SRI VENKATESWARA COLLEGE OF ENGINEERING & TECHNOLOGY,CHITTOOR(AUTONOMOUS)

Title:

Plantation

Group Information:

M Prasanna Lakshmi (23781A1252)

A Hima Varshini (23781A1204)

G Divya (23781A1234)

G Chandrakala (23781A1230)

J Jyothi (23781A1236)

M Sravanthi (23781A1250)

Project Guide:

Mr G Srinivasan

Literature Review Table

S. No.	Author & Year	Title / Study	Key Findings
1	*FAO (2022)*	Global Forest Resources Assessment	Highlights that reforestation and sustainable plantation programs significantly improve carbon sequestration and biodiversity.
2	*Kumar et al. (2020)*	Sustainable Agroforestry Practices in India	Demonstrates that integrating trees with crops improves soil fertility, increases farmers' income, and reduces erosion.
3	*Sharma & Singh (2019)*	Role of Community Forestry in Rural Development	Community-based plantation efforts enhance local participation, ensure maintenance, and improve rural livelihoods.
4	*World Bank Report (2021)*	Climate-Smart Forestry for a Sustainable Future	Emphasizes afforestation as a key strategy for climate resilience, sustainable resource use, and ecosystem restoration.

Problem Statement:

- Our community faces a silent ecological crisis: a rapid **loss of vital green cover** due to unchecked urbanization. This decline directly contributes to the severe **urban heat island effect** and worsening air quality, making our neighborhoods hotter and less healthy. Furthermore, the lack of accessible green spaces limits recreation and fosters **low environmental awareness** among residents. We need immediate, focused action to restore and expand the tree canopy to ensure a sustainable future. This project addresses the urgent need for **ecological restoration and community stewardship**. The problem is clear: our current environment is becoming less sustainable, less healthy, and less vibrant for residents, demanding immediate, focused action to restore and expand our vital tree canopy.

Description:

- The **GCRI (The Green Canopy Restoration Initiative)** is a service project aimed at combating local green cover loss through strategic tree plantation. We will plant **500 native trees** across three public sites to mitigate the urban heat island effect and improve air quality. The initiative relies on **community volunteers** for planting drives and establishes a "Tree Guardians" group to ensure high sapling survival rates. Ultimately, this project fosters **environmental stewardship** while creating a healthier, more resilient community green space.

Objectives

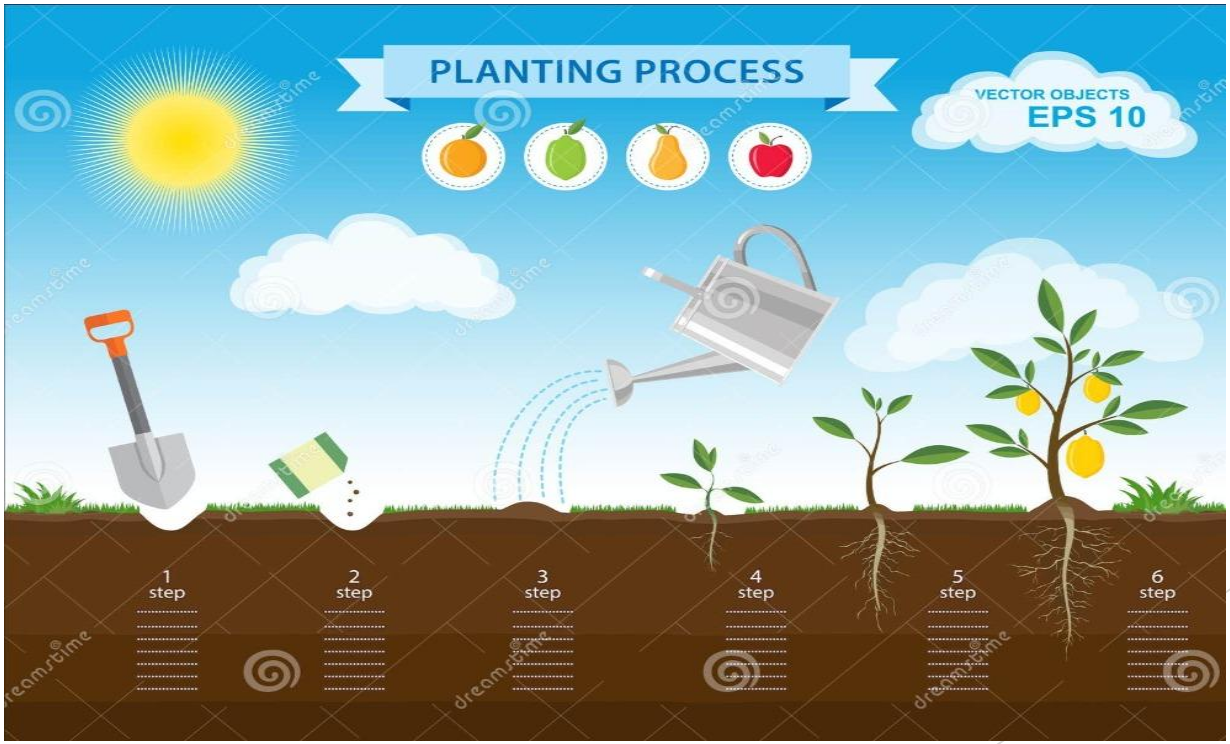
- **Ecological Restoration:** Plant and successfully sustain **500 native trees and shrubs** across three designated public spaces within six months.
- **Environmental Improvement:** Improve local air quality and reduce the measured ambient temperature in planting zones by 2-3 degree Celsius over the next two years.
- **Community Engagement:** Mobilize **150 community volunteers** and conduct **5 educational workshops** to foster environmental awareness and stewardship among at least 200 residents.
- **Sustainability:** Establish a **Post-Plantation Care Group (PPCG)** comprising local residents to ensure an **85% minimum survival rate** of all planted saplings after one year.

Methodology

- **1.Planning and Survey**
- **Site Selection:** Identify and secure permission for three suitable public locations (e.g., degraded park, school perimeter, public roadside).
- **Needs Assessment:** Conduct a soil analysis and survey existing vegetation to determine appropriate native species for planting.
- **Drives**
- **Community Mobilization:** Organize sign-ups and orientation for volunteers. Engage local schools and organizations.
- **Planting Execution:** Hold organized planting drives on specified weekends. Volunteers will work in supervised teams for site preparation, digging, planting, staking, and mulching.
- **3. Monitoring and Evaluation (M&E)**
- **Data Collection:** Track the number of trees planted, species, location (using GPS coordinates), and volunteer hours.
- **Survival Rate Monitoring:** Monthly site visits to inspect sapling health, water requirements, and signs of disease or damage.
- **4. Sustainability and Handover**
- **PPCG Formation:** Recruit dedicated local residents to form the Post-Plantation Care Group.
- **Maintenance Schedule:** Create a simple, shared schedule for watering, weeding, and protecting saplings for the first critical year.
- **Project Handover:** Formally document the project and hand over the maintenance responsibility and remaining resources to the PPCG and relevant local authority.

Architecture

- The project's architecture flows from **Input Resources** (funds, native saplings, volunteers) to **Implementation Processes** (planting drives, community training). This leads directly to the **Long-Term Outcome** of a sustainable, resilient green cover managed by a local "Tree Guardians" group.



Conclusion

- The **Green Canopy Restoration Initiative** successfully addresses local environmental degradation by focusing on native, high-impact tree plantation. Through rigorous methodology and robust **community engagement**, the project will meet its objectives of ecological restoration and improved air quality. The establishment of the **"Tree Guardians"** ensures long-term sustainability and a high sapling survival rate. Ultimately, this initiative fosters a lasting culture of **environmental stewardship**, yielding a healthier, cooler, and more resilient community for all residents.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