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## A step towards green economy and green growth for sustainable development in India

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#### Abstract

The term "green economy" has become increasingly popular worldwide, leading many countries to prioritise environmental issues and adopt it as their primary economic model. India is one of the few nations experiencing rapid economic growth while also focusing on sustainable development. "Green growth" refers to the promotion of economic expansion while ensuring natural resources continue to provide crucial environmental protection. India's Union Budget 2023–2024 prioritises green growth, aiming a transition to green economy with ecologically responsible agriculture and sustainable energy. The green economy concept places an emphasis on environmental conservation in addition to financial benefits to produce more robust and sustainable economies. The green economy seeks to do away with or drastically lower this development cost. The environment and natural resources need to be conserved because they are the most valuable assets. According to proponents of the green economy or low-carbon economy, environmental preservation should play a significant role in the development and implementation of all economic policies. Environmental dangers hinder economic progress since it has a detrimental effect on both society and the environment. This research paper provides an understanding of the terms "green economy," "green growth," and "sustainable development." It also discusses how major economic sectors are transitioning to a green economy, as well as the potential and problems that India faces. India could lead the world in green growth and economic development to attain sustainable development.

Keywords: Green growth, green economy, sustainable development

#### Introduction

An economic strategy that encourages the harmonious coexistence of people and nature while simultaneously seeking to meet their needs is known as the green economy. It uses resources wisely and is socially inclusive while lowering carbon emissions. The idea of a green economy has grown in importance within the individual development strategies of nations around the world (Bogovic & Grdic, 2020)<sup>[4]</sup>. A green economy should increase resource utilisation, protect and expand the pool of accessible natural resources, promote environmentally friendly modes of consumption and production, and direct the world towards low-carbon growth as part of sustainable development. Because of rapid industrialization, more trees are cut which led to decrease the amount of oxygen in the air and worsened the issue of carbon emissions that caused air pollution and global warming. The idea of a green economy was first put forth by British environmentalist Pearce in his book Blueprint for a Green Economy. According to him, a green economy is the most effective way to achieve economic development, as opposed to the more traditional goal of economic growth. According to Pearce et al. (1989) <sup>[16]</sup>, it emphasises the natural interplay between societal advancement and environmental preservation. Green economy proponents call for the creation of funds and jobs through private and public investments that protect biodiversity, lessen carbon emissions and other forms of pollution, and improve resource efficiency. The United Nations General Assembly imparted member nations direction by classifying the green economy and sustainable development concept into seven tracks: "eco efficiency, greening markets and public procurement, investments in sustainable infrastructure, restoration and upgrading of natural capital, getting prices right, and ecological tax reform." India really wants to move to a green economy, and it can do so by spending between 0.02% and 0.04% of the average annual GDP growth rate on environmental protection measures.

In October 2008, the Green Economy Initiative was launched by the United Nations Environment Programme (UNEP) with the aim of encouraging investment in environment friendly industries in addition to promoting sustainability. During the 2012 Rio+20 World Conference on Sustainable Development, the notion of an inclusive green economy was introduced and has since developed. The concept of an inclusive green economy, along with green growth and sustainable development, has undergone significant growth and evolution.

The term "green growth" refers to a sustainable economic expansion that utilises natural resources. This concept is gaining popularity worldwide as an alternative to traditional industrial growth. Consequently, the "green economy" has emerged as a concept that promotes both environmental security and real progress (Pollin et al. (2014)<sup>[18]</sup>; Albekov et al. (2018) <sup>[1]</sup>. The viewpoints presented by the green economy reinforce a holistic and unified approach to sustainable development, with the protection of the environment being its primary objective. This improves a nation's resource productivity and competitiveness. Multiple industries' emergence, accelerated commercialization, and other outcomes of this economic boom. However, environmental pollution, ecological imbalance, water scarcity, and other issues have brought attention to India's extraordinary economic growth. 'Green Growth' is projected to operate as an enabler in numerous ways, including cleaner transition, producing green jobs, and enabling sustainable development, as the Indian economy is anticipated to strengthen at nearly 6.5% in fiscal year 2023-24.

#### **Reviw of Literature**

Kasztelan, (2017)<sup>[12]</sup> revealed that sustainable development is viewed as a timeless goal that can be attained through the use of green growth. The complementary and synergistic nature of the correlations between the three concepts-green economy, green growth, and sustainable developmentleads to the conclusion that their coexistence is reasonable. Sustainable innovation and technology transfer boost green growth, which in turn has a favourable impact on economic growth (Fernades, et al. 2021)<sup>[20]</sup>. Green investment aims to raise social justice and human wellbeing while reducing environmental hazards and protecting the environment. Additionally, it recognises the value of the environment and its natural resources (Soundarrajan, 2016)<sup>[16]</sup>. According to Melnyk et al. (2020) <sup>[15]</sup>, assessing the dynamics of a country's economic greening is crucial because it allows for the assessment of the environmental impact of a new economic model by looking at various contributing factors and determining the best strategies for reducing environmental pressures from economic activity. Numerous global reporting systems rely on energy indices and indicators to evaluate the state of the green economy and the potential for green growth. Chhaochharia (2021) <sup>[6]</sup> discussed global and Indian trends in green finance transactions. Utilising multiple data sources, the study evaluates both the level of public awareness and the availability of financial resources for green initiatives. The findings indicate that while India has made progress in terms of public awareness and financing options, there is scope for improvement in information management systems and coordination among stakeholders. Such improvements could help reduce information asymmetry and encourage

environmentally responsible and sustainable economic growth. Economic expansion is the driving force behind economic progress, but it also contributes to pollution and the loss of natural resources, so it shouldn't come at the expense of the environment (Bholane KP, 2013)<sup>[3]</sup>. In the article "Risks and Uses of the Green Economy Concept in the Context of Sustainable Development, Poverty, and Equity", Khor 2021)<sup>[21]</sup> thoroughly explores the dangers of utilising the concept in a narrow manner that prioritises environmental factors above all else. Khor emphasises the need to recognise the economic and social values of environmental resources as a key component of the green economy. To promote sustainable development, the green economy places importance on both environmental conservation and financial gains. The conservation and preservation of natural resources and the environment are crucial, as they are the most valuable assets. Promoters of the green or low-carbon economy argue that protecting the environment should be the top priority in the formulation and implementation of all economic policies.

#### **Objectives of Research**

- 1. To understand the concepts of a green economy, green growth, and sustainable development.
- 2. To identify the transition to a green economy in major economic sectors.
- 3. To highlight the green initiatives taken in India.
- 4. To examine the opportunities and hurdles faced in the green economy.

#### Methodology

The secondary data used in this research paper was gathered from various books, journals, websites, publications, and annual reports from various governments and organisations. This is a theoretical paper attempting to add to the literature on green economies and green growth. The news articles that are related to the green economy, green growth, and ecological footprint have been reviewed for this research paper.

**Green Economy:** A green economy is a strategy of conducting business that seeks to simultaneously meet the needs of both humanity and nature while promoting peaceful coexistence. A green economy is one that conserves resources, is socially inclusive, and decreases carbon emissions.

#### **Principles of the Green Economy**

Principles of a green economy are based on five key principles.

#### 1. The wellbeing principle aims to:

- Enable the society to create and enjoy prosperity.
- Increasing wealth to encourage well-being.
- Potential for sustainable and decent living.
- Established on the tenet of collective action for public goods.

#### 2. Justice principle

- Equity within and between generations is encouraged.
- Supports the emancipation of women and opposes elite capture.
- Fair distribution of opportunity and result.
- Founded on compassion and social justice.

#### 3. Planetary boundary principle

- Protects, restores, and funds the environment.
- Adopting the precautionary principle to prevent the depletion of natural resources and ecological boundaries.
- Make investments to safeguard, enhance, and revive the natural systems, including the land, water, and air.

#### 4. Efficiency and Sufficiency principle

- Supporting sustainable consumption and production.
- A global move to sustainable resource consumption.
- Employ polluter pays principle or benefits to be accrued to those delivering inclusive green outcomes.

#### 5. Good Governance principle

- Integrated, accountable and resilient institutions.
- Requires public participation, transparency, and social dialogue.
- Devolved decision- making.

#### Indian position as green economy

According to the 2022 Environmental Performance Index, nations are rated based on parameters such as air quality, environmental health, ecosystem services, climate change, biodiversity & habitat, fisheries, and waste management.

India is the fifth largest economy in the world, ranked lowest out of 180 countries, indicating its poor performance lags in green growth. Some of the indicators that contribute to India's ranking are as follows: Fisheries (42), Sanitation & Drinking Water (139), Waste Management (151), Climate Change (165), Environment health (178), Biodiversity & Habitat (179), and Air Quality (179). India's poor performance is concerning, and quick action is needed to address these issues and protect people from major environmental health concerns.

Country	Rank	<b>EPI-Score</b>	10-year change
Denmark	1	77.9	14.9
United Kingdom	2	77.7	23
Finland	3	76.5	21
Malta	4	75.2	25.4
Sweden	5	72.7	15.8
India	180	18.9	-0.6

Table 1: Shows Environmental Performance Index (EPI)

Source: 2022 Environmental Performance Index (EPI).

India has committed to achieving net zero emissions by 2070. Presently, India's economy is the world's fifth largest and one of the fastest growing.

Table 2: KDI for India and some countries

Countries	GDP (Current US\$), (Billions (2021)	GDP growth (Annual %) (2021)	CO2 emissions (Metric tons per capita), (2020)
United States	23,315.08	5.9	14.67
China	17,734.06	8.1	7.61
Brazil	1,608.98	4.6	2.05
India	3,176.30	8.7	1.78
Japan	4,940.88	1.7	8.54

Source: World Bank Development Indicators

India's economy needs to grow more if it is to meet its development goals. Growth could, however, have severe adverse consequences for the environment due to the rapid depletion of natural resources. India's ability to eventually rely less on the resources required to support economic growth while enhancing social justice and creating jobs will determine how far India moves towards green growth. Green growth potential may help strike a balance between these needs. However, the management of the public debt and budget deficits, two major impediments to national planning, could halt the technological developments required for green growth.

### Major Greening Economic Sector in India

Agriculture: Organic farming has the potential to improve food quality, preserve non-renewable resources, and benefit the environment. Since organic farming practises are thought to offer some solutions to the problems now affecting the agriculture business, interest in them has increased over the past 10 years (Charyulu et al., 2017)<sup>[22]</sup>. Sikkim was dubbed the nation's first entirely organic state in 2015. Many other state governments are being encouraged by this to take similar action. The government has implemented several initiatives to enhance and assist farmers' livelihoods, particularly those of small farmers. These include increasing the minimum support prices, enhancing loan availability, creating seeds resistant to climate change, and implementing some technical treatments like the Soil Health Card, which allows farmers to assess the condition of their soils. Additionally, the government has set a goal to double farmer incomes. However, the majority of our organic farmers continue to struggle as a result of subpar regulatory measures, a lack of knowledge, rising input costs, and an ignorance of the market.

Energy: India has vowed to use non-fossil fuel-based energy resources to generate about 50% of its total installed capacity by 2030. By December 31, 2022, 167.75 GW of renewable energy capacity has been installed throughout the nation. In addition, 78.75 GW worth of projects are currently in various stages of completion, while 32.60 GW worth of projects are in various stages of the bidding process. India ranks fourth globally for installed renewable energy capacity, wind power capacity, and solar power capacity, according to the REN21 Renewables 2022 Global Status Report. The country's renewable energy capacity (including large-scale hydro) has increased from 76.37 GW in March 2014 to 167.75 GW in December 2022. During this period, India's total solar power capacity has increased 24.07 times, from 2.63 GW to 63.30 GW. Source: Annual Report 2022-23 Ministry of New and Renewable Energy.

**Construction:** The construction industry is highly resource intensive. It accounts for 30% of Indian electricity usage and has a large material footprint. India has secured the third position among the top ten countries for LEED (Leadership in Energy and Environmental Design). To further the cause, the Indian Green Building Council (IGBC) was established in 2001 by the Confederation of Indian Industry (CII) with the vision of enabling a sustainable built environment for all and elevating India to a global leader in sustainable infrastructure by 2025. The growth of green built-up area in India has been impressive, from a modest beginning of 20,000 square feet in 2003 to more than 10,698 green building projects currently under construction as of March 31, 2023, with a footprint of over 10.26 billion square feet

registered with the Indian Green Building Council (IGBC). Out of these, 3,321 projects are already certified and fully operational in India. The collective efforts of all parties involved in the green construction movement have made this expansion feasible.

Manufacturing: India's green manufacturing industry is only getting started. Although the manufacturing sector has developed and adopted important policies in the field of green energy, there is still much room for policy development and adoption in the areas of green products and processes. Despite the country's increasing industrial exports, the manufacturing sector only accounts for 16% of India's GDP, which is far less than the 55 percent generated by services. By 2025, if manufacturing reaches its full potential, it may contribute 25 to 30 percent of the nation's GDP and add 60 to 90 million new jobs. Global climate change is one of the main issues with global industrialisation and economic growth. Manufacturing has a significant impact on both economic and sustainability issues because it is a major source of GHG (greenhouse gas) and other emissions. Green manufacturing is a process that is crucial for long-term sustainability and for defending the planet against the new dangers brought on by climate change. The goal of green manufacturing is to reduce the industrial sector's contribution to climate change and other environmental issues by altering business and manufacturing practises as well as stakeholder mind-sets. Manufacturers can promote sustainable practises through practical means within their production facilities, throughout the supply chain, and among their consumer bases. To lessen the detrimental effects on the environment, it is imperative that we standardise our production processes and products.

In addition to being good for the environment, green manufacturing is also cost-effective. CO2 emissions must be cut in half by 2030, according to a recent United Nations assessment. Green and sustainable manufacturing will be essential to accomplishing this aim as India embarks on an ambitious growth plan. Green manufacturing uses green energy sources like non-fossil or renewable energy, decreases waste, encourages safe production, and lessens the impact on the environment. Eco-friendly practises are no longer merely "nice to haves." They are a "must-have" because investors consider a company's financial health alongside its long-term performance. Green manufacturing can be incorporated by businesses in a number of ways. They can create and market eco-friendly products or implement production techniques that reduce emissions, waste, and pollution while emphasising recycling and reusing.

**Transportation:** The development of on-demand transportation and carpooling systems is now a developing trend in India's transportation industry. These are especially common in cities and are anticipated to experience exponential growth as Internet usage increases. Electricity sector decarbonization is a significant step that is required for the decarbonization of end use sectors. India has proven to be a leader in the advancement of renewable energy and, through its departure from coal consumption, has the potential to maintain this position. This transformation of the electricity sector could result in substantial benefits for

sustainable development and create opportunities for growth across various industries.

### Government initiative towards green India

India has committed to achieving net zero emissions by 2070, released a low-carbon development strategy, and introduced the idea of "Life" (Lifestyle for Environment) to encourage ethical consumption in order to address the climate crisis. The first auction for the new Sovereign Green Bonds, which were introduced in the fiscal year 2022–23 budget as a new way to finance green initiatives, was recently a success. The government has accelerated green growth as India overtakes China as the most populous nation. The Indian government has made the following steps towards a green economy that promotes sustainable growth.

Hydrogen energy mission: The project involves producing hydrogen using environmentally friendly energy sources, which has the potential to revolutionise the transportation industry. The budget's allocation of funds towards green hydrogen is in line with the objective of decreasing reliance on minerals and rare earth elements for energy storage and encouraging the use of clean energy sources in India. The development of a national initiative for green hydrogen, supported by a budget of Rs 19,700 crore, will facilitate the shift towards a low-carbon economy and decrease the country's dependence on imported fossil fuels. The goal is to attain an annual production rate of 5 MMT by 2030. To aid in this energy transition, the Ministry of Petroleum and Natural Gas will invest Rs 35,000 crore in capital projects, furthering the objective of achieving net-zero emissions and enhancing energy security.

# PM Kusum (Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan)

Introduced in 2019, this programme aims to provide Indian farmers with energy security while also aligning with the country's Intended Nationally Determined Contributions (INDCs). India has committed to achieving 40% of electric power generation from non-fossil fuel sources by 2030, and the Ministry of Petroleum and Natural Resources has identified energy security, transitioning to non-fossil fuel sources, and achieving a net-zero goal as their top priorities.

Public Transport: India's public transportation system is undergoing a significant overhaul, with the Indian government committing INR 18,000 crore (USD 2.43 billion) from private sources to acquire 20,000 buses. Additionally, the government is utilising innovative financing methods through public-private partnerships. The intent of the programme is to decrease reliance on private vehicles and reduce the carbon footprint. In India, the process of scrapping old vehicles plays a crucial role in promoting environmentally friendly practises. By removing older vehicles, it allows for the introduction of a newer and more sustainable fleet of vehicles. This law is anticipated to diminish emissions, enlarge job prospects, and escalate the need for new vehicles, all of which promote the development of an eco-friendly economy by upholding the three R's: reuse, recycle, and recover. This contributes to the overall goal of achieving a greener future for the country.

**Deep Ocean Mission:** The mission would carry out programmes to save deep marine biodiversity in addition to

deep ocean survey and exploration. Within five years, this programme will receive a budget of more than INR 4,000 crore.

**PM Pranam:** The government's objective is to support and encourage one crore farmers to take up natural farming techniques via the PM Programme for Restoration, Awareness, Nourishment, and Amelioration of Mother Earth (PRANAM). The main focus of this initiative is to decrease reliance on chemical fertilisers and endorse a more balanced use of chemicals. Moreover, it promotes eco-friendly practises, like green growth, to diminish the adverse effects on the environment.

**Green Credit Programme:** The Environment (Protection) Act will be notified as a Green Credit programme to promote behaviour change. This would encourage ecologically responsible behaviour on the part of businesses, people, and local organisations while also assisting in the mobilisation of additional resources for such initiatives.

**Urban Swachh Bharat Mission 2.0:** Efficient waste management of building and demolition projects is a key focus for the government. Their strategy involves the bioremediation of all previously used landfills, and a concentrated effort towards integrated management of manure, sludge, and sewage treatment. Waste sources will be categorised and a reduction in disposable plastic use will be implemented, leading to a decrease in air pollution.

**Gobardhan Yojana:** India has the potential to produce 150,000 cubic metres of gas and 10 billion cubic meters of biogas from cow dung, also known as Gobar. These resources can contribute up to 8% to the country's city gas distribution. The Gobardhan Yojana, which is an essential element of India's biofuel strategy, was introduced in 2018. As a part of the Gobardhan Yojana, the government has plans to construct 500 new wastes to wealth facilities.

**Consumer preference for Greener Products:** Consumers are aware of green products. Buyers favour companies that aid in reducing waste, decreasing carbon emissions, using recyclable packaging, maintaining ethical labour standards, and upholding human values and rights. The pandemic has heightened people's environmental consciousness, health considerations, and desire to preserve resources for future generations.

### Potential hurdles for achieving green economy in India

It is commonly believed that environmental protection comes at the expense of economic development and progress. As a means of preserving the environment, The Government of Odisha put a halt to open cast mining.

- The majority of people think green technology is unreliable and prohibitively expensive. As an illustration, electric vehicle battery charging stations are limited in availability, and solar energy is initially pricey.
- Green investment financial markets are still in their infancy, and there are insufficient structures in place to allocate financing towards such ventures. For instance, because green bonds have a credit rating below AAA, investors are hesitant to purchase them.

- The idea that India cannot afford to pollute now and clean up later has not yet been accepted by the public.
- The widespread recognition of a green economy as a means to advance social development and environmental sustainability remains limited.

# Accelerating the transition towards a green economy in India

# The following recommendations are being provided to accelerate the shift to a green economy:

- Use public procurement procedures to generate sustained, high-volume demand for eco-friendly products and services, which will incentivize businesses to innovate and benefit from economies of scale.
- Redirect money into the environment by promoting livelihood models that protect and improve natural resources, including water and land systems.
- Use monetary and fiscal policy tools to encourage green economic activity.
- Encourage the growth of eco-friendly businesses, particularly within the micro, small, and medium enterprise realms, through the provision of benefits, protection against risk, proper regulation, technology, and modern infrastructure.
- Supporter for the adoption of environmentally friendly construction supplies for housing, smart agriculture for food production, and sustainable energy sources for electricity generation as effective, clean solutions for fulfilling essential demands.
- Increasing investor confidence by making significant environmental challenges more predictable from a government perspective
- Create favourable conditions for informed decisionmaking and the uptake of necessities like education, health care, and cleanliness, such as reasonable supply, adequate finance, and responsive products and services.
- Promote environmental social awareness via a variety of channels like radio and television.
- To conserve resources, use digital mode rather than physical mode. It opens great opportunities for digital media.
- Raising funds by implementing green taxes and discontinuing environmentally harmful subsidies can aid in budgetary consolidation.
- Increasing efficiency can be attained by providing incentives for environmentally friendly behaviours, reducing waste, promoting growth and innovation, and allocating resources towards high-yield investments.
- Expanding the market for eco-friendly products, services, and technologies can stimulate demand.

### Conclusion

This research focuses on key metrics in India's green economy, highlighting its progress and potential. The results demonstrate promising trends that support India's ongoing efforts to transition towards a green economy. Despite obstacles commonly faced by developing countries, India's sustainable development goals can be achieved by adopting more efficient policies. By implementing economic tools to develop environmentally friendly regulations and legislation, the government can accelerate this transition. Although India's government has previously relied on a command and control approach to penalise environmental offenders, use of economic techniques can be more effective in promoting green growth without sacrificing GDP growth. In the Union Budget 2023, green growth is a major priority, with a focus on creating green jobs, promoting sustainable energy, and transitioning towards a green industrial and economic model. This budget reflects the government's commitment to achieving Net Zero by 2070, with a decisive and goal-oriented plan. However, there is a need for many improvements, and future budgets should consider green budgeting and green accounting to recognise the value of biodiversity in ecosystem services.

### References

- 1. Albekov AU, Parkhomenko TV, Polubotko AA. Green Economy: A Phenomenon of progress and a concept of environmental security; Contemporary studies in economic and financial analysis; Emerald Publishing Limited: Bingley, UK. 2018;100:51-59.
- 2. Allen C, Clouth S. A guidebook to the Green Economy UN Division for Sustainable Development; c2012.
- 3. Bholane KP. A Policy Shift from Economic Growth to Green Growth with Special Reference to India. Excel International Journal of Multidisciplinary Management Studies. 2013;3(12):126-132
- 4. Bogovic ND, Grdic ZS, Transitioning to a green economy possible effect on the Croatian economy. Sustainability. 2020;12:9342.
- Charyulu D, Subho B. Economics and Efficiency of Organic Farming vis-?-vis Conventional Farming in India. Indian Institute of Management Ahmedabad, Research and Publication Department, IIMA Working Papers; c2010. p. 2-26.
- 6. Chhaochharia M. Green Finance in India: Progress and Challenges. Research Journal of Humanities and Social Sciences. 2021;12(4):223-226.
- Dutta S. Green Economy In the context of Indian Economy. International Review of Research in Emerging Markets & the Global Economy. 2016;2(3):873-894
- 8. Fedrigo-Fazio D, Ten Brink P, Bassi S, Emond J, Lucas T. Green economy: what do we mean by green economy. UNEP: Nairobi, Kenya; c2012.
- 9. Fernandes CI, Veiga PM, Ferreira JJ, Hughes M. Green growth versus economic growth: do sustainable technology transfer and innovations lead to an imperfect choice? Business Strategy and the Environment. 2021;30(4):2021-2037.
- Gupta D. Application of Economic Tools in Environment: A Step towards Sustainable Development and Green Economy in India. Issue 5 Int'l JL Mgmt. & Human. 2020;3:1341.
- 11. Jose AO, Aaron C, Martin K. The Transition to a Green Economy: Benefits, Challenges and Risks from a Sustainable Development Perspective, United Nations Conference on Trade and Development (UNCTAD), United Nations Environment Programme (UN Environment), United Nations Department of Economic and Social Affairs (UNDESA).
- Kasztelan A. Green growth, green economy and sustainable development: terminological and relational discourse. Prague Economic Papers. 2017;26(4):487-499.
- 13. Khor M. Risks and uses of the green economy concept in the context of sustainable development, poverty and

equity, Research Paper, No. 40, South Centre, Geneva; c2011.

- Loiseau E, Saikku L, Antikainen R, Droste N, Hansjürgens B, Pitkänen K, *et al.* Green Economy and Related Concepts: An Overview. J. Clean. Prod. 2016;139:361-363.
- Melnyk T, Reznikova N, Ivashchenko O. Problems of statistical study of "green economics" and green growth potentials in the sustainable development context. Baltic Journal of Economic Studies. 2020;6(3):87-98.
- Pearce D, Markandya A, Barbier E. Blueprint for a Green Economy. London: Earth scan Publications Ltd; c1989.
- 17. Pokharel SB, Bhandari BP. Green GDP: Sustainable Development, The Himalayan; c2017 May 5.
- 18. Pollin R, Garrett-Peltier H, Heintz J, Hendricks B. Green Growth: A U.S. Program for Controlling Climate Change and Expanding Job Opportunities, Center for American Progress; Center for American Progress and Political Economy Research Institute, University of Massachusetts: Amherst, MA, USA; c2014. p. 2.
- 19. Soundarrajan P, Vivek N. Green finance for sustainable green economic growth in India. Agricultural Economics. 2016;62(1):35-44.
- Pandolfo MT, Rover G, Bortoluzzi EA, Teixeira CD, Rossetto HL, Fernades PC, *et al.* Fracture resistance of simulated immature teeth reinforced with different mineral aggregate-based materials. Brazilian Dental Journal. 2021 Nov 8;32:21-31.
- 21. Gharahkhani P, Jorgenson E, Hysi P, Khawaja AP, Pendergrass S, Han X, *et al.* Genome-wide metaanalysis identifies 127 open-angle glaucoma loci with consistent effect across ancestries. Nature communications. 2021 Feb 24;12(1):1258.
- Garcia-Areas R, Libreros S, Simoes M, Castro-Silva C, Gazaniga N, Amat S, *et al.* Suppression of tumorderived Semaphorin 7A and genetic ablation of hostderived Semaphorin 7A impairs tumor progression in a murine model of advanced breast carcinoma. International Journal of Oncology. 2017 Nov 1;51(5):1395-404.