

Indian Economy and Ecology

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Abstract

Dr. Rowan Williams rightly said that ecology and the economy go hand in hand. To see to have an economy without ecology is to try to manage an environment with no knowledge or concern about how it works in itself. A healthy economy is not possible without healthy ecology. Environment issues are closely related to the economy and addressing these issues further promotes our economy's success. Ecosystem protection is an economic investment. It does not make sense to try to separate these two subjects. Therefore the concept of a green economy has been gaining ground on the global sustainable development agenda and the Indian economy is no exception. Green economy is an economy that aims at reducing environmental risks and evening for sustainable development without harming the environment. It is closely related to ecological economics. The massive growth of organic farming, the establishment of plant-based homes and the use of bicycles as a means of transportation are some ways in which people are contributing to the green economy. Green energy announcements in budgets since 2014 are playing a key role in establishing India as a major player in the global green energy market. Green Economy is a development strategy that unites both economic development and ecological sustainability. In India, the Journey of transition towards a greener economy has started. India is making significant progress in areas of environmental policies at national level, enhancement in renewable energy portfolio, and improved access to basic services. The main objective of this paper is to throw light on the impact of ecology on the Indian economy.

Keywords

Ecology, Green Economic System, Environment, Economic Growth, Sustainable Development.

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Objectives of the Study

The following are the objectives of this research paper:

- To understand the concept of a Green Economic System.
- To throw light on the impact of ecology on the Indian economy.
- To identify the green economy transition in India.
- To study the policy framework of the Indian government on environmental protection.

Research Methodology

This research paper is based on secondary data, which is collected from various publications, journals, and articles given various websites. This paper is theoretical in nature.

Introduction

A Green economic system is defined as low carbon, resource efficient and socially inclusive system. The green economic system creates focus on the economy, investment, capital and infrastructure, employment and skills and positive social and environmental outcomes. So, a green economy is a clean, green economy that promotes good health, wealth and well-being. It can be defined as an economy in which economic growth and environmental responsibility work together for sustainable development without harming the environment. It is closely related to ecological economics and can be said to be considered part of the ecosystem. UNEP (2011a) defines, a green economy as an economy that leads to improved human well-being and social justice, while significantly reducing environmental risks and ecological scarcities. Green Indices have been developed to measure environmental impact and efficiency in various sectors. 2016-2022 Green Score City Index is an independent ongoing study to measure the anthropogenic impact of human activity on nature. Anthropogenic processes are intentional and non-malicious human activities such as groundwater abstraction, sub-surface mining, vegetation removal, chemical explosions and infrastructure. Fairness implies recognizing global and country-level equity dimensions, particularly in assuring a just transition to an economy that is low-carbon, resource-efficient and socially inclusive.

Thus Green Economy is an economic system that is based on or guided by ecological principles. In this economy, employment and income growth are driven by public and private investment into such economic activities, infrastructure and assets that enable a reduction in carbon emissions and pollution, enhance energy and resource efficiency, and prevention of the loss of biodiversity and ecosystem services.

The term green economy was first coined in a landmark 1989 report for the Government of the United Kingdom by a group of leading environmental economists entitled *Blueprint for a Green Economy*.

Examples of green economy can be traced from people's everyday lives. Substantial growth in the organic farming sector, setting up plant-based homes and using a bicycle as a means of transportation, are some of the ways in which people are contributing to the green economy.

The following are the features of a Green Economic System:

- The green economy aims to increase prosperity for all, not only in economic terms, but also in terms of human, social, physical and cultural capital. It allows people to prosper while treating nature and natural resources sustainably.
- The green economy promotes good governance because it is based on accountable, transparent and resilient institutions. It also requires broad public support, and a bold and methodical approach to problem-solving.
- This economy offers significant investment and employment opportunities as the transition to a green economy requires new skills and training to eradicate poverty.
- A green economy focuses on the efficient use of resources and minimizes waste to make the use of natural resources more sustainable.
- The green economy is based on the use of renewable energy sources such as solar, wind, and hydropower with little or no carbon emissions.

The green economy, therefore, takes a long-term view and focuses on how resources are used to create value for society. Not only low carbon fuels are important but also how to promote efficiency and resource sufficiency to create the prosperity and well-being of citizens of today and tomorrow.

Impact of Ecology on the Indian Economy

India is one of the fastest growing economies in the world, faces a major challenge that how to meet the basic needs of its population without exceeding the environmental limits.

The policymakers and practitioners, who are the key players, have the responsibility to guide the economy toward a sustainable future. The success and failure of a green economy depend on green governance. It concerns rules and regulations that encourage more sustainable practices that enable the transition to a green economy.

There is a long way to go to be a green economy for the Indian economy,

but several countries have shown leadership by adopting national ‘green growth’ or ‘low carbon’ economic strategies. For example: The Republic of Korea is allocating 2% of its GDP for investment in several green sectors such as renewable energy, energy efficiency etc. China, Namibia, and Mexico are also managing their natural resources to generate economic, social and environmental benefits. Although India has made major international commitments towards the 2030 Global Development Agenda and the Paris Climate Agreement, it still ranks 68th out of 80 countries on the Global Green Economy Index. Much work is to be done.

One of the main environmental problems facing India is the pollution from the combustion of fossil fuels. This leads to serious health issues and with the fast growth of the economy, these impacts are rising. The environmental impact of economic growth includes the increased consumption of non-renewable resources, global warming and loss of environmental habitats. Following are the some impacts of economic growth on the environment:

- A decline in sources of oil/coal/gas.
- Loss of fishing stocks due to overfishing.
- Damage to natural resources has led to species extinction.
- Poor air quality.
- Global warming is due to excessive CO₂ emissions.
- Health problems due to air/land/water pollution.
- Volatile weather patterns, and rising levels of the sea because of global warming.
- Soil erosion results from deforestation.

The Transition of India to a Green Economy

In India, Lakshadweep is the winner of India’s greenest states with 90.33% forest cover. Mizoram is India’s second greenest state with around 84.53% forest cover. The other states like Andaman & Nicobar Islands (81.75%), Arunachal Pradesh (79.33%), and Meghalaya (76%) too, have a thick forest cover with more than 75% land covered in greenery. Among India’s union territories, Lakshadweep has a vast forest cover in 2023. Total forest cover in India 21.71% and 7,13,789 sq. km. of India’s area. Making the nation a green economy is a big challenge for India. Despite the India’s remarkable growth record, the environment has suffered, exposing the population to serious air and water pollution. A new report finds that environmental degradation costs India per year 5.7% of its economy.

In a recent survey of 178 countries, India ranked 155th place overall and almost last for its exposure to air pollution. The study also found that India’s

environmental quality is far below that of all BRIC countries. Environmental sustainability is the biggest challenge for India. The survey conducted by WHO, across the G-20 economies, indicates that 13 of the 20 most polluted cities are in India. Simultaneously poverty is both cause and effect of resource degradation and agricultural production also declines on degraded land.

Table:1 Present status of forest cover area in India-2023

Forest cover in India	In Square Kilometre	In Percentage
Very Dense Forest (70% and above)	99,779	3.04% of India's area
Moderately Dense Forest (between 40%-70%)	3,06,890	9.33% of India's area
Open Forest (between 10%-40%)	3,07,120	9.34% of India's area
Total Forest cover	7,13,789	21.71% of India's area

Source: India State of forest report(2023)

Table:2 Forest cover of different states (More than 75% and Less than 10%)

More than 75%	Less than 10%
Lakshadweep (90.33%)	Ladakh (1.35%)
Mizoram (84.53%)	Haryana (3.63%)
Andaman & Nicobar Islands (81.75%)	Punjab (3.67%)
Arunachal Pradesh (79.33%)	Rajasthan (4.87%)
Meghalaya (76%)	Uttar Pradesh (6.15%)
	Gujrat (7.61%)
	Bihar (7.84%)

Source: India State of forest report(2023)

Policy Framework in India for Environment Protection

Some of the major policies of India's green economy are:

Gobardhan Yojana (2018) : India has the potential to produce 10 thousand million cubic meters of biogas from Gobar (cow dung) and 1.5 lakhs cubic meters of gas from Gobar, which contributes up to 8% to the country's city gas distribution. Gobardhan Yojana launched in 2018, is an important part of India's biofuel strategy. In this budget, the government has announced plans to build 500 new waste treatment plants under the Gobardhan Yojana. The Galvanizing Organic Bio-Agro Resources Dhan (GOBAR-DHAN) scheme is implemented under the Swachh Bharat Mission Gramin-Phase 2, by the Department of Drinking Water and Sanitation under the Jal Shakti ministry.

PM-KUSUM (2019) : PM-KUSUM (Pradhan Mantri Kisan Urja Suraksha am Utthaan Mahabhiyan) Scheme is designed to ensure the energy security for Indian farmers. It is commemorating India's commitment to increase the installed capacity

share of electricity from non-fossil-fuel sources to 40% by 2030 as part of Intended Nationally Determined Contributions (INDCs). The scheme was launched in 2019 with 3 components: 1) For Setting up 10,000 MW of Decentralized Grid Connected Renewable Energy Power Plants on barren land, 2) For Installation of 17.50 Lakh stand-alone solar agriculture pumps, 3) For Solarisation of 10 Lakh Grid Connected Agriculture Pumps.

India's Vehicle Scrapping Policy (2021) : This policy is an important part of the green growth strategy as it gives room for a clean fleet of vehicles. The Vehicle Scrapping Policy launched on August 13, 2021, is a government-funded program to replace old vehicles with modern & new vehicles on Indian roads. According to the new policy, commercial vehicles over 15 years and passenger vehicles over 20 years must be compulsorily scrapped if they fail to pass the fitness and emission tests. The policy aims to reduce pollution, create job opportunities and stimulate demand for new vehicles.

PM PRANAM (Budget 2022-23) : The government will encourage and facilitate one crore farmers to select natural farming through Prime Minister Program for Rehabilitation, Awareness, Nourishment, and Betterment of Mother Earth (PRANAM). The main objective of this scheme is to reduce the use of chemical fertilizers and promote the balanced use of chemicals, promote green growth, and reduce the negative environmental impacts.

Green Credit program (Budget 2023-24) : Green Credit program will promote environmental protection to mitigate climate change and enhance adaptive capacity. The

The Green Credit Clause outlined in this budget (2023-24) provides a pathway to achieve sustainability for the country. The goal of this program is to encourage behavioral change. This program also facilitates the allocation of additional resources for the adoption of environmentally friendly, sustainable and responsive technologies.

MISHTI and Amrit Darohar (Budget 2023-24) : 'Mangrove Initiative for Shoreline Habitats & Tangible Incomes' or MISHTI, is a new program to promote mangroves plantation along the coastline and on salt pan lands. Amrit Darohar is another new scheme that will be implemented over the next three years to "encourage optimal use of wetlands, and enhance biodiversity, carbon storage, eco-tourism opportunities, and income generation for local communities".

Threats Before India to be a Green Economic System

The major threats are:

- How to move to an economic system that benefits more people in the long run. To be a green economic system requires a fundamental rethinking of growth and development of goods and services as well as consumer habits. This Transition does not happen by itself.
- How important decisions are made with better information about impacts, risks, or better economic analysis?
- Financial and Technological factors are the major challenges for the transition to a Green economy.
- Other threats are:
 - Weak Management,
 - Increasing Poverty,
 - Changing political climate that keeps changing economic policies,
 - Economic dependency on conventional resources particularly fossil fuels,
 - Increasing food insecurity.

Suggestions

Some of the following measures may help create a more level policy-making playing field:

- Raise Public awareness and advocate for change as the need for this transition is clearly recognized now. It will motivate people not only for the costs but also for the benefits of a green economy. They will care about the environment if they believe, it is in their best interests.
- Promote new indicators that complement gross domestic product: Planning agencies and finance ministries should adopt a more diverse and representative set of economic indicators that focus not only on growth, but rather track the pace and progress of development also.
- Open up Government decision-making processes to the public and civil society.
- Sustainable farming practices increase food availability and food security, and reduce poverty.

Conclusion

Green growth is one of the top priorities of the Union Budget 2023-24. The Union Budget 2023-24 has considered several projects and initiatives spread across different sectors and ministries such as Green Hydrogen Mission, Energy Transition, Energy Storage Projects, Renewable Energy Evacuation, Green Credit

Program, PM-PRANAM, GOBARdhan Scheme, Bhartiya Prakritik Kheti Bio-Input Resource Centres, MISHTI, Amrit Dharohar, Coastal Shipping, and Vehicle Replacement. The objective is to accelerate the momentum for green growth in the country by forwarding new-age reforms along with detecting solutions to current challenges. The green energy announcements in the budget play a vital role in establishing India as a leading player in the global green energy market. India has been the fastest in renewable energy capacity addition among major economies since 2014. Green Economy promotes a sustaining and advancing economic, environmental and social well-being. The main challenges in the area of economic and environmental development, as well as the public policies for a green economy, is a real concern. The transition towards a green economy has become an urgent need.

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