



GREEN ECONOMY FOR SUSTAINABLE DEVELOPMENT- IMPACT ON INDIAN ECONOMY AND ECOLOGY

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Abstract

A Green Economy is as one which is low carbon, resource efficient and socially inclusive. The green economy captures the three dimensions of sustainable development: environmental, social, and economic. India's green economy represents a powerful force for both economic growth and environmental protection. By nurturing its potential, India can not only achieve its ambitious development goals but also become a global leader in sustainable solutions, inspiring other nations to follow it. It is based around five principles: Well-being: A green economy must create genuine, sustained, shared wellbeing, going beyond mere monetary wealth to priorities human development, health, happiness, education, and community. In this background, the study highlights on sustainable development and its impact Indian Economy and ecology.

Key Words: Green economy, sustainable development, Ecology and Environment, business sustainability, environmental sustainability climate change.

Introduction

Green economy model promotes sustainable development by integrating economic growth with environmental protection and social inclusion. It emphasizes resource efficiency, low-carbon development, and reduced environmental risks, aiming for a balance between economic progress and ecological well-being. This model seeks to create a more sustainable and equitable future by shifting away from traditional, resource-intensive economic practices. The world transforms with the evolution of technology, climate, politics and economics, there are interconnected practices which positively balance environmental and social goals for the good of nature, citizens, and businesses. Leading the way is the green economy, an economic model that prioritizes the success of human well-being and social equity, while reducing environmental risks and ecological scarcity. The definition of green economy is the practice of sustainable development through the support of public and private investment to create infrastructure that fostering social and environmental sustainability. The importance of green economy is that, it encourages economies to become more sustainable and low-carbon, and ensures that natural assets continue to provide the resources and environmental services for our continued wellbeing.

India's Role in Sustainable Environment

The Paris Agreement in 2015 was an ambitious step in tackling climate change; 196 countries expressed their ambitions toward curbing climate change as well as taking steps toward adapting to a changing environment. India is one of the signatories to the Paris Agreement and is contributing to strengthening the global response to climate change. India has also submitted its Nationally Determined Contributions (NDCs) to the United Nations Framework Convention on Climate Change (UNFCCC), under which India committed to reducing emissions intensity by 33-35 percent by 2030 compared with 2005 levels. It also pledged to increase carbon sinks by 2.5 to 3.0 billion tons of carbon dioxide and increase renewable energy share capacity to 40%. India's green economy model is a system dynamics model that aims to reduce environmental risks and ecological scarcities. It also seeks to achieve sustainable development without harming the environment.

Objectives of the Green Economy

The primary objectives of a green economy are to improve human well-being and social equity while significantly reducing environmental risks and ecological scarcities. This involves transitioning to a low-carbon, resource-efficient, and socially inclusive economic model.

Key Aspects of a Green Economy Model

- 1) Social inclusion: Ensuring that the benefits of economic growth are shared equitably, addressing poverty and inequality while creating decent jobs.
- 2) Environmental protection: Reducing pollution, protecting ecosystems, and mitigating climate change impacts.
- 3) Sustainable consumption and production: Encouraging conscious consumption patterns and sustainable production methods.
- 4) Green technology and innovation: Developing and implementing technologies that minimize environmental impact and promote resource efficiency.
- 5) Green finance and investment: Shifting financial flows towards environmentally friendly projects and businesses.
- 6) Low-carbon development: Transitioning to renewable energy sources (solar, wind, hydro) to reduce greenhouse gas emissions and reliance on fossil fuels
- 7) Resource efficiency: Promoting circular economy principles like reuse, repair, and recycling to minimize waste and conserve natural resources.

Benefits of a Green Economy Model

1. **Reduced environmental risks and ecological scarcities:**By minimizing pollution, conserving resources, and mitigating climate change.
2. **Improved human well-being:**By promoting social equity, creating jobs, and enhancing quality of life.
3. **Sustainable economic growth:**By fostering innovation, resource efficiency, and new economic opportunities.
4. **Enhanced resilience to climate change and other environmental challenges:**By reducing reliance on fossil fuels and promoting resource-efficient practices.
5. **Long-term prosperity:**By ensuring the availability of natural resources for future generations and promoting sustainable development.

Need of Green Economy

1. India the place on a lower-carbon development pathway;
2. To ensure continued economic growth;
3. Create new jobs opportunities and ensuring a just and inclusive pattern of development; and
4. To deliver health and other developmental benefits and reduce vulnerabilities.

Challenges and Considerations

- a) Behavioral changes: Shifting consumer and business behavior towards more sustainable practices requires awareness and education.
- b) Equity and social justice: Ensuring that the benefits of a green economy are shared equitably
- c) Global cooperation and partnerships: Addressing climate change and other environmental challenges requires international cooperation and collaboration.
- d) Political will and policy support: Strong government policies and regulations are needed to drive the transition to a green economy and that no one is left behind is crucial.
- e) Transition costs: Shifting to a green economy can involve significant upfront costs, requiring careful planning and investment.

Environmental Performance Index

Countries	Environmental Performance Score	Rank (Out of 180 Countries)	GDP Rank
United Kingdom	81.3	04	5
Germany	77.2	10	4
Japan	75.1	12	3
United States	69.3	24	1
China	37.3	120	2
India	27.6	169	6

Source: Wendling, Z. A., Emerson, J. W., de herbinin, A., Esty, D. C., et al. (2020). 2020 Environmental Performance Index. New Haven, CT: Yale Center for Environmental Law & Policy. Indicators are weighed on a 0–100 scale, from worst to best performance.

Green Economy and Sustainability

The green economy is closely related to ecological economics, but it has a more politically applied focus. The three pillars of sustainability are environmental, social, and economic, also known as ESG. As per IMF's World Economic Outlook (WEO), October 2022, India is projected to grow at 6.8 per cent in the year 2022 which is one of the fastest among major economies. Major steps taken for reducing carbon emission and moving towards sustainable development goals inter-alia include:

1. Declaration of path for Renewable Purchase Obligation (RPO) up to the year 2030.
2. India's massive LED bulb campaign is reducing emissions by 40 million tonnes annually.
3. Launch of Green Term Ahead Market to facilitate sale of renewable energy power through exchanges.
4. Launch of Schemes such as Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM), Solar Rooftop Phase II, 12000 MW CPSU Scheme.
5. Laying of new transmission lines and creating new sub-station capacity under the Green Energy Corridor Scheme for evacuation of renewable power
6. Notification of promoting renewable energy through Green Energy Open Access Rules, 2022.
7. Permitting Foreign Direct Investment (FDI) up to 100% under the automatic route for renewable energy projects.
8. Setting up of Ultra Mega Renewable Energy Parks, to provide land and transmission to RE developers on a plug and play basis.
9. The Government has been proactively shutting down inefficient thermal units. A total 259 Units with capacity of 18152 MW have been retired from 10th Plan onwards till November 2022.
10. The Net Zero target by 2030 by Indian Railways alone will lead to a reduction of emissions by 60 million tonnes annually.
11. Transmission Plan for Integration of 500 GW Renewable Energy capacity by 2030.
12. Waiver charges of Inter State Transmission System (ISTS) for inter-state sale of solar and wind power for projects to be commissioned by 2025.

Futures of India's green economy model

- a) Choosing local, organic agricultural produce
- b) Considers the country's key priorities
- c) Examples of green economy practices
- d) Incorporates primary and allied sectors that affect climate change
- e) Links the ecosystem services of forests with the Green GDP
- f) Principles of green economy low carbon, resource efficient, socially inclusive and diverse.
- g) Using renewable energy sources like solar and wind
- h) Using sustainable mobility like electric scooters and cars

Sustainable Development

Development that meets the basic needs of all people while conserving, protecting, and restoring the health and integrity of the Earth's ecosystem, without jeopardizing future generations' ability to meet their own needs and without exceeding the earth's ecosystem's longterm capacity. Sustainable development is an organizing principle for achieving human development goals while also preserving natural systems' ability to provide the natural resources and ecosystem services on which the economy and society rely.

Conclusion

In India from 2017 onwards all thermal power capacity addition is through super critical units only. This will lead to reduction in fossil fuel consumption and thereby reducing CO₂ emissions. Promoting Electric Vehicles and creation of charging infrastructure in the country. Notifying fuel efficiency norms to reduce carbon footprints for transport sector. Co-firing of Biomass pills with coal is being done in thermal power plants. Implementation of various schemes and programmes to enhance energy efficiency. The Net Zero target by 2030 by Indian Railways alone will lead to a reduction of emissions by 60 million tonnes annually. By addressing these challenges and implementing effective policies, a green economy model can play a vital role in achieving sustainable development, improving human well-being, and ensuring a healthy planet for future generations.

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