45 x 45 x 45 cms to be dug for transplanting.
- The recommended spacing for plantations is as follows.
- Eucalyptus seedlings / Clones - 3 x 1.5 M.
- In case of slope or undulating terrain, the 3M wide rows should be along the contours to facilitate ploughing in between the 3M wide rows and conserve moisture and prevent soil erosion.

Table: suitability of clones for various soil types

Sl. No.	Soil Type	Suitable Clones
1	Black	P23, 2045, 405, 316, 1802
2	Red sandy	108,109,110,111 112 & 113
3	Sandy	2,7,288

II. Handling of planting stock

- Minimum age of the planting stock should not be less than 3 months from the date of setting of cuttings. In addition, the plants should be hardened for at least 2 months from the date of shifting of rooted cuttings from the mist chambers.
- After final grading and counting of plants kept ready for deliveries, 0.2% Bavistin spray should be carried out on all plants just before dispatch.
- Plants should normally be dispatched after getting confirmation that the planting site has been prepared and pits are ready for transplanting.
- Light irrigation to be given to plants on receipt by the farmer at the planting site. Temporary storage under partial shade is recommended, if required. Provide light irrigation twice a day till transplanting is completed. Saline or alkaline water should not be used for irrigation.
- The media in the root trainer (RT) should neither be too dry nor too wet at the time of removal of saplings from the root trainer trays. A light irrigation during the previous evening and gentle tapping of the RT will facilitate easy removal of the plant from the RT with roots and the vermiculite in a compact mass.

III. Planting operations and maintenance

- Planting pits must not be less than 30 x 30 x 30 cms. The fertile soil from upper 30cms depth separately to use for refilling the pit after transplanting.
- Refill the lower 5 cms. of planting pits made with spade with treated soil. Hold the sapling in an upright position in the center of the planting pit in such a way that lowest roots or the mass of media is 2 cms. above the level of soil in the planting pit. Holding the sapling in this position, the treated soil should be refilled into the pit and gently compacted. After compaction, about 5 to 7.5 cms of the pit should remain unfilled for irrigation and holding rainwater.
- In case of inadequacy of rains, Irrigation or pot watering at 3 to 7 days interval depending on the need, soil and climatic conditions, will be required till establishment of the transplanted saplings.
- Avoid application of chemical fertilizers, as far as possible apply organic fertilizers such as neem cake @ 50 gms per plant at the time of transplanting.
- After the establishment of plants, chemical fertilizer can be given as top dressing after weeding, @ 50 gms Diammonium phosphate (DAP) per plant in 2 split doses. The granules to be applied in the form of a ring, minimum 15 to 20 cms away from the stem. Fertilizers should only be applied when adequate soil moisture is available. Any chemical fertilizer placed close to the stem may dehydrate and kill the plant.
- During subsequent years required quantities of fertilizers may be applied by broadcasting in the 3M wide rows followed by irrigation/ moist condition. Fertilizers should be only applied when adequate moisture is available. Ploughing between the 3M wide lines to be carried out thereafter.
- Young plants are very sensitive to competition from weeds. In first year at least two weeding's, in 50 cms. radius around the plants is to be done. Care should be taken not to damage the saplings during weeding operations.
- Ploughing in between the 3 M wide rows of plants will help improve soil aeration, moisture conservation and control the weeds. During first year, plough the wide strips and arrange second ploughing at the end of monsoon rains. During subsequent years, one ploughing after the first monsoon showers and one after the monsoon can be done.
- Use only tractors/bullock plough for ploughing in between the 3M wide rows. Do not plough in cross direction to avoid injuries to the stems and roots of trees during ploughing operations. 20-30 cms. space on either side of the plant rows should not be ploughed but maintained free of weeds.

IV. Protection of plantations

- White ants or termites cause widespread damage to young saplings. Symptoms of damage by termites are sudden wilting of healthy saplings and drying of the leaves leading to death of the plant. Therefore, it is advised to plant with onset of monsoons and timely use of organic fertilizer and proper weeding give growth of plantations and lessen termite attacks.
- Total protection of plants against damage by cattle and fire is absolutely necessary. No grazing should be permitted.
- Likewise, prevention of damage to the plants during the ploughing operations should also be ensured. Normal ploughing should be only in one direction in the 3 wide strips.
- No crop residues should be burnt in or near the plantation areas as the young Eucalyptus trees are very sensitive to fires. Even scorching hot winds, generated by the fires in adjoining fields, can damage the plants. Therefore, farmers must take adequate precautions.
- If the saplings are transplanted in 30 cms. deep pits, normally there will be no lodging. In case of any incidence of lodging of young saplings, minimum necessary earthing up to support the plants should be carried out. No stakes should be used.
- All Eucalyptus clones are self-pruning. No pruning of the branches should be carried out. If any plant is severely damaged because of physical injuries or broken by the wind, the same should be coppiced back 5 cms above ground level. If the wind damage is at a fairly high level in plants more than 1 year old, there is no need for coppicing such plants, as new leaders will emerge from the pollard shoots. Only forked or V shaped double leaders should be prevented in young plants by careful early pruning of co-leader.

V. Best time for plantation

- Beginning of monsoon rains (June to July) is the best time for planting in field. Early planting ensures full benefit of the entire monsoon rains for optimum establishment and growth of the saplings.

Plantation Management of single FMU

A standard Calendar of Operation to be followed for management of FMU. Operations in each of the FMU'S to be followed as specified in Calendar of operation for optimum growth, proper utilization of resources and safety.

Table: Calendar of Operation of Eucalyptus Plantation

Operation Year	Operation	Month of operation
1st	Removal of bushes & making land suitable for planting	April – May
	1st Ploughing, in case ploughing is not possible, Bigger pits of 1.5' X 1.5' X 1.5' to be dug.	June
	Pitting & Planting	June – July (onset of monsoon)
	1st dose of fertilizer and anti-termite application	July – August
	Weeding, Soil working & application of 2nd dose of Fertilizer application	Sept – October
	Ploughing	October – Nov
2nd - 4th	Fertilizer application and Ploughing	June – July
5th	Harvesting	October – February

Alternative species explored for pulping (compared with Eucalyptus)

Mango

- **Growth & Harvesting:**

  - Long gestation period.
  - Requires harvesting permit.
  - Not commercially viable for pulp-wood due to lower returns.

- **Pulp Characteristics:**

  - **Moisture/Bulk Density:** Normal.
  - **Solubility/Ash:** High cold & hot water solubility, pentosan, and ash.
  - **Chemical Demand:** High alkali & bleach consumption.
  - **Yield:** Normal unbleached yield; normal bleached yield with high chemical use.
  - **Brightness:** 91% ISO requires high chemical input.
  - **Kappa Reduction (ODL):** Normal.
  - **Fibre Quality:** Low fibre length and strength, high fines, high metal content.
  - **Overall Suitability:** Limited due to high chemical demand, poor strength, and low fibre quality.

Sal

- **Growth & Harvesting:**

  - Long gestation period.
  - Requires harvesting permit.
  - Not profitable for pulp-wood production.

- **Pulp Characteristics:**

  - **Lignin/Extractives:** High content; leads to higher alkali demand.
  - **Holocellulose Content:** Low.
  - **Chemical Demand:** High alkali demand; high shrinkage during bleaching.
  - **Yield:** Low bleached pulp yield.
  - **Brightness:** Requires high chemical input for kappa reduction.
  - **Fibre Quality:** Normal fibre length/diameter, but low viscosity and strength.
  - **Metal Content:** Normal.
  - **Overall Suitability:** Less suitable due to high extractives, low pulp yield, and poor strength.

Benefits of Eucalyptus Compared to Mango and Sal

Growth & Profitability

- **Short Maturity Period:** Eucalyptus matures much faster (4–6 years), enabling quicker harvest cycles.
- **High Profitability:** Yields more pulpwood per hectare, making it economically viable and preferred by farmers.

Pulping Characteristics

- **High Holocellulose Content:** Leads to better pulp quality and higher yield.
- **Normal Alkali Demand:** Requires less chemical input than Mango or Sal, reducing processing costs.

- **High Kappa Reduction at ODL Stage:** Efficient delignification, improving pulp brightness with fewer chemicals.
- **Normal Shrinkage & Bleached Yield:** Maintains consistency and efficiency during the bleaching process.
- **Normal Fibre Dimensions:** Suitable for most paper grades.
- **Low Viscosity & Strength:** Though moderate in strength, it's acceptable for blending or commercial applications.
- **Stable Metal Content:** Less interference in the pulping and bleaching process.

Agro-Climatic Suitability

- **Adaptability:** Thrives in a wide range of soils and climates, especially in degraded or marginal lands.
- **Water Use Efficiency:** New clones are developed to be more sustainable and water efficient.

Conclusion
Based on pulpability, agro-climatic adaptability, short rotation cycle, and profitability, Eucalyptus and Populus is the preferred species for pulpwood plantations. Therefore, we are actively promoting Eucalyptus and Populus in our FSC-certified project areas to ensure sustainable, high-yield, and cost-effective raw material sourcing for pulp and paper production.

Conflict Resolution Mechanism

If any complaint is received supported by evidence related to management of FSC- Forest Management Complaints, it would be assessed by the FSC Administrator within two weeks of receipt. In the event that evidence is considered relevant, field verification would be conducted within two months of receipt of the complaint. Field verifications would be conducted by the personnel having sufficient expertise and knowledge for the purpose. The FSC Administrator shall constitute a three-member committee for field verification as under:
- A person having domain/plantation knowledge from the local area/ area of complaint.
- An NGO, working in the area in relevant field.
- A person from Naini Forestry team.

The conflict can be of any of the three types mentioned, between members, between member and Project entity, between member and an outside party.

Between members: If there is any issue between the members, then the project entity will mediate to close the issue amicably.

Between Members and Outside Party: If there is any issue, this is to be resolved with mediation by the Project entity.

Between Member & Project Entity: FSC Administrator will look into the matter and if required will be referred to the Committee constituted for the purpose. Committee shall examine the complaint and verify the documentation during field visit.

All records related to complaint, examinations, findings, action taken shall be maintained for at least five years.

List of Laws pertaining to FSC-FM Operation.

Respecting all national and local laws and administrative requirements

We are listing out the laws as per FSC Interim Standard for Forest Management Certification in India under the Forest Stewardship Council Version 1.0.
We will circulate the list to our Branch offices with summaries of some key laws.

All applicable and legally prescribed Fees, Royalties or Taxes paid by FME & Group Members
We as project entity are paying all our taxes, etc. in time as per the Indian legal framework. All the FMUs are belonging to farmers, and they are giving their land revenue (khajana) in time for their respective FMUs. The Balance sheet of our company is available in public domain, and any interested party can access it.

We have compiled a list of international agreements such as CITES, ILO conventions, ITTA and Convention on Biological Diversity for which India is a signatory. We have also summarized few of the treaty for better understanding.

International Agreements & Treaty

Naini monitors and is aware of obligations in international agreements or treaties that may affect Naini's plantation programme. In general, international agreements do not directly impose affirmative conditions on businesses or individuals within states that are members and signatories of international agreements and conventions. However, the intent of these agreements and conventions is often addressed by federal or state laws that do impose affirmative compliance obligations on Naini. Accordingly, Naini's comprehensive Compliance Program helps to assure that its management of natural resources, human resources, and business and trade practices fulfill the intent of applicable international agreements and conventions.

Conflicts between national and local laws and FSC Principles and how they shall be addressed.

Naini is committed to managing its FSC-FM Plantation programme in conformance with FSC standards and policies. Naini is not aware of any conflicts between the laws and regulations that pertain to Naini's plantation operations in Odisha and the applicable FSC Principles and Criteria). If a situation arises where Naini's compliance with laws and regulations conflicts with FSC principles and criteria, Naini will consult with FSC or the Certification body to resolve the conflict.

Protection from illegal harvesting and unauthorized activities

All the FMUs are owned by individual farmers, and they are maintaining their respective FMUs. For all the FMUs the operation is being carried out under their guidance. The FMEs has a dedicated work force to monitor the various operations carried out in the field. Wherever there is any need of technical guidance, it is being provided by FMEs technical staff. The FME has demarcated the boundary of all the plots with rough sketches of their plot with the property holders surrounding the plots and the type of cultural operations practiced by them.

Long term commitment to adhere to the FSC Principles and Criteria

The FME has a clear-cut policy regarding the long-term commitment regarding adherence to the FSC Principles and Criteria. We are conducting general training programme for our staffs regarding the FSC Principles and Criteria and general knowledge of the principles and Criteria.

Community Relations and Worker's Rights

- **Opportunity of employment and training**

Employment preference is given to the local people first. To encourage local people, we are sponsoring some of the ITIs, where the local students are undergoing training and they become employable in the market. Similarly, for contractual jobs local people are being given preference over outsiders. Similarly, although our Corporate Social Responsibility we are organizing many activities.

- **Health and Safety issues of employees and their families**

There is a written health and safety policy of the company to which all the workers and staffs must adhere. Inside the mill, proper PPEs are being provided to the workers during working hours and periodic safety inspection of the safety performance is monitored. Similarly in the field we are conducting training programmes for creating the safety awareness and the precautions are to be taken for different operation in relation to Forest Management.

For demonstration and training purpose to be given to farmers, we are issuing the safety PPEs to our different centers, where they are utilizing the PPEs for demonstration purpose and advising the farmers to follow all the safety precaution. All the equipment is periodically inspected and tested for the safety performance. Similarly, in our training programmes we are sensitizing the FMU owners not to engage any child labor below the age of 14 years in their plantation operations.

- **Rights of workers as per ILO Convention**

The FME recognizes the different working unions in the Mill and respect their rights of workers to bargain collectively with FME.

- **Affected Party by Direct Operations**

The FME will conduct one social impact evaluation related to forest management activities on yearly basis. We are collecting the basic data of all neighboring plots (Their owners and the type of cultivation they are doing). We are involving the local people during our identification of High Conservation Value Forest. We are conducting regular communication meeting in all our villages regarding the basic principles of FSC Forest Management and the implementation of FSC-FM Programme.

- **Appropriate Mechanism for resolving Grievances and providing fair compensation.**

As all the participants lands belong to individuals, there is very little scope of any customary rights in such lands for outsiders. All the cultural operations will be performed within the boundary of the plot without affecting the adjacent plots. No negative ecological impact has been found due to Eucalyptus and Populus plantation in their surroundings. At the time of harvesting precaution is to be taken for not damaging the nearby plots due to harvesting operation. The Eucalyptus and Popolus plantation in turn will help in employment generation for the local people.

Even after all this if there is any damage to the nearby party, most of the cases is solved in the village level mutually or through the village Panchayat etc.

Benefits from Forest

Forest management should strive towards maintaining ecological productivity of the Forest. The income from FMU will be obtained by farmer once in a 4-year cycle. We are providing the table below considering the different level of risks of productivity at 3 levels of return High, Average and Low.

Table: Crop Economics of Eucalyptus

Sr. No	Parameters	UOM	Pure Eucalyptus	Pure Populus
1	Land preparation & Maintenance	Ha	45000	55000
2	Labor	Ha	153000	165000
3	Material	Ha	37000	86000
	Total Expenses	**Ha**	**235000**	**306000**
4	**Yield Eucalyptus in MT**			
	High	**MT/ Ha**	336	350
	Average	**MT/ Ha**	270	300
	Low	**MT/ Ha**	225	250
5	**Income from Eucalyptus**			
	Return (High)	Rs.	3800000	4375000
	Return (Avg)	Rs.	2500000	2835000
	Return (Low)	Rs.	2200000	2125000
	Rate / (MT) of standing Crop	Rs.	12500	12500
6	**Net Income**			
	Return (High)	Rs.	**3560000**	**4069000**
	Return (Avg)	Rs.	**2265000**	**2529000**
	Return (Low)	Rs.	**1965000**	**1819000**
7	**Net Return/ Annum**			
	Return (High)	Rs. /Ha	**760000**	**813000**
	Return (Avg)	Rs. /Ha	**500000**	**505800**
	Return (Low)	Rs. /Ha	**440000**	**363000**

Optimal Use of Forest Productivity

The FME is providing competitive price to the FMU owners for the wood supplied to the Mills. We are providing the minimum support price or the current market price of the produce whichever is higher.

In this kind of plantations generally we are not getting any kind of Non-Timber Forest Produce (NTFP). At the time of harvesting the lops and tops are used for fuel wood by the local people, and we are recommending the barks to be left at the field for increasing the fertility of the lands.

Minimizing waste associated with harvesting & avoid damage to other Forest resources

- **Harvesting Planning**

Harvest planning is an important activity for plantation programs. Not only is it important to protect the ecological functions of forests by limiting the negative impacts of timber harvesting on soils and other vegetation, but careful harvest planning can also reduce dangerous logging accidents and reduce the amount of valuable wood lost due to accidental breakage.

Over the past few decades, a series of reduced impact logging (RIL) techniques have been developed for natural tropical forest conditions. For smallholder plantations many of these techniques can be used to plan an effective and safe harvesting of wood.

❖ Why is reduced impact logging is important.

RIL is the intensively planned and carefully controlled implementation of timber harvesting operations, which include a series of logging techniques to reduce the negative environmental impacts of timber harvesting and improve worker safety. The specific techniques vary, depending on local conditions.

RIL techniques aim to reduce or eliminate

• Unnecessary roads and skid trails
• Unnecessary damage to the remaining trees and other trees
• Unnecessary use of machinery
• Injury among forest workers
• Unnecessary impact to any HCV

Additional precautions need to be included in RIL techniques to reduce or eliminate

• Unnecessary damage to adjacent crops
• Injury to livestock.
• Injury to neighbors and their property

Harvesting Limit

Once the planning has been completed, the supervisor may need to first inform all of the adjacent property owners that they are doing timber harvesting and that people and livestock should avoid the area, in order to avoid any accidents.

Safety procedures and equipment should always be used. The teams will likely use directional felling to minimize waste and accidental breakage of the tree during cutting.

Directional felling is also an important method because it limits the risk of damaging the remaining trees, or injuring members of the logging crew or neighbors. Before each tree is felled, all vines should be cut that may connect the crowns of adjacent trees.

Next, the crew will need to process the tree by lopping off the branches and the tops that do not meet the specification for pulpwood. The slash should be disposed of in a way as to limit its falling into water bodies and blocking flow. This wood may be useful as firewood or small artisanal woodworking. Leaves can be used as mulch or for extraction of essential oil if viable and facilities are available. Some slash may also provide valuable ground cover or mulch to the agricultural areas of the agro-forestry.

Directional Felling within plantation Area:

1. Select the felling direction.
2.Cut the scarf (undercut) in the felling direction at a 45° angle, about one-quarter to one-third into the tree. The base of the scarf is made first and the oblique cut must neatly meet it in a straight line.
3.The back-cut must be horizontal and about “two fingers” above the base of the scarf for trees around 30 cm in diameter. If the tree is bigger, the distance has to be between 3-4 fingers.

If the saw’s guide bar is sufficiently long, it is placed close to the hinge and the back-cut is carried out in one continuous movement. Special care must be taken, however, to leave the hinge sufficiently strong because otherwise control over the felling direction is lost. If the length of the guide bar is smaller than the diameter of the tree, the position of the saw must be shifted several times when performing the back-cut. Once the back-cut has been done and the tree begins to fall:

• Remove saw from cut.
• Move into the planned escape route

• Watch for falling material
• Watch for the tree kicking back or bouncing as it hits the ground

Stump height should be as low as practical (10 cm is preferable) to maximize merchantable volume and improve coppicing.
After the tree is felled, it is cut into billets as per specification of pulpwood and the bark is removed. To lessen the moisture loss, it is advisable to send the material to the Mills as soon as it is billeted and debarked. After the wood material sent to the Mill, it is either directly fed into the chipper for production of paper or it is stored in the yard for future use in making paper.

Rate of harvesting should not exceed that can be permanently sustained:
Rationale for rate of annual harvest:
The species promoted in the project is Eucalyptus, it coppices, and one can obtain three harvests (one main & two coppice) from the plantation. In our area, Eucalyptus plantations are generally harvested every four years. This is the preferred rotation age, considering pulpability and economic factors.

Projection of Annual allowable cut and the additional Plantation area for that year are given below:

Table: Annual allowable cut & additional plantation area

Harvesting Year	Annual Allowable Cut (Ha)	Additional plantation (Ha)
2026-27	**405**	**1200**

In all the years the Annual allowable cut is less than the additional area covered under plantation for that Year.

Enhancing the value of forest services and resources

Most of the land used are either fallow or subsistence agriculture is being practiced. So effectively there is very little productivity or no productivity of all those lands. By this Forest Management Project all those lands are put to a substantial use and also generating employment opportunities for local people. The FME is very much sensitive towards any other service which may generate in future.

Monitoring Environmental and Social impacts:
We need to monitor the environmental and social impact of the plantation. We need to understand any potential negative impacts from any activity associated with the Forest Management such as use of fertilizer and chemicals, harvesting operations etc.

Most of the lands before this plantation are either fallow lands or being used to carry out subsistence agriculture. So those lands are not much of significant use to the users. Now the farmers are carrying out plantation operation of Eucalyptus in their land. We are carrying out a simple exercise of the land use pattern of our surrounding FMUs to find out any negative impact by our plantation operations to their plantations.

All the FMUs are being owned by individual farmers, so there is no question of any group right on that FMUs. We are carrying out training programmes to farmers covering some basic issues with respect to environment.

The training programme basically includes the following concepts to minimize any negative impacts with respect to environmental impacts out of the plantations:

- **Timely planting operation:** This helps the plantation to get entire rain and will grow significantly, so the effect of pests and diseases on the plantation is minimized.
- **Use of Fertilizer:** The use of fertilizer is advised for the 1st two years of plantation. It must be handled with care. The carry bags of fertilizers to be disposed up in environmentally friendly manner.
- **Use of insecticides/ Pesticides:** We are advising not to use any kind of chemical insecticides and plantations in our FMUs. We only advise to use organics if the need arises.
- **Harvesting:** We will do the harvesting with saw instead of the axe. This will minimize the loss for the farmers. We will use the lops and tops as firewood for cooking minimizing the pressure on natural forests. We will let the bark and leaves to be left in the field and decompose in the field which will in turns helps in improving the fertility of the soil.

We are continuously carrying out this kind of training programme to farmers and imparting the good practices for plantation operation. We will analyze on the above subjects on sample basis to find out the impact in the field. As per preliminary findings there is no negative impact in the FMUs in our project area.

We need to incorporate the results of evaluations of social impact into planning & operations and monitoring of the same. Social impacts can be positive or negative, intentional, and unintentional.

The impact of our FSC-FM project on people will be assessed every year by undertaking a social impact assessment on sample basis through our own Unit In charges/ Field managers. The exercise will be done to understand the positive and negative impacts of the project and formulate mitigation measures for the negative impacts to reduce their impact.

We will carry out this at village level by involving all stakeholders such as farmers, village representatives, NGOs, etc. to find out any negative social impacts through our plantation operation and how to minimize the negative impacts.

We are following the approach as below to find out the impact.

- Who is going to be affected: Workers employed in the planting operation till harvesting, like land preparation & Ploughing, Pitting, and planting, harvesting etc. neighbors who are doing some kind of operation in the nearby areas or any local people who are dependent on FMUs.

We have listed out some of the impacts which have come through our discussion with villagers.

Some Positive Impacts

- **Employmen**t- Creating getting employment opportunities. Jobs locally: Through plantation operations local people are
- **Increasing acreage under plantation**- Additional area being covered by farmers putting more unutilized lands to productive use.
- **Availability of firewood**- Increased availability from lops and tops of harvested trees will reduce pressure on natural forest.
- **Land use / access** – Protecting the traditional rights: Protecting the plantation which is of significant socio-cultural values.
- **Water conservation and prevention of soil erosion-** The water conservation measure taken by farmers helps in retaining the water as well as prevents the soil erosion from the field.

Some negative impacts & mitigation measures

7. **Employment** – Using of heavy machinery sometimes reduces the number of manpower requirement for a particular operation.
8. **Mitigation measure:** Local people are given first preference for carrying out various plantation related operations.
9. **Health- Accident**- Some mishaps may happen in the harvesting operation.

10. **Mitigation measure:** Farmers are made aware/trained regarding safety aspects while performing various operations. For example, it is advised that the harvesting is to be done through saw and proper protective head gear (helmet) to be worn at the time of working.

Forest protection from Pests, Diseases & Fire

Integrated Pest Management (IPM) and Fire Management (IFM) are important parts of the Forest Management Plan. By developing methods that improve the health of the forest, group managers and members can actively protect pulpwood from pests, diseases and fire.

Integrated Pest Management

IPM describes the activities aimed at both preventing and controlling pest outbreaks. In general, healthy trees can resist insect attack through their own natural defenses. Though Covered Species is not affected by any major pests or diseases, we will maintain vigil through monitoring and suggest preventive measures for management of pests in FMUs. As part of our overall pest management strategy, we do not promote use of harmful pesticides.

FMUs will carry out required POP such as cultural operations like ploughing, soil working, water conservation measures that encourage better tree growth and help prevent insects & diseases from affecting the tree.

When a tree is attacked, the affected portion can be cut and removed or the whole tree can be cut and removed so that the pest does not affect others. We shall try to identify its natural enemies and identify factors that may be reducing the population of the natural enemy of the pest.

Chemical pesticides

We discourage use of chemical pesticides since they can be hazardous to a wide variety of insects and animals and not just the ones targeted. They can also pose risks to human health. As such a list identified by FSC as prohibited chemical pesticides which include chemicals that have been identified by the World Health Organization (WHO) to be extremely hazardous (Class 1A) or highly hazardous (Class 1B) to human health and persistent chlorinated hydrocarbon pesticides (DDT).

We are encouraging organic pesticides such as Neem/ Mahua/ Karanj cake (de-oiled cake of *Azadirachta indica/ Madhuca indica/ Pongamia*), which are useful for controlling pests and also as fertilizer. We will keep necessary records of any pesticides or fertilizers group members use in the FMUs.

Use of Fertilizer

Chemical fertilizers stimulate plant growth in the plantation field, but the chemicals pose a threat to human health and environmental safety. Even the small-scale use of a farmer requires attention to the way fertilizers are stored and applied. Learning how to safely use chemical fertilizers reduces risks for immediate harm and long-term damage.

Proper Storage of Fertilizer

The original fertilizer packaging is the safest storage container for any leftover chemicals that you want to save. Keeping the packaging ensures the fertilizer isn't confused for a different product and ensures the instructions are kept with the chemicals. All plantation related chemicals including fertilizer should be stored in a garage, shed or other area outside of the main part of their home, to avoid contact. Extreme temperatures may cause damage to the chemicals. Extreme heat can turn liquid chemicals into a gas. Choose a location that keeps the fertilizer away from weather elements, including extreme temperatures and moistures.

Follow Package Directions

Even if we know how to apply fertilizer, reading the package is a simple precaution that can prevent personal injury or environmental damage. The packaging tells us how, when and where to apply the chemical to ensure the fertilizer is appropriate for your needs. The instructions outline necessary precautions for storage and application.

Mixing of Fertilizer
When mixing and loading fertilizers, it is inevitable that a spill will occur. Using proper clean up procedures and precautions to minimize spills, will reduce or eliminate environmental risks.

Guidelines to be followed while mixing and loading chemical fertilizers:

- For dry fertilizer, if we use a permanent mixing and loading area, the mixing pad should be impermeable. Sweep up any spilled dry fertilizer and store it in a clean container until it can be used.

Application
Ideal application conditions are on days with mild weather when temperatures aren't too high. The fertilizer application should be done around plants and in between rows, avoiding areas where chemicals wash off and contaminate nearby waterways. A light irrigation after applying the fertilizer forces the fertilizer to be effectively used in the field. When we are using the fertilizer, we should use gloves to prevent any kind of damage to our hands.

Avoid Overuse
Excessive fertilizer often harms plants instead of making them grow better. The extra fertilizer may also leach into the ground or wash away, leading to a greater potential for pollution. The fertilizer requirements vary by plant type and species. A slow-release fertilizer stretches out the release of the chemicals for longer-lasting effects without frequent applications.

Disposal of fertilizer Bags/ Container

- Consider reuse options.
- Store silage bales on concrete areas where possible; remove wrap prior to transporting the bales to the feeding area. Handle all silage film from bags and clamp to avoid dragging on soiled areas.
- Fully empty out packaging e.g. fertilizer bags – shake or brush if appropriate. Wash them properly, but keep in mind that the water does not flow to waterbody, where it can contaminate the water.

Integrated Fire Management
Careful IFM is an essential component of the Forest Management Plan in areas with a risk of forest fire, or those forest areas that naturally had regular forest fires. In many regions of the world, small scale forest fires are common and cause little damage to most forest plant and animal species. In fact, there are some plant species specifically adapted to frequent small fires.

However large amounts of slash from logging operations, as well as other dry organic materials, can increase the frequency and intensity of fires, resulting in catastrophic damage. Plantations and agro forests in the tropics can be highly susceptible to fire, especially in areas where slash and burn agriculture (**Podu**) is commonly used to clear vegetation.

First, we discuss with the community/ owners/growers whether fire is common in their area, and how often and to what intensity the fires usually burn. We must find out if there are certain seasons when the risk for fire is higher, and if they do anything to prevent fires.

An IFM plan can help reduce the risk of forest fires by combining prevention and control methods. The relevant factors considered for the fire management plan are the forest/plantation type (Eucalyptus is highly susceptible) and management activities, risk and sources of fire, access and terrain, climatic conditions, adjoining land uses, social and economic factors and the fire management capabilities of the community/ grower.

Majority of the fire outbreaks in the plantations are in the spring and summer season (Feb - May), when there is a high probability of small bushes and grass growing and slash and burn is prevalent in the adjoining areas. As part of the plan farmers / growers are educated and trained on fire risk, safe use of fire and fire prevention. Fire suppression methods include a system of fire beaks/ lines where the dry grass/bushes are burnt under controlled conditions to prevent fire from neighboring area from affecting the plantation. Removing dry grass/ bushes within the plantation area (FMU) to prevent fire.

Safeguard of Protected, Rare, Threatened and Endangered species
All the FMUs are owned by individual farmers, and they have planted eucalyptus on their land. There are no RTE species found within the boundary of the FMUs. As farmer is the sole owner, he/she checks and prevents any illegal, unauthorized, and/or inappropriate activities inside the FMU. The FME provides information and training to groups about RTEs and advises them to report any illegal activities in FMUs. The FMU owners are not involved in harvesting of any species listed on CITEs; they are only involved in harvesting of Eucalyptus.

Representative sample of existing eco-system to be Protected.
Through our interaction for HCVF identification, we have found that farmers are retaining naturally available tree species in their plantation areas. We have also sensitized groups through our interactions and training programmes for retention/ protection of any naturally available tree species in the FMUs.

Soil & Water Conservation Measures
The project area where we are doing plantation is mostly fallow land and some subsistence agriculture activities are being carried out in those lands. This kind of land use practice is prone to soil erosion.
We are planting Eucalyptus on such lands which is a long-term crop and a good coppice. The plantation will remain in such lands for around 12-15 years. We are advising/ training farmers to carry out soil and water conservation measures in their fields to improve the soil conservation and prevention of soil erosion as under.

1. Soil Basin: This kind of soil conservation measure can be adopted in plain soil. This will help in water retention so soil will not flow in flow with water.

2. Contour Bunds: This is mainly used in sloppy lands.

3. Brush Wood Dam: This kind of water conservation value will be helpful in sloppy lands, where there are high possibilities of water runoff, and the soil will be washed away. Most of the soil nutrients are in upper layer of the soil and when there is high water run-off most of the soil nutrients will run away and it will be unsuitable for planting after some days. This kind of Brush Wood Dam structure will help in retaining the soil erosion and soil fertility.

4. Semi Lunar Bunds: This kind of water conservation measure will be helpful in sloppy lands.

Harvesting Precautions
During harvesting optimum care should be taken to minimize the loss during operation in own plot as well as no loss to the property of the nearby plots. Currently most of the plots are either approachable by tractor or by truck. In some places where there is no approachable road is there, till such points the wood will be carried out by human being only. So, there is very less possibility of construction of any road network to the plantation site.

Monitoring:

Monitoring is an essential requirement as part of good forest management. The main reason for monitoring is to improve management. Our monitoring should help us with the following aspects:

- Identifying Change: Monitoring helps us learn whether there are any changes e.g. in the plant populations or in the services the forest provides.
- Understanding impacts: Monitoring helps us to discover what effects the forest management has on the important areas of plantation, on the services that the plantation provides like climate regulation and preventing soil erosion.

What needs to be monitored

❖ **Monitoring Productivity, Yield and Dynamics of the forest**

There are some growth indicators in monitoring of Forest growth and dynamics like Height (Mtr) and Girth (Cms) along with the survival of the plantation. We are monitoring the current year as well as previous two years plantation as per the criteria given below.

Current year plantation: 100% of plantation
Previous year plantation: 50% of Plantation
Before previous year Plantation: 50% of Plantation.
The monitoring is carried out every year with help of our Unit Ingharges/ Field managers as per standard format. All the monitoring sheets are submitted to the FME for entry, compilation, and reporting. A summary of the report is being generated every year. A public summary of the key indicators of enumeration will be made available to the public on request.

When the plantation is in harvestable stage, our area Incharge will follow the following approach to assess the inventory and harvesting of the same:

12.1 Identification of Vendor (Farmer):

- Area In-charge visits FMU and assess plantation for pulpwood yield and approach the farmer for harvesting.
- Farmer submits his application for harvesting plantation from his own Patta land & supply to Naini.
- A checklist/visit report is given below for assessing yield.
    - Name of Farmer:
    - Village:
    - Block/ Mandal:
    - Year of Plantation:
    - Area of Plantation (Ha):
    - Species:
    - Type of Plantation: Clone/ Seed Origin/ Coppice - Clone/ Seed Origin
    - Estimated Yield (in MT)
- After report is submitted decision is taken regarding mode of harvest i.e. through authorized handling agent/ Departmentally/ Farmer. The plantation will be harvested, and pulpwood transported to Mills with proper documents (Patta copy, RI Certificate. etc.) and the material will be treated as FSC 100% material in Mill. If it is through supplier, the supplier will harvest and transport the material with the required documents for FSC 100% wood. The challan will be stamped with FSC 100% wood by our Area Incharge and will be sent along with other documents while transporting for proper identification and storage of FSC 100% material.

12.2 Issue of Purchase Order: (Farmer)

- The area in-charge will give his recommendation about yield in MT (approximate) for purchase of pulpwood.
- The rate is decided depending upon the area from where the wood is to be transported and an Order is issued for supply of wood to Naini.
- Farmer supplies the wood with all the relevant documents to Naini.
- Naini will accept the wood based on Purchase Order and issue a weighment slip against that wood received at Naini and arrange for storage of pulpwood.

12.3 Document list for FSC 100% Wood:

- Land Patta copy.
- Certificate of standing plantation on private Patta land by Revenue Inspector / Sarpanch/ Forester.
- The Challan copy will be stamped by our Area Incharge with FSC 100%.

12.4 Supply of FSC 100% Wood from Farmers field to Naini:

- The wood after harvested will be loaded into trucks with the (challan copy stamped by our centre in-charge, Land patta copy and RI/ Sarpanch certificate).
- At the mills based on the document it will be entered into the system by Yard and will be stacked in FSC 100% area.
- We will generate a report on yearly basis, the receipt of FSC 100% wood as per the receipts by Yard department.

12.5 Payment procedure for Farmers

- The farmer will submit bill with weighment slip to CFO.
- The CFO after due verification of the details will send the bill to Accounts Department for payment.

Monitoring Conservation Measures and Results

We are going to protect the biodiversity of our plantation area. As we have identified, there is no significant availability of High Conservation Value Forest in our operational area, we will do a stake holder consultation with the villagers, the village representatives and related forest officials to find out the HCVF area and take appropriate action for it. If we find out any of High Conservation value forest in our operational area, we will create awareness of such areas to farmers through village level meetings and will plan for mitigation of impacts.

The details of growth data i.e. GBH, DBH, Height, Volume and Yield of Eucalyptus and Populus are collected regularly from the field and maintained in a register by the R&D wing. The data of those plantations is checked after one year to assess the growth rates.

The assumptions are based on the growth data collected by Naini in its plantation programme and the records are also being maintained by Naini.

Table: Eucalyptus and Populus stand volume

Year	Stand Volume (M^3 per Ha.)			
	Eucalyptus Clonal	Eucalyptus seed route	Populus Clonal	Populus Seed route
1				
2				
3				
4				
5	Harvesting			

The rotation age of Eucalyptus is taken as 4–5-year cycle based on the harvesting practice in local area. It will give 3 rotations of harvesting. After the harvesting, a lot of shoots are sprouting from the stump. The Leading 2-3 shoots are left for growth. We will monitor the total harvesting for a particular year based on our harvesting cycle and the Raw material receipt at our Mill. As mentioned in environmental impact section we will monitor any impact of our harvesting activity towards the surrounding farmers.

A standard Operating procedure is defined for the purchasing of FSC- 100% wood. Based on actual monitoring and field level feedback, the SOP will be modified when deemed necessary. The result of monitoring will be incorporated in the management plan. If there is any requirement of modification, we will do the necessary amendments.

High Conservation Value Forest:
A High Conservation Value Forest is the area of forest required to maintain or enhance a High Conservation Value.

This definition provides a new approach to the zonation of HCVF as well as introduces the concept of ‘High Conservation Value’. The inclusion of the term ‘area of forest’ provide clarity that there may be instances where an HCVF zone might be restricted to part of a forest, while the FSC definition implied that the presence of one or more HCV attribute would render the whole forest as to be a ‘high conservation value forest’.

Any forest management unit containing even one small HCV is classified as a High Conservation Value Forest, which brings into play extra requirements for consultation, maintenance or enhancement, and annual monitoring. However, the additional burden is determined by the nature of the HCV and will affect only those parts of the forest, and those aspects of management, that are required for the maintenance or enhancement of the HCV.

Procedure for Identification of HCVF:

Step 1: 10% plot visit, Consultation with stake holders like Sarpanch, Village elder people etc.

Step 2: Report based on interaction and submission of the report as per the format below:

Table: HCVF IDENTIFICATION DESCRIPTION

Sr. No	Type of HCVF (High Conservation Value Forest)	Description & Location	Remarks / Area in Ha
1	HCV1	Forests or areas containing globally, regionally, or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia).	N/A
2	HCV2	Forests or areas containing globally, regionally, or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.	N/A
3	HCV3	Forests or areas that are in or contain rare, threatened, or endangered ecosystems.	N/A
4	HCV4	Forests or areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control).	N/A
5	HCV5	Forests or areas fundamental to meeting basic needs of local communities (e.g. subsistence, health).	N/A
6	HCV6	Forests or areas critical to local communities’ traditional cultural identity (areas of cultural, ecological, economic, or religious significance identified in cooperation with such local communities).	N/A

Out of the six categories of HCVF we must record area in each category in all our areas.

Summary of the findings of HCVF:

All the plantations are being carried out in the farmer's own patta lands. We are giving our observations regarding the availability of HCVF (High Conservation Value Forest) in our plantation (Forest) area. We are providing a summary of the number of villages covered and number of persons contacted for HCVF identification.

Table- HCVF identification summary

DISTRICT	NO OF VILLAGES COVERED FOR HCVF IDENTIFICATION	NO. OF PERSONS INVOLVED/ CONSULTED
Pilibhit		
Bareilly		
Udham Singh Nagar		
TOTAL		

Species: No threatened or endangered species which are protected under national laws. So, there is no HCVF found within our Project boundaries.

Ecosystems/ Habitats: No special or unusual types of forest area available. So, there is no HCVF found within our Project Boundaries.

Environmental Services: All the lands are being owned by individual farmers. Most of the lands owned by farmers are rain-fed uplands usually plain or having less slope. There is none availability of any important service being provided to the local community or to others living downstream from the plantation area. So, there is no HCVF found in our Project boundaries.

Social and cultural values: The dependency of other persons except the landowner on the plantation/ forest land is not there with respect to Pulpwood, firewood, bark or seed. There are some areas within the project boundaries with cultural significance like old Banyan tree, Fishtail palm (Salapa) tree, Neem tree and some sacred places for carrying out religious activity. This occurrence of 1 or 2 trees in some of the farmers' fields is negligible considering the total project area of around ___________ Ha. No trees or sacred places are disturbed by management activities under the Project. So, we can conclude, there is no HCVF found in the FMUs.

Frequency of HCVF Study: High Conservation Value Forest (HCVF) study will be carried out on a yearly basis covering 10% of the plantation area in consultation with stakeholders like Farmers of that village, village representative like Sarpanch / Ward member, Forest officials like Forest guard/ Forester/ Range Officer, etc. We will find out the availability of HCVF in those areas and how to plan for conservation of such areas. We will include the findings of High Value Conservation Forests in our management plan on yearly basis and that will be updated on yearly basis.