Mini-Forest Plantation

Final Report

Ester Industries Ltd

August, 2024

1.0 Brief about the programme

Ester Industries and Nauka Foundation have planted 4000 trees of different local species and varieties such as shade-giving, fruit-bearing, and fodder trees to grow a mini forest on community land in Ramanujapuram village, Rangareddy district, Telangana. Nauka Foundation has planted the forest and will maintain it for three years. This novel approach aims to counter the adverse effects of pollution by fostering green spaces.

Leveraging the expertise in setting up Mini forests, Nauka Foundation is leading the implementation of this initiative on the community land in Ramanujapuram village, Telangana for Ester Industries. Here, 4000 trees are thoughtfully planted on 4 acres of land. By employing the Agro-Forestry and Pomo system, trees are planted by using Ultra ultra-high-density technique. This project endeavors to create a dense, diverse, and rapidly growing forest that will significantly reduce pollution levels over the forthcoming years and support the community resigning nearby.

The objectives of the project are:

- To plant 4000 native trees on community land, Ramanujapuram village, Telangana
- To Cover 4-acre area to grow the forest.
- To create a well-planned forest that would grow fruits, sequester carbon and produce oxygen.

The plantation process was successfully planned, designed and completed in March 2024

2.0 Planning, Design and Implementation

2.1 Planning

During the planning phase, the Nauka Foundation collaborated with Ester Industries Ltd. and other stakeholders to strategize and outline the Mini forest establishment project. The planning process involved identifying the project's objectives, setting targets for tree planting, determining the location of the forest, and selecting appropriate native plant species suitable for the site's ecological conditions. We engaged a horticulturist from Rajiv Gandhi International Airport to create the design scientifically and identify the species.

2.2 Land Survey

Before commencing the project, a comprehensive land survey was conducted to assess the area's topography, soil quality, drainage patterns, and any existing vegetation. The survey data helped in formulating an effective plantation design and determining the optimal layout for the Mini forest.

We measured the land boundaries and calculated the spacing needed for trees. Ester and Nauka's team finalized the land after a discussion with multiple stakeholders.

2.3 Clearing the land

Before planting, the selected site was cleared of any unwanted debris, weeds, or invasive plants. This step was essential to create a clean canvas for the new forest to thrive.

2.4 Fencing the Area

To safeguard the developing mini forest and prevent unauthorized access, a protective fencing was erected around the designated area. This fencing serves to shield the young trees from potential damage caused by external factors, ensuring their undisturbed growth and creating a safe environment for the forest to thrive.


2.5 Marking of the Area and Plantation Density:

Prior to initiating the tree planting process, the designated area for the Mini forest at Ramanujapuram village, community land was meticulously marked to demarcate the boundaries and establish the plantation layout. The marking process involved precise measurements to ensure an accurate allocation of space for the forest.


2.6 Procuring saplings

High-quality saplings of selected native plant species were sourced from a private nursery. These saplings were carefully chosen based on their adaptability to the local climate and soil conditions, ensuring a successful forest establishment.

2.7 Digging the land

The JCB operator was involved for three days in digging pits as per the marked measurements and spacing between each tree.

2.8 Pit preparation by adding manure

To improve soil fertility and enhance the growth conditions for the trees, organic manure and compost were added to the soil. This helped provide essential nutrients and promoted the development of a nutrient-rich environment for the saplings.

2.9 Community Engagement and Inauguration:

Engaging local communities and stakeholders was integral to the success of the plantation project. We organized a tree plantation launch event involving community members and company employees to foster a sense of ownership and stewardship. Additionally, awareness sessions were conducted to educate stakeholders about the importance of tree plantation and environmental conservation. Collaboration with Ester Industries facilitated the hosting of tree plantation events for visiting dignitaries, further amplifying the project's impact and reach.

2.10 Media coverage

The inauguration of a mini forest plantation at Ramanujapuram marked a collaborative effort between the Nauka Foundation, Ester Industries, and the local community. The press personnel from popular Telugu channels like ABN, Big Tv, V6 and Tv 5 were present for the plantation site launch event.

Highlighting CSR Efforts:

Mr. Ayush Singhania, Director of Ester, emphasized the company's commitment to environmental initiatives and social responsibility in local villages. He looks forward to scaling the plantation with the Nauka Foundation from 4000 trees at present.

రామంజపూర్ బాలాజీ దేవాలయనికు సంబంధించిన నాలుగు ఎకరాల్లో 4 పండ్ల మొక్కలను నాటిన ఈస్టర్ కంపెనీ సభ్యులు

నౌక ఫౌండేషన్ ఆధ్వర్యంలో 4000 మొక్కలు నాటిన...

ఫౌండేషన్ కంపెనీ సభ్యులు

- రామంజపూర్ బాలాజీ దేవాలయనికు సంబంధించిన నాలుగు ఎకరాల్లో 4 పండ్ల మొక్కలను నాటిన ఈస్టర్ కంపెనీ సభ్యులు

శంషాబాద్.వెల శక్తి : శంషాబాద్ మండల పరిధిలోని రామంజపూర్ గ్రామ పంచాయతీ పరిధిలో గల అతి పురాతన బాలాజీ దేవాలయనికీ సంబంధించిన నాలుగు ఎకరాల స్థలం ఈస్టర్ కంపెనీ నౌక ఫౌండేషన్ సభ్యులకు దేవాలయ కమిటీ సభ్యులు మూడు సంవత్సరాల కోసం ఫౌండేషన్ కంపెనీ సభ్యులకు అందజేశారు ఇందులో భాగంగా సోమవారం రోజు ఈస్టర్ కంపెనీ నౌక ఫౌండేషన్ సభ్యులు దేవాలయ చైర్మన్ శ్రీనివాస్ రెడ్డి ఆధ్వర్యంలో మినీ ఫారెస్ట్ ప్లాంటేషన్ ఏర్పాటుకు నడుము చుట్టారు ఎందుకు సంబంధించి రామంజపూర్ బాలాజీ దేవాలయ నీకు సంబంధించిన నాలుగు ఎకరాల స్థలాన్ని ఫౌండేషన్ సభ్యులకు అందజేశారు ఆదివారం రోజు ఈ యొక్క స్థలంలో 4 పండ్ల మొక్కలను. మామిడి సపోటా జామ దానిమ్మ తదితర పండ్ల మొక్కలను దేవాలయ కమిటీ సభ్యులు గ్రామస్తులతో కలిపి ఫౌండేషన్ సభ్యులు మొక్కలను నాటారు అనంతరం వారు మాట్లాడుతూ మూడు సంవత్సరాల కోసం దేవాలయానికు చెందిన నాలుగు ఎకరాల స్థలాన్ని కేటాయించిన దేవాలయ కమిటీ సభ్యులకు గ్రామస్తులకు కృతజ్ఞతలు తెలిపారు ఈ మూడు సంవత్సరాల్లో మొక్కలు పెరిగి పళ్ళ ద్వారా వచ్చే ఆదాయాన్ని దేవాలయ అభివృద్ధి కోసమే కమిటీ సభ్యులకు అందజేస్తామని ఇప్పటికే భారత దేశవ్యాప్తంగా నౌక ఫౌండేషన్ ఆధ్వర్యంలో 50 వేల మొక్కలను నాటినట్టు సంస్థ సభ్యులు తెలిపారు. ఇంతకుముందు హైదరాబాద్లోని గ్రామంలో స్కిల్ డెవలప్మెంట్ కార్యక్రమాన్ని ఏర్పాటు చేసిన ఈస్టర్ కంపెనీ సభ్యులు దాదాపు 100 మంది విద్యార్థులు నిరుద్యోగులకు శిక్షణ కార్యక్రమాన్ని నిర్వహించారు. ఈ కార్యక్రమంలో ఆయుష్ సింఘానియా (డైరెక్టర్ ఆఫ్ ఈస్టర్ ఇండస్ట్రీస్). రాహుల్ గోస్వామి (ప్రాజెక్ట్ హెడ్). శ్రీనివాస్ రెడ్డి (బాలాజీ టెంపుల్ కమిటీ చైర్మన్). మాజీ ఎంపిటిసి మాధవరెడ్డి. ప్రకాష్. ధీరజ్(ఫౌండర్ ఆఫ్ నౌక ఫౌండేషన్). ఐశ్వర్య రఘుపతి (కో ఫౌండర్ ఆఫ్ నౌక ఫౌండేషన్). శ్రీశైలం బక్క(ఇంగ్లీష్ ఫెసిలిటీ నౌక ఫౌండేషన్) తదితరులు పాల్గొన్నారు.

2.11 Plantation

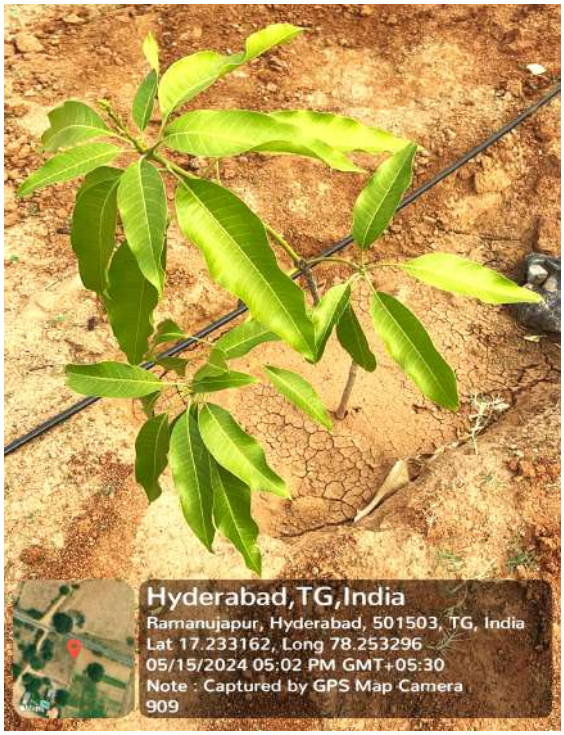
The plantation phase involved the collective efforts of local labourers and villagers who participated in the planting of four thousand trees. This process included the preparation of the land, marking designated planting spots, and the careful placement of saplings. The chosen tree species were Mango, Sapota, Ramphal, Sitaphal, Guava, Milia Dubia, Mahogany, Pomegranate, and Ashok Pendula etc, which are expected to thrive in the local climate and soil conditions. This initiative not only aimed at environmental restoration but also provided economic benefits to the local community through job creation.

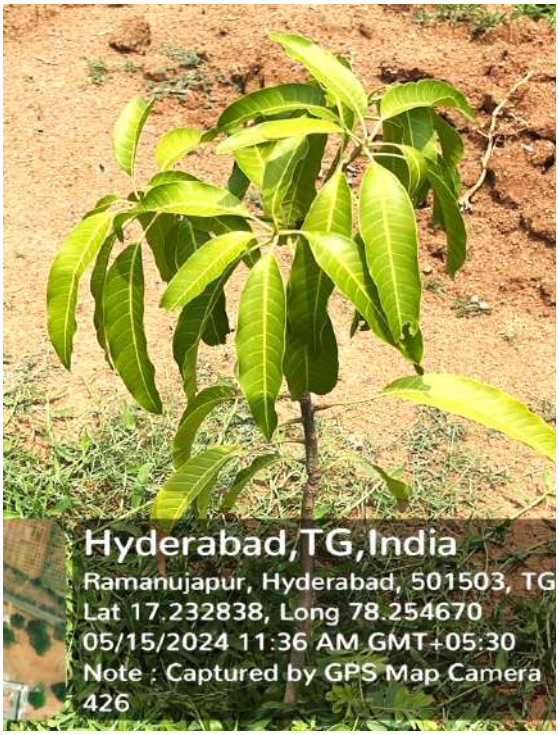
2.12 Installment of drip irrigation system

After the trees were planted, a drip irrigation system was installed to ensure they receive adequate water for optimal growth. This system is designed to deliver water directly to the root zone of each tree through a network of tubes and emitters, which helps conserve water by reducing evaporation and runoff. The drip irrigation system provides a consistent and efficient water supply, which is crucial for the healthy development of the newly planted trees, especially during the initial establishment phase. This installation underscores our commitment to sustainable and resource-efficient practices in forest management.

2.13 Geo Tagging the Forest

As a crucial step in the technological advancement of the project, the Mini forest area was geo-tagged using modern geolocation technology. This process involved the precise recording of the forest's geographical coordinates, allowing for accurate tracking and monitoring of the forest's growth and development over time. Geo-tagging enhances the management and documentation of the project's progress, contributing to its overall success.





All the geo-tagged trees' information with images can be found here - https://drive.google.com/drive/folders/1L7TQNYOam1AYWw9TvH60wnoM6iWY69cl?usp=sharing

Near term Plan

This plan outlines a comprehensive strategy for ensuring the long-term health and productivity of the fruit trees planted on the temple land in Telangana for the next 3 years. This plan leverages drip irrigation and the dedication of a full-time maintenance person to establish a sustainable fruit-bearing orchard. The temple will benefit from the marketing of the produced fruits.

Year 1: Establishment Phase

Focus: Proper tree establishment and root development.

Activities:

- **Watering:** Consistent watering with drip irrigation following the recommended schedule for the specific fruit varieties planted.
- **Weeding:** Regular weeding around the base of the trees to eliminate competition for water and nutrients.
- **Pruning:** Conduct light pruning to remove dead, diseased, or overcrowded branches to promote healthy growth and fruit production.
- **Fertilization:** Apply a balanced fertilizer according to soil test results and specific fruit tree needs.
- **Pest and Disease Monitoring:** Regularly inspect trees for signs of pests or diseases and take appropriate action using organic methods whenever possible.

Year 2: Growth and Development Phase

Focus: Encourage healthy tree growth and fruit production.

Activities:

- Continue all year 1 activities (watering, weeding, mulching, pest/disease monitoring).
- Pruning: Perform more targeted pruning to shape the tree canopy for optimal light penetration and fruit production.
- Fertilization: Apply fertilizer based on soil test results and the trees' fruit production stage.
- Pollination Support: If necessary, implement hand pollination techniques to ensure adequate fruit set, especially for self-unfruitful varieties. (if needed)

Year 3: Fruit Production and Maintenance

Focus: Maximize fruit yield and maintain overall tree health.

Activities:

- Continue all year 1 & 2 activities (watering, weeding, mulching, pest/disease monitoring, pruning, fertilization).
- Harvesting: Harvest fruits at their peak ripeness according to the specific variety.

Sustainability Measures:

- Utilize organic pest and disease control methods whenever possible.
- Harvest rainwater for supplemental watering if feasible.
- Introduce cover crops between the trees to improve soil health and suppress weeds.
- Train the full-time maintenance person on best practices for sustainable orchard management.

Monitoring and Evaluation:

- Regularly monitor the trees' health, growth, and fruit production.
- Evaluate the effectiveness of the implemented strategies and make adjustments as needed.
- Track the success of the fruit marketing efforts and explore opportunities for improvement.

Conclusion

The Mini Forest established by Nauka Foundation at Community land, Ramanujapuram village, Telangana serves as a remarkable example of corporate responsibility towards environmental conservation. By fostering a green and sustainable ecosystem within your premises, your company has taken significant steps towards offsetting carbon emissions and contributing to a healthier planet.

We extend our gratitude to **Ester Industries Ltd.** for the opportunity to collaborate on this meaningful endeavour. Together, we have taken a stride towards a greener future and a sustainable environment for generations to come.

Should you have any questions or require further assistance, please feel free to contact us at dheeraj@naukafoundation.org

Link to our dashboard

https://docs.google.com/spreadsheets/d/1wuLGzVF9e7Fpqvx__SiR0UDk3ll5XjQFI-maP70oLml/edit?gid=0#gid=0

Thank you for your commitment to environmental stewardship.

Nauka
Foundation

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Project	**:**	Mini-Forest Plantation
Thematic area	**:**	Environment
Forest Location	**:**	Community Land, Ramanujapuram, Telangana