

GREENING THE GLOBE: SUSTAINABLE TREE PLANTATION PRACTICES**Dr. Rashmi C. Lengade**

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ABSTRACT

This study explores the multifaceted concept of Greening the Globe since the Green Revolution. This research integrates the Sustainable Development Goals by the United Nations to provide a better biodiversity and environment. It strives to present a few initiatives by the government and NGO's and the contribution of individuals for a stable and sustainable construction of our ecological environment. By advancing collaborative disciplines, we are trying to address the global challenges. Achieving sustainable development needs a holistic approach that cements the multiple disciplines. The findings call for an urgent need and collective approaches across the sectors to achieve the best pathway. Adopting interdisciplinary efforts and engaging in different sectors with unique approaches can make a better balance. The use of science and technology should be adopted at its best along with the contribution of mankind, which is a primary initiative for promoting a better future for our next generation. Education plays a very important role in this regard, especially the right education for youths to focus on our ecology rather than abusing it.

Keywords: Ecology, Sustainability, Biodiversity, Education, and Green

INTRODUCTION

The **Green Revolution in India** was a period that began in the 1960s during which the agriculture sector was converted into a modern industrial system by the adoption of technology, such as the use of High-Yielding Variety (HYV) of seeds. India's Green Revolution dramatically increased food grain production, ending chronic shortages and making India self-sufficient, but it also created environmental issues like water depletion and soil degradation, increased regional/social inequality (favouring larger farmers in Punjab, Haryana, UP), and led to dependency on chemical inputs, shifting agriculture towards commercialization and market-orientation. These issues arose from intensive use of chemicals, water, and technology not accessible to all farmers, creating unsustainable practices.

Another Revolution behind this is now echoed everywhere is the **Sustainability**, where it has become a major point of discussion. It's a growth that meets current needs without harming and maintains economic growth, social equality, and environmental protection.

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared vision for action for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership. They recognise that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests. Today, the Division of Sustainable Development in the United Nations provides substantive support and capacity-building, including water, climate, soil, oceans, urbanization, transport, science and technology and many more sectors. It includes the goals-

1. No Poverty
2. Zero Hunger
3. Good Health and Well-Being
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy

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8. Decent Work and Economic Growth
9. Industry, Innovation, and Infrastructure
10. Reduced Inequalities
11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15. Life on Land
16. Peace, Justice, and Strong Institutions
17. Partnerships for the Goals

Sustainable tree plantation involves planting native species, integrating trees with agriculture (agroforestry), ensuring long-term care, involving local communities, and focusing on ecological benefits like carbon sequestration, biodiversity, and soil/water health for lasting environmental and social impact, rather than just quick, large-scale planting. Key aspects include selecting climate-resilient, appropriate species, using efficient water techniques. The benefits of this will be significantly more which creates biodiversity, and supports livelihoods through economic and social stability.

LITERATURE REVIEW

Why are trees important to the environment?

The study states that trees help to clean the air we breathe, filter the water we drink, and provide habitat to over 80% of the world's terrestrial biodiversity. Forests provide jobs to over 1.6 billion people, absorb carbon dioxide from the atmosphere, and are key ingredients in 25% of all medicines. Protecting forests and diverse planting plays a vital role in balancing the ecosystem. Even with this importance, deforestation and urbanisation continue to threaten global tree cover, leading to ecosystem degradation and biodiversity loss. Therefore, conserving and expanding tree populations is critical for a sustainable future.

India is a highly diverse country with a wide variety of plants and greenery. Key hotspots include the Himalayas and the Western Ghats. However, challenges persist. Many tree species are threatened, with hundreds listed as endangered. Habitat degradation is an ongoing issue. This has led to initiatives such as tree planting and community-led conservation efforts. When a forest fire occurs and burns, the stored carbon is released, which speeds up global warming. Mature and diverse forests, like those in the Western Ghats or Northeast India, serve as significant carbon sinks. Replacing them with single-species plantations cannot provide the same ecological benefits because they lack the complexity and carbon storage potential of native forests. Today, global warming or climate change is one of the threats to life on earth, where an increase in the plantation can really help us. We need more clean air and water to live, rather than modern technology for survival. Trees are the dominant aspect of forests and keep the ecosystem in a more balanced way. A single tree often supports hundreds of species. For instance, fig trees are regarded as keystone species in many Indian forests, feeding a large number of birds and mammal species during the scarce season. Trees purify air, conserve water, prevent soil erosion and help to mitigate climate change.

Forest types in India

1. Tropical Rainforests (e.g., Western Ghats, Andaman and Nicobar Islands)
2. Deciduous Forests (e.g., Central India, Satpura Range)
3. Dry and Thorn Forests (e.g., Rajasthan, parts of Gujarat)
4. Coniferous and Montane Forests (e.g., Himalayas)
5. Mangrove Forests (e.g., Sundarbans)

These are the assets for our future generation. We have many government organisations to protect trees and forests. The primary government body Indian Council for Agricultural Research (ICCAR), Department of Agricultural Research and Education (DARE), and State Agricultural Universities (SAU) aims at going green and planting more trees.

METHODOLOGY

The methods used in this paper are based on gathering relevant data from the specified documents and articles as secondary data, which is used to provide more clearer and complete understanding of the concept of social media and consumer behaviour. The study is mainly based on scholarly journals, books and authoritative databases for understanding consumer decision making and variables.

According to the data collected, today the slogan “**Save Trees, Save Life**” is the most appropriate. We need to focus on making our land green, instead of cutting forests and going for urbanization. We have a very candid example of **Saalumarada Thimmakka** (died 14 November 2025), also known as **Aala Marada Thimmakka**, who was an Indian environmentalist from Karnataka, noted for her work in planting and tending to 385 banyan trees along a 4.5-kilometre (2.8 mi) stretch of highway between Hulikal and Kadur district. Nearly, she planted 8000 other trees.

Thimmakka was born in Gubbi Taluk of the Kingdom of Mysore, which is now in the Tumakuru district of Karnataka, on 30th June, 1911 around 1928. Chikkaiah, a resident of Hulikal village in the Magadi taluk of the Ramanagara district in Karnataka, was her husband. She was employed as a temporary worker in a nearby quarry and had no formal education. The couple was unable to conceive. According to legend, Thimmakka began planting banyan trees instead of kids. Because of her work, she is known by the Kannada word Saalumarada, which means (row of trees in Kannada language) is how she is referred to because of her work.

From these trees, Thimmakka and her spouse began grafting saplings. In the first year, ten saplings were grafted and planted five kilometres away from Kudur, a nearby village. In the second year, fifteen saplings were planted, and in the third year, twenty. She planted these trees with what little she had. To water the saplings, the couple would travel four kilometres with four pails of water. They were also fenced off with prickly shrubs to keep cattle from grazing on them. In order to provide enough rainwater for the saplings to grow, they were primarily planted during the monsoon season. The saplings always took root by the time the next monsoon arrived. A total of 384 trees were planted, and their estimated asset value is 1.5 million rupees. The Karnataka government is now in charge of managing these trees.

In 2016, Saalumarada Thimmakka was listed by the British Broadcasting Corporation as one of the most influential women of the world. For her achievement, she was conferred with the Padma Shri Award on 16th March, 2019.

Thimmakka had received invitations to numerous afforestation initiatives in India and also participated in other social activities, such as building a tank to hold rainwater for her village's annual fair. A trust has been established in order to fulfill her dream of building a hospital in her village in honor of her husband. “Thimmakka Mathu 284 Makkalu,” a 1999 documentary about her work, was screened at the 2000 Indian International Film Festival.

To gain sustainability and to balance the ecology, we need such personalities who generously sacrificed their lives for our future generation to breathe free.

Apart from this we have many NGO's operating in many cities to rise the awareness programs to the public and initiatives encompass afforestation, ecosystem restoration, water conservation projects, awareness sessions, and nutrition programs, aiming at combating climate change and fostering sustainable communities.

Major Threats to Trees

Despite of education and awareness, we are lagging to understand that the threat to green is also a threat to us. We often go beyond our imagination to understand nature and go on to bewildering, rupturing and exploiting nature with artificial remakes. Of course, mankind has proven to be the best for the development of science and technology, but with an adverse growth in industrialisation, urbanisation, and population growth, it has led to environmental degradation.

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The threats include deforestation, climate change, global warming, forest fires, and land reclamation. The environmentalists suggest certain green practices apart from “Vanamahotsav” (India’s Annual Tree Planting Festival), which include Renewable energy, Green Buildings, Waste Management, Eco-Friendly Transportation and Sustainable Agriculture.

CONCLUSION

In today’s global world, Green Sustainability is not an option but a necessity for the planet's survival. Collective efforts are more required than slogans in speech and books. Protecting and planting the trees is a shared responsibility. We need the individuals like Salumarada Thimmakka, Jadav Payeng, known as Forest Man of India M.S Swaminathan, an environmentalist, Deepak Gour who aimed to plant billion trees, Radhika Anand, Delhi- based CEO of Plantology, planted more than one lakh fruit trees, Shyam Sunder Jyani, a professor took his steps to revive Neem trees in Bikaner, and Shubhendu Sharma, an engineer, founder of Afforestt , a service provider for creating natural, wild, and native forests. In the phase of deforestation and degradation, protecting and planting trees has become an immediate need. Safeguarding trees today ensures a better future for generations to come.

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