



Environmental Responsibility and the Shared Destiny of India

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Abstract

As the world's most populous nation and one of its fastest-growing economies, India stands at a critical juncture where developmental aspirations must be balanced with ecological preservation. This paper examines India's transition from a "hesitant participant" in global climate talks to a proactive leader advocating for climate justice and a "shared destiny". It explores the philosophical foundations of India's environmental stewardship, the robust domestic policy framework—including the "Panchamrit" targets and Mission LiFE—and the nation's role in shaping international cooperation through initiatives like the International Solar Alliance. Despite significant progress, the paper identifies critical challenges, including continued fossil fuel dependency and the need for massive climate finance to ensure a sustainable future for its 1.4 billion citizens.

Key words: Shared destiny, Climate justice, Panchamrit (five-fold climate action plan), Mission LiFE (Lifestyle for Environment), International Solar Alliance (ISA), Climate finance, Net-zero emissions by 2070, Carbon Credit Trading Scheme

1. Introduction

Environmental responsibility in the 21st century is no longer a peripheral concern but the cornerstone of global survival. For India, this responsibility is deeply intertwined with its vision of a "shared destiny," rooted in the ancient philosophy of *Vasudhaiva Kutumbakam*—the world is one family. As India targets becoming a developed nation by 2047, it must navigate the "dual challenge" of eradicating poverty while mitigating the impacts of climate change, which it is highly vulnerable to. This paper argues that India's approach, blending traditional wisdom with modern technology, offers a unique model of "prakriti and pragati" (nature and progress).

2. Philosophical and Historical Foundations

India's environmental consciousness is not a modern imposition but is "woven into the cultural and religious fabric" of its society.



- **Traditional Wisdom:** Ancient texts emphasise a deep reverence for nature, viewing elements like trees and rivers as divine. This reciprocal relationship—where respecting nature ensures natural harmony—forms the bedrock of modern initiatives like Mission LiFE (Lifestyle for Environment).
- **The Shift in Narrative:** Historically, India was seen as a hesitant participant in climate negotiations. However, in the last decade, it has reshaped the global narrative by introducing the concepts of climate justice and equity, holding developed nations accountable for their historical emissions.

3. Domestic Policy Framework: The "Panchamrit" Strategy

At COP26 in Glasgow, India announced its ambitious "Panchamrit" (five-fold) climate action plan:

1. **Non-Fossil Capacity:** Reaching 500 GW of non-fossil fuel energy capacity by 2030.
2. **Renewable Energy Share:** Sourcing 50% of energy requirements from renewables by 2030.
3. **Emissions Reduction:** Reducing projected carbon emissions by 1 billion tonnes by 2030.
4. **Emissions Intensity:** Lowering the carbon intensity of the economy by 45% below 2005 levels by 2030.
5. **Net Zero:** Achieving net-zero emissions by 2070.

3.1 Achievements to Date

India has demonstrated remarkable progress, often meeting targets ahead of schedule:

- **Renewable Growth:** As of late 2024, cumulative non-fossil fuel power capacity reached approximately 46.5% of the total, putting India on track to hit its 50% target well before 2030.
- **Solar Revolution:** Solar capacity increased 25-fold from 2.82 GW in 2014 to over 71 GW by 2025. Flagship schemes like PM Surya Ghar: Muft Bijli Yojana aim to equip 10 million households with rooftop solar power, thereby democratising clean energy.
- **Carbon Sink:** India has pledged to create an additional carbon sink of 2.5 to 3 billion tonnes of equivalent by 2030.



4. Corporate and Social Responsibility

Environmental responsibility has moved from being aspirational to a "strategic imperative" for Indian businesses.

- **Regulatory Reforms:** The Securities and Exchange Board of India (SEBI) has mandated Business Responsibility and Sustainability Reporting (BRSR) for the top 1,000 listed companies, ensuring transparency in energy and water usage.
- **Carbon Markets:** The introduction of the Carbon Credit Trading Scheme (CCTS) in 2023 represents a pivotal step toward creating a regulated carbon market, incentivising industries to adopt low-carbon technologies.

5. Global Leadership and the "Shared Destiny"

India's international climate initiatives embody the principle of global solidarity:

- **International Solar Alliance (ISA):** Co-founded with France, the ISA aims to mobilise \$1 trillion in solar investments by 2030, specifically supporting Small Island Developing States (SIDS).
- **Global Biofuel Alliance & CDRI:** By leading the Coalition for Disaster Resilient Infrastructure (CDRI), India helps vulnerable nations build climate-proof systems.
- **Climate Justice:** India remains a powerful voice for the Global South, advocating for the principle of Common but Differentiated Responsibilities (CBDR-RC). It has urged developed nations to fulfil their commitment to provide \$300 billion annually in climate finance by 2035.

6. Critical Challenges and the Way Forward

Despite its successes, several "structural challenges" remain:

- **Fossil Fuel Dependency:** Coal still accounts for over 74% of power generation. Rapidly rising energy demands mean India has no immediate plans to shut down coal plants before 2030, necessitating a focus on "clean coal" and CCUS (Carbon Capture, Utilisation, and Storage).
- **Financial Gap:** To achieve its net-zero goals, India requires an estimated \$10 trillion in investments by 2070. Currently, only about 25% of the required annual investment is being met.



- **Biodiversity vs. Development:** Recent legislative shifts, such as the decriminalisation of certain provisions in the Environment (Protection) Act to promote "Ease of Doing Business," have drawn criticism for potentially diluting enforcement.

7. India's Key Climate Targets:

The transition toward environmental responsibility is reshaping India's industrial landscape, moving from a "compliance-only" mindset to a strategic economic model. This shift is driven by rigorous reporting standards, massive investments in green energy, and market-based mechanisms such as carbon trading.

Table 1: India's Key Climate Targets and Progress (2024-2025)

Indicator	2030 Target	Current Status (Approx.)
Non-Fossil Fuel Installed Capacity	50%	~50% (Achieved 2024)
Emissions Intensity Reduction	45% (below 2005)	~36% (as of 2020)
Additional Carbon Sink	2.5 - 3 billion tonnes	2.29 billion tonnes (2021)
Net Zero Year	2070	In progress

7.1 ESG & BRSR: Redefining Corporate Accountability

The Securities and Exchange Board of India (SEBI) has transformed corporate transparency through the Business Responsibility and Sustainability Reporting (BRSR) framework.

- **Mandatory Disclosure:** Since FY 2022-23, the top 1,000 listed entities must report on 9 key ESG principles, integrating financial and non-financial data.



- **Value Chain Sustainability:** Starting in FY 2024-25, the top 250 companies must provide "reasonable assurance" for BRSR Core metrics, with mandatory value chain disclosures phasing in by FY 2025-26.
- **Access to Capital:** ESG-compliant firms gain a competitive edge in attracting Foreign Institutional Investors (FIIs) and accessing green finance instruments like social and sustainability bonds.

7.2 Decarbonising Hard-to-Abate Sectors

Critical industries like steel and cement face the highest economic hurdles but also the greatest opportunities for innovation.

- **Steel Sector:** Decarbonising existing plants requires an estimated \$283 billion (₹21.2 lakh crore) in capital expenditure. The Ministry of Steel plans to increase renewable energy use in the sector to 43% by 2030.
- **Cement Sector:** As the world's second-largest producer, India's cement industry needs roughly \$334 billion in additional investment for a net-zero transition, largely relying on Carbon Capture, Utilisation, and Storage (CCUS).
- **Financial Imperative:** Total climate finance needed to decarbonise power, steel, cement, and transport is approximately \$467 billion by 2030, representing 1.3% of India's annual GDP.

7.3. The Green Hydrogen Economy

The National Green Hydrogen Mission is the cornerstone of India's industrial self-reliance.

- **Economic Goals:** By 2030, the mission aims to attract ₹8 lakh crore in investments, create 6 lakh jobs, and reduce fossil fuel imports by over ₹1 lakh crore annually.
- **Industrial Hubs:** Major ports like Deendayal (Kandla), V.O. Chidambaranar (Tuticorin), and Paradip have been designated as Green Hydrogen Hubs to integrate production and export.
- **Cost Competitiveness:** Green hydrogen costs are projected to fall to \$2 per kg (down from \$4–\$5), making it a viable substitute for fossil fuels in refineries and fertiliser production.



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7.4. India's Carbon Credit Trading Scheme (CCTS)

Launched in 2023, the CCTS creates a market-driven incentive for emissions reduction.

- **Sector Targets:** In 2025, legally binding emission intensity targets were notified for eight sectors, including aluminium, cement, paper, and textiles, with required reductions ranging from 2.8% to 15%.
- **Revenue Streams:** Early participants like Tata Power and Reliance Industries have already leveraged carbon credits to reduce millions of tons of carbon and generate additional revenue.
- **Implementation:** Trading is expected to fully commence in 2025-2026, administered by the Bureau of Energy Efficiency (BEE).

8. Conclusion:

India's journey toward environmental responsibility is a testament to its commitment to a "shared destiny" for all. By aligning its domestic growth with global sustainability, India is demonstrating that emerging economies can lead the fight against climate change while addressing their unique developmental needs. The success of this model will depend on robust implementation, continued innovation in green technology, and the fulfilment of international climate finance obligations by the developed world.

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