

Guru Vishwambharkrupa Bahauddeshiya Shikshan Prasarak Mandal Lakkadjawalga's

**SHIVNERI MAHAVIDYALAYA,
SHIRUR ANANTPAL, DIST. LATUR- 413544**

BEST PRACTICE

**"GROWING A SUSTAINABLE FUTURE THROUGH TREE PLANTATION AND
CONSERVATION"**

Academic Years 2017-18 to 2023-24

INTERNAL QUALITY ASSURANCE CELL

BEST PRACTICE –I

Title of the Practice: "GROWING A SUSTAINABLE FUTURE THROUGH TREE PLANTATION AND CONSERVATION"

1. Objectives of the Practice:

- **Enhance Biodiversity:** By planting a diverse range of native tree species, we aim to enhance biodiversity in the local ecosystem. Increasing the variety of plant species supports a healthier ecosystem and provides habitat and food sources for a wide range of wildlife.
- **Improve Air Quality:** Trees play a vital role in purifying the air by absorbing pollutants such as carbon dioxide, sulfur dioxide, and nitrogen oxides. Through our tree plantation drive, we aim to improve air quality in the college campus and surrounding areas, creating a healthier environment for students, faculty, and the community.
- **Mitigate Soil Erosion:** Trees help prevent soil erosion by stabilizing the soil with their roots and reducing the impact of wind and water erosion. By planting trees strategically in areas prone to erosion, we aim to mitigate soil erosion and preserve soil fertility for sustainable agriculture and land use.
- **Provide Shade and Cooling:** The plantation of trees will provide much-needed shade and cooling in the college campus, creating comfortable outdoor spaces for students and faculty to study, socialize, and relax. This will also reduce the reliance on artificial cooling systems, leading to energy savings and lower carbon emissions.
- **Promote Student Engagement:** One of our objectives is to actively involve students in all stages of the tree plantation process, from seedling selection to post-plantation care. Through hands-on involvement, we aim to educate and empower students to become environmental stewards and advocates for sustainability.
- **Enhance Aesthetic Appeal:** Planting trees enhances the aesthetic appeal of the college campus and surrounding areas, creating a more visually pleasing environment for students, faculty, and visitors. A green and well-maintained campus contributes to a positive learning and working atmosphere.
- **Contribute to Climate Change Mitigation:** Trees are important allies in the fight against climate change, as they absorb carbon dioxide from the atmosphere and store it in their biomass. By planting trees, we aim to sequester carbon and contribute to global efforts to mitigate climate change and reduce greenhouse gas emissions.

- **Foster Community Participation:** Our tree plantation drive aims to foster community participation and collaboration by involving local residents, businesses, and organizations in the initiative. By working together towards a common goal, we can achieve greater impact and create a sense of shared ownership and pride in our environmental stewardship efforts.

Intended Outcomes of the Practice:

- **Increased Green Cover:** The primary outcome of the tree plantation drive is to increase the green cover in and around the college campus and surrounding areas. This will result in a more aesthetically pleasing environment and provide numerous ecological benefits such as improved air quality, soil conservation, and habitat creation for wildlife.
- **Environmental Awareness:** Through active participation in the tree plantation process, students, faculty, and the community will gain a deeper understanding of environmental issues and the importance of conservation. This increased awareness will foster a culture of environmental stewardship and inspire individuals to take action to protect the environment.
- **Biodiversity Conservation:** By planting a diverse range of native tree species, the initiative aims to enhance biodiversity in the local ecosystem. The presence of a variety of plant species will support a healthier ecosystem and provide habitat and food sources for a wide range of wildlife, contributing to biodiversity conservation efforts.
- **Climate Change Mitigation:** Trees play a crucial role in mitigating climate change by sequestering carbon dioxide from the atmosphere and storing it in their biomass. The tree plantation drive will contribute to carbon sequestration efforts, helping to reduce greenhouse gas emissions and mitigate the impacts of climate change.
- **Community Engagement:** The tree plantation initiative aims to foster community participation and collaboration by involving local residents, businesses, and organizations in the planting and maintenance of trees. This will create a sense of shared ownership and pride in the environmental stewardship efforts, strengthening community bonds and promoting collective action for a greener future.
- **Improved Livelihoods:** Planting fruit-bearing and economically valuable tree species will create sustainable livelihood opportunities for local communities. The sustainable harvest and sale of tree products such as fruits, nuts, and timber can provide additional income sources for community members, contributing to poverty alleviation and economic development.



- **Enhanced Campus Environment:** The presence of trees on the college campus will create a more pleasant and conducive learning environment for students and faculty. Trees provide shade, reduce noise pollution, and create green spaces for recreation and relaxation, enhancing the overall quality of campus life.
- **Long-term Sustainability:** By integrating tree plantation into the college's sustainability initiatives and incorporating maintenance activities into regular campus operations, the initiative aims to ensure the long-term sustainability of the planted trees. This includes ongoing monitoring, watering, pruning, and pest management to support the healthy growth and survival of the trees for future generations to enjoy.

2. The Context of the Best Practice:

The context of the tree plantation best practice at Shivneri Mahavidyalaya is framed by a convergence of environmental challenges, educational imperatives, and community needs. Situated in an area possibly grappling with environmental degradation, including deforestation and habitat loss, the college recognizes the urgent need for action to mitigate these issues. The broader context of climate change exacerbates these challenges, with the region potentially experiencing impacts such as changing rainfall patterns and rising temperatures. Addressing these environmental concerns requires proactive measures to restore ecosystems, conserve biodiversity, and enhance resilience to climate change impacts.

As an educational institution, Shivneri Mahavidyalaya acknowledges its responsibility to not only impart academic knowledge but also foster values of environmental stewardship and sustainability among its students and the community. Integrating environmental conservation efforts into the college's curriculum and extracurricular activities aligns with its mission to cultivate socially responsible citizens and future leaders. Moreover, the college recognizes the potential for tree plantation initiatives to serve as experiential learning opportunities, allowing students to actively engage in environmental restoration projects and witness the tangible impacts of their actions.

The community context further underscores the importance of collaborative action and community engagement in addressing environmental challenges. Engaging local residents, businesses, and organizations in tree plantation efforts not only mobilizes additional resources and support but also fosters a sense of ownership and pride in local environmental stewardship. By aligning with community priorities and building partnerships with relevant stakeholders, Shivneri Mahavidyalaya aims to create a more

sustainable and resilient future for both the college and the surrounding community. Through its tree plantation best practice, the college seeks to leverage its role as an educational institution to drive positive environmental and social change in the region.

The Actual Practice and Its Implementation:

The implementation of the tree plantation practice at Shivneri Mahavidyalaya is a comprehensive and collaborative effort involving meticulous planning, resource mobilization, and stakeholder engagement. The initiative begins with thorough site assessments to identify suitable locations for tree planting and species selection based on local climate and soil conditions. This planning phase also involves securing necessary resources such as funding, manpower, and materials through partnerships with government agencies, NGOs, and community organizations.

Once the groundwork is laid, planting activities are organized and carried out with attention to detail to ensure the healthy growth and survival of trees. Planting teams, comprised of students, faculty, and community volunteers, work together to plant saplings using proper techniques and spacing to promote optimal growth. Ongoing monitoring and maintenance activities, including watering, mulching, and pest control, are implemented to support the long-term sustainability of the planted trees.

Stakeholder engagement is a key aspect of the practice, with active participation and collaboration sought from students, faculty, local communities, and environmental organizations. Community outreach and educational initiatives raise awareness about the importance of tree plantation and environmental conservation, empowering stakeholders to become environmental stewards.

The practice is designed for long-term sustainability, with efforts made to integrate tree care into regular college activities and establish partnerships for ongoing support. By fostering a culture of environmental responsibility and community engagement, the initiative aims to create positive environmental and social impacts for the college and the surrounding community. Through collaborative efforts and ongoing commitment, Shivneri Mahavidyalaya demonstrates its dedication to promoting environmental sustainability and fostering a greener future for all.

3. Evidence of Success of the Practice:

- **Increased Green Cover:** Through systematic tree planting efforts, there is a noticeable increase in green cover in and around the college campus. Satellite imagery



can be used to quantify the extent of greenery before and after the initiative, providing concrete evidence of success.

- **Improved Environmental Quality:** Monitoring data reveals improvements in environmental indicators such as air quality, soil health, and biodiversity. Measurements of air pollutants, soil erosion rates, and biodiversity indices can be compared before and after the tree plantation drive to assess positive changes.
- **Community Engagement:** High levels of participation and enthusiasm from students, faculty, and community members indicate the success of the initiative in engaging stakeholders. Surveys, interviews, or focus group discussions can capture feedback and perceptions of the tree plantation drive, highlighting its impact on community involvement and awareness.
- **Educational Outcomes:** Enhanced environmental awareness and knowledge among students and faculty are demonstrated through changes in attitudes and behaviors towards conservation. Pre- and post-assessments, as well as qualitative feedback from participants, can be used to measure improvements in environmental literacy and stewardship.
- **Long-Term Sustainability:** The establishment of healthy, thriving tree populations indicates the sustainability of the initiative. Regular monitoring of tree growth, survival rates, and ecosystem health provides evidence of the long-term viability of the planted trees.
- **Recognition and Awards:** External recognition, awards, or accolades received by Shivneri Mahavidyalaya for its tree plantation efforts serve as external validation of the practice's success. Certificates, commendations, or media coverage can highlight the impact and effectiveness of the initiative.



4. Problems Encountered and Resources Required Implementing this practice

Limited Water Availability: Insufficient access to water for irrigation poses a significant challenge, particularly during dry spells or in areas with unreliable water sources. This can affect the survival and growth of newly planted trees, necessitating alternative water management strategies such as rainwater harvesting or efficient irrigation systems.

Pest and Disease Infestation: Newly planted trees are susceptible to pest infestations and diseases, which can negatively impact their growth and survival. Implementing integrated pest management strategies and regular monitoring can help mitigate these risks, but may require additional resources for pest control measures and training of personnel.

Resource Constraints: Limited financial resources and manpower may pose challenges in scaling up the tree plantation drive and ensuring its long-term sustainability. Securing adequate funding for procurement of saplings, equipment, and maintenance supplies, as well as recruiting and training personnel, may require strategic partnerships and resource mobilization efforts.

Site Preparation Challenges: Site preparation, including soil testing, land clearing, and preparation of planting sites, may encounter logistical challenges such as land ownership issues, land degradation, or uneven terrain. Overcoming these challenges may require additional resources for land management and soil rehabilitation efforts.

Community Resistance or Apathy: Resistance or apathy from the local community towards tree plantation initiatives may hinder the success of the practice. Building trust, raising awareness, and engaging with community members through participatory approaches can help address these challenges and garner support for the initiative.

5. Links of activities cited in the practice

Sr. No.	Year of plantation	No. of plants	Link
1.	2017-18	30	https://drive.google.com/file/d/1EiVocOpv0vmFUoFmIXU7F3gQZ-MkBUx/view?usp=sharing
2.	2018-19	25	
3.	2019-20	25	
4.	2020-21	10	
5.	2021-22	12	
6.	2022-23	35	
7.	2023-24	35	

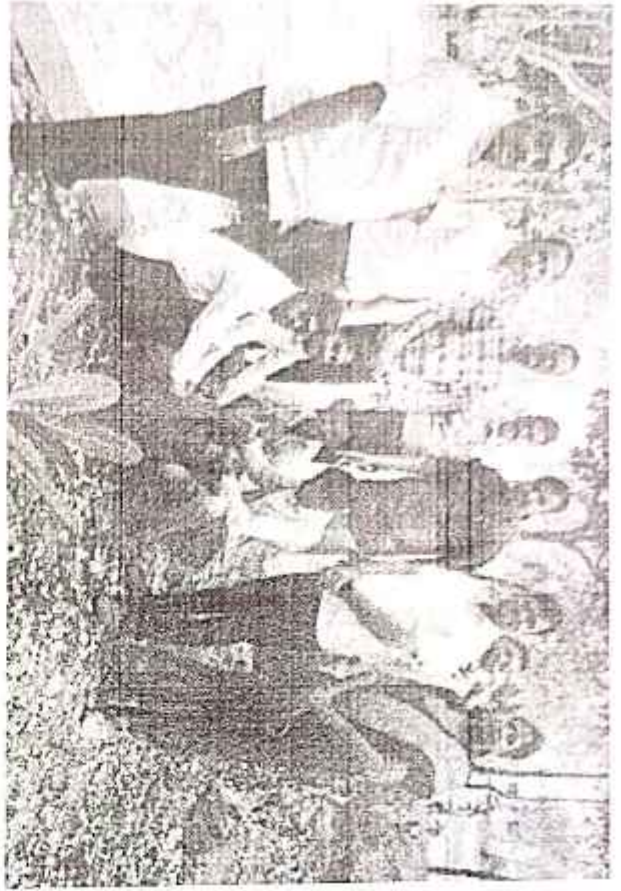
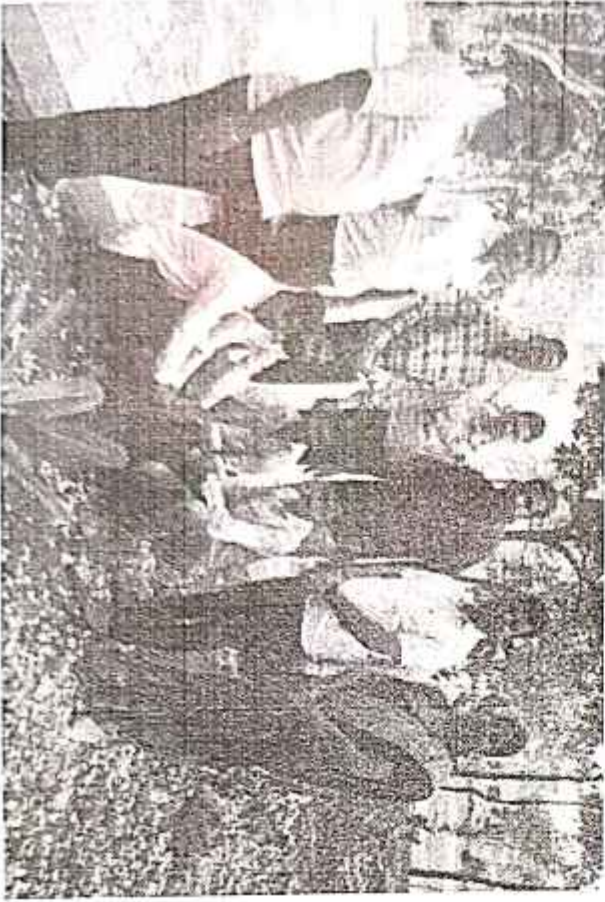






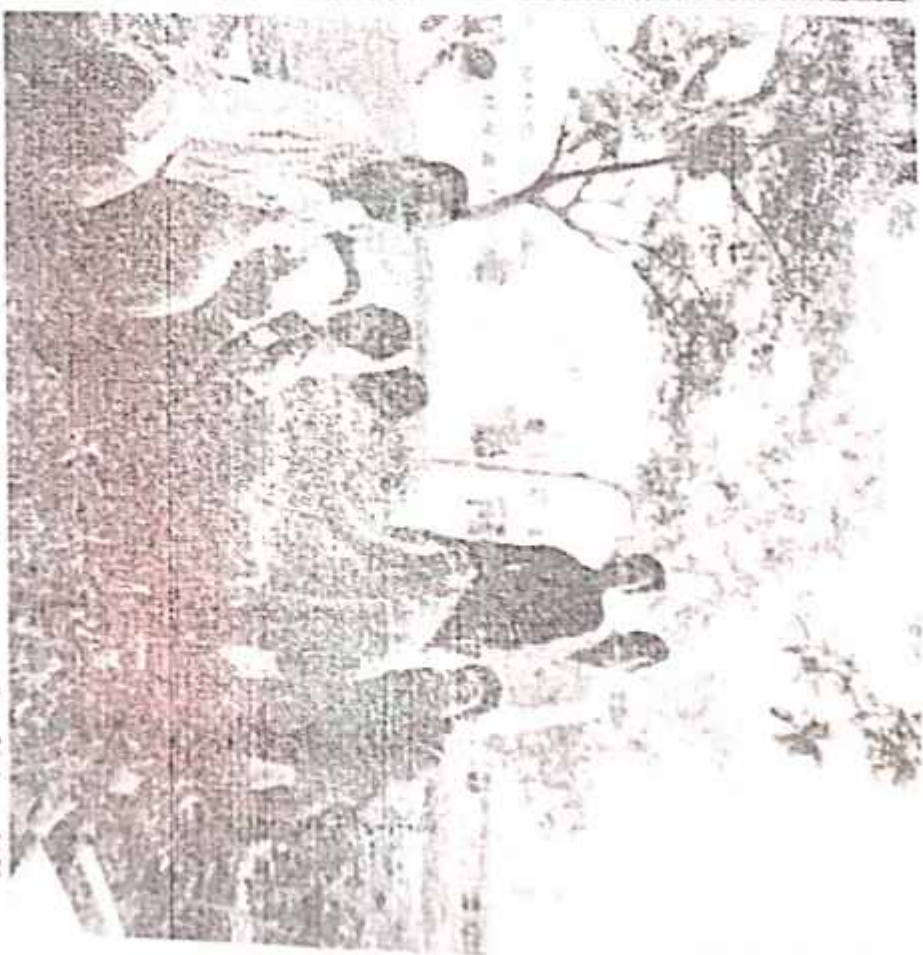
The department of NSS organized tree plantation at college campus



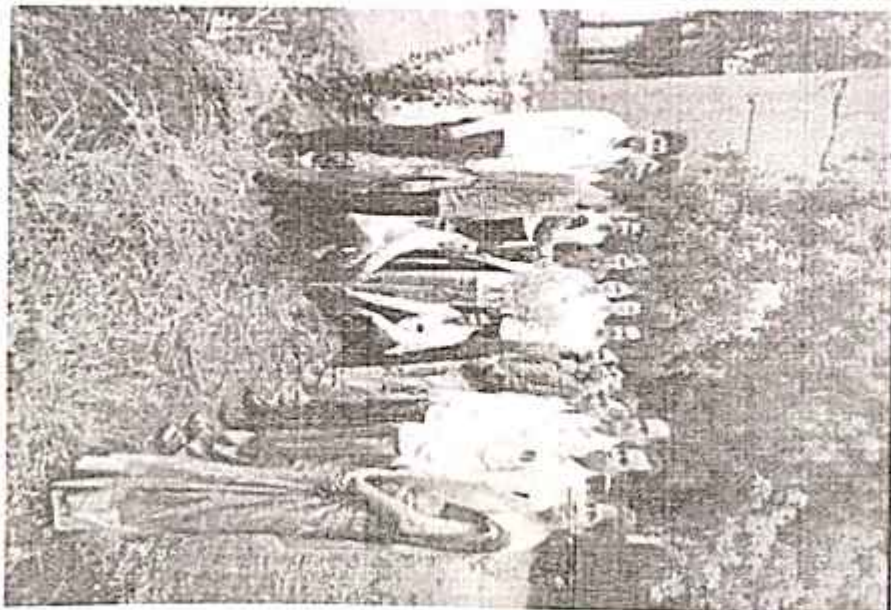
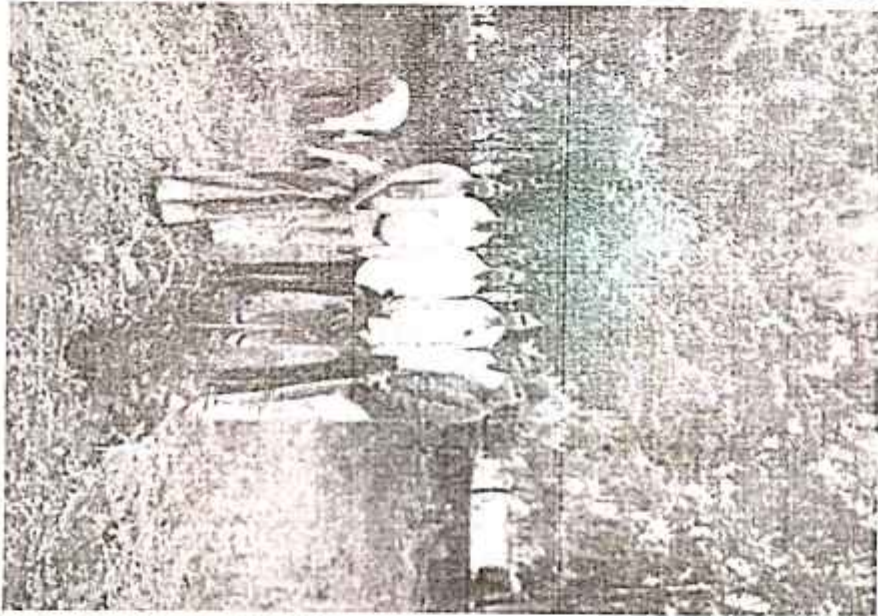
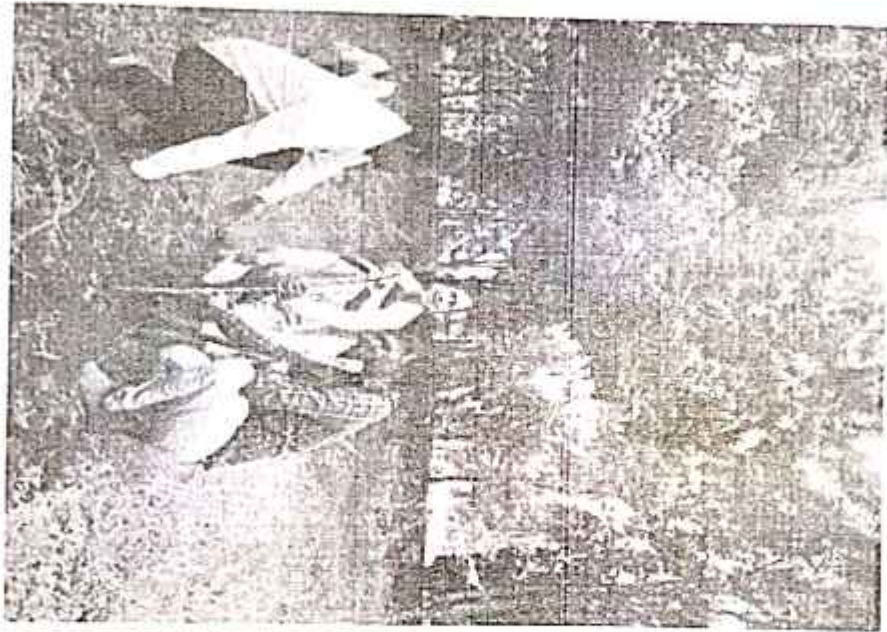


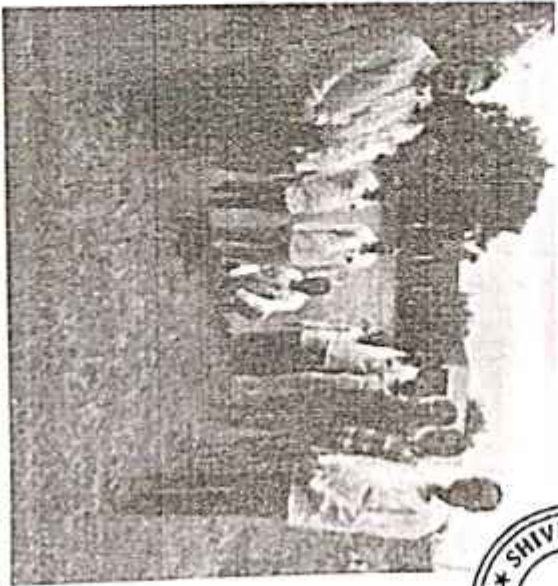
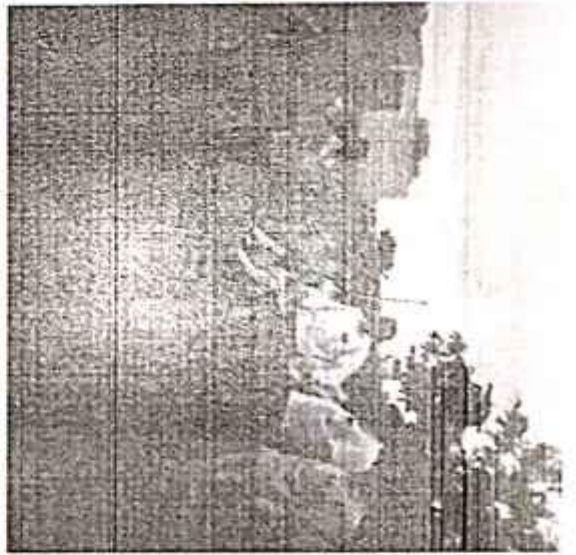
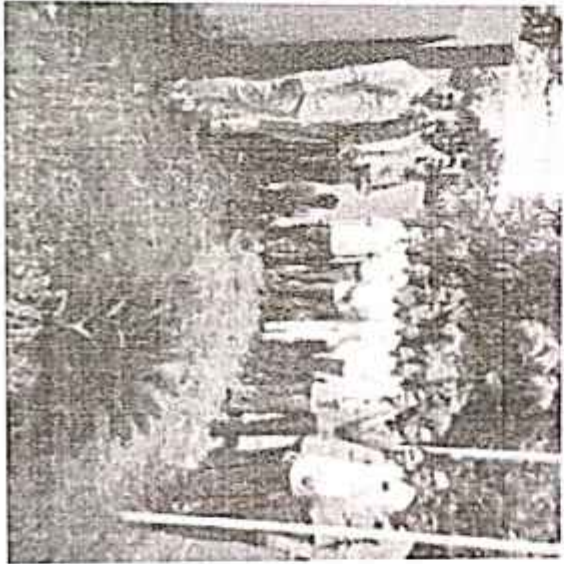
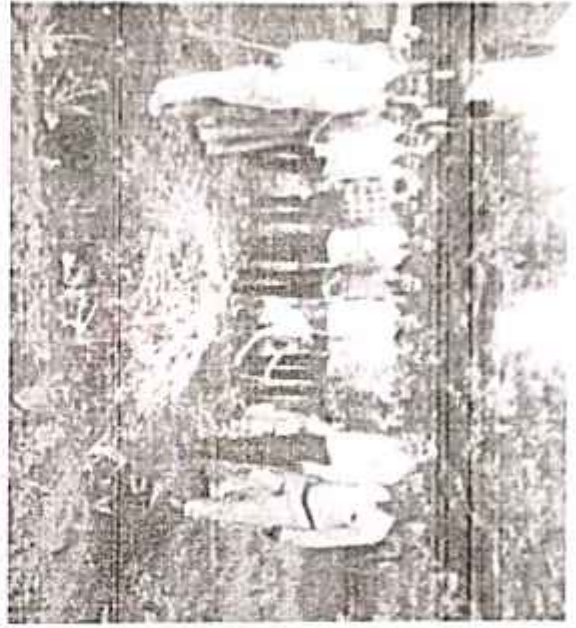
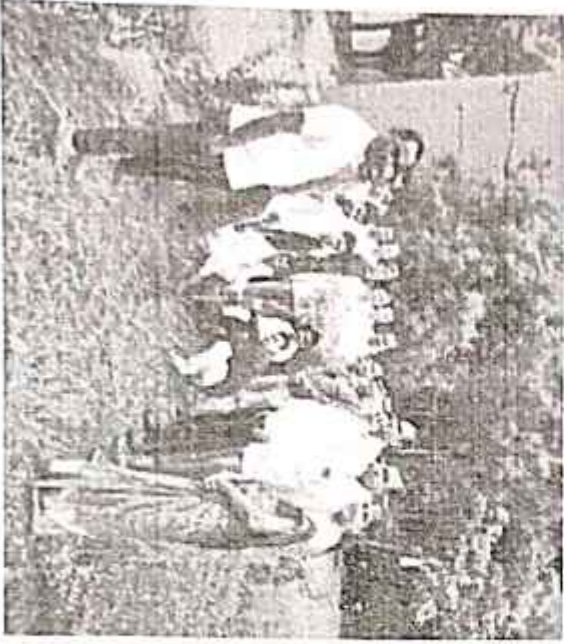


Plantation activity on the occasion of World Environment Day 5th June, 2021



Plantation activity on the occasion of World Environment Day 5th June, 2021





Advantages

It provides 75% imperviousness

Disadvantages/Limitations

- * Growth of aquatic weeds takes place
- * It has less durability



