



Proceedings

Discussion on Instituting a Carbon Pricing Policy for India: Way Forward

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Introduction

The impact of carbon emissions is well understood, and Bhutan serves as a compelling example of how a small nation can effectively tackle this issue. Bhutan's approach highlights the importance of vulnerability assessment and inclusivity. This roundtable discussion aims to shed light on the potential outcomes and how they will shape our future. Unpacking this challenge is crucial, as it directly influences our planning and revenue processes. Viewing this issue from fiscal and revenue perspectives adds depth to the conversation.

Context Setting and Background:

In the pursuit of achieving a 50% share of renewable energy in the electricity sector, there is a pressing need to reevaluate public finance to address gaps. This transition will naturally lead to a reduction in fossil fuel revenues, making it essential to analyse the financial implications. To gain further insights an international analysis, particularly drawing from World Bank data, where Finland stands as a trailblazer in renewable energy adoption, providing a compelling example could be looked at. Carbon pricing mechanisms and the Clean Development Mechanism (CDM) play a pivotal role in climate action strategy. Emissions trading systems cap emissions and create a market for permits, while carbon taxes impose a set price on carbon emissions, providing different approaches to reducing greenhouse gases warranting careful consideration and resolution for a seamless transition to clean energy. The aim is to uncover revenue recycling mechanisms that not only drive environmental progress but also foster economic growth. Ultimately, the overarching objective is to assess the necessity of explicit carbon pricing which will also be diligently developed through this workshop, with a focus on shaping the future of sustainable energy and finance.

Session 1: The Role of Carbon Pricing in India's Climate Policy

Panelists: Sh. Prashanth Vairavan a Regy, Dr. Suranjali Tandon, Mr. Shubhashis Dey

Chair: Mr. VR Raman

Key Points Discussed

- Carbon pricing efficiently guides decentralised decision-making across households and firms, promoting optimal strategies for achieving India's environmental targets at the lowest economic costs.
- Carbon pricing offers flexibility to address these distributional impacts, especially with concerns like decreased employment in carbon-intensive sectors like coal mining. Revenues from carbon pricing can be used to offset negative impacts from these transitions.
- As the country moves away from fossil fuels, there's an opportunity to create new jobs in green sectors such as electric vehicles, solar panels, windmills, etc. While there might be job losses in areas like coal mining, green industries can potentially offer new employment opportunities, even if they might not directly replace the lost jobs.

- Carbon pricing-driven reduction in fossil fuel combustion can significantly improve respiratory health, with the overall benefits going beyond just cost savings to adding tangible value to society.
- Carbon pricing is crucial to tackle the carbon externality problem, and a combination of cap and trade and carbon tax approaches can be effective, especially when markets respond slowly.
- Revenue generation methods, such as taxes, should consider their impact on various sectors and industries, including the potential implications for industries with high carbon intensity.
- Setting appropriate carbon pricing levels and designing taxes with inclusivity, possibly through exemptions, are important considerations in creating effective carbon pricing schemes.
- Carbon taxes should align with other tax policies and fiscal strategies, with a clear intent, whether it's to incentivise behaviour change or establish a new revenue source, all while addressing the core issue of carbon externality.
- India needs a carbon pricing instrument to effectively transition to renewable energy and energy efficiency. Research suggests that with appropriate carbon pricing, India could reduce emissions by up to 65% by 2050, compared to a business-as-usual scenario.
- Achieving such transitions will require significant resource reallocation and raising additional funds, where carbon pricing plays a crucial role.
- Must consider international factors such as carbon border adjustment taxes and foreign pollution fees discussed in the USA when determining its carbon pricing strategy.
- Uniform global carbon regime may not be suitable for India, as it could disproportionately impact certain sectors like metal and textiles. The impact on Indian industries needs careful consideration during negotiations.
- Developing a carbon tax and carbon market mechanism together is essential because both have nuanced complexities. Taxation often faces obstacles due to concerns about its impact on various sectors and the reliance on research outcomes primarily from global North and South countries. It's crucial to consider the unique Indian context when developing these mechanisms to ensure their effectiveness and minimize potential adverse effects on the workforce and industries.
- When considering carbon taxation, it should be implemented gradually in phases. Revenue recycling is essential, with a focus on reinforcing receipts as a critical component. Additionally, efforts should be made to address and support communities that may be negatively impacted by these measures.
- A portion of the revenue should be allocated to Research and Development, particularly for facilitating technology transfer. Decisions on how to use carbon tax revenue should consider whether to apply it upstream or downstream, each with its own advantages and disadvantages.

- Sector-specific strategies are essential for carbon reduction, considering the unique challenges and needs of each industry. A balanced approach is necessary to address various sectors effectively.
- Subsidies should be used judiciously, targeting sectors with the ability to attract additional private investment, ensuring that public funds generate significant private sector participation and impact. Otherwise, subsidies may not be recommended for certain sectors.
- Offsetting the high carbon prices of the EU's Carbon Border Adjustment Mechanism (CBAM) with India's domestic coal prices is impractical, given that India's coal cess is relatively low at around \$3 per tonne. Attempting to offset the EU CBAM through domestic prices in the near future is not a feasible approach.
- Despite the challenges of offsetting, there is a case for implementing a coal tax in India to create a price signal that can have a significant impact within the country's context.
- When considering the implementation of a coal tax, it's important to think about how the revenue generated from it will be utilised. One of the tax's effects is an increase in the end-user cost of electricity, so measures should be taken to protect those in energy poverty, possibly by providing minimal life support for electricity access.
- Addressing the significant air pollution problem in North India, which is largely caused by cooking and heating with solid fuels, is essential in the long run. While LPG adoption is one solution, transitioning to electric cooking is also important.
- Carbon pricing, by increasing the cost of carbon-intensive goods and services while making less carbon-intensive alternatives cheaper, changes incentives for both producers and consumers. Producers can choose to either stick with carbon-intensive production, which might be initially costly, or transition to more sustainable methods driven by consumer demand influenced by carbon pricing.
- While in India the current approach often involves a larger role for the state, with government-identified sectors and specific targets for internal carbon intensity, there should still be room for producers within those sectors to decide how best to meet those targets, allowing for some flexibility and market-driven decision-making. The choice is left to the producers rather than being strictly mandated by the government.
- IMF discusses the role of an international carbon price, but it leaves the decision to price it up to individual countries. While countries engage in discussions, there is no clear consensus or agreement, as evidenced by the G20's communication on pricing.
- Countries should focus on determining a fair price based on their unique circumstances, as there are differential impacts. Achieving a single, universally agreed-upon price is likely to require negotiation rather than universal consensus.

- Profitable sectors like electric mobility have seen significant global research, but in areas like green hydrogen, research in India is insufficient. Research doesn't happen in isolation, and India should draw from past experiences.
- To foster research capabilities, there must be institutionalisation and a focused approach. Long-term commitment is essential for success, as seen with U.S. universities translating research into commercial products. In India, while research institutions produce patents and products, commercialization lags due to institutional structure challenges.

Session 2: The Role of Carbon Pricing in India's Climate Policy

Panelist: Mr. Montek Singh Ahluwalia, Shri Saurabh Diddi, Smt. Chandni Raina, Dr. Shoibal Chakravarty,

Chair: Professor E. Somanathan

Key Points Discussed

- The Indian government's Net Zero Emissions target was seen as a bold but challenging step, highlighting the need for a clear path toward achieving targets, particularly in sectors like coal phase-out. Also, whether achieving net-zero emissions is feasible and underscored the necessity of outlining strategies and implementing them swiftly as structural changes needed.
- There was unanimous agreement on the essentiality of phasing out coal to attain net-zero emissions.
- Recognizing that renewable energy might be costlier, especially due to high storage costs, raised the need for effective energy transition strategies.
- Imposition of a tax on coal to increase its cost, but there is a need to determine the appropriate tax rate. Emphasis on determining carbon tax rates based on the social cost of carbon, with variations according to each country's context.
- Investment signals are critical for encouraging the transition to cleaner energy sources.
- Taxation should not be the sole method for raising revenue, hinting at the need for diverse approaches.
- While there are concerns about the regressive nature of carbon pricing, as carbon-intensive consumption of the poor is significantly lower than that of the rich, this impact can be mitigated. Direct Benefit Transfer can be one way to address distributional concerns.
- The potential impact of CBAM on Indian industries was recognized, with a suggestion to advocate for lower reference levels to mitigate adverse effects.

- Also, revenue generation through the auctioning of emission entitlements in a phased manner can be considered.
- There are various carbon pricing mechanisms to address carbon emissions encompassing carbon taxes, cap and trade, and energy-related policies. The choice of instrument would depend on various factors, such as administrative feasibility and effectiveness.
- Determining the appropriate price for carbon and where to direct the resulting revenues is a crucial consideration. This decision would have a significant impact on the success of the chosen carbon reduction strategy.
- Integration of India's PAT scheme with global Emissions Trading Systems (ETS) to establish a customised carbon tax framework. India was in the process of exploring the development of a carbon market, amalgamating its existing Perform, Achieve, and Trade (PAT) scheme with international Emissions Trading Systems (ETS). This approach aimed to streamline carbon emissions reductions within the country.
- The main objective of carbon pricing is to decrease carbon emissions per unit of product, prioritising energy conservation and efficiency. This emphasises the significance of concentrating on emission intensity rather than absolute emission levels, enabling a more nuanced and sustainable reduction strategy.
- The target-setting process entailed the Ministry of Environment establishing the objectives, with the power sector tasked with their execution. The degree of stringency in these targets and the feasibility of technology to attain them are critical factors.
- Strictness of emission reduction targets could impact the carbon price in the compliance market. For instance, the compliance market price in the European Union (EU) was notably higher at \$100 compared to South Korea's price of just \$9.
- Promising potential of an offset market for investment and economic growth. This scheme resembled the Verified Carbon Market (VCM) and involved the issuance of carbon certificates. These certificates could offer a cost-effective alternative to the compliance market, appealing to businesses seeking emissions offset solutions.
- Sustainable Development Goals (SDGs) should not be integrated into the carbon market due to concerns about potential cost and complexity, although this decision should be made on a case-by-case basis.
- Complexity in introducing carbon pricing in India, considering the implicit costs associated with fuels and coal. The transition to renewable energy faces obstacles, including technology gaps and infrastructure limitations, while the Emissions Trading System (ETS) emerged as a phased approach to align with India's diverse energy landscape.

- The role of CGE modelling in understanding carbon markets, energy-intensive industries, and policy impacts. It emphasised a flexible approach to address climate change, recognizing the finance industry's role and the importance of not neglecting fossil fuel revenues.
- CGE modelling framework used for a policy experiment, adjusting the efficiency standards of thermal power plants. Preliminary results indicated a shift towards oil and gas consumption and increased renewable energy generation, even without specific policy intervention. This raised questions about the ideal efficiency standards.
- There is a utility of these models in assessing the implications of achieving net-zero emissions targets, understanding associated costs, and evaluating trade-offs.

Annexure

List of Speakers and Presenters

S.no	Name	Organisation
1	Chandni Raina	Ministry of Finance, Government of India
2	E. Somanathan	Indian Statistical Institute
3	Jyotsna Goel	Centre for Budget and Governance Accountability
4	Kanishka Kacker	Indian Statistical Institute
5	Montek Singh Ahluwalia	Centre for Social and Economic Progress
6	Prashanth Vairavan a Regy	NITI Aayog
7	Raavi Aggarwal	Indian Statistical Institute
8	Sharad Pandey	Centre for Budget and Governance Accountability
9	Shoibal Chakravarty	Indian Institute of Science, Bangalore
10	Shri Saurabh Diddi	Bureau of Energy Efficiency, Government of India
11	Shubhashis Dey	Shakti Sustainable Energy Foundation
12	Soutrik Goswami	Centre for Budget and Governance Accountability
13	Subrata Rath	Centre for Budget and Governance Accountability
14	Suranjali Tandon	National Institute of Public Finance & Policy
15	VR Raman	Centre for Budget and Governance Accountability



