



Assessment of Government Policy Framework in India for Promoting Green Entrepreneurship

Barkha Bhati¹, Iram Naaz^{2*}

^{1,2} Jai Narain Vyas University, Jodhpur

(*) Corresponding Author: imiram786@gmail.com

Article Info:

Abstract

Keywords:

Green Entrepreneurship(GE);
Government Policies;
Sustainability;
Start-ups;
Environment;

The increasing need to address climate change and promote environmental sustainability has positioned green entrepreneurship as a vital element of global economic growth. The government of India has recognized the importance of fostering a supportive environment for green businesses that emphasize sustainability while driving economic progress. In response, several government initiatives and policies have been introduced to encourage green entrepreneurship, with an emphasis on fostering innovation, minimizing environmental impact, and promoting the use of sustainable technologies. Despite these initiatives, there remains a need to evaluate how effectively these policies are reaching and benefiting green entrepreneurs. Using data from government reports and practical examples, the paper assesses the effectiveness of such policies in promoting sustainable start-ups and identifies areas for improvement. This research paper seeks to examine India's policy framework designed to support green entrepreneurship. The study concludes by highlighting gaps in the policy framework and recommending targeted interventions to enhance the green entrepreneurship ecosystem, contributing to both economic growth and environmental sustainability.

Article History:

Received : 29-01-2025

Revised : 15-02-2025

Accepted : 17-03-2025

Article DOI :

<https://doi.org/10.70550/bisma.v2i1.82>

How to cite : Bhati, B., & Naaz, I. (2025). Assessment of Government Policy Framework in India for Promoting Green Entrepreneurship. *Business, Management & Accounting Journal (BISMA)*, 2(1), 43-63. <https://doi.org/10.70550/bisma.v2i1.82>



This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/). Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

Published under licence by Bacadulu.net Publisher.

INTRODUCTION

In the twenty-first century, environmental degradation has become one of the most pressing issues for academics, policymakers, governments, and civil society organizations worldwide. The introduction of the “Sustainable Development Goals” (SDGs) reflects a growing worldwide awareness of the ecological shortages that have resulted from the rapid industrial transformation. Climate change, in particular, has disrupted delicate environmental & ecological systems & presents significant challenges to the enduring viability and well-being of economies. Relentless

pursuit of economic growth has resulted in the degradation of natural systems, signaling that Earth's environment is reaching its limits. As a result, there is an urgent need to adopt sustainable consumption and production practices that address economic, environmental, and social responsibilities.

Earlier attempts to solve environmental issues focused on understanding why existing and how existing businesses could adopt green practices. However, it quickly became apparent that a truly circular economy could not be achieved without introducing sustainability at the very foundation of businesses and industries. This realization underscored the importance of fostering a shift towards sustainability that starts at the inception of business ventures. Entrepreneurs who are committed to developing innovative solutions to social and environmental challenges have the potential to drive this transformation, offering a path toward a sustainable future.

In response to the increasing demand for eco-friendly innovations, an emerging generation of business leaders, driven by environmental and ecological priorities, is capturing interest from academics, policymakers, civil society etc. The concept of "green entrepreneurship" has been discussed since Berle introduced the term in 1991.

As the world continues to experience industrialization and rapid economic growth, India too is striving to balance economic development with sustainability. Recognizing the importance of "green entrepreneurship", the government of India has initiated many policies and schemes aimed at promoting environmentally sustainable business practices. Initiatives such as the Atal Innovation Mission (AIM) & the "National Clean Energy Fund" (NCEF) played a crucial role in encouraging the growth of green startups. The Atal Innovation Mission fosters innovation and entrepreneurship across the country by providing mentorship, funding, and support for startups. The "National Clean Energy Fund" provides funding for projects & research focused on technologies related to clean energy, helping to finance ventures that aim to reduce carbon emissions and promote renewable energy sources. Additionally, the Startup India initiative offers incentives for startups working on innovative solutions, including in the areas of clean energy, waste management, and water conservation. These efforts reflect India's commitment to fostering green entrepreneurship and supporting the development of sustainable businesses that align with global environmental goals.

GREEN ENTREPRENEURSHIP (GE)

In the rapidly shifting global landscape, sustainability has become a central focus, particularly in the business sector. Green entrepreneurship, which reflects this evolving mindset, refers to the creation of businesses that deliberately aim to balance profitability with environmental responsibility. Fundamentally, green entrepreneurship involves crafting and implementing business strategies where environmental sustainability is not an afterthought but a core element integrated into the very foundation of the business model (Dean & McMullen, 2007).

Green entrepreneurship is emerging as a transformative force in sustainable development, with students increasingly launching eco-friendly businesses (Moiceanu et al., 2023). This trend challenges traditional entrepreneurship models and highlights the need for a more nuanced understanding of green business practices (Gibbs & O'Neill, 2014).

"The term green entrepreneurship was first introduced in Gustav Berle's 1991 book titled The Green Entrepreneur: Business Opportunities That Can Save the Earth and Make You Money."

Evolution of “Green Entrepreneurship Models”

GE, characterized by its diverse and dynamic nature, has experienced notable transformations over the last 30 years. As global awareness around sustainability has increased, green entrepreneurship models have evolved to align with the shifting priorities of society, the economy, and environmental concerns.

Table 2.1.1. Evolution

Stage	Time Period	Key Focus	Description	Example
Era of Eco-Friendly Goods	The Late 1990s – to The Early 2000s	Marketing & creation of eco-friendly goods	Focused on developing goods that reduce ecological impact during production, use, and disposal.	Biodegradable products, organic foods, energy-efficient appliances
Sustainable Business Procedures	Mid-2000s – Late 2010s	Implementing sustainability across the business value chain	Emphasis shifted from products to sustainable sourcing, production procedures, supply chain, and life cycle completion management.	“Patagonia, Tesla.”
Holistic Systems Thinking	2020s Onwards	Systems-thinking approach with regenerative and circular business models	Entrepreneurs adopt models ensuring resource reuse, minimizing waste, and addressing interconnected environmental issues.	Echogen Power Systems, Green Energy Storage

Source: Maulidian et al. (2024)

The progression of GE underscores the dynamic scope of sustainability issues and the critical need for enterprises to remain creative, resilient, and visionary. As sustainability needs continue to change globally, green entrepreneurs must constantly refine their strategies to lead in sustainable business practices.

Green entrepreneurship is a global phenomenon that introduces a new body of knowledge and strategies aimed at addressing environmental issues like resource scarcity & climate change. It also sets new benchmarks for capacity building and development. By fostering innovation, encouraging technological adaptation, and generating employment, green entrepreneurship helps tackle unemployment in many developing countries while addressing local and community-level issues. India, with the world's largest youth population, must acknowledge the immense potential of a green economy. It is crucial for the country and its youth to recognize the importance of transitioning towards a greener economy, with sufficient emphasis and effort to encourage more entrepreneurs to join this global movement. Adopting sustainable business practices can unlock numerous opportunities for these "ecopreneurs" (Mathur & Tandon, 2016). To facilitate this shift, the government has introduced supportive policy frameworks and initiatives, like the "Startup India program", "Atal Innovation Mission (AIM)", and more.

SUSTAINABLE DEVELOPMENT GOALS (SDGS)

The 2030 Agenda for Sustainable Development, comprising 169 targets and 17 Sustainable Development Goals (SDGs), was embraced by the international community in September 2015. Building on the accomplishments of the Millennium Development Goals (MDGs), setting forth a transformative agenda that seeks to harmonize and integrate economic, social, and environmental ambitions.

Environmentally sustainable business models that sync with the SDGs can help businesses with many ways, including:

Figure 3.1 Seventeen SDGs



Source: <https://sdgs.un.org/goals>

Businesses can enhance their reputation by building trust with stakeholders and distinguishing themselves from competitors. Implementing sustainable practices not only strengthens credibility but also leads to long-term cost savings. Moreover, collaborating with others fosters innovation and contributes to a more prosperous world. Companies that prioritize quality products and services appeal to customers who value these attributes. Similarly, they can appeal to investors prioritizing long-term growth by showcasing their dedication to sustainable practices. Moreover, organizations have the opportunity to design & communicate their strategies, goals, and activities, ultimately making a positive social impact.

Sustainability is essential for shaping a better future, both for individual businesses and society as a whole. Adopting sustainable business practices is not only beneficial on an organizational level but also has broader societal impacts. These practices foster environmental stewardship, social responsibility, and economic development. Companies can lessen their ecological footprint by cutting down on carbon emissions, reducing waste, and preserving natural resources. In return, they build stronger reputations, improve customer loyalty, and attract top talent. Additionally, sustainable business efforts address critical global challenges like climate change, inequality, and poverty. Integrating sustainability into business strategies is key to ensuring long-term success while promoting environmental and social well-being. The following sections will explore the advantages of sustainable business practices and how they support both organizational goals and global progress.

RESEARCH OBJECTIVES AND METHODOLOGY

- To identify the government policies that promote green entrepreneurship in India.
- To assess the reach and accessibility of these government policies among green entrepreneurs.
- To examine case studies of green startup ideas that have successfully leveraged government policies for growth and sustainability.

This study investigates the various Government policies for green entrepreneurs' through a comprehensive analysis of secondary literature sources, including government websites, Government reports, research papers, and testimonies from various official documents. The research specifically examines government policies that support green entrepreneurs and facilitate their growth. The findings aim to provide recommendations for fostering a supportive environment for green entrepreneurship, considering the various initiatives and programs implemented over the past several decades by the Indian government. The methodology emphasizes a qualitative approach, synthesizing insights from diverse secondary sources to assess the government policy framework for promoting green entrepreneurship in the landscape of India.

ATAL INNOVATION MISSION (AIM)

The AIM, introduced by the Government of India, which focuses on fostering entrepreneurship culture and innovation throughout India. Its primary objective is to establish a platform that nurtures the development of world-class Innovation Hubs, addresses pressing challenges, and fosters startups and self-employment, mainly in tech-oriented sectors. A central component of AIM's mission involves creating Atal Incubation Centers (AICs) to assist innovative startups in evolving into scalable and sustainable businesses.

Atal Incubation Centres or AICs are business incubators set up by the Atal Innovation Mission (AIM) in corporations, institutions, and universities to encourage innovation and entrepreneurship among the young innovators of the nation. The primary goal of these centres is to nurture exceptional innovation and assist ambitious entrepreneurs in developing scalable and sustainable businesses. AIM has effectively established 72 AICs throughout India. These centres support startups by offering mentorship, technical resources, co-working spaces, networking opportunities, funding, and laboratory facilities, among other services.

Table 5.1.1. Data regarding AICs

Startups Incubated	3500+ startups
Job Creation	32,000+ jobs generated
Women-Led Startups	1000+ startups led or founded by women entrepreneurs
Focus Areas	HealthTech, EdTech, Space and Drone Tech, FinTech, Food Processing, AR/VR, Tourism, and more.

Source: aim.gov.in/overview

The NITI Aayog (AIM) Atal Innovation Mission, announced the launch of 2 innovative initiatives designed to promote sustainability and creativity in India: the 5th edition of the the handbook titled ‘**Innovations for You**’ and ‘**AIM – ICDK Water Challenge 4.0**’ highlights Indian entrepreneurs dedicated to the Sustainable Development Goals (SDGs). This showcases sixty entrepreneurs from various regions among India, each making significant contributions to societal advancement with sustainable innovations.

Startups are engaged in areas such as renewable and recyclable materials, green energy, inclusive advocacy, and education for marginalized local artisans and communities.

Table 5.1.2. Some of these startups

Startup Name	AIC Name	Focus on SDG Goal	Startup Description
3R ZeroWaste Private Limited	AIC BIMTECH	Goal 7: Affordable and Clean Energy	Creating a waste-free world by establishing Integrated Recycling Units across various regions to promote a sustainable circular economy.
Adva Enviro Solutions Private Limited	AIC-IIITH Foundation	Goal 11: Sustainable Cities and Economies Goal 6: Clean Water and Sanitation	Addressing the water crisis in India through a collective approach, utilizing innovative water conservation techniques to enrich groundwater and encourage rainwater harvesting among the community.

Bambrew (Bambrew technologies Private Limited)	AIC-Innovation Incubator	Amity	Goal 11: Sustainable cities and economies Goal 9: Industry, innovation and infrastructure	Bambrew focuses on sustainability by creating eco-friendly products from bamboo, sugarcane, and seaweed. All items are handmade, reusable, lightweight, durable, and biodegradable, made without chemicals or pesticides. The company aims to uplift local communities and emphasizes responsible development. Each product is crafted by various tribes across the country, utilizing local expertise throughout the process.
Buyo India Private Limited	AIC Business Incubator	RAISE	Goal 8: Decent work and economic growth Goal 12: Responsible consumption and production	Buyofuel is a marketplace that unites biofuel manufacturers, traders, and consumers on a single platform, facilitating the buying and selling of various types of biofuels and feedstocks used in biofuel production.
Vayuguard Climate Tech Private Limited	ACIC-BMU		Goal 13: Climate action	Vayuguard Climate Tech, a startup recognized by the DPIIT, is leading the charge in tackling air pollution and climate change. We have created, developed, and patented an innovative Hybrid Solution that harnesses Electro-Magnetic Technology to unlock the future of clean air.

Source: aim.gov.in_sdg-coffee-table-book

The Atal New India Challenge is a key initiative of the Atal Innovation Mission, NITI Aayog. This program is designed to identify, select, support, and nurture technology-driven innovations that address significant national and societal challenges. ANIC invites innovations that are at the prototype stage and provides comprehensive support to the chosen startups throughout their commercialization journey, spanning 12 to 18 months. This includes funding of up to INR 1 crore, along with additional resources and assistance.

Each winner of the Atal New India Challenge (ANIC) receive funding of up to INR 1 crore, which is divided into two components:

- **Grant-in-Aid:** Up to INR 80 lakhs, provided as a non-returnable grant.
- **Equity Investment:** Up to INR 20 lakhs, with the government acquiring a 2% equity stake in the startup.

Table 5.2.1. Data regarding ANIC

Current Status	Details
Innovations/Startups Supported	30 startups are receiving support from AIM through grant-in-aid and ecosystem resources.
Total Grant-in-Aid Approved	INR 22.85 crores
1st Tranche Disbursed	30% of the approved grant, amounting to INR 6.85 crores, has been distributed to the 30 grantees.
2nd Tranche Status	Disbursement of the second tranche is in progress.

Source: aim.gov.in_anic

Table 5.2.2. Some of the ANIC 1.0 beneficiaries are:

Ministry	Challenge	Start-up	Name	City, State
Drinking Water and Sanitation	Waste Management Recycling and Reuse	REGENO VENTURES and PVT LTD	Cibhi Sel Ven	Coimbatore, Tamil Nadu
Agriculture and Farmers Welfare	Climate Smart Agriculture	VYODA PRIVATE LIMITED	Avinash KR	Mysore, Karnataka
Road Transport and Highways	Electric Mobility	PIXY ELECTRIC CARS PVT LTD	Rajeev Ranadive	Pune, Maharashtra
Housing and Urban Affairs	Waste in Public Spaces	WIDE NEED	Siddhant Tawarawala	Ahmedabad, Gujarat

Source: aim.gov.in_anic_1.0_beneficiaries

ANIC 2.0

The most recent round of the ANIC targets 18 specific challenges across five key areas, along with an open innovations segment. These sectors include Focus on millets in Agriculture; Sanitation & Drinking Water; Telegraph & Postal services; Clean Technology & Renewable Energy; and Education.

STARTUP INDIA

Startup India is a key initiative by the Government of India aimed at fostering a robust startup culture and developing a dynamic ecosystem for innovation and entrepreneurship. Launched on January 16, 2016, it has introduced various programs to empower entrepreneurs and shift India's focus from being a nation of job seekers to one of job creators.

Some of the programs launched under Startup India initiative are:

Startup India Seed Fund Scheme (SISFS)

The SISFS was initiated by the Department for Promotion of Industry and Internal Trade (DPIIT) on April 19, 2021, with a budget of ₹945 Crore. Its primary goal is to offer financial aid to startups at their early stages, assisting with prototype development, product trials, proof of concept, as well as commercialization and market entry. The purpose of this funding is to support startups in achieving a stage where they can attract investments from venture capitalists, angel investors, or obtain loans from financial institutions.

Significantly, startups that focus on developing innovative solutions in areas such as waste management, social impact, water management, and sectors like energy, agriculture, and biotechnology are given preference. This makes the scheme especially valuable for green entrepreneurs and businesses aligned with sustainability goals, as they address critical environmental and societal challenges like resource conservation and sustainable development.

The emphasis on waste and water management, alongside sectors such as energy and food processing, highlights the scheme's alignment with the growth of eco-friendly technologies and the promotion of startups committed to environmental stewardship.

Table 6.1.1 Funding Category & Disbursement

Funding Category	Amount	Disbursement
Grant for Proof of Concept, Prototypes, Product Trials	Up to ₹20 Lakhs	Milestone-based installments (e.g., testing, prototyping)
Investment for Commercialization, Market Entry & Scaling	Up to ₹50 Lakhs	Convertible debentures, debt, or debt-linked instruments

Source: www.myscheme.gov.in

International Market Access to Indian Startups: The Startup India initiative aims to integrate the Indian startup ecosystem with global markets by employing various engagement strategies. This goal has been achieved through intergovernmental collaborations, involvement in international forums, and hosting global events. Startup India has fostered partnerships with more than 15 countries, including the UK, Brazil, Japan, Israel, and Singapore, providing a robust

platform for startups from these partner nations to facilitate cross-border innovation and collaboration.

A startup received a cash grant exceeding ₹35 lakhs during a pitching session organized by Startup India in collaboration with the Indian Embassy in Tokyo. This event focused on clean energy, energy efficiency, and waste management, with 10 finalists from the National Startup Awards presenting to Japanese stakeholders. The session attracted 56 confirmations from Japanese stakeholders, and 11 business connections were established afterward.

Fund of Funds for Startups (FFS)

The Fund of Funds for Startups (FFS) was launched with ₹10,000 crore corpus to address the funding needs of startups. Monitored by DPIIT and operated by SIDBI, the funds are allocated over the 14th and 15th Finance Commission cycles, depending on scheme progress and available resources. FFS supports startups in early, seed, and growth stages, while promoting domestic capital, reducing reliance on foreign investments, and encouraging the growth of local venture capital funds.

Income Tax Exemption: Startups that were established after April 1, 2016, can seek income tax exemptions for three consecutive years within their first decade of operation, as long as they obtain certification from the Inter-Ministerial.

Intellectual Property Protection: Startups benefit from expedited processing of patents and trademarks under the **Startups Intellectual Property Protection (SIPP)** scheme. Registered facilitators assist with patent, design, and trademark applications, with the government covering their fees. Startups only pay statutory fees and receive an 80% rebate on patent filing costs and a 50% rebate on trademark filings compared to other companies.

Invest India

Invest India serves as the country's national agency for promoting and facilitating investment. Established as a non-profit organization under the Department for Promotion of Industry and Internal Trade (DPIIT) within the Ministry of Commerce and Industry. It supports investors under the Make in India initiative by helping them set up, operate, and expand their businesses across the country.

Invest India plays a significant role in supporting India's Sustainable Development Goals (SDGs) by incorporating them into its investment promotion efforts. It creates and manages projects focused on SDG objectives like **developing the startup ecosystem (SDG 8)**, **boosting innovation (SDG 9)**, and collaborating with the **International Solar Alliance (SDG 7)**. Through these initiatives, Invest India engages stakeholders and promotes sustainable growth across sectors.

Startup20

The drive for this initiative, though spread across multiple policy directives, is unified by the aim of fostering knowledge and resource exchange among G20 nations. At the heart of this effort is Startup20's call for G20 leaders to collectively boost their annual investment in the global startup ecosystem to US\$ 1 trillion by 2030. Achieving this ambitious goal will require leveraging the

cumulative impact of increased capital, products, services, mentorship, and talent flows. Its key objectives include:

- Closing the knowledge gap between G20 countries and developing economies,
- Establishing a global innovation center,
- Improving startup success rates,
- Encouraging inclusivity and environmental sustainability.

The Sustainable Development Goals (SDGs) offer a global blueprint of prosperity and peace by 2030, with India leading the charge through collaboration among government, businesses, and academia. In its first year, Startup20 called on G20 leaders to build capacity for scaling startups focused on SDGs and inclusive practices. The Atal Innovation Mission has supported over 400 startups aligned with various SDGs, providing incubation and mentorship to drive their success.

Figure 6.7.1 Sustainability View Through SDGs



Source: aim.gov.in_startup20_Communique_2023

Startup20 Communiqué 2023 Task Force's Recommendations and Policy Directives aimed at scaling sustainability efforts are:

Table 6.7.2. Recommendations and policy directives

Recommendations and Policy Directives	Details
Recommendation 5.1	Expand the number of entrepreneurs working towards Sustainable Development Goals (SDGs) within G20 countries.
Policy Directive 5.1.1	Raise awareness regarding entrepreneurial opportunities aligned with SDGs.
Policy Directive 5.1.2	Recognize and promote leading startups/entrepreneurs addressing SDG challenges.
Policy Directive 5.1.3	Integrate SDG-centered entrepreneurship programs in undergraduate, postgraduate, and vocational institutions.
Policy Directive 5.1.4	Offer early-stage, high-risk, and adaptable funding for startups focused on SDGs to support innovation and business establishment.
Recommendation 5.2	Enhance the ability of startups addressing SDGs to scale across G20 countries.
Policy Directive 5.2.1	Create a structured approach to identify startups that focus on SDG initiatives.
Policy Directive 5.2.2	Formulate a capital inflow system for SDG-oriented startups, incorporating patient capital and long-term options such as grants, debt, or equity.
Policy Directive 5.2.3	Develop a supportive environment for SDG-focused startups through incubation, mentoring, and knowledge-sharing platforms.
Policy Directive 5.2.4	Facilitate networks that offer market access and trade opportunities for startups engaged in SDGs.

Source: aim.gov.in_startup20_Communique_2023

Challenges under Startup India promoting sustainability:

Sustainable Agtech Challenge - 2024

This initiative invites innovative and creative minds to enhance agricultural productivity and promote advancements in Ag-Tech startups that demonstrate scalable business models aimed at achieving sustainable and inclusive Agri-Food Systems by 2030.

Eligibility Criteria: Agri-business startups seeking integrated incubation support, including business mentoring, technical assistance, and marketing. Relevant Industries: Agriculture, Green Technology, Food & Beverages.

Problem Statements: Climate Change & Natural Disasters, Soil Degradation & Land Erosion, Outdated Farming Practices, Market Volatility & Price Fluctuations, Other Issues: Emphasize how the startup uses technology in areas such as environmental sustainability, biodiversity preservation, land use optimization, and supply chain management.

Table 6.8.2. Types of incentive

Type of Incentive	Details
Fiscal Incentives	Venture capital investment ranging from ₹20,00,000 to ₹20,00,00,000.
Non-Fiscal Incentives	Exclusive access to a curated mentor board, including professionals, researchers, and industry experts.
Special Incentives	Support for machinery and equipment, integrated pest management, soil conservation, and protected agriculture systems.

Source: www.starupindia.gov.in

Circular Economy Accelerator 2024

As the global economy shifts toward sustainability, circular economy businesses are becoming increasingly attractive to investors and stakeholders. The Circular Economy Accelerator aims to assist entrepreneurs with at least a Minimum Viable Product (MVP) in refining their products and achieving Product-Market Fit (PMF). The program offers various platforms for pitching to investors and networking opportunities.

Table 6.8.2.1 Sectors & Focus Areas

Sectors	Focus Areas
Agri and Food	Sustainable farming, circular food production, food waste reduction, regenerative agriculture.
Automotive and Transportation	Vehicle longevity, recycling parts, sustainable transportation, circular battery manufacturing.
Construction and Building	Sustainable materials, waste reduction, energy-efficient practices, green construction.
Electronics and ICT	Sustainable design, recycling, extending product life cycles.
Energy and Utilities	Biogas production, carbon capture, smart grids, renewable energy solutions.

Fashion and Textiles	Sustainable design, circular production, recycling fabrics.
Healthcare and Pharmaceuticals	Reducing medical waste, sustainable packaging, eco-friendly practices.
Hospitality and Tourism	Waste reduction, sustainable tourism, eco-friendly travel.
Packaging and Consumer Goods	Optimizing materials, developing biodegradable and recyclable packaging.
Retail and E-commerce	Closed-loop supply chains, minimizing waste, circular business models.
Water and Sanitation	Water conservation, wastewater treatment, sustainable management.
Waste Management	Innovations in recycling, upcycling, and waste-to-energy solutions.

Source: www.starupindia.gov.in

Eligibility Criteria: Startups fostering a circular value chain with at least 1 year of incorporation that meet one of the following: 1) Achieved initial MVP, 2) Early revenue stage ventures, 3) Raising pre-seed/seed/pre-series A funding.

Incentives: Non-fiscal incentives include capacity building through workshops, mentorship, and training aimed at enhancing technical, legal, and business skills. Startups will also receive guidance to refine their business models, pitch decks, and overall investment strategies. Additionally, a collaborative ecosystem will be established for startups to network, learn, and collaborate with industry experts and fellow entrepreneurs.

Sustainable Livelihood India:

This initiative addresses challenges faced by micro food processing enterprises in the unorganized sector while promoting their formalization. It also supports Self Help Groups (SHGs), Producers Cooperatives, and Farmer Producer Organizations (FPOs) throughout the food processing value chain. Small-scale entrepreneurs in the unorganized food processing sector face barriers such as insufficient resources, training, technology adoption, and access to credit. Tackling these challenges is essential for realizing the sector's full potential and fostering economic growth.

Incentives: Winning startups will receive assistance in securing grant and equity funding, mentorship, access to industry networks, incubation opportunities, and collaboration prospects with established businesses and institutions.

The Startup India Single-Use Plastic International Grand Challenge, organized by DPIIT on the Startup India Portal from October 2 to 22, 2019, invited entries addressing three key issues: the disposal, consumption, and production of single-use plastics. The challenge received 68 applications, and after evaluation, 15 startups (five from each category) were selected. The top six startups received awards of ₹3 lakh for first place and ₹2 lakh for second place based on their

scores. Additionally, six startups were incubated at the Amity Incubator at no cost, resulting in a total impact of ₹30 lakh to promote sustainable entrepreneurship.

CASE STUDIES

Testimonial of REVY Environmental Solutions: Startup India's Guidance and Acknowledgment for a Startup

I, Dr. Vanita Prasad, am the founder of REVY Environmental Solutions Pvt. Ltd. My research bent has always been in analysing challenges and looking for innovative solutions. However, due to lack of resources and funds, I kept my ideas on hold for a long time. Having learnt about Government of India schemes to support startups, I was motivated to embark on the journey of entrepreneurship.

During this journey, we got handholding support and recognition by Startup India. We were recognized as winners in the Indo Israel Innovation Challenge in the category of 'Low energy and cost effective sustainable solutions for waste water treatment' organized by Startup India, this worked as a booster for our cause.. We also got a chance to collaborate with Israeli companies and are currently working with them. Further in this journey, to fulfil the mission of Swachh Bharat, we also focussed on the treatment of Biodegradable waste, sewage, and industrial effluents contaminating the fresh water resources of India. This helped us win the 'Swachh Bharat Grand Challenge' under the aegis of the Swachhta Pakhwada in Waste Management category organized by Startup India.

Further, with the support from a very cohesive and well - integrated startup ecosystem that has been built in India in line with the Government's mission to promote entrepreneurship and innovation in the country, Invest India's Integrate to Innovate (i2i) Program helped us get connected with Exxon mobile. This unique collaboration supported us in addressing the growing need of treating produced water as and helped in commercializing our offering, improving its competitive positioning, and generating larger revenue.

Also, having DPIIT recognition and now access to a host of tax benefits, easier compliance, fast-tracking of IPR have indeed helped us grow and expand at a faster rate. Presently, we are scaling up our operation and reach within Gujarat and have plans to ramp it up further as national solution provider. Our vision is to strive for innovation and provide economically feasible, eco-friendly and sustainable solutions to our customers. Thank You Startup India for supporting, guiding, and motivating us in our entrepreneurial journey!!"

Dr. Vanita Prasad, Founder & Director, REVY Environmental Solutions Pvt. Ltd.

Source: Startup India 5_years_Achievement_report

Testimonial of Bare Necessities Assistance offered by Startup India to a budding startup.

Through this blog post, I wanted to share my story and the role of Startup India in supporting me in my entrepreneurship journey. When I first faced the facts, I couldn't believe how something as innocuous as our garbage could be negatively connected to so many of my personal concerns. I wanted to stop being a part of the problem. I had to address my own trash problem first. My solution – live a lifestyle that best reflected the values I cared about. I had called myself an environmentalist for about six years at the time. I studied environmental planning, environmental policy, and environmental economics in college and graduate school, but I thought I needed to live a life more congruent to my environmental and social justice values. In my zero-waste journey, I realised we lived in a world with LANDFILL destined products. Toothbrushes for instance- 4.7 billion of them end in the landfill every year, take 200-700 years to start decomposing. So, every toothbrush you and I have ever produced is sitting on our planet somewhere! In response to this problem, I wanted to create a company that mirrored the values of zero waste, ethical consumption, and sustainability. I wanted to make it easy and accessible for other people looking to consume more mindfully, and to encourage others to produce less waste. Thus, Bare Necessities was born.

At Bare Necessities, it's not just about selling products. It's about encouraging an earth friendly lifestyle. In the larger sense, BN seeks to change the narrative on waste in India. In the future, Bare Necessities seeks to become an interdisciplinary hub, a home for product designers to design products with a cradle to cradle philosophy, a place for policy analysts to work with local government on policy recommendations to manage our waste better, and to reduce our waste. A place for behaviour economics, ecologists, researchers and consumers alike to build the ecosystem towards a circular economy.

In March 2020, I was fortunate enough to be a part of the CII-Startup India delegation to attend the India- Bhutan Startup Summit in Bhutan. I had the amazing opportunity to learn all about the gross happiness index from the PM of Bhutan himself, among senior leaders from the Chamber of Commerce and UNDP in Bhutan. I met amazing Bhutanese entrepreneurs, and got to travel and know some of my fellow Indian entrepreneurs. Additionally, I had the opportunity to attend SLUSH in Helsinki, Finland. SLUSH is a world famous startup event! A gathering of more than 20,000 change-makers, including thousands of startups and investors. One of my favourite sessions was talking about breaking taboos and building future companies for the next generation with Andrea Barrica, Valentina Milanova and Sophia Bendz! So grateful for this opportunity, thank you Startup India. Lastly, I wanted to share that Bare Necessities won the 'Single-use Plastic Challenge' organised by Startup India. Plastic pollution is something that has been often overlooked for many years. We are currently living in the largest global garbage crisis of our lifetime. I am extremely glad that there was a competition hosted around such an important issue. We additionally were invited to do a pitch with Amity University Incubation Lab.

Startup India has helped facilitate a variety of competitions, national and international opportunities, and more. The most beneficial being: Through financial initiatives, Startup competitions such as (the Single-use Plastic Challenge), and International startup opportunities

- Sahar Mansoor, Founder and CEO of Bare Necessities

Source: Startup India 5_years_Achievement_report

NATIONAL CLEAN ENERGY FUND (NCEF)

The National Clean Energy Fund (NCEF), created as part of the 2010-11 Budget, marks an important advancement in strengthening India's energy security and lowering the carbon footprint of its energy usage. During his budget speech, the Union Finance Minister highlighted the increasing pollution levels in certain parts of the country. He emphasized that while the principle of "polluter pays" should guide pollution control, it is equally important to encourage the development of clean energy solutions. To support this, the NCEF was created to fund research and innovative projects focused on clean energy technologies.

Initially, the coal cess was set at Rs. 50 per tonne from June 22, 2010 on both domestically produced and imported coal to contribute to the NCEF's corpus, and this was raised to Rs. 100 per tonne in the 2014-15 Budget (effective from July 11, 2014). Further increases saw the cess rise to Rs. 200 per tonne on March 1, 2015, as part of the 2015-16 Budget. Finally, in the Union Budget for 2016-17, the cess was increased to Rs. 400 per tonne and renamed the "Clean Environment Cess." Consequently, the NCEF was renamed the National Clean Energy and Environment Fund (NCEEF).

Table 8.1 Details of projects funded

Key Details	Description
Major Projects Funded	Green Energy Corridor, Namami Gange, Green India Mission, JNNSM (solar lighting, water pumping, SPV plants), wind power pilot projects.
Total Projects (last updated 2017-18)	55 projects with a total VGF of Rs. 34,811.19 crore.
Budget Allocation (2017-18)	Rs. 8,703 crore.

Source: NCEF_Brief_post_BE_2017_18.pdf

According to the NCEF guidelines, funding is available for research and development as well as innovative projects aimed at adopting clean energy technologies. Any project proposing novel methods to enhance clean energy technology qualifies for funding under the NCEF.

According to section 2.1 of the NCEF guidelines, projects that are eligible for funding can be categorized into several key areas:

- **Advanced clean fossil energy technologies:** These involve innovative approaches to reduce emissions from fossil fuel-based energy systems.
- **Renewable energy technologies:** This includes cutting-edge renewable energy solutions, essential infrastructure for energy distribution, and integrated community-based energy models.
- **Basic energy sciences:** Projects that focus on foundational research and scientific advancements in energy are also supported.

- Environmental management initiatives: Particularly for areas surrounding energy production, these projects aim to mitigate environmental impacts.
- Pilot and demonstration projects: Funding is available for projects that test and demonstrate new technologies with potential for commercialization.
- National missions on climate change: This includes projects under the National Action Plan on Climate Change (NAPCC) and R&D for replacing current technologies in line with the National Mission on Strategic Knowledge for Climate Change (NMSKCC).

These categories help guide the funding of projects that promote clean energy innovation and environmental sustainability.

FINDINGS

India has implemented several policies and initiatives aimed at fostering green entrepreneurship, including Atal Innovation Mission (AIM), Startup India, National Clean Energy Fund (NCEF) and there are more such policies. These initiatives provide financial aid, technical support, and promote innovation in sectors like renewable energy, waste management, and sustainable agriculture.

Entrepreneurs, like Sahar Mansoor and Dr. Vanita Prasad, have demonstrated how government support can be used to address global waste issues, including plastic pollution and water treatment. Their ventures—Bare Necessities and REVY Environmental Solutions—highlight the potential of green startups to make an impact on waste reduction and water resource conservation, thereby contributing to larger environmental goals.

International Exposure and Collaborations Boost Innovation, Platforms like the India-Bhutan Startup Summit and the SLUSH event in Finland have exposed Indian green entrepreneurs to international best practices, collaborations, and investors. Such exposure has enriched their innovation processes and facilitated partnerships, such as REVY's collaboration with Israeli firms for wastewater treatment.

Despite these successes, green startups face challenges in scaling their operations, accessing continuous funding, and navigating bureaucratic hurdles. While competitions and initial recognition provide a strong foundation, more long-term and scalable funding solutions are necessary.

Despite the availability of various general entrepreneurship policies, there is no specific, dedicated policy for promoting **sustainable start-ups**. This lack of a tailored framework makes it difficult for green entrepreneurs to access support that directly addresses the unique needs of eco-friendly businesses.

RECOMMENDATION

To overcome the limitations of initial grants and seed funding, the government should establish long-term financial support programs focused on sustainability. This could involve venture capital support, low-interest loans, or equity-based investments specifically aimed at scaling green startups.

Extend the benefits of such policies to rural areas by setting up additional local incubation centers. This could address the existing concentration of support in urban regions and help green entrepreneurs in underserved areas access mentorship, resources, and funding.

The government should implement awareness campaigns to educate entrepreneurs, particularly in remote and rural areas, about available green entrepreneurship schemes. This could include online platforms, regional workshops, and collaboration with educational institutions.

There should be a push for policies that integrate green entrepreneurship into the mainstream economic framework, including fast-tracking approvals, compliance processes, and intellectual property rights (IPR) for startups focused on sustainability. Special tax exemptions and incentives should be offered to promote green businesses and encourage innovation in waste management, renewable energy, and sustainable product development.

CONCLUSION

The evaluation of India's policy framework for promoting green entrepreneurship highlights significant progress, with initiatives such as the National Clean Energy Fund (NCEF), Atal Innovation Mission (AIM), and the Startup India scheme playing pivotal roles in fostering innovation and sustainability. These initiatives have created a foundation for green start-ups to thrive by providing financial assistance, technical support, and an enabling regulatory environment. However, the reach and impact of these policies remain uneven, with gaps in accessibility, awareness, and effective implementation.

While several green businesses have successfully leveraged government policies to scale and grow, many start-ups, particularly those in rural areas or early-stage development, face challenges in accessing these benefits. The complexity of regulatory processes, limited awareness of available schemes, and inadequate early-stage funding continue to act as barriers. Moreover, there is no dedicated policy framework for sustainable start-ups, leaving green entrepreneurs without tailored guidance and resources that directly address their unique needs. This lack of tailored policies specifically for green entrepreneurship highlights the need for more focused interventions.

In conclusion, while India's government has made considerable strides in supporting green entrepreneurship, more targeted efforts are required to address existing gaps. Introducing specific policies for sustainable start-ups, enhancing outreach, simplifying access to funding, and fostering networks that enable market access will strengthen the green entrepreneurship ecosystem. By addressing these challenges, India can create a more inclusive and effective policy framework that not only drives economic growth but also ensures long-term environmental sustainability.

REFERENCES

- Dean, T. J., & McMullen, J. S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of Business Venturing*, 22(1), 50–76. <https://doi.org/10.1016/j.jbusvent.2005.09.003>
- Mathur, S., & Tandon, N. (2016). Green entrepreneurship: The emerging paradigm for sustainable growth and development in India: A study of the millennials. *Indian Journal of Science and Technology*, 9(45). <https://doi.org/10.17485/ijst/2016/v9i45/106753>
- Renu. (2020). Green entrepreneurship in India. *Entrepreneurial and economic development in India*. <https://www.sdcollegeambala.ac.in/wp-content/uploads/2021/08/eedi2020-31.pdf>
- Maulidian, M., Puspitawati, M. D., Novita, N., Ramayanti, R., Dahlia, L., & Purnengsih, I. (2024). Green entrepreneurship incubation model for students at Trilogy University Business

- Incubator: A literature review. *E3S Web of Conferences*, 483, Article 01017. <https://doi.org/10.1051/e3sconf/202448301017>
- Haldar, S. (2019). Green entrepreneurship in theory and practice: Insights from India. *International Journal of Green Economics*, 13(2), 99–114. <https://doi.org/10.1504/IJGE.2019.103232>
- Pandey, R., Bali, S., & Mongia, N. (2013). Promoting effective utilisation of National Clean Energy Fund. *National Institute of Public Finance & Policy*. https://www.nipfp.org.in/media/medialibrary/2013/08/Full_Report_NCEF_VAP.pdf
- Startup India. (2024). Circular Economy Accelerator. Retrieved October 16, 2024, from <https://www.startupindia.gov.in/content/sih/en/ams-application/accelerator-program.html?applicationId=66d800d6e4b0da161d5a8021>
- Startup India. (2024). Sustainable Agtech Challenge - 2024. Retrieved October 17, 2024, from <https://www.startupindia.gov.in/content/sih/en/ams-application/challenge.html?applicationId=6630ad24e4b0cdd2e3dcea48>
- Startup India. (2023). Sustainable Livelihood India. Retrieved October 17, 2024, from <https://www.startupindia.gov.in/content/sih/en/ams-application/challenge.html?applicationId=647b4403e4b0d597a033146b>
- Ministry of Commerce & Industry. (2022). Press Release: 46,173 Startups Recognized in Last Three Years. Retrieved October 9, 2024, from <https://pib.gov.in/PressReleasePage.aspx?PRID=1843899>
- Atal Innovation Mission, NITI Aayog. (2024). Atal Innovation Mission, NITI Aayog unveils AIM – ICDK Water Security & Climate Resilience Challenge. Retrieved October 8, 2024, from <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2023753>
- MyGov India. (2024). Startup India Seed Fund Scheme- For Startups. Retrieved October 2, 2024, from <https://www.myscheme.gov.in/schemes/sisfs-fs>
- Atal Innovation Mission (AIM). (2023). *Startup20 Communiqué 2023 India: Taskforces: Recommendations and Policy Directives* [PDF]. https://aim.gov.in/pdf/Startup20_Communique_2023_India.pdf
- Atal Innovation Mission (AIM). (n.d.). ANIC 1.0 Beneficiaries [PDF]. https://aim.gov.in/pdf/anic_1.0_beneficiaries.pdf
- Atal Innovation Mission (AIM). (n.d.). ANIC Overview. Retrieved September 24, 2024, from <https://aim.gov.in/anic-overview.php>
- Atal Innovation Mission (AIM). (2024). SDG Entrepreneurs of India. <https://aim.gov.in/pdf/sdg-coffee-table-book.pdf>

- Atal Innovation Mission (AIM). (n.d.). Overview. Retrieved September 22, 2024, from <https://aim.gov.in/overview.php#collapseTen>
- MyGov India. (n.d.). National Clean Energy & Environment Fund (NCEEF). https://doe.gov.in/files/circulars_document/NCEF_Brief_post_BE_2017_18.pdf
- Ministry of Skill Development and Entrepreneurship. (2024). Government initiatives to promote startups across the country. Retrieved October 7, 2024, from <https://pib.gov.in/PressReleasePage.aspx?PRID=2038380>
- Government of India. (n.d.). *Startup India seed fund scheme (SISFS)*. Retrieved October 7, 2024, from <https://www.india.gov.in/spotlight/startup-india-seed-fund-scheme-sisfs>
- Startup India. (n.d.). 5 years Achievement report. [https://www.startupindia.gov.in/content/dam/invest-india/Templates/public/5_years_Achievement_report%20%20final%20\(1\).pdf](https://www.startupindia.gov.in/content/dam/invest-india/Templates/public/5_years_Achievement_report%20%20final%20(1).pdf)
- Invest India. (n.d.). Invest India Sustainability Framework . Retrieved October 3, 2024, from <https://www.investindia.gov.in/invest-india-sustainability-framework>
- United Nations. (n.d.). *Sustainable Development Goals*. United Nations. Retrieved October 3, 2024, from <https://sdgs.un.org/goals>