

## National Seminar on Effect of Ecopreneurship on Environment Protection & Sustainable Development

### Eco-Entrepreneurship: A study on Opportunities and Obstacles in Indian Context

**M. Pavana kumari<sup>1\*</sup>, Dr. M. Vijay kumar<sup>2</sup>**

<sup>1</sup>Research Scholar, Department of Management Studies, JNTUK, Kakinada, Andhra Pradesh, India.

<sup>2</sup>Professor & Head, Department of Management Studies, Andhra Loyola Engineering College, Vijayawada, Andhra Pradesh, India.

\*Corresponding author e-mail: [pavana\\_mutyala@yahoo.co.in](mailto:pavana_mutyala@yahoo.co.in)

#### Abstract

**Introduction:** Environmental degradation is a serious threat to the lives of people, plant, and animals, and business and industry are often viewed as one of the largest contributors. Ecopreneurship, also known as ecological entrepreneurship, is a revolutionary form of operating businesses that brings together economic success with environmental responsibility, and is emerging as a crucial driver of India's green economy. The study seeks to understand the concept of ecopreneurship, to study the role of ecopreneurs in the Indian scenario, to examine real world case studies, and to provide suitable recommendations to improve ecopreneurship in India.

**Methodology:** This research comes under the category of descriptive research method. The paper is purely based on secondary data, collected from various websites, online journals and academic materials, and government reports. The current situation of ecopreneurship in India is examined by analysing patterns and case studies, covering the typologies of green entrepreneurship identified by Khare (2003), a list of ten Indian ecopreneurial ventures classified by state, founder, sector and key innovation, area-wise climate change solutions, sector-wise and product-wise market growth and market size, the highlights of

**IntelliMindEd | ISSN: 2998-8527, USA | National Seminar on Effect of Ecopreneurship on Environment Protection & Sustainable Development, Department of Commerce & Management Studies, AKNU, Rajamahendravaram, AP, India**

Union Budget 2025 relevant to green entrepreneurship, and existing government schemes. Due to the descriptive nature of the research, the study is composed of secondary data only, and statistics are provided only based on the data's accessibility.

**Results & Discussion:** Four categories of green entrepreneurs were identified by Khare (2003): visionary champion, ad-hoc enviropreneur, ethical maverick, and inventive opportunist. The documented ventures include Phool.co, ReNew Power, Bare Necessities, Husk Power Systems, EcoRight, Startup Farms, Zerocircle, Flycatcher Technologies, NEPRA and Tonbo Imaging, spanning waste management, renewable energy, sustainable agriculture, biodegradable packaging and sustainable fashion. For 2024, India has 1.76 Mn hectares of organic farming land, generated around 0.5 of its total electricity from waste, and recorded an increase of renewable energy by 30%. The market for ecopreneurs in waste management and renewable energy is expanding with a forecast CAGR of about 12.5%, renewable energy growing at 8.7% with a market size of \$22 bn and waste management at 6.5% with \$13.1 bn, while market size reaches \$2.07 bn for the organic sector, \$11.9 mn for green packaging and \$24 bn for green energy solutions. Union Budget 2025 allocated Rs. 26,549 crores for new and renewable energy and Rs. 600 crore for Green Energy Corridors, and reduced GST on waste processing equipment from 18% to 5%. Reported obstacles include greenwashing scrutiny, complex ESG reporting, permitting delays, high upfront costs, limited access to green finance and lack of skilled people.

**Conclusion:** In India, ecopreneurship offers a unique set of potential and difficulties. The opportunity for eco-friendly businesses is growing as a result of growing customer preference for sustainable products, government assistance through programs like Startup India and other green initiatives, and growing environmental awareness. The rise of ecopreneurial ventures is nevertheless hampered by obstacles like expensive startup costs, restricted access to green funding, low consumer awareness in rural areas, and complicated regulations. Government, business, and civil society must work together to build an environment that encourages sustainable entrepreneurship. India can become a global leader in ecopreneurship by utilizing technology, encouraging innovation, and putting robust policy measures in place.

---

**Keywords:** Ecopreneurship; Eco-Entrepreneurship; Green Economy; Environmental Sustainability; Renewable Energy; Waste Management; Organic Farming; Government Schemes; Green Finance; India.

---

## 1. Introduction

As an amalgamation of traditional and social entrepreneurship, ecopreneurship — also known as eco-entrepreneurship — is a relatively new type of entrepreneurship. Research on ecopreneurship has grown during the last several years. The practice of operating a business with an emphasis on sustainability and the environment is becoming more popular globally, including in India's emerging economies. In times when India faces issues like pollution, resource depletion, and global warming, among others, ecopreneurs play an indispensable part in providing solutions. Ecopreneurs play a crucial role in creating innovative, sustainable solutions that lower ecological footprints while making money as the world's climate change issues deepen. Key sectors offering immense opportunities include renewable energy, sustainable agriculture, green construction, eco-tourism, and waste management. Notable success stories, such as ReNew Power in renewable energy, Phool.co in waste recycling, and Organic India in sustainable agriculture, demonstrate the potential of ecopreneurship in addressing both environmental and economic challenges. This study examines the current situation of ecopreneurship in India using secondary data, analyzing patterns and case studies to suggest solutions for long-term growth.

## 2. Meaning of Ecopreneurship

A business strategy known as ecopreneurship blends entrepreneurship with an emphasis on environmental sustainability.

Green entrepreneurship, sustainable entrepreneurship, and environmental entrepreneurship are some other names for it.

## 3. Literature Review

Certainly the most significant global concern of the twenty-first century is deterioration of the environment. The rising rates of soil erosion, deforestation, land degradation, and

chemical emissions from industry alarm governments, nongovernmental organizations, and academics (Volery, 2002). Ecopreneurship and green product projects, in turn, offer numerous benefits for development, such as eradicating poverty and establishing employment opportunities (Solaja, 2017; Shrestha & Rijal, 2022). However, sustainability necessitates collaboration between ecopreneurs and members of society on the one hand, and the goods manufacturers on the other (Rodríguez-García et al., 2019). The study used Indian ecopreneurial scenarios, such as organic farming and renewable energy start-ups, and discovered that the results were not entirely linear or favorable. While some companies have expanded naturally, others fail due to the market's extreme fragmentation and consumers' skepticism (Rajput & Singh).

#### **4. Objectives**

1. To understand the concept of Ecopreneurship
2. To study the role of ecopreneurs in Indian scenario
3. To examine real world case studies on ecopreneurship
4. To provide the suitable recommendations to improve the ecopreneurship in India

#### **5. Methodology**

##### **5.1 Type of Research**

This research comes under the category of descriptive research method.

##### **5.2 Source of Data Collection**

This paper is purely based on Secondary data, collected from Various websites, Online journals and academic materials, Government reports.

##### **5.3 Limitations and Scope**

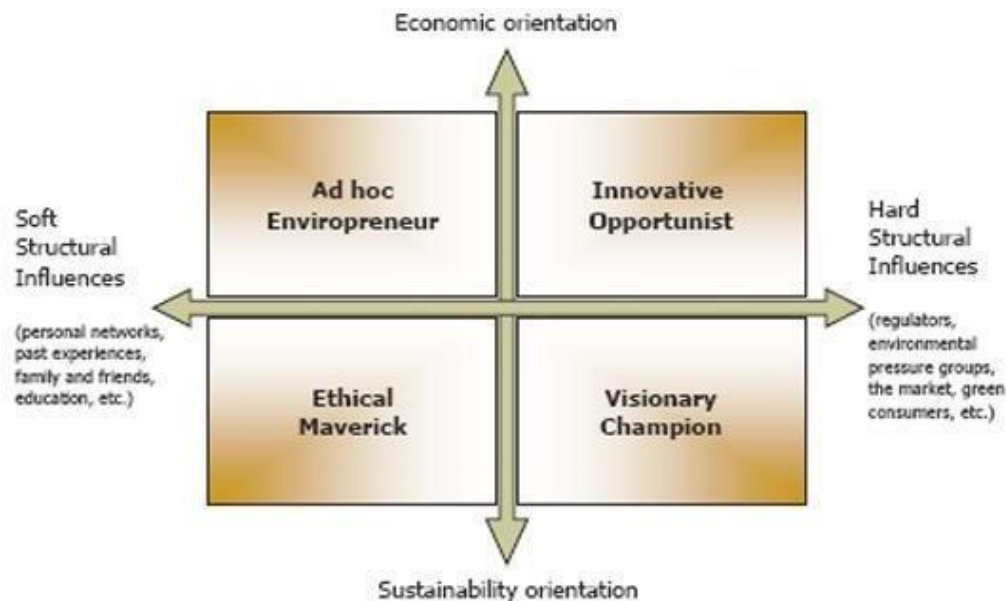
Due to the descriptive nature of the research, this study is composed of secondary data only. Statistics are provided only based on the data's accessibility.

#### **6. Results and Discussion**

**IntelliMindEd | ISSN: 2998-8527, USA | National Seminar on Effect of Ecopreneurship on Environment Protection & Sustainable Development, Department of Commerce & Management Studies, AKNU, Rajamahendravaram, AP, India**

## 6.1 Typologies of green entrepreneurship

Governments and corporations have long been in the forefront of environmental protection, but this is beginning to change. One significant approach to the environmental issues confronting the world today is ecopreneurship, an emerging field in business. Efforts employing ecopreneurship can address a variety of matters, such as food waste, recycling, and ocean pollution.



**Fig1: Typologies of Green Entrepreneurship**

Four categories of green entrepreneurs were identified by Khare (2003): visionary champion, ad-hoc enviropreneur, ethical maverick, and inventive opportunist. Entrepreneurs with a strong economic orientation and significant hard structural influence are considered **innovative opportunists**. (regulators, environmental pressure groups, the market, green consumers, etc.).

Ad-hoc enviropreneurs has also high economic orientation but has soft structural influences (personal networks, past experiences, family and friends, education, etc.). On the sustainability orientation there were ethical maverick which has soft structural influences and visionary champion which tend to have hard structural influences

## 6.2 Case studies on Ecopreneurship in India

| S.  | STATE         | START-UP                | FOUNDER                     | SECTOR                                   | KEY INNOVATION                                                                  |
|-----|---------------|-------------------------|-----------------------------|------------------------------------------|---------------------------------------------------------------------------------|
| 1.  | Uttar Pradesh | Phool.co                | Ankit Agarwal               | Waste Mgt & Sustainable Products         | Recycling Temple Waste into Sustainable Products                                |
| 2.  | Gujarat       | ReNew Power             | Sumant Sinha                | Renewable Energy                         | Revolutionizing Renewable Energy                                                |
| 3.  | Karnataka     | Bare Necessities        | Sahar Mansoor               | Sustainable Consumer Goods               | Zero-Waste Lifestyle Brand                                                      |
| 4.  | Bihar         | Husk Power Systems      | Gyanesh Pandey              | Renewable Energy & Rural Electrification | Rural Electrification Using Biomass                                             |
| 5.  | Gujarat       | EcoRight                | Rohnit Mehta, Prateek Goyal | Sustainable Fashion                      | Sustainable Fashion & Accessories                                               |
| 6.  | Chandigarh    | Startup Farms           | Manisha Gupta               | Sustainable Agriculture                  | eco-friendly supply chains for agricultural products                            |
| 7.  | Gujarat       | Zerocircle              | Neha Jain                   | Biodegradable Packaging                  | seaweed-based materials to create biodegradable packaging                       |
| 8.  | Gao           | Flycatcher Technologies | Dr. Kabir Udeshi            | Waste Management                         | automated waste segregation solutions for efficient recycling                   |
| 9.  | Gujarat       | NEPRA (Let's Recycle)   | Sandeep Patel               | Waste Recycling                          | India's largest dry waste recycling company                                     |
| 10. | Karnataka     | Tonbo Imaging           | Mukund Bansal               | Energy-Efficient Imaging Technology      | low-power, sustainable imaging technology for industrial & defense applications |

**Tab2: List of ecopreneurs and their details**

## 6.3 Opportunities for ecopreneurship in India

### Solution for climate change issues

In India, climate change has a major impact on waste management because it increases the amount of waste produced by extreme weather events like floods and droughts. It also affects the efficiency of renewable energy sources like solar power because of increased heat and unpredictable weather patterns, which makes it difficult to manage

solar waste as India's solar capacity grows quickly, To lessen the impact on the environment, it is required for stronger recycling programs for both conventional and renewable energy sources as well as better waste management techniques.

| Area of Impact   | Examples                                             | Outcomes                                                               |
|------------------|------------------------------------------------------|------------------------------------------------------------------------|
| Nature friendly  | Green Packaging, Organic farming, Green Construction | For 2024, India has 1.76 Mn Hectares of Organic farming land           |
| Waste Management | Waste recycling, waste to energy                     | India generated around 0.5 of its total electricity from waste in 2024 |
| Renewable energy | Solar and wind energy                                | Increase of renewable energy by 30%                                    |

**Tab3: Solutions for climate change issues**

### Market Growth:

With forecasts showing a Compound Annual Growth Rate (CAGR) of about 12.5%, the market for ecopreneurs in India's waste management and renewable energy sectors is expanding significantly. This growth is being driven by rising environmental consciousness, government policies that support sustainability, and rapid urbanization, which creates a significant demand for cutting-edge waste management solutions as well as renewable energy sources like solar and wind power.

| Sector           | Market growth (%) | Market Size (\$) |
|------------------|-------------------|------------------|
| Renewable Energy | 8.7%              | 22 bn            |
| Waste Management | 6.5%              | 13.1 bn          |

**Tab4: sector wise market growth and market size**

### Products Vs Market size:

The organic food market is growing due to consumers' increasing awareness of the health benefits of organic products. Consumers are also becoming more discerning about the ingredients in their food and are looking for products that are free of chemicals and residues. The green packaging industry's consumer base in 2024 is made up of consumers who are increasingly conscious of the environment and want eco-friendly packaging

| Product category | Market size (\$) |
|------------------|------------------|
|------------------|------------------|

**IntelliMindEd | ISSN: 2998-8527, USA | National Seminar on Effect of Ecopreneurship on Environment Protection & Sustainable Development, Department of Commerce & Management Studies, AKNU, Rajamahendravaram, AP, India**

| Product category       | Market size (\$) |
|------------------------|------------------|
| Organic sector         | 2.07 bn          |
| Green Packaging        | 11.9 mn          |
| Green Energy Solutions | 24 bn            |

**Tab5: Product-wise list and market size**

### Highlights of Union Budget 2025 on the light of green entrepreneurship

1. A sum of Rs. 26,549 crores has been allocated for financial support for the new and renewable energy sectors.
2. For Green Energy Corridors (Used for Evacuation of renewable energy) allocated Rs. 600 crore
3. Reduced GST from 18% to 5% on waste processing equipment and recycling technology
4. Provide capital subsidies up to 50% for businesses having eco-conscious goals ahead.
5. The elimination of basic customs duties on vital materials, including cobalt, lead, zinc, and 12 other necessary minerals, is anticipated to reduce the cost of manufacturing electronics, clean energy, and electric vehicles.

### Government Schemes for Ecopreneurship in India

| Government scheme                                 | Purpose                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ecomark Scheme                                    | <ol style="list-style-type: none"> <li>1. Accredite and label commodities that match certain environmental standards.</li> <li>2. Promoting customer knowledge of environmentally responsible alternatives</li> <li>3. Motivating producers to implement eco-friendly procedures</li> </ol> |
| Startup Village Entrepreneurship Programme (SVEP) | assists rural business owners launch local ventures with an emphasis on sustainable livelihoods.                                                                                                                                                                                            |
| Green Business Scheme                             | provides financial support in the form of loans for climate change-related revenue-generating projects, such as solar energy and electric cars.                                                                                                                                             |
| Startup India (Targeted Eco Entrepreneurship)     | Eases rules and makes finance more accessible to new enterprises, particularly those that prioritize sustainability.                                                                                                                                                                        |
| Green Credit Program                              | Market based program that encourages environmental actions by offering credits to participating individuals and organizations                                                                                                                                                               |

**Tab6: List of Government schemes**

## 6.4 Challenges of Ecopreneurship in India

- **Greenwashing scrutiny:** Companies that make environmental claims are being closely examined by regulatory agencies, which want proof of their sustainability initiatives.
- **Complex ESG Reporting:** It can be difficult and time-consuming to meet the increasing requirements of Environmental, Social, and Governance reporting criteria.
- **Proof for Environmental Impact:** It can be difficult to illustrate the tangible environmental advantages of new eco-friendly goods or services.
- **Permitting delays:** Innovative eco-technologies may require a drawn-out and bureaucratic process to obtain the required permissions.
- **High Upfront costs:** One of the challenges facing ecopreneurship firms is the substantial initial investment needed to implement eco-friendly practices and technology.
- **Limited access to green finance:** The availability of dedicated green fund for eco-friendly projects remains limited.
- **Lack of knowledge on green technology and their revenue among investors is a hurdle.**

| Issue                  | Description                                                           |
|------------------------|-----------------------------------------------------------------------|
| Lack of Skilled People | UNESCO 2022 annual report found that 3,528 short-term employment      |
| Regulatory Hurdles     | Complex ESG Report, Greenwashing scrutiny, Varying Regional standards |
| Economic issues        | High Upfront costs, Limited access to green finance                   |

**Tab7: List of Challenges for ecopreneurs in India**

## 7. Recommendations

1. **Strategic Partnerships:** Collaborating with Established players in the industry.
2. **Advocacy Initiatives:** engaging with advocacy organizations and trade associations to promote laws that encourage ecopreneurship
3. **Transparency in reporting:** Create thorough ESG reporting procedures to effectively convey sustainable initiatives.

**IntelliMindEd | ISSN: 2998-8527, USA | National Seminar on Effect of Ecopreneurship on Environment Protection & Sustainable Development, Department of Commerce & Management Studies, AKNU, Rajamahendravaram, AP, India**

4. **Alternative financial sources:** Exploring options like Crowdfunding, angel investors, green bonds specially designed for sustainable ventures
5. **Value proposition and branding:** To set your business apart and draw in eco-aware customers, highlight the advantages your goods and services have for the environment.
6. **Innovation and product development:** consistently innovate to provide high-quality, reasonably priced sustainable products that appeal to a wider market.
7. **Green certification:** Certification is essential for increasing consumer trust in sustainable products.
8. **Educate customers:** Raising awareness of the advantages of sustainable products for the environment and health.

## 8. Conclusion

In India, ecopreneurship offers a unique set of potential and difficulties. The opportunity for eco-friendly businesses is growing as a result of growing customer preference for sustainable products, government assistance through programs like Startup India and other green initiatives, and growing environmental awareness. Green technology, organic farming, waste management, and renewable energy innovations provide ecopreneurs enormous opportunities for success. The rise of ecopreneurial ventures is hampered by obstacles like expensive startup costs, restricted access to green funding, low consumer awareness in rural areas, and complicated regulations. Government, business, and civil society must work together to overcome these obstacles and build an environment that encourages sustainable entrepreneurship. India can become a global leader in ecopreneurship by utilizing technology, encouraging innovation, and putting robust policy measures in place. This will drive economic growth while maintaining environmental sustainability.

## References

1. Volery, T (2002). Ecopreneurship: rationale, current issues and future challenges. In U. Figlisteraller, H. J. Pietner, T. Volery, W. Weber. (Eds). *Radical change in the world: Will SMEs soar or crash?* St. Gallen: KMU Verlag, pp. 541-553.
2. Sharma, R., & Singh, A. (2020). "Ecopreneurship: Boons and Challenges in Indian Business Context." *International Journal of Innovative Research in Technology*, 7(12), 123-130.
3. Chatterjee, S., & Das, S. (2019). "Assessing Ecopreneurship in the Context of a Developing Country: The Case of India." *Journal of Entrepreneurship and Innovation in Emerging Economies*, 5(2), 1-15.