SUSTAINABILITY, PRODUCTIVITY & GREEN GROWTH

Presented by
IPL FOUNDATION

Indian Potash Limited (IPL) was established in 1955 with the objective of import, handling, promotion, and marketing of potash across the entire country. Over the years, IPL has emerged as India's largest potash company and a major player in multiple agricultural value chains and inputs and continues to contribute steadfastly towards agrarian growth and farmers' prosperity in India.

Extending this commitment beyond business, IPL Foundation, the CSR arm of IPL, continues to focus on sustainability, skill development, education, and community empowerment. Through its Rural Outreach Programme viz. IPL Center for Rural Outreach (ICRO), the Foundation has reached over 2,60,000 farmers, promoting sustainable agricultural practices at the grassroot level and strengthening farmer welfare. The Amrit Internship Programme has also provided valuable exposure to more than 2,700 interns across 9 states, enabling them to engage with real-world agricultural challenges and develop practical insights.

Education and social empowerment remain central to the Foundation's efforts. By supporting institutions (schools) such as Udhav Shiksha Niketan at Sakhoti Tanda and Jarwal Road, IPL Foundation is actively contributing to strengthening rural education. Initiatives like Project PANKH have further impacted the lives of over 30,000 women and girls through menstrual health awareness and community engagement.

The Foundation also plays a significant role in promoting dialogue and awareness through Sustainability Conclaves, Seminars, and Internship Programmes that focus on contemporary issues such as climate resilience, technological innovation, and sustainable agricultural practices. Skill development continues to remain a core priority, as empowering youth with industry-relevant knowledge and practical exposure is essential for building a future-ready workforce.

It gives me great pleasure to present this booklet on ***"Sustainability, Productivity & Green Growth",*** which brings together critical insights on one of the most pressing priorities of our time—achieving balanced and inclusive development while safeguarding our natural resources for future generations.

This booklet thoughtfully captures the essence of sustainability by highlighting its environmental, social, and economic dimensions, while also emphasizing practical pathways such as resource efficiency, circular economy, climate-resilient planning, and community participation. It further connects these principles with the broader framework of the Sustainable Development Goals (SDGs), offering a comprehensive understanding of how global commitments translate into actionable strategies at the grassroots level. The integration of productivity with sustainability and the concept of green growth makes this publication especially relevant in today's context, where economic progress must go hand in hand with environmental responsibility.

It is important to note that the content of this booklet has been carefully curated and compiled in-house from reliable and credible sources. The intent

behind this effort is to provide readers with comprehensive, well-structured, and accessible study material in one place, enabling a clearer understanding of key concepts related to sustainability, productivity, and green growth.

I am confident that this booklet will not only serve as a valuable resource for the interns and readers but also inspire them towards collective action towards a more sustainable, productive, and greener future.

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Sustainability Index

Sustainability, Productivity & Green Growth

1. Why Sustainability matters?

Sustainability matters because it is about safeguarding the planet, ensuring human well-being, fostering economic stability, and acknowledging our shared responsibility for the health of the Earth. It is a guiding principle that helps us make choices that benefit not only ourselves but also future generations and the entire global community.

1. **Environmental:** Sustainability is essential for preserving the Earth's natural resources and biodiversity to ensure that current and future generations can enjoy clean air, water, and a stable climate.
2. **Climate Change:** Unsustainable practices, such as burning fossil fuels and deforestation, are major contributors to climate change. Sustainability efforts aim to reduce these activities and mitigate the effects of climate change.
3. **Resource Conservation:** Sustainable practices help manage and conserve finite resources like water, minerals, and energy which ensures their availability for the long term.
4. **Human Health:** Sustainability promotes practices that reduce pollution and exposure to harmful chemicals, leading to better public health and well-being.
5. **Economic Stability:** A sustainable economy is more resilient and less vulnerable to resource shortages and environmental disasters. Long-term economic growth depends on sustainable practices.
6. **Social Equity:** Sustainability aims to address social injustices by ensuring that the benefits of development are shared equitably among all people, regardless of their socioeconomic status.
7. **Innovation and Job Creation:** Sustainable practices drive innovation and create new industries and job opportunities. This includes fields such as renewable energy, green technology, and sustainable agriculture.

Many countries and regions have established laws and regulations related to environmental protection and sustainability. Complying with these regulations is essential for avoiding legal issues and penalties. Unsustainable practices can deplete resources, causing long-term harm to ecosystems and economies. Sustainability ensures that systems can persist for generations to come.

A. The Three Pillars of Sustainability

The Three Pillars of Sustainability, also known as the ***"Triple Bottom Line,"*** provide a framework for understanding and addressing sustainability challenges by considering the interrelated aspects of environmental, social, and economic sustainability.

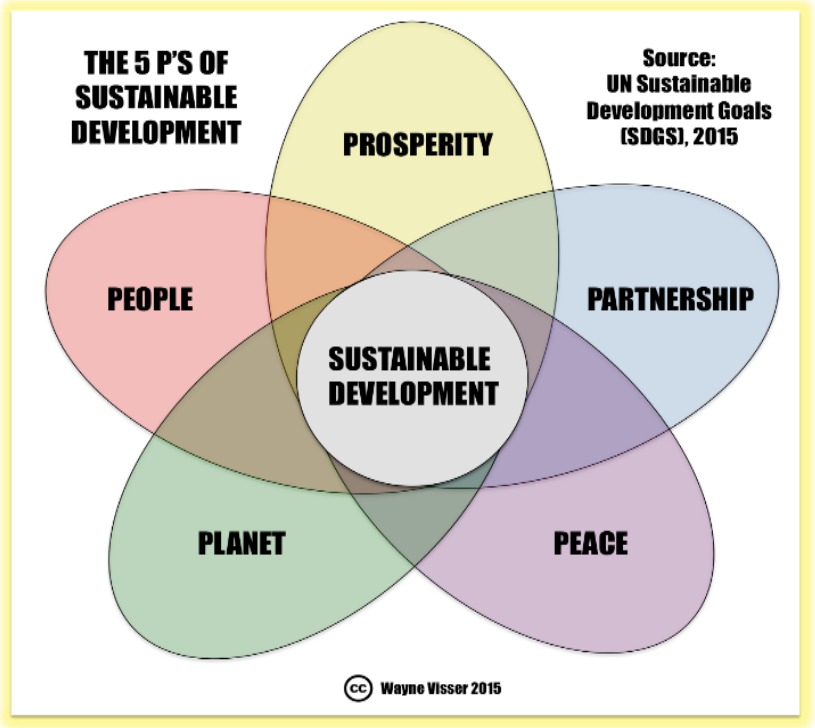
- **Environmental Sustainability:** This pillar focuses on the conservation and protection of the natural environment. It involves minimizing the negative impacts on ecosystems, reducing pollution, conserving resources, and addressing climate change. (Source- SDG 6,7,12,13, 14 & 15)

- **Social Sustainability:** Social sustainability emphasizes equity, justice, and the well-being of people within a society. It encompasses aspects like human rights, social inclusion, access to healthcare and education, and community development. (Source- SDG 4, 5, 10, 11, 16 & 17)

- **Economic Sustainability:** Economic sustainability relates to the viability of economic systems and activities over time. It involves practices that promote long-term economic growth, stability, and the responsible use of resources while avoiding excessive consumption and economic inequality. (Source- SDG 1, 2, 3, 8 & 9)

B. What are the 5 P's of sustainability?

- **People**
- **Planet**
- **Prosperity**
- **Peace**
- **Partnership**



C. Practical Pathways of Sustainability

Sustainability is not limited to ideas and policies; it is achieved through practical actions that guide how resources are used, how communities behave, and how development is planned. The following pathways explain the key methods through which sustainability is practiced in real life helping to balance environmental protection, economic growth, and social development.

- **Resource Efficiency (Water, Energy, and Inputs):** Resource efficiency means using water, energy, land, and raw materials wisely so that minimum resources are used to

achieve maximum output. Efficient water use through rainwater harvesting, micro-irrigation, and wastewater reuse helps reduce pressure on freshwater sources. Energy efficiency measures such as renewable energy adoption, energy-efficient appliances, and improved infrastructure reduce energy consumption and greenhouse gas emissions. Efficient use of inputs in agriculture and industry lowers costs, reduces waste, and supports long-term sustainability. (Source- Niti Aayog resource efficiency and circular economy report)

- **Circular Economy (Reduce, Reuse, Recycle):** The circular economy promotes the efficient use of materials by reducing waste generation and keeping resources in use for as long as possible. Instead of disposing of products after use, materials are reused, recycled, or recovered. Practices such as waste segregation, composting, recycling, and extended producer responsibility help reduce landfill waste and pollution. This approach conserves natural resources, supports sustainable production, and creates green employment opportunities. (Source- Swachh Bharat Mission)

- **Nature-Based Solutions:** Nature-based solutions use natural ecosystems to address environmental challenges such as climate change, biodiversity loss, and disaster risks. Activities like afforestation, wetland restoration, mangrove conservation, and urban green spaces help absorb carbon dioxide, improve air and water quality, and protect communities from floods and heat stress. These solutions are cost-effective, environmentally friendly, and provide long-term benefits to both people and nature. (Source- National Biodiversity Action Plan)

- **Climate-Resilient Planning:** Climate-resilient planning focuses on preparing for and adapting to climate change impacts such as droughts, floods, cyclones, and rising temperatures. It includes climate-smart agriculture, resilient infrastructure, disaster risk reduction, and early warning systems. By integrating climate risks into development planning, governments and communities can reduce vulnerability, protect livelihoods, and ensure sustainable development even under changing climate conditions. (Source- State Action Plans on Climate Change)

- **Community Participation and Behavioural Change (LiFE – Lifestyle for Environment):** Community participation is essential for achieving sustainability, as individual and collective actions play a major role in environmental protection. The LiFE (Lifestyle for Environment) initiative encourages people to adopt eco-friendly habits such as saving water and energy, reducing waste, avoiding single-use plastics, and making sustainable consumption choices. Active involvement of communities increases awareness, ownership, and long-term success of sustainability initiatives. (Source- Mission-LiFE Ministry of Environment, Forest and Climate Change)

2. UN Sustainability Development Goals

The SDG Goals are based on the principle of universality and aims to ensure that no one is left behind in the development efforts.

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. India is a signatory to this transformative agenda by the 193 member states of United Nations General Assembly Summit in 2015. India is, and hence all Indians are, committed to achieve Sustainable Development Goals (SGD) by 2030. The SDGs cover a wide range of social, economic, and environmental challenges and are designed to create a more sustainable and equitable world by the year 2030. As per NITI Aayog's SDG India Index 2023–24, India's overall score has improved to **71**, up from **66** in 2020–21. Significant progress has been made in areas like **No Poverty**, **Good Health**, **Clean Energy**,

and **Climate Action**. Over 30 states/UTs are now classified as 'Front Runners' in SDG performance, with Kerala, Tamil Nadu, and Uttarakhand leading. This progress reflects the impact of key government initiatives and strong policy coordination across sectors.

1. **No Poverty**: End poverty in all its forms everywhere.

2. **Zero Hunger**: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.
3. **Good Health and Well-Being**: Ensure healthy lives and promote well-being for all at all ages.
4. **Quality Education**: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
5. **Gender Equality**: Achieve gender equality and empower all women and girls.
6. **Clean Water and Sanitation**: Ensure availability and sustainable management of water and sanitation for all.
7. **Affordable and Clean Energy**: Ensure access to affordable, reliable, sustainable, and modern energy for all.
8. **Decent Work and Economic Growth**: Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.
9. **Industry, Innovation, and Infrastructure**: Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.
10. **Reduced Inequalities**: Reduce inequality within and among countries.
11. **Sustainable Cities and Communities**: Make cities and human settlements inclusive, safe, resilient, and sustainable.
12. **Responsible Consumption and Production**: Ensure sustainable consumption and production patterns.
13. **Climate Action**: Take urgent action to combat climate change and its impacts.
14. **Life Below Water**: Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.
15. **Life on Land**: Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
16. **Peace, Justice, and Strong Institutions**: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels.
17. **Partnerships for the Goals**: Strengthen the means of implementation and revitalize the global partnership for sustainable development.

These goals are interconnected and mutually reinforcing. Achieving the SDGs requires cooperation among governments, businesses, civil society, and individuals to mobilize resources, enact policies, and take action at local, national, and international levels. The SDGs are a roadmap to a more sustainable and equitable future for people and the planet.

3. What is Productivity?

Productivity is the efficiency of production of goods or services expressed by some measure. Many factors can affect productivity growth. These include technological improvements, economies of scale and scope, workforce skills, management practices, changes in other inputs (such as capital), competitive pressures and the stage of the business cycle.

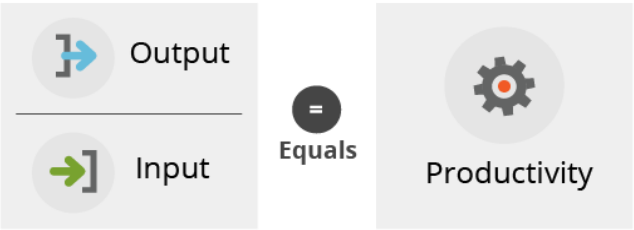
"Productivity is the mentality of progress, of the constant improvement of that which exists. It is the certainty of being able to do better today a yesterday, and less well than tomorrow"

"Productivity isn't everything, but, in the long run, it is almost everything".

"Focus on being productive instead of busy"

"Productivity is being able to do things that you were never able to do before"

Measurements of productivity are often expressed as a ratio of an aggregate output to a single input or an aggregate input used in a production process, i.e. output per unit of input, typically over a specific period of time.



A. Productivity and Green Growth

Green growth is possible only through sustainable practices, resource efficiency and renewable energy sources. The green growth envisions a future with environmentally sustainable and equitable economic growth, resource security, healthy environment (air, water, and land), and restored ecosystems with rich ecology and biodiversity. ***"Vasudhaiva Kutumbakam (One Earth, One Family, One Future)"*** closely ties with LiFE (Lifestyle for Environment)

Innovation for Higher Productivity & Growth - Key Areas

- **Technology and Digital Transformation**: Embracing emerging technologies such as artificial intelligence, big data analytics, cloud computing, and the **Internet of Things (IoT)** can significantly enhance productivity.

- **Renewable Energy**: Investing in renewable energy sources like solar, wind, and hydro power can lead to sustainable growth while reducing dependence on fossil fuels.

- **Agriculture and Rural Innovation**: Developing innovative farming techniques, precision agriculture technologies, and leveraging data analytics can enhance agricultural productivity while minimizing resource wastage.

- ❖ **Sustainable Manufacturing**: Encouraging sustainable practices in manufacturing industries can reduce environmental impact while boosting productivity.

- ❖ **Skill Development and Education**: Fostering a culture of innovation requires a well-trained and skilled workforce.

- ❖ **Start-ups and Entrepreneurship**: Encouraging a vibrant start-up ecosystem can fuel innovation and economic growth.

- ❖ **Infrastructure Development**: Enhancing physical infrastructure, such as transportation networks, logistics systems, and digital connectivity, is vital for enabling efficient movement of goods, services, and information.

- ❖ **Collaboration and Partnerships**: Encouraging collaboration between industry players, research institutions, and government bodies can foster innovation ecosystems.

B. Sustainable Productivity: Doing More with Less

Sustainable productivity refers to improving output and performance while minimizing the use of natural resources and reducing negative environmental and social impacts. It focuses on achieving economic growth in a manner that is efficient, resilient, and inclusive. Sustainable productivity ensures that economic growth does not compromise environmental integrity or social well-being, thereby supporting long-term development goals.

- **Output Growth without Resource Overuse:** Sustainable productivity emphasizes increasing production and income without excessive exploitation of land, water, energy, and raw materials. This is achieved by improving processes, reducing wastage, and adopting efficient resource-use practices. By decoupling economic growth from resource consumption, productivity gains can be maintained without causing environmental degradation or depletion of natural resources.

- **Efficiency Combined with Resilience:** Productivity is not only about efficiency but also about resilience. Efficient systems reduce costs and improve performance, while resilient systems can withstand shocks such as climate change, market fluctuations, and resource scarcity. Sustainable productivity integrates both aspects by promoting adaptive practices, diversified systems, and risk-aware planning, ensuring stability and continuity in the long run.

- **Role of Technology, Skills, and Management:** Technological innovation, skilled human resources, and effective management practices play a crucial role in sustainable productivity. Technologies such as precision agriculture, renewable energy, digital tools, and automation help optimize resource use and improve outputs. At the same time, skill development and good management ensure that technologies are used responsibly and efficiently, leading to sustained productivity improvements.

- **Long-Term Productivity V/S Short-Term Gains:** Unsustainable practices may deliver short-term productivity gains but often result in long-term environmental damage, resource depletion, and social costs. Sustainable productivity prioritizes long-term benefits by maintaining soil health, conserving water, protecting ecosystems, and ensuring decent livelihoods. This approach supports consistent productivity growth over time rather than temporary gains.

4. Green Growth

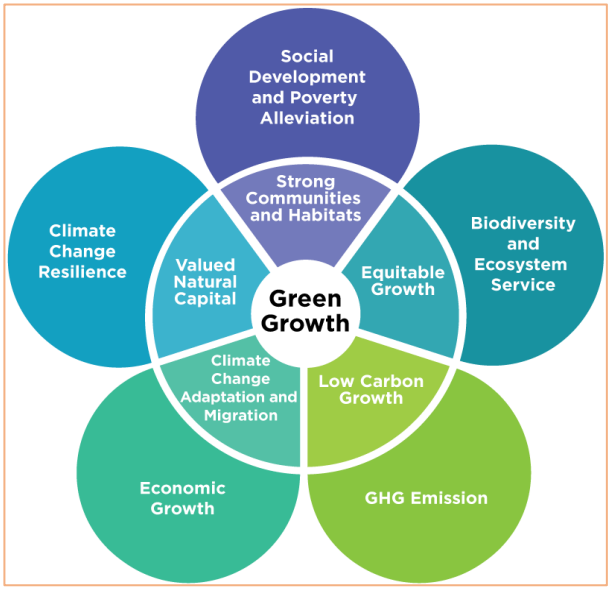
A. Introduction

Green growth is an economic development paradigm that aims to foster economic growth and development while simultaneously ensuring environmental sustainability and social inclusion. The core idea is to achieve prosperity by optimizing the use of natural resources, minimizing pollution, and investing in clean technologies, effectively "decoupling" economic growth from environmental degradation.

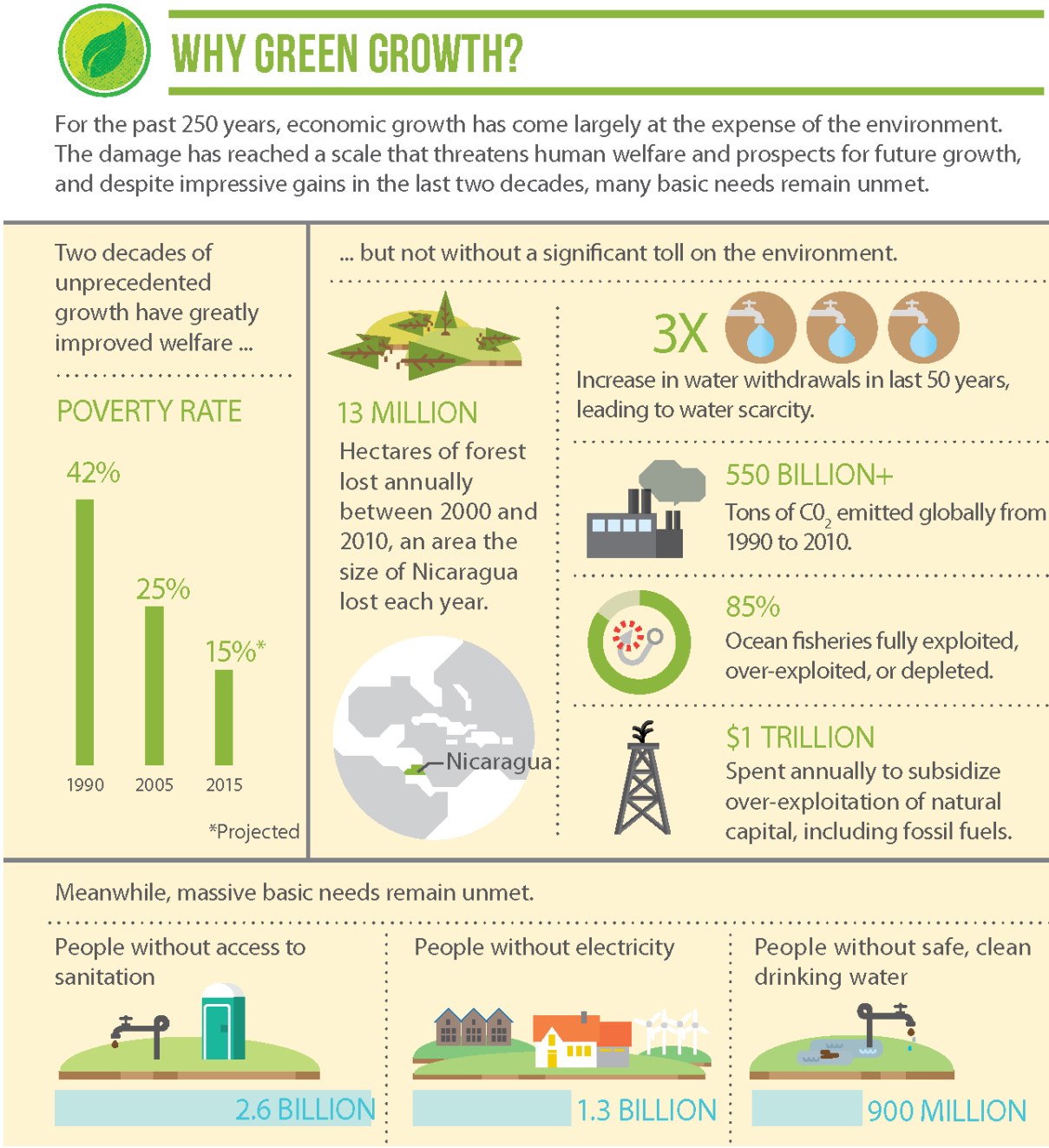
- Aims to foster economic growth and development while ensuring natural assets provide essential resources and services. (Source: OECD- Organisation for Economic Co-operation and Development)
- Characterized by efficient resource use, minimal pollution, and resilience to environmental hazards, recognizing the role of natural capital. (Source: World Bank)

B. What is Green Growth?

Green growth is an economic growth plan that emphasizes sustainable development while minimizing harmful environmental effects. It assumes that economic growth and development can continue while associated negative impacts on the environment, including climate change, are reduced. Green growth provides a pathway to combat environmental issues and the use of natural resources. It is a departure from the traditional economic strategy pf "grow first, clean up later" to a more responsible economic growth with emphasis on environmental and social concerns. It results in a low carbon growth.



C. Why Green Growth matters? (Source- Green Policy Platform)



D. India's Initiative to Promote Green Growth and Sustainability

India's green growth strategy is based on three pillars:

- Increasing renewable energy production
- Reducing fossil fuel use
- Moving towards a gas-based economy

To lead the world into a green industrial and economic transition, India is vigorously pursuing the "**PANCHAMRIT**" and net-zero carbon emissions by 2070. India's green growth policies and programs include Green buildings, Green equipment, Green farming, Green mobility, Green fuels,

Solar energy, Energy efficiency, Sustainable habitat, Water, Himalayan ecosystems, Sustainable agriculture. Some of the initiative taken by GoI: -

- National Bio - Energy Mission
- National Mission on Sustainable Agriculture (NMSA)
- National Adaptation Fund for Climate Change (NAFCC)
- Pradhan Mantri Krishi Sinchayee Yojna (PMSKY)
- Pradhan Mantri Fasal Bima Yojna (PMFBY)
- Soil Health Card (SHC)
- Green India Mission (GIM)
- National Water Mission (NWM)
- Paramparagat Krishi Vikas Yojna (PKVY)
- National Action Plan on Climate Change (NAPCC) and State Action Plan on Climate Change (SAPCC)
- Agricultural Contingency Plans and National Innovations on Climate Resilient Agriculture (NICRA)

The budget defines India's firm stance on green growth by articulating the government's strategy for economic development with a focus on sustainable development. The announcements in the budget resonate with India's climate change policies and are aligned with the country's net zero goals, COP27 commitments and the updated Nationally Determined Contributions (NDCs).

The National Green Hydrogen Mission, with a total outlay of ₹19,744 crore, aims to develop a green hydrogen production capacity of 5 million metric tons (MMT) per year by 2030, supported by approximately 125 GW of additional renewable energy. In the Union Budget 2025–26, the allocation for the mission was doubled to ₹600 crore, reflecting the government's strong push for clean energy transition.

This strategic investment is expected to significantly reduce India's reliance on imported fossil fuels and aid in deep decarbonization across sectors like fertilizers, refining, steel, and transport. In addition, policy measures such as reducing GST on green hydrogen from 18% to 5%, waiving inter-state transmission charges, and promoting open access to renewable energy have further improved the economic feasibility of green hydrogen.

Several state governments have also committed additional incentives, amounting to over ₹5 lakh crore, including subsidies and tax waivers, to attract private investments. These efforts align with the budget's core priorities for 2025 Inclusive Development, Reaching the Last Mile, Infrastructure and Investment, Unleashing Potential, Green Growth, Youth Power, and Financial Sector Reforms positioning India as a global leader in clean energy innovation and sustainability.

India's National Action Plan on Climate Change (NAPCC) has eight core missions. The Government of India has also initiated reforms with missions like:

- The Green Hydrogen Mission
- Renewable energy evaluation storage projects
- The Green Credit programs
- PM-PRANAM (Prime Ministers programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth.
- Gobardhan scheme (Galvanizing Organic Bio-Agro Resources Dhan)
- Bhartiya Prakritik Kheti Bio-input Resource Centres
- MISHTI (Mangrove Initiative for Shoreline Habitats & Tangible Incomes)
- Amrit Dharohar initiative.

SUSTAINABLE GREEN GROWTH PROMOTION

The risks of climate change, resource scarcity, damage to common goods and property for businesses are drawing attention of stakeholders beyond financiers and regulators. Businesses for their continued operations and to seek investments for growth are being asked to report how these risks are being taken into cognizance and how they are addressing them to prove the investments are not at risk and to indicate the businesses perception on way forward pertaining to risks and opportunity and the basis of their thinking. Environment-Social-Governance (ESG) reporting is increasingly becoming an accepted way to address the risks.

To enable uniformity in reporting structure, to ensure right indicators and metrics are considered; to enable verification of materiality assessment of ESG aspects affecting their business across the life cycle, various governmental and non-governmental agencies are mandating/proposing guidelines/standards. In India, the market regulator SEBI, came out with "the Business Responsibility and Sustainable Reporting (BRSR)" guidelines to make investors all over the world aware that Indian industry and governments realize the importance of these issues and how they affect not only India but nations across continents.

To deliberate on this, five national conferences has been organized across Delhi, Chennai, Mumbai, Guwahati, and Dehradun as part of our ESG series, focusing on Environmental, Social, and Governance issues.

Additionally, between March 2023 to September 2024, ICRO have organized 18 Sustainability, Productivity, and Green Growth Conclaves in collaboration with esteemed institutions and agricultural universities like ICAR in Patna and Dimapur, IIM Vishakhapatnam, Gati Shakti University (Ministry of Railways), Lady Irwin College University of Delhi with Nobel Laureate Kailash Satyarthi, Business schools, Sardar Vallabhbhai Patel University of Agriculture and Technology, Galgotias University and others. These events have engaged over 5900 professionals nationwide, garnering overwhelming appreciation for our commitment to addressing key sustainability challenges and the participants have appreciated the efforts made by ICRO/IPL to espouse the issues.

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