MOBIUS FOUNDATION

The Climate Reality Project
INDIA & SOUTH ASIA

YOUTH FOR EARTH 2024

PROJECT REPORT

**Teams have to follow this format of headings for report writing & report should not be more than 10 pages.*

1. Title of Project/ Name of Team

PROJECT TITLE: Project Srishti

NAME OF THE TEAM: ABC

TEAM MEMBERS:

Mentor Names - Jane Doe
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Team Member Names:

1. **Prachi Sharma**
2. **Devansh Verma**
3. **Sanjana Shah**
4. **Kritika Pandey**
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2. Introduction

Lantana camara, originally a native of Central and South America, has become one of the world's most notorious invaders. This plant aggressively takes over landscapes, pushing out native flora, disrupting ecosystems, and reducing biodiversity. Its allelopathic properties make it tough to eliminate, and traditional methods like mechanical removal and chemical treatments are not only costly but also labor-intensive and often short-lived.

Project Srishti aims to flip the script by converting this invasive plant into a valuable organic fertilizer and other livelihood options from this weed thereby boosting the life of tribal communities.

This initiative tackles environmental, agricultural, and economic challenges head-on. By promoting sustainable agriculture and offering a practical solution for managing the spread of

This project addresses significant ecological threats while creating economic opportunities.

While prized for its ornamental value, lantana poses significant threats to wildlife due to its allelopathic chemicals, dense growth habits, and toxicity. Lantana alters ecosystems by outcompeting native vegetation. Its rapid growth and ability to form dense thickets shade out other

plants, reducing biodiversity and altering habitats. This disruption affects wildlife by diminishing food sources and shelter, impacting species that rely on diverse plant communities for survival.

Control of Lantana usually encompasses mechanical removal, herbicide application, and biological control through the introduction of natural enemies. These techniques differ in effectiveness and sometimes have undesirable consequences for non-target species.

Project Srishti demonstrates a clear way out: turning something that was causing wide-scale destruction into a force for sustainable agriculture and community prosperity. Conservation efforts must consider the ecological context and employ integrated approaches to manage and mitigate the spread of this invasive species, thereby safeguarding the delicate balance of natural ecosystems worldwide.

3. Aims & Objectives

The core concept of the project is to convert this invasive plant into a nutrient-rich manure through composting, cut homam sticks from this weed and make polybag mixtures in order to increase the livelihood of people. The primary objectives are:

1. **Environmental Management:** Reduce the ecological footprint of Lantana camara by utilizing it as a raw material.

2. **Sustainable Agriculture:** Provide farmers with an affordable and effective organic fertilizer alternative.

3. **Economic Opportunities:** Create new income streams for communities and tribes involved in the collection and processing of Lantana camara.

The Lantana manure project aligns with several United Nations Sustainable Development Goals (SDGs):

1. **SDG 2: Zero Hunger**

Boosts agricultural productivity with organic fertilizer, enhancing soil fertility and crop yields, promoting food security through sustainable farming practices.

2. **SDG 12: Responsible Consumption and Production**

Converts invasive Lantana camara into valuable compost, championing waste reduction, recycling, and responsible resource use while cutting reliance on harmful chemical fertilizers.

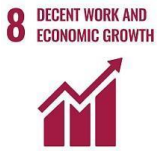
3. **SDG 13: Climate Action**

Addresses climate change by managing Lantana camara, which degrades habitats and contributes to greenhouse gas emissions. Composting helps sequester carbon in the soil.

4. **SDG 15: Life on Land**

Protects and restores ecosystems by controlling Lantana camara, preserving biodiversity, preventing land degradation, and restoring native habitats.

5. **SDG 8: Decent Work and Economic Growth**



Creates economic opportunities by involving local communities and tribes in collecting, processing, and distributing Lantana-based compost, fostering job creation, skill development, and sustainable livelihoods.

6. SDG 17: Partnerships for the Goals

Thrives on collaboration among communities, governments, NGOs, and agricultural organizations, enhancing resource mobilization, knowledge sharing, and sustainable practices.

The Lantana Manure Project is more than just an environmental initiative; it's a holistic approach to sustainable development. By turning a troublesome plant into a valuable resource, the project not only mitigates the environmental impact of Lantana camara but also supports community prosperity and fosters global partnerships for a greener, more sustainable future.

4. Methodology (not more than 500 words)

Green manuring using Lantana:

1. **Collect and Shred Lantana:** Gather lantana leaves and stems, then chop them into small pieces. Make it into a powder.
2. **Layering:** In a compost bin, layer lantana powder, green waste and brown matter alternatively to ensure appropriate carbon to nitrogen ratio.

The bin is watered and turned every week. The compost will be ready within 2 to 3 months.

Nursery polybags filling:

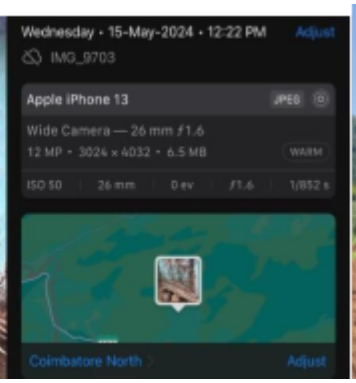
As an alternative to fill nursery polybags lantana is mixed with soil so that nearly 30 % of topsoil usage is reduced. This mixture of lantana and soil has about 55% more water retention than normal soil.

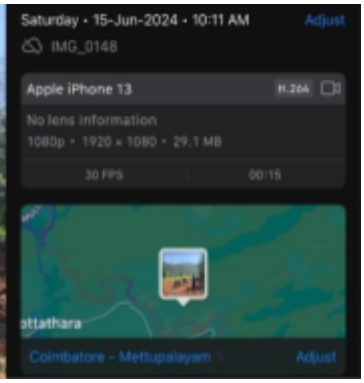
Homam sticks:

Lantana sticks were collected and cut into 7-inch pieces to make homam sticks which increases the livelihood and revenue of the native tribes.

The lantana manure was executed in xxx geographical location, where the people shred lantana and compost it into manure and sell it to various customers and earn their livelihood.

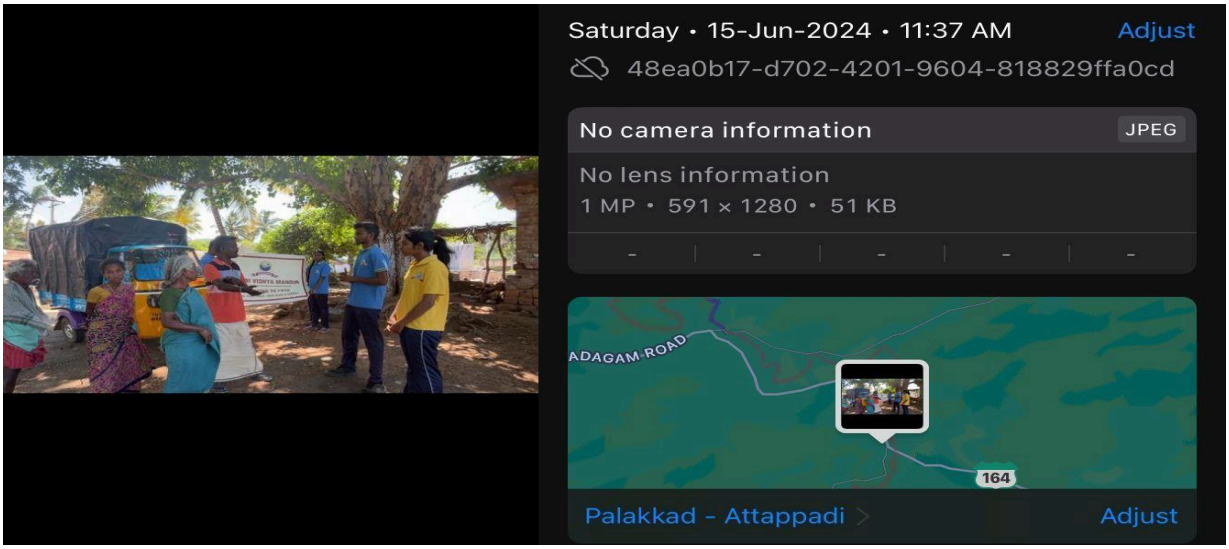
The homam sticks from lantana sold to temples also made a significant change in the tribal life. By turning Lantana camara, a plant destroying the ecosystem into a way of enhanced livelihood of tribes, team Srishti proves to be eco conscious. Project Srishti has also taken up the initiative and has started the field work of lantana manure and polybags filling with lantana and soil mixture to a broader view by spreading awareness in other tribal as well as urban settlements.





Team Srishti has also organized collection and donation drives to the tribal settlement, henceforth working for their betterment. We have also conducted a mass planting drive in our school premise with the lantana manure bought from the tribal people.

Following it several awareness drives and rallies were also held to emphasise on the importance of native forests and balance in the ecosystem for the upholdment of better future.



5. Environmental & Social Impacts (not more than 500 words)

Environmental Impacts by using our project:

1.**Invasive Species Control**: Manages and reduces spread, protecting native flora and ecosystems.

2.**Soil Health:** Improves soil structure, fertility, and water retention.

3.**Biodiversity:** Supports native species by controlling lantana.

4. **Reduction in Chemical Use:** Decreases need for chemical fertilizers, reducing soil and water pollution.

5.**Waste Management:** Reduces plant waste, promoting a circular economy.

Social Impacts by using our project:

1. **Economic Benefits**, generates income through production and sale of manure, homam sticks and polybag mixture promoting tribal livelihood.

2.**Employment Opportunities:** Creates jobs in harvesting, processing, and marketing.

3. **Agricultural Productivity:** Enhances crop yields, supporting food security and farmer/tribal livelihoods.

4.**Health and Safety:** Lowers health risks from chemical fertilizers.

5.**Community Engagement:** Fosters collaboration and environmental conservation.

6. **Challenges (not more than 500 words)**

1. **Locating lantana:**
   Locating lantana in the dense area.
2. **Uprooting:**
   Lantana being a thorny shrub is difficult to handle and uproot.
3. **Composting Issues:**
   Slow decomposition of woody stems and the need to balance lantana with cocopeat for effective composting.
4. **Economic Viability:**
   Initial setup costs and market acceptance issues may hinder widespread adoption.

7. Results & Conclusion (not more than 500 words)

1. **Soil Enrichment:**
   Lantana manure effectively enriches soil with organic matter by improving soil structure and fertility.
2. **Invasive Species Management**:
   Utilizing lantana for composting helps control the spread of this invasive lantana, benefiting native flora and ecosystems.
3. **Economic Opportunities:**
   Production and sale of lantana manure and homam sticks creates economic opportunities, particularly in rural areas and increases the livelihood of the people.
4. **Environmental Benefits**:
   Reduced chemical fertilizer use and waste management benefits contribute to environmental sustainability.
5. **Water retention:**
   Lantana's wood chips are proved to have good water retaining properties from our project proving that this manure promotes agriculture consuming less amount of water.
6. **Soil conservation**:
   By using lantana in polybag filling mixture topsoil usage is reduced and thus soil degradation is also prevented.

Lantana manure, homam sticks and polybag filling mixture presents a promising solution for sustainable agriculture, offering benefits such as soil enrichment, invasive species management, economic opportunities and environmental sustainability.

However, challenges such as handling and processing, sustainability concerns,

and economic viability needs to be addressed through careful planning, education, and community engagement.

With proper management and support, lantana manure can be a valuable asset in promoting agricultural productivity, biodiversity conservation, and economic development.

8. Future Potential (not more than 500 words)

Our future idea of expansion of the project includes to create awareness and seeking hands from various sponsorships to enhance the business deals to ideate,

- **Bio gas Production**
- **Lantana Furniture Making and marketing**
- **Expansion of Marketing the Lantana household decorative**

Other ideas include,

Agricultural Innovation:

Research and Development: Explore optimal composting techniques and nutrient content analysis.

Technology Integration: Implement automated composting systems for efficiency.

Environmental Sustainability:

Waste Management Solutions: Utilize lantana for sustainable waste management.

Carbon Sequestration: Contributes to soil carbon sequestration.

Economic Development:

Market Expansion: Promote lantana manure as a premium organic fertilizer.

Value-Added Products: Diversify into organic fertilizers and soil amendments.

Community Engagement:

Capacity Building: Provide training on lantana management and composting.

Partnerships: Foster collaboration for sustainable initiatives.

Policy and Regulation:

Incentive Programs: Offer incentives for adopting sustainable practices.

Regulatory Frameworks: Establish regulations for lantana management.

With innovative approaches, collaborative efforts, and favorable policies, team Srishti holds the key to transforming into a valuable asset for sustainable agriculture and ecosystem management.

“Any regeneration project that fails to put environmental and social benefits at its very heart is unlikely to achieve anything more than a very short-lived spasm of spurious prosperity.”