



Green Economy: A Pathway to Sustainable Development

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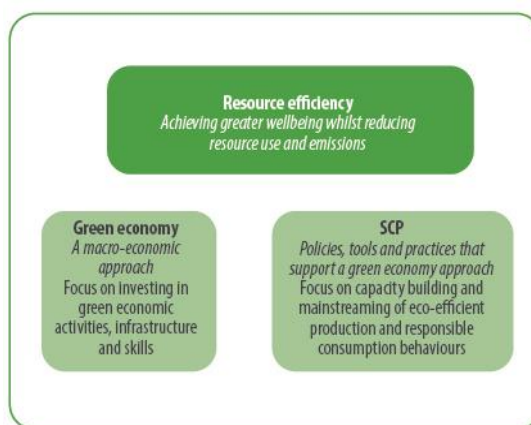
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INTRODUCTION

A green economy is characterized by minimal carbon emissions, resource efficiency, and social inclusion. Public and private investment in such economic activities, infrastructure and assets that enable lower carbon emissions and pollution, improved energy and resource efficiency, and prevention of the loss of biodiversity and ecosystem services is what drives growth in employment and income in a green economy. A green economy is one that is socially inclusive, low-carbon, and resource-efficient. The United Nations Environment Programme (UNEP) defines a "green economy" as one that considerably lowers environmental hazards and ecological scarcities while simultaneously enhancing human well-being and social fairness.



The present Green Economy research focuses on three primary areas:

- 1) Using regional, sub-regional, and national forums to promote the macroeconomic approach to sustainable economic growth
- 2) Exhibiting Green Economy strategies with an emphasis on green investment, technology, and financing access
- 3) Assistance to nations in developing and mainstreaming macroeconomic policies to facilitate the shift to a green economy

Benefits of Green Economy

- Improves human well-being.
- Promotes social equality.
- Reduces environmental risks.
- Minimizes ecological scarcity.
- Supports a low-carbon, resource-efficient, and socially inclusive economy.

Partnerships

In order to accelerate and solidify sustainable changes in consumption and production patterns, multi-stakeholder collaborations are encouraged for the advancement of a green economy. UN Environment has expanded its involvement with the business sector, which is a crucial player in advancing resource efficiency and the green economy, in addition to governments and nonprofits. The Ministry of Environment, Forest and Climate Change, the National Institution for Transforming India, the Ministry of Textiles, the Ministry of Finance, the Ministry of Commerce and Industry, the Ministry of Labour and Employment, the Ministry of Rural Development, the Environment Planning and Coordination Organization, the Directorate of Environment Protection and Climate Change, the Department of Urban Administration and Development of the Government of Madhya Pradesh, and the Department of Environment of the Government of Uttar Pradesh have all worked closely together to advance India's green economic transformation.

Need for Green Economy in India

Adopting a green economy is essential for developing countries like India because:

1. The use of clean energy technologies, improved access to energy services, and efficient resource utilization provide economic and social benefits.

2. It promotes the development of new markets in areas such as: Organic farming Renewable energy Waste management Pollution control These sectors also create new employment opportunities.

3. It helps India achieve the Sustainable Development Goals (SDGs) set by the United Nations.

Green Finance Ecosystem in India

The Green Finance Ecosystem is a broad concept that includes financial investments in sustainable development projects, environmental products, and policies that promote sustainable economic growth. India is the fourth-largest energy consumer in the world. Therefore, green finance is essential for achieving India's Intended Nationally Determined Contributions (INDCs) under international climate commitments. By 2040, India will require approximately USD 4.5 trillion in infrastructure-related investments to achieve low-carbon development.

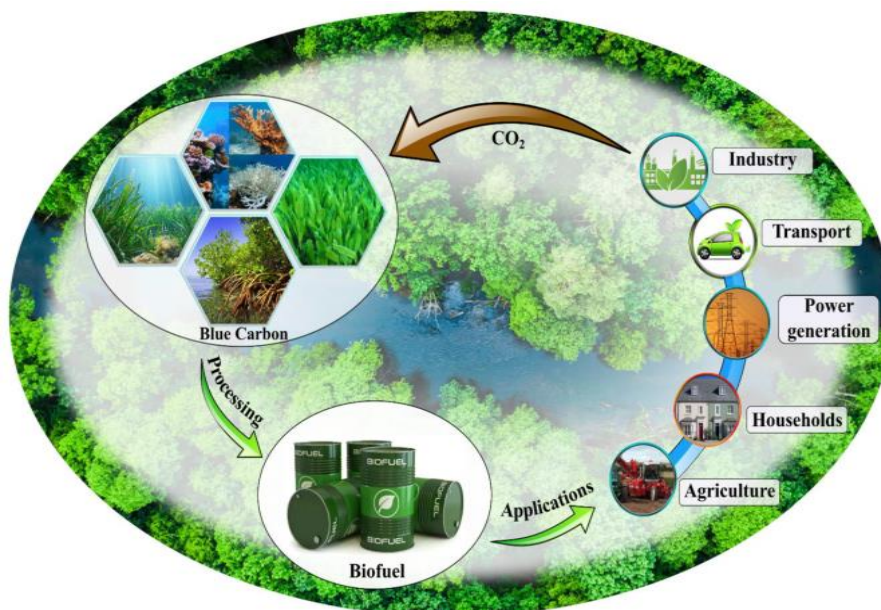
Concepts Related to Green Economy

• Carbon Market

A Carbon Market is a market-based mechanism that creates tradable pollution permits or carbon credits to encourage industries to reduce emissions. Companies that emit less pollution can sell their unused emission allowances. China has recently established its national carbon market.

• Green Carbon and Blue Carbon

Green Carbon refers to carbon stored in terrestrial ecosystems such as forests, plants, and soils. Blue Carbon refers to carbon stored in coastal and marine ecosystems such as mangroves, seagrass beds, and tidal wetlands. Both act as carbon sinks by absorbing and storing carbon dioxide from the atmosphere.



• Carbon Credit

A carbon credit is a type of government permit or digital certificate that legally authorizes a company, factory, or country to emit one metric ton of greenhouse gas (such as carbon dioxide) into the atmosphere. This system operates on the principle of 'carbon trading,' wherein governments set a maximum pollution limit for each industry. If a company emits less than its allocated limit, it earns carbon credits, which it can then sell to companies that have exceeded their limits. Consequently, farmers and organizations by planting trees (afforestation), adopting solar energy, or practicing modern farming methods that avoid stubble burning can earn these credits and generate additional profit; this creates economic pressure on polluting industries and helps mitigate global warming worldwide.

Price of 1 Carbon Credit

There is no fixed price for a carbon credit; it depends on how the credit was generated. In India, the price of a carbon credit (representing 1 tonne of CO₂) currently ranges from approximately ₹1,200 to ₹2,800. Internationally, standard credits sell for \$4 to \$6 (roughly ₹330 to ₹500), whereas premium projects such as afforestation or initiatives that deliver lasting environmental improvements

can command prices ranging from \$22 to \$50 (approximately ₹1,800 to ₹4,000) per tons.

Registration Process

If a farmer, organization, or company wishes to earn and sell carbon credits, they must go through these key steps:

Step 1: Partnering with a Developer/Agency:

It is generally difficult for an individual farmer to register directly. Therefore, they contact entities like Grow Indigo or large aggregator companies (project developers) working in the environmental sector to assist with the process.

Step 2: Providing Land and Project Details:

You must provide the agency with details about your land and the specific practices being implemented (such as organic farming, solar pumps, or tree plantation). The agency then makes an initial estimate of the amount of carbon you can save.

Step 3: Project Design and Registration: Next, a comprehensive project plan is prepared and registered with India's Carbon Registry (CR-I) or global bodies (such as Verra or Gold Standard).

Step 4: Monitoring and Third-Party Verification: The eco-friendly practices you have adopted are monitored for a period of 1 to 3 years. Subsequently, an independent government or international auditor conducts

an inspection to certify that you have indeed reduced carbon emissions.

Step 5: Credit Issuance and Earnings: Once verification is successful, 'carbon credits' are issued to your digital account; agencies then sell these credits to large corporations and transfer the proceeds directly to your bank account.

This entire process may take approximately 2 to 3 years, but it is emerging as a major source of income for farmers and owners of barren land in the near future.

- **Carbon Trading**

The buying and selling of carbon credits is known as Carbon Trading. It can take place at both national and international levels. The concept was promoted by UNEP in the 1970s and gained greater importance after the Kyoto Protocol. Types of Carbon Trading (i) Emission Trading Organizations that emit less than their permitted limit can sell their excess emission allowances to organizations that exceed their emission limits. (ii) Offset Trading Offset trading provides financial incentives for investing in projects that reduce greenhouse gas (GHG) emissions in other locations.

- **Carbon Tax**

A Carbon Tax is a tax imposed on greenhouse gas emissions generated by burning fossil fuels. The United Nations Framework Convention on Climate Change (UNFCCC) has recommended adopting carbon taxation. Carbon tax is generally imposed on: Fossil

fuel consumption. Carbon dioxide emissions during industrial production (such as cement and steel industries).

- **Carbon Footprint**

A Carbon Footprint is the total amount of greenhouse gases, mainly carbon dioxide (CO₂), emitted directly or indirectly by an individual, community, organization, or event.

- **Carbon Space**

Carbon Space refers to the Earth's remaining capacity to absorb carbon emissions without causing dangerous climate change. Once this limit is exceeded, atmospheric CO₂ concentration increases, leading to global warming.

- **Earth Hour**

Earth Hour was first observed in 2007 in Sydney, Australia, by the World Wide Fund for Nature (WWF). Every year, on the last Saturday of March, people around the world switch off nonessential lights for one hour (8:30–9:30 PM) to raise awareness about climate change. In 2022, Earth Hour was observed on 26 March.

- **Green Building**

A Green Building is designed, constructed, operated, and maintained using environmentally friendly and resource-efficient methods. Its objectives include: Reducing energy and water consumption. Minimizing environmental impacts. Conserving natural resources. Providing a healthier living environment.