

Non Traditional Security Digest

Carbon Trading and Green Financing

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Carbon Trading and Green Finance

Introduction

Carbon trading is a market-based system designed to reduce greenhouse gas (GHG) emissions. In this system, entities can buy and sell carbon credits, which represent the right to emit a specific amount of GHGs. The idea is to incentivize businesses and countries to reduce their emissions by making it more expensive to pollute.

Green finance refers to financial instruments and services that aim to support environmental sustainability. This includes investments in renewable energy, energy efficiency, sustainable agriculture, and other green initiatives. Green finance can take various forms, such as green bonds, green loans, and impact investing.

India's Perspective on Carbon Trading and Green Finance

India has been actively working towards a low-carbon future. The country has set ambitious climate goals, including reducing its emissions intensity and increasing renewable energy capacity. To achieve these goals, India is exploring the potential of carbon markets and **green finance**. India is developing a domestic carbon market to

incentivize emissions reductions. This market will allow entities to trade carbon credits, creating a financial incentive for adopting cleaner technologies. India is promoting green finance initiatives to mobilize capital for sustainable projects. This includes green bonds, which are debt instruments issued to finance environmentally friendly projects.

Key Issues and Challenges

Ensuring the integrity of carbon markets is crucial to avoid double-counting of emissions reductions and other forms of green-washing. Carbon markets and green finance projects need to be designed to have positive social and environmental impacts, avoiding unintended consequences. Developing countries like India need access to affordable green finance to implement climate-friendly projects. A clear and supportive policy and regulatory framework is essential to facilitate the growth of carbon markets and green finance. Many countries around the world are embracing carbon markets and green finance as tools to combat climate change. However, there are diverse views on how to implement these mechanisms effectively. Many developed countries have established carbon markets and are actively promoting green finance. They are often

leading the way in setting international standards and regulations. Developing countries face unique challenges in transitioning to a low-carbon economy. They need financial and technological support to implement climate-friendly projects and participate in carbon markets. [COP29](#), the upcoming UN Climate Change Conference, is expected to focus on accelerating climate action and mobilizing finance for climate mitigation and adaptation. In this year's [COP29](#) it would be crucial to watch to discussions on issues related to carbon markets, green finance, and international cooperation on climate change. Addressing the challenges and leveraging the opportunities presented by carbon markets and green finance, India and other countries can work towards a sustainable and low-carbon future.

India's Green Balancing Act: Navigating Trade and Climate Challenges

India finds itself at a [critical juncture](#), striving to balance its ambitious climate goals with the imperative of energy security. As the global trade landscape shifts towards sustainability, India's exports are facing increasing pressure from [non-tariff measures](#) (NTMs) designed to promote green products. The concentration

of sustainable finance and clean-tech supply chains in advanced economies presents another significant challenge. To overcome these hurdles, India needs adopt a multi-pronged strategy to address various trade barriers, including price-based and non-price-based measures, concentrated supply chains, and intellectual property rights. By strengthening domestic capabilities, forging strategic trade partnerships, and addressing intellectual property challenges, India can position itself as a global leader in the transition to a low-carbon economy. The country's potential to capitalize on the growing global demand for [low-carbon goods](#) and services to achieve some goals of [SDGs 2030](#) is promising, but must be carefully navigated to ensure equitable distribution of benefits.

India and Bulgaria Eye Green Trade Opportunities

India and Bulgaria are [exploring avenues](#) for increased bilateral trade, particularly in the context of Europe's green transition. India's Ambassador to Bulgaria, Sanjay Rana, has highlighted the growing potential for cooperation in renewable energy, electric vehicles, and other sustainable technologies. To further strengthen economic ties, Ambassador Rana emphasized the need for a bilateral

agreement allowing the employment of third-country workers. This could benefit Bulgarian employers and contribute to enhanced economic cooperation between the two nations.

WTO Calls for Trade Policies to Drive Green Transition

The World Trade Organization (WTO) has highlighted the crucial role of trade policies in accelerating the global shift to clean energy. Deputy Director-General [Angela Ellard](#) emphasized the need for a coordinated approach to address tariff disparities, harmonize carbon pricing schemes, redirect subsidies toward sustainable initiatives, and align standards to create a favorable environment for renewable energy adoption. By reducing tariffs on renewable energy equipment, harmonizing standards, and redirecting subsidies from fossil fuels to green initiatives, trade policies can significantly lower the costs of clean energy and stimulate economic growth in emerging low-carbon markets.

Ellard stressed the importance of international cooperation to address these challenges and leverage trade tools to combat climate change. She cited the Agreement on Fisheries Subsidies as a model for future efforts to promote

environmental sustainability and urged WTO members to ratify the agreement promptly. Looking ahead to [COP29](#), Ellard called for a comprehensive approach that integrates climate finance, investment, and trade.

Clean Energy Trade Offers Opportunities for Developing Economies, WTO Report Says

A new report by the World Trade Organization (WTO) Secretariat highlights the significant [trade potential](#) for developing countries as the world transitions to clean energy sources. Titled "[Aid for Trade in Action: Supporting the transition to clean energy](#)," the report emphasizes the crucial role development finance can play in helping these economies seize opportunities in emerging clean energy value chains. It [further highlights](#) that around \$60 billion, or 30% of all climate-focused Aid for Trade commitments between 2011 and 2021, was directed towards the energy sector. However, this amount still remain insufficient when considering the overall climate finance needs. [This report](#) identifies three key segments of the clean energy value chain where developing economies can gain a foothold:

Minerals and metals: These are essential for clean energy technologies, and

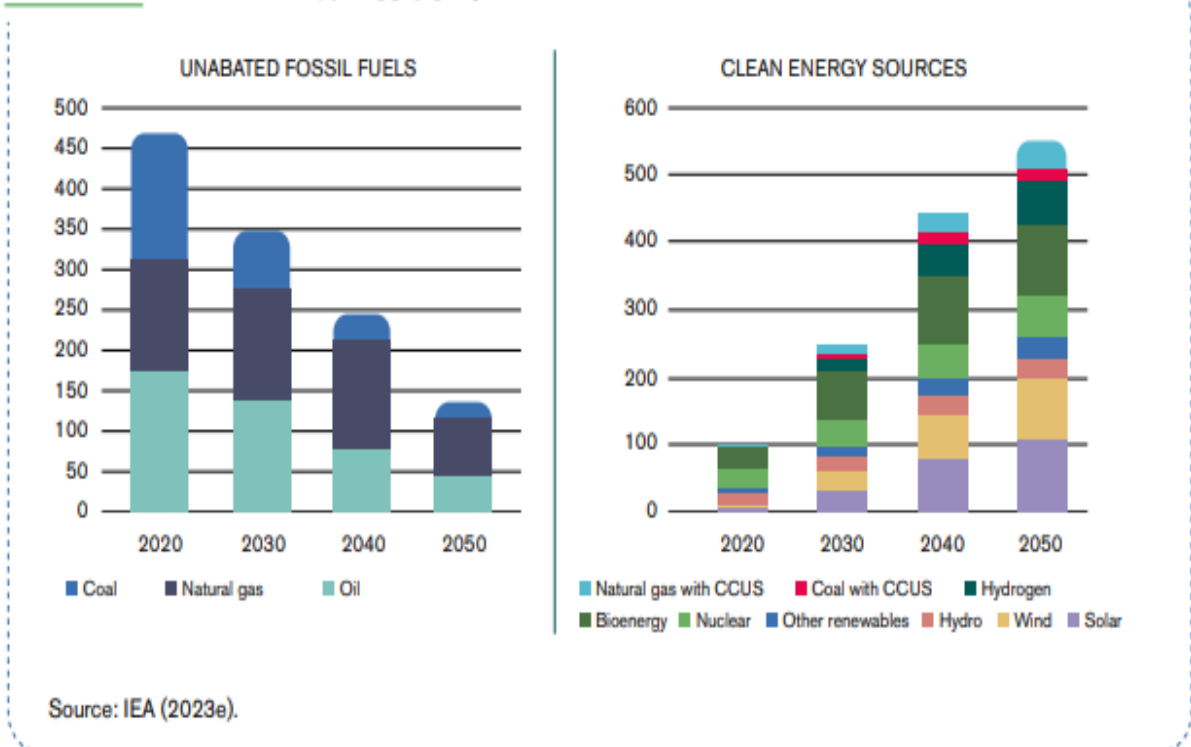
developing countries with rich resources can benefit from increased demand.

Machinery and equipment manufacturing: Building the tools and equipment needed for the clean energy transition presents an opportunity for developing economies to expand their manufacturing capacity.

Services: Expertise in areas like installation, maintenance, and grid management can create new service opportunities for developing economies.

The report also explores opportunities related to carbon credits and carbon capture and storage systems. The report delves into five specific clean energy value chains: *wind, solar photovoltaic (PV), green hydrogen, hydropower, and nuclear power.* It concludes by recommending a stronger alignment between Aid for Trade and clean energy opportunities. By mobilizing financial resources, building trade capacity, and fostering international cooperation, the global community can ensure a just and inclusive transition to a clean energy future.

FIGURE 1.1 IEA total energy supply projections to 2050³



The above graph shows total energy supply projections by 2050. Source: International Energy Agency (IEA, Report 2023)

India Steps up Climate Action: A Look at the Carbon Market Framework

India has reaffirmed its commitment to the Paris Agreement by revising its [Nationally Determined Contributions \(NDCs\)](#) to reduce [greenhouse gas \(GHG\)](#) emission intensity by 45% by 2030. A key component of this strategy is the establishment of a robust carbon market framework. This framework comprises two primary mechanisms: a compliance mechanism for energy-intensive industries and a voluntary mechanism for non-obligated entities. The compliance mechanism targets emissions from energy use and industrial sectors, while the voluntary mechanism incentivizes voluntary actions for GHG reduction.

The regulatory and institutional framework for the Indian Carbon Market is being established with the involvement of various key agencies, including the National Steering Committee for [Indian Carbon Market](#), the Bureau of Energy Efficiency, the Grid Controller of India, and the Central Electricity Regulatory Commission. As India continues to strengthen its climate action efforts, the carbon market framework plays a vital role in driving sustainable development and reducing GHG emissions.

Carbon Markets: A Double-Edged Sword in the Fight against Climate Change

Carbon markets, where countries and businesses trade permits to emit greenhouse gases, are increasingly seen as a [crucial tool](#) in the fight against climate change. These markets can drive investments in low-carbon technologies and incentivize emissions reductions. However, challenges like double-counting of emissions reductions and potential for [green-washing](#) threaten the integrity of these markets. To ensure their effectiveness, it's essential to establish robust rules and regulations to prevent such issues. While carbon markets offer opportunities for countries to generate revenue for climate action and support vulnerable communities, their successful implementation requires careful consideration of various factors. Countries must strategically engage in these markets, leveraging their unique strengths and opportunities. As the world transitions to a low-carbon future, carbon markets can play a pivotal role.

India Eyes Carbon Markets to Combat Climate Change

India is exploring the potential of carbon markets to accelerate its efforts in reducing greenhouse gas emissions. Carbon markets involve the buying and selling of carbon

credits, which represent reductions in emissions. The Indian government is actively working on establishing a domestic carbon market through the [amendment](#) of the Energy Conservation Act and the development of a national Cap-and-Trade system. This initiative aims to incentivize investments in renewable energy and help India achieve its target of reducing emissions intensity by [45% by 2030](#). While carbon markets offer promising opportunities, the article emphasizes the need for a balanced approach.

COP29: A Critical Year for Climate Action

The 2024 [UN Climate Change Conference](#) (COP29) is set to take place in November 2024 in Baku, Azerbaijan. This crucial [event](#) will bring together nations to address the urgent climate crisis and accelerate the transition to a low-carbon future.

The [COP29](#) presidency, led by Azerbaijan, has outlined an ambitious roadmap to keep the 1.5°C global warming limit within reach. The Presidency aims to foster international cooperation and stimulate ambition in the next round of Nationally Determined Contributions (NDCs). To achieve this, a series of high-level political convenings will be held to identify barriers to NDC development and discuss the

necessary support for ambitious climate action.

Key themes and priorities for COP29 include:

- **Enhancing Ambition:** Increasing the ambition of climate action through stronger NDCs and enhanced climate policies.
- **Enabling Action:** Providing the necessary financial, technological, and capacity-building support to implement climate solutions.
- **Just Transition:** Ensuring that the transition to a low-carbon economy is fair and equitable for all.
- **Climate Finance:** Mobilizing adequate and sustainable climate finance to support developing countries.
- **Loss and Damage:** Addressing the impacts of climate change, particularly for vulnerable countries.

COP29 will be a pivotal moment in the global climate effort. By fostering international cooperation, mobilizing resources, and accelerating climate action, the world can work towards a sustainable and resilient future.

IFC Backs Bajaj Finance with \$400 Million to Boost Green Finance

The [International Finance Corporation](#) (IFC), a member of the [World Bank Group](#), has extended a \$400 million loan to Bajaj Finance Ltd. (BFL) to accelerate the adoption of electric vehicles (EVs) and energy-efficient consumer goods (EECGs) in India. This significant investment aims to bolster climate finance, promote financial inclusion, and empower women-owned microenterprises. The funding will enable BFL to expand its financing options for customers purchasing EVs, including two-wheelers, three-wheelers, and four-wheelers. Additionally, the lender will strengthen its presence in the EECG segment, offering financial solutions for energy-efficient appliances and devices.

India, as the world's third-largest energy consumer, is witnessing a surge in demand for energy-efficient products and [Electric Vehicles](#). The country's rapidly developing energy sector is fuelling the need for innovative financing solutions to support a greener future. By 2050, the demand for air conditioners is projected to increase nine-fold, posing significant challenges to India's climate goals. IFC's investment in Bajaj Finance is a significant step towards

addressing these challenges and promoting sustainable development in India.

India Emerges as a Key Market for Sustainable Finance

India has solidified its position as a significant market for sustainable finance, alongside China, according to Standard Chartered's Chief Sustainability Officer, [Marisa Drew](#). The country's strong government push towards net-zero emissions and its growing focus on renewable energy and electric vehicles have created a fertile ground for sustainable investments. Standard Chartered, a global bank, has identified India as a key market for its sustainable finance initiatives. The bank has been actively involved in financing various projects, including renewable energy, energy efficiency, and electric vehicles. Drew emphasized the bank's commitment to supporting India's transition to a low-carbon economy. The bank plans to further invest in sectors like [metals and mining](#), which are traditionally hard to decarbonize, as well as emerging technologies such as battery energy storage systems.

Some Suggested Readings

Chen, Shi, Yonghong Zhao, Fu-Wei Huang, Bin Wang, and Jyh-Horng Lin.

"Carbon leakage perspective: Unveiling policy dilemmas in emission trading and carbon tariffs under insurer green finance." *Energy Economics* 130 (2024): 107292.

Wu, Gongliang, Xu Liu, and Yueling Cai. "The impact of green finance on carbon emission efficiency." *Heliyon* 10, no. 1 (2024).

Zhao, Xin, Ramzi Benkraiem, Mohammad Zoynul Abedin, and Silu Zhou. "The charm of green finance: Can green finance reduce corporate carbon emissions?." *Energy Economics* 134 (2024): 107574.

Kharb, Ravita, Charu Shri, and Neha Saini. "Growth-accelerating factors of green finance for green growth: a study using TISM." *Kybernetes* (2024).

Gokilavani, R., M. Durgarani, and Manoj Kumar. "Green Finance: A Roadmap to Sustainable Investment in India." In *2024 Ninth International Conference on Science Technology Engineering and Mathematics (ICONSTEM)*, pp. 1-4. IEEE, 2024.

Gupta, Varsha, and Abhishek Kumar. "Green Bonds: Accelerating Green Finance Towards Sustainable Economic Development." In *Green Innovations for Industrial Development and Business*

Sustainability, pp. 127-145. CRC Press, 2024.

Chen, Jian Ming, Muhammad Umair, and Jie Hu. "Green finance and renewable energy growth in developing nations: a GMM analysis." *Heliyon* 10, no. 13 (2024).

Dutta, Madhubanti, and Satya Narayan Singh. "Role of Regenerative Agriculture in India's Climate Strategy." *IUP Journal of Applied Economics* 23, no. 2 (2024).

Bilal, Muhammad Junaid, and Wasim Abbas Shaheen. "Towards sustainable development: Investigating the effect of green financial indicators on renewable energy via the mediating variable." *Renewable Energy* 221 (2024): 119819.

Bansal, Tanuja. "Impact of the Emissions Trading System (ETS) on Indian Shipping." (2024).

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This digest has been prepared by the Non-Traditional Security Centre, Manohar Parrikar Institute for Defence Studies and Analyses, New Delhi.



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