

# Green Entrepreneurship Startups



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**First Edition**

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## **CHAPTER – 1**

### **SUSTAINABLE DEVELOPMENT GOALS FOR ENTREPRENEURSHIP DEVELOPMENT**

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**Abstract**—The Sustainable Development Goals (SDGs) provide a comprehensive framework for addressing global challenges while promoting economic growth, social inclusion, and environmental sustainability. This paper explores the relevance of SDGs in fostering entrepreneurship development worldwide. It also discusses the key SDGs that impact entrepreneurship, such as SDG 1 (No Poverty), SDG 5 (Women's Empowerment and gender equality), SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation, and Infrastructure), SDG 11 (Sustainable Cities and Communities) and SDG 12 (Responsible Consumption and Production) that support entrepreneurial ecosystems. This paper also examines how the achievement of these Sustainable Development Goals (SDGs) with their corresponding targets and provides recommendations to achieve the target by 2030.

**Keywords**—Sustainable Development Goals, Entrepreneurship, Target

## **I. INTRODUCTION**

### **A. Sustainable Development Goals**

The Sustainable Development Goals (SDGs) play a crucial role in supporting entrepreneurship in developing countries by creating an enabling environment for business growth and innovation. These are 17 global goals adopted by all United Nations Member States in 2015 as part of the 2030 Agenda for Sustainable Development. The SDGs aim to address various global challenges, including poverty, inequality, climate change, environmental degradation, peace, and justice. Each goal has specific targets to be achieved by 2030, providing a framework for countries and organizations to work towards a sustainable future that balances economic growth, social inclusion, and environmental sustainability. Entrepreneurship is key in supporting sustainable development and achieving the UN Sustainable Development Goals

(SDGs). Entrepreneurs can drive social transformation by offering sustainable products and services that balance economic, social, and environmental goals.

## **II. OBJECTIVES**

1. To comprehend the SDGs that influence entrepreneurship.
2. To assess the achievement of these Sustainable Development Goals (SDGs) with their corresponding targets
3. To offer recommendations for the successful attainment of the target.

## **III. SDGs FOR ENTREPRENEURIAL DEVELOPMENT**

### **A. SDG 1 - No Poverty**

SDG 1, focuses on ending poverty in all its forms everywhere. It may not directly target entrepreneurship, but its emphasis on poverty alleviation, financial inclusion, and resilience plays a crucial role in fostering an environment conducive to entrepreneurial activities. It is important in developing countries, where poverty is most prevalent, as these factors can significantly enhance opportunities for entrepreneurship to thrive.

### **B. SDG 5 - Women's empowerment and gender equality**

Sustainable Development Goal 5, focuses on achieving gender equality and empowering all women and girls. It significantly influences entrepreneurship by promoting gender equality, enhancing access to resources, and fostering an environment where women can thrive as entrepreneurs. This empowerment is essential for achieving broader economic development goals and ensuring sustainable growth in developing countries.

### **C. SDG 8 – Decent work and Economic growth**

Sustainable Development Goal 8, focuses on promoting sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all. SDG 8 plays a crucial role in supporting entrepreneurship by promoting inclusive growth, fostering innovation, improving access to financial services, ensuring decent work and labor rights, and addressing youth unemployment.

### **D. SDG 8 - Industry, Innovation, and Infrastructure**

Sustainable Development Goal 8, focuses on promoting sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all. It plays a crucial role in supporting entrepreneurship by promoting inclusive growth, fostering innovation, improving access to financial services, ensuring decent work and

labour rights, and addressing youth unemployment. With the principles of SDG 8, entrepreneurs can contribute to sustainable economic development and job creation.

### E. SDG 9 - Industry, Innovation, and Infrastructure

Sustainable Development Goal 9, focuses on building resilient infrastructure, promoting sustainable industrialization, and fostering innovation. By aligning their business strategies with the principles of SDG 9, entrepreneurs can contribute to sustainable economic growth while addressing pressing social and environmental challenges.

### F. SDG 11 - Sustainable Cities and Communities

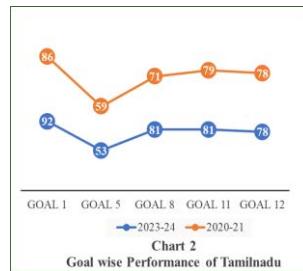
Sustainable Development Goal 11, aims to make cities and human settlements inclusive, safe, resilient, and sustainable. This goal addresses the challenges of urbanization and promotes sustainable urban development, which has significant implications for entrepreneurship in Encouraging Sustainable Urban Development, Promoting Inclusive Communities, Enhancing Infrastructure and Services, Fostering Innovation and Technology, Addressing Climate Change and Creating Job Opportunities.

### G. SDG 12 - Responsible Consumption and Production

Sustainable Development Goal 12, focuses on ensuring sustainable consumption and production patterns. While it may not directly target entrepreneurship like some other SDGs, it can significantly influence entrepreneurial activities in Promoting Sustainable Business Models, Fostering Innovation in Sustainable Technologies, Addressing Consumer Demand for Sustainability, Promoting Sustainable Entrepreneurship, and Collaboration with Stakeholders.



Source: NITI Aayog - <https://sdgindiaindex.niti.gov.in/#/ranking>



Source: NITI Aayog - <https://sdgindiaindex.niti.gov.in/#/ranking>

Chart 1 exhibits that India is making progress in several areas of the SDGs, particularly in poverty alleviation and decent work. However, progress in gender equality remains slow, highlighting the need for continued efforts in this area. The improvements in sustainable cities and responsible consumption reflect a growing awareness and commitment to sustainability, which can foster new entrepreneurial opportunities whereas Chart 2 exhibits that Tamil Nadu is making notable advancements in several areas of the SDGs, particularly in poverty alleviation and decent work. However, the decline in gender equality highlights the need for continued focus and intervention in this area. The improvements in sustainable cities and responsible consumption reflect a growing commitment to sustainability, which can create new entrepreneurial opportunities.

**TABLE 1**  
**PERFORMANCE OF SDG 1: NO POVERTY**

Area	a*	b*	c*	d*	e*
<b>Target</b>	0	12.425	100	100	100
India	4.6	14.96	41	99.74	46.29
Tamil Nadu	2.1	2.2	66.5	99.99	197.65

Source: NITI Aayog - <https://sdgindiaindex.niti.gov.in/#/ranking> (2023 -24)

a\* indicates Percentage of households living in Kachha houses

b\* indicates Head count ratio as per the Multidimensional Poverty Index (%)

c\* indicates Percentage of households with any usual member covered by a health scheme or health insurance

d\* indicates Persons offered employment as a percentage of persons who demanded employment under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)

e\* indicates Percentage of the population (out of total eligible population) receiving social protection benefits under Pradhan Mantri Matru Vandana Yojana (PMMVY)

Recommendations to achieve the target of SDG 1

By Implementing financial incentives or subsidies for households to transition from Kachha to Pucca houses. It include low-interest loans, grants, or assistance in construction materials. Moreover, skill development and vocational training programs can be launched in rural areas to enhance employability. This can empower individuals to secure better-paying jobs and reduce poverty levels. Awareness campaigns can be conducted to educate households about available health schemes and the importance of health insurance. This can help increase enrollment rates. Addressing bottlenecks in fund disbursement of MGNREGA can help guarantee timely employment for those who demand it. Increasing the awareness and benefits under the Pradhan Mantri Matru Vandana Yojana (PMMVY) and other social protection schemes can help in achieving the target.

**TABLE 2**

**PERFORMANCE OF SDG 5: WOMEN'S EMPOWERMENT AND GENDER EQUALITY**

Area	1*	2*	3*	4*	5*	6*	7*	8*	9*
<b>Target</b>	950	1	0	1	245	100	50	80.63	100
India	929	0.76	29.2	0.48	210.24	74.1	13.96	53.9	88.7
Tamil Nadu	878	0.76	38.1	0.54	190.18	86.1	19.65	74.6	92.8

Source: NITI Aayog - <https://sdgindiaindex.niti.gov.in/#/ranking> (2023-24)

1\* indicates Sex ratio at birth

2\* indicates Ratio of female to male average wage/salary earnings received among regular wage/salaried employees

3\* indicates Percentage of ever married women aged 18-49 years who have ever experienced spousal violence (physical/sexual)

4\* indicates Ratio of female to male Labour Force Participation Rate (LFPR) (15-59 years)

5\* indicates Proportion of women in managerial positions including women in board of directors in listed companies (per 1000 persons)

6\* indicates Percentage of currently married women aged 15-49 years who have their demand for family planning satisfied by any modern method

7\* indicates Percentage of female operated operational land holdings

8\* indicates Percentage of women (aged 15-49 years) who own a mobile phone that they themselves use

9\* indicates Percentage of currently married women (aged 15-49 years) who usually participate in three household decisions

### Recommendations to achieve the target of SDG 5

Comprehensive awareness campaigns can be launched to educate communities on the importance of gender equality and the negative consequences of gender-biased practices, including sex-selective abortions. Enforce laws that mandate equal pay for equal work, ensuring that women receive the same wages as men for similar roles. Encourage employers to adopt flexible work arrangements, such as remote work and flexible hours, to accommodate women's responsibilities at home. Implement leadership and mentorship programs that aim to prepare women for managerial roles and board position. An awareness program targeting both men and women about family planning options and services through community outreach programs can be increased. Advocate for legal reforms that ensure women's rights to own and inherit land, addressing cultural and systemic barriers. Implement programs to improve digital literacy among women, ensuring they can effectively use mobile technology for communication and business. Promote initiatives that encourage women's participation in household decision-making, such as community workshops and support groups.

**TABLE 3**

### PERFORMANCE OF SDG 8: DECENT WORK AND ECONOMIC GROWTH

Area	1@	2@	3@	4@	5@	6@	7@	8@
Target	7	2.9	66.9	0	100	21.27	28.9	50

India	5.88	3.4	61.6	53.9	95.7	11.75	18.39	55.63
<b>Tamil Nadu</b>								
Nadu	7.87	4.8	62.3	48.5	96.6	16.68	39.05	58.59

Source: NITI Aayog - <https://sdgindiaindex.niti.gov.in/#/ranking> (2023-24)

1@ indicates Annual growth rate of GDP (constant prices) per capita (%)

2@ indicates Unemployment rate (%) (15-59 years)

3@ indicates Labour Force Participation Rate (LFPR) (%) (15-59 years)

4@ indicates Percentage of regular wage/ salaried employees in non-agriculture sector without any social security benefit

5@ indicates Percentage of households with any usual member with a bank or post office account

6@ indicates Number of functioning branches of commercial banks per 100000 population

7@ indicates Automated Teller Machines (ATMs) per 100000 population

8@ indicates Percentage of women account holders in Pradhan Mantri Jan Dhan Yojana (PMJDY)

Recommendations to achieve the target of SDG 8

By Implementing skill development and vocational training programs to equip the workforce with skills that match market demands, particularly in high-growth sectors like technology and renewable energy will reduce unemployment rate. Implementing initiatives that promote women's participation in the workforce, such as flexible work arrangements, childcare support, and awareness campaigns about the benefits of gender diversity in the workplace can increase labour force participation rate. Ensure all workers, especially those in the informal sector, have access to social security benefits by simplifying enrollment processes and increasing awareness of available programs. Increase the number of banking and financial service outlets in rural and underserved areas to ensure that all households have access to banking services will improve financial inclusion. To increase the number of ATMs it is essential to Provide incentives for banks to open branches and install ATMs in underserved areas, ensuring that financial services are accessible to all segments of the population. Create targeted

financial products and services that cater to women entrepreneurs, including microloans and grants, to help them start and grow their businesses.

**TABLE 4**

**PERFORMANCE OF SDG 9: INDUSTRY, INNOVATION, AND INFRASTRUCTURE**

Area	1#	2#	3#	4#	5#	6#	7#	8#
Target	100	25	19.66	63.26	52.98	100	100	100
India	99.7	14.34	11.42	54.18	27.75	36.4	93.3	95.08
Tamil Nadu	100	20.43	16.77	53.05	33.98	15.6 9	92.8	98

Source: NITI Aayog - <https://sdgindiaindex.niti.gov.in/#/ranking> (2023-24)

1# indicates Percentage of targeted habitations connected by all-weather roads under Pradhan Mantri Gram Sadak Yojana (PMGSY)

2# indicates Percentage share of GVA in manufacturing to total GVA (current prices)

3# indicates Manufacturing employment as a percentage of total employment

4# indicates Percentage Share of GVA in Services to total GVA (current prices)

5# indicates Services employment as a percentage of total employment

6# indicates Innovation score as per the India Innovation Index

7# indicates Percentage of households that own at least one mobile phone

8# indicates Percentage of inhabited villages with 3G/4G mobile internet coverage

Recommendations to achieve the target of SDG 9

It is essential to Ensure timely completion of road projects under the Pradhan Mantri Gram Sadak Yojana (PMGSY) by increasing funding, streamlining approval processes, and enhancing project management. By Providing incentives such as tax breaks or subsidies for companies that invest in manufacturing, particularly in rural and semi-urban areas, to increase the share of GVA in manufacturing. Micro, Small, and Medium Enterprises (MSMEs) can be supported through easier access to credit, business development services, and market linkages to increase employment in the

manufacturing sector. Increase funding for R&D initiatives in both public and private sectors to foster innovation. Encourage collaboration between universities, research institutions, and industries. Expand the investment in 3G/4G mobile internet infrastructure in rural and underserved areas to ensure that all inhabited villages have access to reliable internet services.

**TABLE 5**

**PERFORMANCE OF SDG 11: SUSTAINABLE CITIES AND COMMUNITIES**

Area	1\$	2\$	3\$	4\$	5\$	6\$	7\$
Target	0	100	7.05	100	100	100	100
India	0.9	95.29	12.68	97	78.46	90	50.67
Tamil Nadu	0.9	123.31	12.54	99.8 7	65.11	99.8 7	23.24

Source: NITI Aayog - <https://sdgindiaindex.niti.gov.in/#/ranking> (2023-24)

1\$ indicates Percentage of urban households living in kachha houses

2\$ indicates Percentage of individual household toilets constructed against target SBM (U)

3\$ indicates Deaths due to road accidents in urban areas (per 100000 population)

4\$ indicates Percentage of wards with 100% door-to-door waste collection (SBM(U))

5\$ indicates Percentage of Municipal Solid Waste (MSW) processed to the total MSW generated (SBM(U))

6\$ indicates Percentage of wards with 100% source segregation (SBM(U))

7\$ indicates Installed sewage treatment capacity as a percentage of sewage generated in urban areas

Recommendations to achieve the target of SDG 11

Awareness campaigns can be conducted to educate communities about the importance of sanitation and the benefits of individual household toilets, emphasizing health and hygiene. The process for households to apply for and receive assistance in constructing toilets, ensures that the target of 100% toilet coverage is met. Implement comprehensive

road safety education programs targeting drivers and pedestrians, focusing on safe driving practices and awareness of road rules. Ensure that municipal authorities implement and monitor door-to-door waste collection services in all urban wards, potentially using technology for efficient tracking and management. Increasing investment in waste processing facilities to ensure that a higher percentage of Municipal Solid Waste (MSW) is processed. This includes composting, recycling, and waste-to-energy plants. Invest in expanding sewage treatment facilities to match the sewage generated in urban areas, ensuring that treatment capacity meets demand.

**TABLE 6**

**PERFORMANCE OF SDG 12: RESPONSIBLE CONSUMPTION AND PRODUCTION**

Area	1	2	3	4	5
Target	55.6	57	100	0.62	100
India	166.43	65.24	54.99	3.04	91.52
Tamil Nadu	200.75	59.84	48.81	5.64	100

Source : NITI Aayog - <https://sdgindiaindex.niti.gov.in/#/ranking> (2023-24)

1 indicates Per capita fossil fuel consumption (in kg.)

2 indicates Percentage use of nitrogenous fertilizer out of total NPK (Nitrogen Phosphorous Potassium)

3 indicates Quantity of hazardous waste recycled/utilized to total hazardous waste generated (%)

4 indicates Plastic waste generated per 1000 population (Tonnes/Annum)

5 indicates Percentage of Bio Medical Waste (BMW) treated to total quantity of BMW generated

Recommendations to achieve the target of SDG 12

Encourage the adoption of renewable energy sources such as solar, wind, and biomass. This can be achieved through subsidies, tax incentives, and government grants to households and businesses that invest in renewable energy systems. Encourage farmers to adopt integrated nutrient management practices that combine organic and inorganic

fertilizers, thus optimizing the use of nitrogenous fertilizers while reducing environmental impact. Enforce stricter regulations on hazardous waste management, ensuring that industries comply with recycling and disposal standards. Implement policies to reduce plastic use, such as banning single-use plastics and promoting alternatives. Encourage businesses to adopt sustainable packaging practices. Invest in and upgrade biomedical waste treatment facilities to ensure that all generated waste is treated effectively and safely.

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