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Policy Brief

Vol. I - Issue 1

**Financial Sector
Policy Series**



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POLICY BRIEF

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ESG Ratings and Funds – An Impact Evaluation

ESG Ratings and Funds – An Impact Evaluation

June, 2022

Background

Environment, Social and Governance or ESG for short, has gained popularity over the last few years. The role of the ESG framework and reporting for corporations around the world has become more pertinent after the 26th session of COP26 at the United Nations Climate Change Conference which brought environment and sustainability to the forefront and announced the creation of the new International Sustainability Standard Board (ISSB) under the IFRS Foundation. The coining of the term ESG, however, goes way back to 2004, when the International Finance Corporation (IFC) along with the UN Global Compact, and the Government of Switzerland released a report titled “Who Cares Wins: Connecting Financial Markets to a Changing World” which made a case that addressing issues related to environmental, social and governance parameters in research, analysis and investment in the global financial market makes good business sense, leads to sustainable markets, and better outcomes for the society.¹ The Freshfield Report released by the United Nations Environment Programme Financial Initiative (UNEP FI) further defined ESG investments as, “...investment decision-making that takes account of environmental, social and governance considerations” that includes one or more of a set of concerns such as the focus on humanitarian concerns (e.g., genetically modified organisms), of qualitative and non quantifiable in terms of money (e.g., corporate governance, intellectual capital), accounts for external agencies otherwise not captured by the market mechanism (e.g., environmental pollution), focussed on making a stringent regulatory framework and policy (e.g. greenhouse gas emission), and, concerns arising from organisational supply chain (e.g. labour issues).²

The IFC-UN Global Compact Report, along with the Freshfield Report of the UNEP FI formed the bedrock for developing the Principles for Responsible Investment (PRI) at the New York Stock Exchange in 2006 and the launch of the Sustainable Stock Exchange Initiative (SSEI) the following year.³ As on 30th March 2022, the UN supported PRI had more than 4,900 signatories with a total of USD 121.3 trillion⁴, all of which follow the six principles⁵ of the PRI i.e.

¹ https://www.ifc.org/wps/wcm/connect/9d9bb80d-625d-49d5-baad-8e46a0445b12/WhoCaresWins_2005ConferenceReport.pdf?MOD=AJPERES&CVID=jkD172p

² https://www.unepfi.org/fileadmin/documents/freshfields_legal_resp_20051123.pdf

³ <https://www.forbes.com/sites/georgkell/2018/07/11/the-remarkable-rise-of-esg/?sh=57458d271695> accessed on 22nd June 2022, 18:15 hrs

⁴ <https://www.unpri.org/download?ac=16278>

⁵ <https://www.unpri.org/about-us/what-are-the-principles-for-responsible-investment>

- “Principle 1: We will incorporate ESG issues into investment analysis and decision-making processes.
- Principle 2: We will be active owners and incorporate ESG issues into our ownership policies and practices.
- Principle 3: We will seek appropriate disclosure on ESG issues by the entities in which we invest.
- Principle 4: We will promote acceptance and implementation of the principles within the investment industry.
- Principle 5: We will work together to enhance our effectiveness in implementing the principles.
- Principle 6: We will each report on our activities and progress towards implementing the principles.”

PRI’s role is to advance the integration of ESG into analysis and decision-making through thought leadership and the creation of tools, guidance, and engagement. The SSEI, supported by the Geneva-based UNCTAD has also grown over the years with many exchanges now mandating ESG disclosure for listed companies or providing guidance on how to report on ESG issues. Moreover, the development of framework and guidelines around ESG has evolved and adoption of ESG issues as relevant factors of financial valuation has increased. The above definition of ESG investment further laid the foundation for modern-day sustainable investments and green financing which can be explained as financing of investments that provide environmental benefits in the broader context of sustainable development. These benefits include reduction in air, water and land pollution, reductions in greenhouse gas (GHG) emissions, improved energy efficiency by utilising natural resources, as well as mitigation of and adaptation to climate change and their co-benefits.

The Importance of ESG Ratings

Bloomberg estimates that by 2025, one-third of total AUM worldwide would be ESG investments. The value of these investments is pegged at USD 53 trillion by 2025.⁶ Growth in ESG investments has so far been driven by Europe and the United States of America (USA), but the next wave of growth is anticipated to take place in Asia. According to The Global Sustainable Investment Review, in 2020 sustainable investments were USD 35.3 trillion across five major markets, namely, Europe, USA, Canada, Japan, and Australasia⁷. The reason for this robust growth in investments is the

⁶ <https://www.bloomberg.com/professional/blog/esg-assets-may-hit-53-trillion-by-2025-a-third-of-global-aum/>

⁷ <http://www.gsi-alliance.org/wp-content/uploads/2021/08/GSIR-20201.pdf>

increased acceptance and evidence in favour of ESG ratings and their impact on businesses.

A wide range of literature suggests a positive correlation between superior ESG ratings and financial valuations. As discussed, the ambit of ESG ratings is wide, varying from broad social and environmental issues to more localised issues around ensuring workplace diversity. Evidence suggests that investors demand higher yields for bonds with heavier carbon footprints and social bonds denominated in the US dollar or the Euro have been issued at a price premium compared to standard bonds (Scatigna et al, 2021)⁸. Studies have also shown that public companies in the European Union undertaking ESG reporting have better financial performance than those not undertaking ESG and tend to be valued higher by the market (Janicka and Sajnóg, 2022).⁹

Investors believe that companies that are more conscientious about their strategies are better prepared for long-term sustainability and hence prefer investing in ESG compliant companies. In the last two years, the pandemic has acted almost as a litmus test. Unsurprisingly, companies with higher ESG rankings performed better in the last two years, validating the hypothesis of positive correlation between ESG ratings and the preparedness of companies for force majeure events. This was true for Europe (Engelhardt et al, 2021)¹⁰ as well as India (Beloskar and Rao, 2022)¹¹. It is therefore not surprising that more and more companies are aiming to be ESG compliant and undergoing ESG ratings in India.

ESG in India

While the rest of the world was easing into the concept and implementation of ESG, India was not far behind. The first step toward the adoption of ESG reporting was facilitated by the Ministry of Corporate Affairs through the National Voluntary Guidelines (NVGs) on Corporate Social Responsibility (CSR) in 2009.¹² The Securities Exchange Board of India (SEBI) mandated the filing of Business Responsibility Report (BRR) based on NVGs along with annual reports for the top 100 listed companies in

⁸ Scatigna, M., Xia, D., Zabai, A. and Zulaica O.; December 2021, "Achievements and challenges in ESG markets", BIS Quarterly Review, Bank of International Settlement

⁹ Janicka, M.; Sajnóg, A., 2022, "The ESG Reporting of EU Public Companies—Does the Company's Capitalisation Matter?", Sustainability, 14, 4279. <https://doi.org/10.3390/su14074279>

¹⁰ Engelhardt, N.; Ekkenga, J.; Posch, P. ESG Ratings and Stock Performance during the COVID-19 Crisis. Sustainability 2021, 13, 7133. <https://doi.org/10.3390/su13137133>

¹¹ Beloskar, V.D., Rao, S.V.D.N. Did ESG Save the Day? Evidence From India During the COVID-19 Crisis. Asia-Pac Financ Markets (2022). <https://doi.org/10.1007/s10690-022-09369-5>

¹² Lumde, Nirbhay, March 29, 2022, "Environmental, Social, and Governance landscape in India" published in Financial Express (<https://www.financialexpress.com/lifestyle/science/environmental-social-and-governance-landscape-in-india/2475476/>)

India in 2012, which was later extended to the top 500 listed companies in 2015, and further to 1000 companies in 2019. During this period, CSR was also made compulsory under The Companies Act 2013. In May 2021, SEBI introduced the Business Responsibility and Sustainability Report (BRSR) replacing the erstwhile BRR. The disclosures under the BRSR measure the performance of the reporting companies against the nine principles of the National Guidelines on Responsible Business Conduct (NGRBCs) which were introduced in 2019 and the reporting format has been aligned with ESG indicators which can be used as a base document for making responsible and sustainable investment decisions.

Recently, there have been several reports on the performance of Indian companies concerning ESG ratings and disclosures. In May 2022, CRISIL released a study of its ESG scores for 225 listed companies in India.¹³ The study found that companies in a sector with better ESG rankings, tend to outperform their peers in the same sector by as much as nine points. The study also finds that sectors that traditionally utilise lower natural resources have higher ESG scores.

A National Stock Exchange whitepaper from 2018¹⁴ notes that the average ESG score of the Nifty 100 companies was around 58 (out of 100). Only two companies scored above 80. Typically, the IT sector has been a top performer when it comes to ESG scores. A more recent report in June 2022, “NSE Corporate Governance: ESG scores of Nifty 50 companies,” presented more nuanced findings of their analysis of the Nifty 50 companies’ ESG ratings. This study found that the companies analysed have performed better on the social parameter than on the governance parameter. Public sector undertakings had some of the lowest scores. The report also noted that the focus on the environment has improved during the pandemic years. However, there is a significant variation in scores between the three pillars of environment, social, and governance parameters across companies.

Challenges to ESG Reporting

Despite its rapid growth into the mainstream, the rise of ESG investing has been neither smooth nor linear. Since its very inception, ESG investing has been critiqued and challenged by investors and companies.

First, institutional investors who questioned the concept argued that adherence to ESG guidelines will impact their fiduciary duty of maximising the value of shareholders

¹³ <https://www.crisil.com/en/home/newsroom/press-releases/2021/06/crisil-launches-esg-scores-of-225-companies.html>

¹⁴ <https://www1.nseindia.com/content/indices/NIFTY ESG Indices Whitepaper.pdf>

irrespective of social, environmental, or broader governance issues. However, with the rising awareness of climate and social issues, their larger implications on global markets, and several studies proving otherwise, such arguments have been put to rest to a large extent.

Second, there is a lack of standardisation regarding the definition of ESG parameters and the rating methodology. Billio et al (2020)¹⁵ have argued that this divergence in scores as a result of the lack of standardisation mitigates any positive impact on the financials of the company. There have been multiple criticisms on the lack of standardisation in definition and methodology.

Third, while the lack of standardisation is a problem with the current ESG framework, there is a possibility that standardisation will enforce a one-size-fits-all framework across countries, which may be detrimental to many developing countries. Finding that balance between standardisation and localisation will always be a challenge.

Fourth, specifically in the Indian context, the impact of ESG ratings across company sizes is yet unknown. The Indian industries comprise of many micro, small, and medium enterprises. The compliance burden on these companies is already high. Introducing ESG compliance may increase their burden rather than do any good. This would also, therefore, have an impact on their access to capital.

Fifth, there is a dearth of data to suggest if ESG ratings have any real on-ground impact on environmental and social parameters. The impact on these parameters is also more difficult to compute than on governance parameters.

Sixth, due to its dynamic nature, the regulatory requirements of ESG are constantly evolving. This means regulatory bodies need to keep up with these changes and bring in amendments and changes to guidelines and compliance requirements to conform to the latest global standard. This makes it challenging for financial institutions and investment firms to keep up with these ever-evolving regulatory changes.

Recommendations

The NSE-PIF Seminar received participants from financial sectors, corporates, rating agencies, ESG consultants, and experts on sustainable development who had come together to debate and discuss ideas on the adoption of ESG standards among India Inc. as well as possible ways to encourage India's large Micro, Small, and Medium Enterprise

¹⁵ <https://onlinelibrary.wiley.com/doi/pdfdirect/10.1002/csr.2177>

(MSME) base to adopt and implement ESG guidelines. Ideas which emerged from this seminar are as follows.

Need for standardisation in ESG scoring methodology

Currently, ESG scoring methodologies vary among different rating agencies in India. Hence, there may be a difference in scores given to two separate organisations undergoing ESG evaluation despite following the same parameters and meeting similar standards due to the methodology the rating agency chose to adopt. This creates an uneven playing field for organisations and affects investors decision. Hence, there is a need to standardise the ESG scoring methodology among rating agencies.

Need for developing industry-wise ESG metrics

It is a known fact that different sectors view and prioritise each metric of ESG differently. While an energy generating company may score low on the environmental metric compared to an IT company, it may score better on other parameters. This would always eventually put one industry above another making it an uneven playing field for some sectors. Hence, this “one size fits all” approach should be discarded, and policymakers should consider developing and standardising industry-wise ESG metrics.

ESG for MSMEs

With more companies opting to become ESG compliant, the large MSME base in India, too, should consider adopting ESG guidelines. This would not only help in gaining investor confidence in the future but would also help in garnering the trust of buyers in the long run. A good example is that of the readymade garment industry in Bangladesh which undergoes an independent annual audit to check compliance with labour laws in Bangladesh and ILO codes. Policymakers need to think of innovative ways to incentivise MSMEs to become ESG compliant. A few of the steps in this direction would be simplified compliance standards for funding and slightly cheaper access to capital. Policymakers may also consider developing a different ESG scale for MSMEs.

Impact Assessment of ESG

Policymakers need to develop a standardised format of impact assessment apart from risk assessment of ESG metrics. This will help in assessing the direct impact of ESG metrics and understanding ground realities. This will further encourage adherence to ESG standards among organisations in a real sense rather than them complying out of necessity.

Need for Supply Chain or Vendor Assessments

Managing ESG risks in supply chains is very important. Companies should assess their supply chains regularly and apply due diligence when identifying and managing ESG risks with their direct suppliers. Corporations should also focus on the sustainability aspects of the operations of their supply chain partners along with their internal company-level processes. Capacity building, supplier sustainability assessments, and audits should be conducted regularly in order to mitigate supply chain risks.

The NSE-PIF discussion also suggested some out of the box solutions to ensure adoption of ESG among companies while furthering the SDG initiative. These are

Rationalising Different Parameters by Different Regulators

In India, different regulators have mandated regulations and guidelines for funding and investment by banks and corporates. Few such examples are Priority Sector Lending (PSL) criteria for commercial banks by the Reserve Bank of India (RBI), annual contribution by corporates and large companies towards Corporate Social Responsibility (CSR) as mandated by the Ministry of Corporate Affairs (MCA), investment in non-governmental organisations (NGOs) through the Social Venture Capital Funds (SVCF) by corporates as directed by the Securities Exchange Board of India (SEBI), among many others. Such mandates combined with stringent lending and/or investment guidelines make deployment of funds difficult, making end-utilisation fruitless. To ensure efficient deployment of funds and smoother accessibility by lenders, there is a need to redefine such criteria, streamline end objectives and align them with the Sustainable Development Goals (SDGs) of UNFCCC. This would help in creating a pool of capital, making end use of such funds impactful and bringing SDG objectives to fruition.

Rewarding Performance not Inputs

The current policy guidelines of ESG rewards input and not outcome or performance. To clarify, the assessment of ESG is based on the effort by an organisation rather than the on-ground impact. Policymakers should rather think of ways to move away from “Pay for Inputs” to “Pay for Performance”. For example, organisations should focus on reducing child mortality by a certain percentage in a fixed period (outcome) instead of focussing on building a certain number of hospitals in a time period (input) or an organisation should concentrate on reducing carbon footprint by a fixed percentage (outcome) instead of focussing on installing a certain number of solar panels (input).



Leveraging Green Bonds for a Net Zero Emissions Economy

Leveraging Green Bonds for a Net Zero Emissions Economy

July, 2022

Background

India's recent commitment to the COP26 Summit has garnered both applause and scepticism from energy experts and media around the world. India has pledged to cut total projected carbon emissions by 1 billion tonnes by 2030 and become a net-zero carbon emissions country by 2070. While the debate on whether India can achieve the promised goals is ongoing, Indian policymakers are working towards meeting these ambitious goals. Naturally, the first step towards fulfilling this arduous task is to arrange for funding for such green projects. One of the most popular ways of funding has been through green bonds. This Policy Brief looks at the development of the green bond market in India and how India has fared in undertaking green debt issuance.

Defining Green Bonds

There is no universal definition of what constitutes as "green." However, for the sake of some uniformity, the Climate Bond Initiative, 2009, came out with its "green bond principles" or GBP, which have since been adopted by a consortium of banks and financial institutions as the definition of "green". They are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the green bond market by clarifying the approach for the issuance of a green bond. Green bonds have been defined as "... a type of debt instrument where proceeds or an equivalent amount will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Projects and which are allied with the four core components of GBP." (Green Bond Principle, June 2021)¹⁶ The four core components of GBP are:

- Use of Proceeds
- Process for Project Evaluation and Selection
- Management of Proceeds
- Reporting

¹⁶ International Capital Markets Association, (June 2021), "Green Bond Principles: Voluntary Process Guidelines for Issuing Green Bonds", Paris (France) (accessed on 19th June 2022)

The green bond principles are voluntary guidelines on process and lack detail, leading to a lack of consensus on what classifies as a green bond. Market participants are not sure whether a stringent set of standards on what constitutes “green” would increase credibility or inhibit growth and innovation. The green bond principles address specific areas of concern such as climate change, natural resource depletion, loss of biodiversity, and pollution. It lists categories of investment¹⁷ which are, but are not restricted to:

- Renewable energy (including production, transmission, appliances, and products)
- Energy efficiency (such as in new and refurbished buildings, energy storage, district heating, smart grids, appliances, and products)
- Pollution, prevention, and control (including reduction of air emissions, greenhouse gas control, soil remediation, waste prevention, waste reduction, waste recycling, and energy/ emission-efficient waste to energy)
- Environmentally sustainable management of living natural resources and land use (including environmentally sustainable agriculture; environmentally sustainable animal husbandry; climate smart farm inputs such as biological crop protection or drip-irrigation; environmentally sustainable fishery and aquaculture; environmentally sustainable forestry, including afforestation or reforestation, and preservation or restoration of natural landscapes)
- Terrestrial and aquatic biodiversity conservation (including the protection of coastal, marine, and watershed environments)
- Clean transportation (such as electric, hybrid, public, rail, non-motorised, multi-modal transportation, infrastructure for clean energy vehicles, and reduction of harmful emissions)
- Sustainable water and wastewater management (including sustainable infrastructure for clean and/or drinking water, wastewater treatment, sustainable urban drainage systems and river training, and other forms of flooding mitigation)
- Climate change adaptation (including efforts to make infrastructure more resilient to impacts of climate change, as well as information support systems, such as climate observation and early warning systems)
- Circular economy adapted products, production technologies, and processes (such as the design and introduction of reusable, recyclable, and refurbished materials, components, and products; circular tools and services); and/or certified eco-efficient products
- Green buildings that meet regional, national, or internationally recognised standards or certifications for environmental performance

¹⁷ IBID

Global Green Bond Market

The global green bond market has been growing at a rapid pace of nine percent compounded annualised growth rate. The collective AUM represented by the 3,826 responsible investment (PRI) signatories (3,404 investors and 422 service providers) increased by 17 percent over the period, from USD 103.4 trillion, and stood at over USD 121 trillion as on 31st March 2021¹⁸. More and more institutional investors and financial institutions are publicly pledging to increase green bond holdings. In addition, there are increasing numbers of specialised green bond funds. The green bond market is expected to cross USD 1 trillion by the end of 2022¹⁹.

However, green bonds included in the Climate Bonds Green Bond Database (GBD) in the first quarter of 2022 totalled USD 83.5 billion, down 38 percent compared to Q1 2021. The 27 percent increase YoY registered in the month of January was offset by declining volumes in the two following months (-18 percent and -69 percent, respectively) amid turbulence in the global financial market²⁰. Escalating interest rates are dampening returns.

Development of a Green Bond Market in India

Long-term bonds are a perfect fit for financing low-carbon infrastructure assets, which are characterised by high up-front capital costs and long-dated and frequently inflation-linked income streams. Bonds can provide a long-term source of debt capital needed for renewable infrastructure projects. Given the fact that the cost of project finance debt given by banks is higher than the yield for investment-grade project bonds²¹, it may be possible to achieve a reduction in the weighted average cost of capital (WACC) for green infrastructure financed or re-financed by bonds²². Lowering the cost of capital for renewable energy is important because an estimated 50 to 70 percent of the costs of electricity generation are in the financial cost of capital, with only the balance being the physical or operational costs of the installation²³. Thus, even small changes in the WACC can have a substantial impact on the long-term cost of capital-intensive renewable energy projects and their competitiveness. With the introduction of the Energy

¹⁸ UNPRI, 2021, Annual Report 2021, United Kingdom (accessed on 19th July 2022)

¹⁹ Climate Bonds Initiative, 2022, Sustainable Debt Market Summary Q1 2022 (accessed on 19th July 2022)

²⁰ IBID

²¹ WEF Brief; 2013; World Economic Forum (accessed on 19th July 2022)

²² Infrastructure Financing Instruments and Incentives, (2015), OECD (accessed on 19th July 2022)

²³ Renewable Power Generation Cost in 2019, IRENA (accessed on 19th July 2022)

Conservation (Amendment) Bill, 2022 in the monsoon session of the Parliament which aims to provide a regulatory framework for carbon trading in India to encourage penetration of renewables in the energy mix, and effective implementation and enforcement of the Energy Conservation Act, the need for renewable energy financing becomes even more crucial and challenging. The green bond can be an effective tool for supplementing the renewable energy market with a long-term cost of capital.

It must be noted that while green bonds can facilitate the flow of capital to low-carbon infrastructure investments, the demand for such investment is driven by other factors, notably low-carbon policy mandates, such as clean energy standards or deployment targets. An enabling policy context, therefore, is vital for the actual use of debt capital available through bond markets.

The following are the advantages of green bonds.

- **Investor Diversification:** Green Bonds give the issuer access to a broader range of investors who are focused on environmental, social, and governance performance.
- **Risk Mitigation:** In the case of “use of proceeds” bonds, the funds are raised for a specific project whereas the repayment is tied to the issuer and not to the success of the project. This reduces the risks of the bond for investors.
- **Public Relations:** Issuing green bonds enhances the issuer’s reputation and demonstrates its green credentials.
- **Refinancing:** Refinancing bank loans by issuing a green bond reduces the cost of funding for Brownfield projects by as much as 1-1.5 percent. Since the project has started, its risks are lower enabling the issuer to reduce the cost of funds and free up bank limits for new projects.

Issuers

India’s green, social, sustainability (GSS) debt issuance increased more than six-fold (+585 percent) to reach USD 7.5 billion, with 89 percent under the green theme in 2021 following a pandemic-induced decline in issuance in 2020. Cumulative volume has almost doubled in the last two years to represent USD 19.5 billion in value²⁴.

India has seen some traction in terms of green bonds in the last couple of years since Yes Bank became the first issuer of INR denominated green bonds in February 2015 issuing INR 1000 crore of green bonds at 8.85 percent to finance new renewable energy projects. The bonds are assured as “green” by KPMG. Yes Bank also came out with a second INR

²⁴ Climate Bond Initiative, 2022, India Sustainable Debt State of Market 2021

315 crore 10-year issue, which was completely subscribed by the International Finance Corporation (IFC). Anecdotal evidence suggests that there was no pricing advantage for Yes Bank or any advantage to the borrowers whose projects were invested in.

The average size of green labelled bonds has been relatively uniform since 2015, with around half of the total green amount (USD 9.5 billion out of USD 18.3 billion) comprised of benchmark-size deals²⁵. The green bonds issuance in India in 2021 was exceptional and set a record in 2022. India issued USD 6.3 billion of green bonds in 2021. It was the strongest issue since the first issue in 2015. Of these, USD 6.3 billion was raised through green bonds targeting renewable energy, USD 85 million towards low carbon buildings, and USD 20 million towards water management. Several 2021 climate bonds certified deals also financed renewable energy projects, particularly solar and wind. These were issued by Azure Power Energy (USD 414 million), Power Finance Corporation (EUR 300 million/USD 352 million), Renew Power (USD 1 billion), and Vector Green Energy (INR 12.37 billion/USD 166 million)²⁶. Between September 2021 and February 2022, Adani Green Energy along with its three subsidiaries had raised a total of more than USD 1.21 billion through domestic (rupee denominated) and overseas (dollar denominated) green bonds.²⁷

Government Initiatives and Incentives

The government currently provides subsidies for green projects in the following ways:

- Accelerated depreciation provisions: Prior to 2017, capital expenditure for renewable energy was allowed to be depreciated by 80 percent in the first year and the remaining in the following 5 years. However, from April 2017 onwards, the depreciation for the first year is calculated at the rate of 50 percent of accelerated depreciation (i.e., 40 percent) and 50 percent of additional depreciation (i.e., 20 percent). Irrespective of the cut down, this allows cash flow positive companies to depreciate their stock faster and pay their debts using the extra cash flow.
- Feed-in Tariffs: Feed-in tariffs are long-term contracts with distribution companies (DISCOMS) to purchase power from a renewable project, usually at higher rates than from conventional power generators.
- Viability gap funding: Viability gap funding is a capital grant from the government that bridges the gap between the project cost under the prevailing

²⁵ Climate Bond Initiative, 2022, India Sustainable Debt State of Market 2021

²⁶ IBID

²⁷ <https://mercomindia.com/adani-green-288-million-solar-wind-hybrid-rajasthan/> (accessed on 19th July 2022)

electricity rate and the price quoted by the developer. It is done via a reverse bidding process where the feed-in tariffs are bid for.

- **Generation-based incentive:** These are subsidies provided to power producers for every unit of electricity fed into the grid up to a specified limit. Under this scheme, the government provides INR 0.5/kWh supplied to the grid, subject to a cumulative maximum of INR 10 million/MW. The incentive must be availed of in a period between 4 and 10 years of the project becoming operational.
- **Renewable purchase/generation obligations:** RPOs are the minimum percentage of the total power that electricity distribution companies need to purchase from renewable energy (RE) sources. RPO creates a market for renewables in the absence of pricing externalities of conventional power generation. In July 2018, the Government of India notified the long-term growth trajectory of Renewable Purchase Obligations (RPOs) for Solar as well as non-solar, uniformly for all States/ Union Territories, reaching 21 percent of RPO by 2022 with 10.5 percent for solar-based electricity.
- **Net Metering Incentive:** Net-metering allows customers who generate their own electricity from solar to feed unused electricity back into the grid and be compensated for it. Under the Electricity (Rights of Consumers) Amendment Rules, 2021 the agreement for net metering, gross metering, net billing, or net feed-in would follow the regulations made by the State Commission from time to time. The latest amendment considers net billing or gross billing for the rooftop solar system above 500kW capacity. Residential and agricultural tariffs are usually kept low; the actual average tariff rate varies widely. The five states with the highest installed rooftop solar capacity are Maharashtra, Rajasthan, Tamil Nadu, Karnataka, and Gujarat, making up close to 50 percent of the country's total. Only residential customers in the highest consumption bracket in some states can benefit from this as they can sell at a profit (their cost of electricity is higher than that of the general populace) and recover their investment.

India's Sovereign Green Bond

The Finance Minister of India Smt. Nirmala Sitharaman, while presenting the Union Budget 2022-23 announced the proposal to issue sovereign green bonds worth INR 24,000 crore (~USD 3.3 billion) to push the green financing initiative in India. The sovereign green bond is expected to fund India's net zero emission by 2070 commitment. This will be a big step for India, especially amongst the BRICS nations, as India will be the first country to issue such a bond.

With huge public expenditure allocated for infrastructure, the sovereign green bond will be an important step for India's commitment toward becoming a net zero emissions country by 2070 and towards building infrastructure that is climate change resilient.

Over the years, many countries have issued sovereign green bonds. The market leaders have been Europe, with France and Germany leading the way. However, it is the emerging market economies that are expected to fuel the next growth spurt on the back of sustainable policies and increasing demand for green financing.

This said, the government is yet to clarify the quantum of bonds, the markets, and the currencies in which these will be issued. Some of the major factors that the government would need to consider are the tenure of the bond (typically green bond tenures are at least 15 years), the currency of issue, and how to attract the retail investor. While in most western countries, green bond issuances have been oversubscribed, in India this has not necessarily been the case.

Challenges with Green Bonds

Green Bond Standards

The International Capital Markets Association (ICMA) has the green bond principles, and the Climate Bonds Initiative has the climate bond standards. There are also green bond indices, which are developed by various banks or rating agencies. These indices and principles specify standards and practices defining what is considered "green". The definitions in both are quite broad and the guidelines voluntary; hence they do not in a sense, hamper innovation in green financing. However, the definitions have also led to a great deal of confusion over what is and can be considered green. CICERO, a second-party reviewer of green bonds, offers a "shades of green" methodology, through which green bonds are graded "dark, medium or light" green depending on the underlying project's contribution to "implementing a 2050 climate solution." There is no fixed definition or binding carbon standards. This has kept some mandated green investors, who prefer to do their own due diligence, away, thus raising the cost of investing and monitoring. Issuers face reputational risk and potential accusations of "greenwashing" if proceeds are not used for their intended purposes or if issuers are unable to prove that proceeds have funded projects with a positive impact.

A second problem faced by green investors is their limited capacity to analyse green projects, in which case the role of third-party guarantors like CICERO and audit firms like KPMG and EY becomes important.

Investors

So far, all Indian green bond issues have seen 15-20 percent investment by dedicated green funds. These include supra-nationals like International Finance Corporation, KfW Development Bank, European Investment Bank, Asian Development Bank, and other funds, which have a mandate to invest in green projects. For any pricing advantage over conventional bonds, this proportion needs to ideally go up to 50 percent.

Funding

Banks are the major source of direct green infrastructure financing. However, the scale of investment along with the “maturity mismatch” significantly exceeds the capabilities of a post-financial crisis banking sector and DISCOMS with constrained balance sheets. Indian PSU banks are already grappling with huge NPAs and are credit constrained. Bond markets, which provide both an alternative and a complement to bank financing of debt, will need to play a pivotal role. Bonds with long tenors are potentially a good fit with institutional investors’ long-term liabilities, allowing for asset-liability matching.

Low Credit Rating of Potential Green Bond Issuers

Infrastructure companies in India have not always had a good credit history to command the highest rating. In addition, apart from the biggest names in the power generation sector, viz., NTPC and Tata Power, no other company has the credit rating to be able to issue bonds in the capital markets. Because of the nature of the business, power generation is very capital intensive and relies heavily on debt for funding, which further hampers new companies from being able to raise debt in the capital markets.

Cost

The issue of “green bonds” entails an additional monitoring and certification cost. Although this is completely voluntary, it does tend to increase the cost of a “green” issue.

Recommendations

The NSE-PIF Seminar Series on Green Financing discussed some of the current challenges in the green bond market and came up with some innovative solutions that can help in reforming the green bond market in India. The seminar was attended by participants including policy experts from embassies, authorities on sustainable financing, bankers, climate consultants, members of the legal fraternity, stakeholders of

the energy industry, corporates, and academia. A few of the ideas which emerged from this seminar are as follows:

- *Framework for Categorising Green Projects:* Policymakers in India should look to develop a uniform framework with metrics to identify and categorise green projects. Such a metric should further consist of parameters to determine the quality of a green project (light green, deep green, etc.)
- *Impact Evaluation:* Policymakers must develop a methodology to evaluate the impact of green projects and publish such analysis promptly to create transparency for investors and the public. This would also promote investor confidence in the market and help such projects access further funds in the future.
- *The German “Green Twin Bond” Concept:* In regard to the issuance of the Sovereign Green Bond in India, policymakers may look to replicate the German “Green Twin Bonds” which are identical to conventional bonds in terms of maturity and coupon rate but with a smaller issue volume compared to conventional bonds. This helps in building a full green yield curve next to the conventional yield curve.
- *Deployment of Sovereign Green Bond Fund:* The funds raised through Sovereign Green Bond must be available to both the public sector as well as the private sector, even if that entails strict scrutiny of Environment, Social, Governance (ESG) and Environment, Health, Safety (EHS) standards of the project to be considered as green.
- *Power Purchase Agreement (PPA) Guarantee:* For power projects, especially clean energy projects (including wind, solar, hydrogen, etc.), state governments must fix Power Purchase Agreement (PPA) prices in the long run and must avoid frequent policy changes to such agreements.
- *Setting up a Green Guarantor:* Policymakers in India should consider setting up a specialised institution backed by the government or supported by a third-party agency to act as a guarantor for corporates issuing green bonds or other green debt instruments. Such an agency may charge a fee from the issuer and ensure that the fund raised through such issuance of debts are indeed used in green projects. Such an institution may also be responsible for penalising issuers for missing their green objectives. This would promote investor confidence and help in market development. Such an agency may be set up along the lines of the Export Credit Guarantee Corporation (ECGC) in India and/or the Japan International Cooperation Agency (JICA) and Japan Bank for International Cooperation (JBIC) of Japan.



Carbon Trading and India Inc.

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August, 2022

Background

Carbon Pricing

With rising global emissions of greenhouse gases (GHGs) and visible consequences of climate change being felt every day, global leaders are increasingly calling for carbon pricing and taxing carbon emitters around the globe. The term “carbon pricing” literally means putting a price on carbon pollution in order to bring down GHG emissions and channelising investments in cleaner options. In carbon pricing, external costs of carbon emissions are captured and passed on to the source of emission, making the polluter pay for the damage. Such damages can be anything such as healthcare costs due to air pollution, damage to crops through flood or heat waves, rain causing landslide due to destruction of green cover/forest, depletion of ground water level due to excessive construction and pumping through borewell and so on. Simply put, carbon pricing is basically an economic signalling for polluting sectors to discontinue or cut down on emissions/pollution or continue to pollute by paying a high price for it.²⁸ Carbon pricing is usually undertaken in two specific ways i.e., carbon taxes and emission trading system. The latter is commonly known as emission trading or carbon trading. A carbon tax directly sets a price on carbon by defining a tax rate on greenhouse gas emissions or – more commonly – on the carbon content of fossil fuels. On the other hand, Emission Trading System (ETS) or carbon trading is based on the concept of “cap-and-trade” system that was earlier used to cut down the level of lead in petrol and atmospheric sulphur dioxide (SO₂) pollution in the United States and Europe in the late eighties and early nineties.²⁹ This regulation works on the principle of market-based incentives to reduce pollution, rather than mandating specific measures. Companies that cut their emissions are rewarded and those that are unable to do so, have financial costs imposed on them.

Cap and Trade and Emission Trading System (ETS)

Under the “cap and trade” system, an overall limit or cap is set on the amount of emission that is allowed from significant sources of carbon, including the power industry, automotive and air travel. In this system, the government sets a cap on the maximum level of emissions and creates permits, or allowances, for each unit of emissions allowed under the cap. Emitting firms must obtain and surrender a permit for

²⁸ <https://www.worldbank.org/en/programs/pricing-carbon> (accessed on August 16, 2022)

²⁹ <https://www.lse.ac.uk/granthaminstitute/explainers/how-do-emissions-trading-systems-work/> (accessed on August 16, 2022)

each unit of their emissions. They can obtain permits from the government or through trading with other firms. The government may choose to give the permits away for free or to auction them. Firms that expect not to have enough permits must either cut back on their emissions or buy permits from another firm. For a given permit price, some firms will find it easier, or cheaper, to reduce emissions than others and will sell permits. If there are too many such firms in the market, the price of permits - the total number of which is set in advance by the cap - will decline, inducing some firms to reduce their emissions reduction efforts. Only when the price of permits is just right will the number of permits offered for sale by firms, that can reduce emissions at low cost, be equal to the number of permits demanded by firms for whom emissions reductions are costly. This process of trading ensures there is a unique price for all firms coordinating their activities and drives down emissions to the level allowed under the cap cost-effectively.³⁰ The core difference between carbon tax and ETS lies in the fact that while the price to emission reduction outcome in carbon tax isn't predefined, ETS has a pre-set limit to carbon emission.

The decision to trade in carbon emerged in 1997 when parties committed under Kyoto Protocol (Annex B Parties) decided to consider carbon as a commodity as part of Article 17. Carbon emission trading, commonly referred to as carbon trading allows countries that have emission units to spare - emissions permitted them but "unused" - to sell this excess capacity to countries that are over their targets.

Emission Trading: Global Scenario

In today's world, emission trading or carbon trading has become a crucial process of decarbonising economies and acts as an effective signalling process for emission cut. The ninth International Carbon Action Partnership (ICAP) Status Report shows that in the beginning of 2022, there were 25 operational ETS around the world, in jurisdictions representing 55 per cent of global GDP and covering 17 per cent of global GHG emissions. At the end of 2021, ETSS covered 37 per cent of emissions in jurisdictions that have enshrined their net-zero targets in law and 17 per cent of emissions in jurisdictions where net-zero targets are under development or discussion. Additionally, 22 more ETSS are currently under development or under consideration, mainly in South America and South-East Asia. Today, almost one-third of the global population lives under an active ETS.³¹

³⁰ <https://www.lse.ac.uk/granthaminstitute/explainers/how-do-emissions-trading-systems-work/> (accessed on August 17, 2022)

³¹ ICAP, (2022), *Emissions Trading Worldwide: Status Report 2022*. Berlin: International Carbon Action Partnership

Major ETS around the World

The European Union Emissions Trading System (EU ETS), established in 2005, is the oldest carbon trading platform in the world. It regulates the emission of carbon dioxide from electricity and heat generation, energy-intensive industry sectors including oil refineries, steel works, and production of iron, aluminium, metals, cement, lime, glass, ceramics, pulp, paper, cardboard, acids and bulk organic chemicals, and commercial aviation within the European Economic Area. Additionally, it also regulates emission of nitrous oxide (N₂O) from production of nitric, adipic and glyoxylic acids and glyoxal and perfluorocarbons (PFCs) from production of aluminium. In 2017, the EU and Switzerland signed an agreement to link their emissions trading systems. The agreement came into force on January 1, 2020, and the link became operational in September that year. The EU ETS operates in trading phases and is currently in its fourth phase. It was revised in 2018 to ensure emissions reduction of GHG emissions to 55 per cent of 1990 levels in support of EU's 2030 emissions reduction target. In the third phase it was targeted at 40 per cent of 1991 levels.³²

The Chinese ETS, that started on 16th July 2020, is considered to be the largest carbon market in the world covering one-seventh of global carbon dioxide emissions while regulating 2,162 companies from power generation sector, emitting around 4.5 billion tonnes of carbon dioxide annually.³³ Eventually, China's national ETS is expected to grow into the world's largest carbon market in terms of value, with a potential transaction value of over CNY 100 billion (USD 15.5 billion), providing a nation-wide price signal and channelling financial resources to sectors that are crucial for the realisation of China's dual goals: peaking emissions before 2030 and ultimately reaching long-term carbon neutrality before 2060.³⁴

The United Kingdom (UK) too launched the United Kingdom Emission Trading System (UK ETS) on 1st January 2021 on the lines of the existing EU ETS. The UK ETS is similar to the EU ETS barring the 5 per cent reduced cap, which is UK's notional share to EU ETS.

³² ICAP, (2022), *Emissions Trading Worldwide: Status Report 2022*. Berlin: International Carbon Action Partnership

³³ <https://www.scmp.com/business/article/3185486/chinas-national-carbon-trading-scheme-marks-one-year-anniversary-analysts> (accessed on August 18, 2022)

³⁴ ICAP, (2022), *Emissions Trading Worldwide: Status Report 2022*. Berlin: International Carbon Action Partnership

These apart, there are 51 implemented or scheduled carbon pricing initiatives worldwide. These include ETSs in Switzerland, South Korea, New Zealand and several US states and Canadian provinces, as well as national-level carbon taxes.³⁵

Critiques of ETS

Like any other policy reform, ETS too has been criticised. Reports suggest that in EU ETS, since permits were given away free of cost, it led to collapse of price and no real reduction in emissions. Political interference has created far too many permits than needed which ultimately has led to an increase of circulation of money without any real impact on environment. Another problem is that offset permits, gained from paying for pollution reductions in poorer countries, are allowed to be traded as well. The importance of these permits in reducing carbon emissions is questionable and the effectiveness of the overall cap and trade scheme is also reduced.³⁶ Another common criticism is that firms participating on ETS could lose out to firms lying outside the scheme that are not subject to the regulations, whose costs are lower. However, research shows that there has been very less evidence of this, at least in the case of EU ETS.³⁷

Emission Trading in India

Carbon (emission) trading has justifiably gained popularity after the Hon'ble Prime Minister of India Shri Narendra Modi unveiled India's *Panchamrit* plan during COP26, at the United Nations Climate Change Conference, putting environment and sustainability centre stage. The updated nationally determined contributions (NDC) seeks to enhance India's contributions towards the achievement of a stronger global response to the threat of climate change. India aims to:

- Reach non-fossil energy capacity of 500GW by 2030.
- Meet 50 per cent of its energy requirements from renewable energy by 2030
- Reduce the total projected carbon emissions by one billion tonnes by 2030
- Reduce the carbon intensity of its economy by less than 45 per cent by 2030
- Achieve the target of Net Zero by 2070

Establishing a carbon credit market is the first crucial step towards this goal. Indian companies have already been participating in the global carbon market, which is through one of three modes: carbon neutrality, Renewable (RE 100), and Science Based Targets (SBT).

³⁵ <https://www.lse.ac.uk/granthaminstitute/explainers/how-do-emissions-trading-systems-work/> (accessed on August 18, 2022)

³⁶ <https://www.bbc.com/news/science-environment-34356604> (accessed on August 18, 2022)

³⁷ <https://www.lse.ac.uk/granthaminstitute/explainers/how-do-emissions-trading-systems-work/> (accessed on August 19, 2022)

Justifiably, the Government of India has proactively started working towards ensuring reduction in carbon emission in India. India didn't have an explicit carbon pricing policy or a market-based mechanism in place but did have an array of schemes and mechanisms that put an implicit price on carbon through various schemes. This includes the market-based Perform, Achieve and Trade (PAT) scheme that has been developed to enhance energy efficiency, indirectly reducing carbon emissions from energy consumption in energy-intensive industries, high tax incidence on petroleum fuels and coal, Renewable Purchase Obligations (RPO) and Renewable Energy Certificates (REC), Internal Carbon Pricing (ICP) by carbon emitting corporates among others.³⁸ These apart, ethanol blending in petrol is another initiative which is being undertaken to reduce carbon emission from petrol engines.³⁹ The monsoon session of the Parliament of India which concluded on August 18, 2022 passed the Energy Conservation (Amendment) Bill, 2022 in the Lok Sabha (lower house of Parliament) which proposes that the central government specify a carbon credit trading scheme, where the central government or any authorised agency may issue carbon credit certificates to entities registered under and compliant with the scheme, while such entities can trade these certificates in the secondary market.⁴⁰ According to a report by the Trade Promotion Council of India (TPCI), India has generated approximately 30 million carbon credits, which is the second highest transacted volume in the world. It also stated that "India is one of the largest beneficiaries of total world carbon trade through CDM, claiming about 31%". India is expected to gain at least USD 5 billion to USD 10 billion from carbon trading (INR 22,500 crore to INR 45,000 crore) over a period of time.

However, India's tryst with carbon trading started in 2011 with introduction of the pilot Emission Trading Scheme (ETS) mechanism by the Ministry of Environment and Forests (MOEF) along with the Central Pollution Control Board (CPCB) and State Pollution Control Boards (SPCBs) of Gujarat, Maharashtra and Tamil Nādu with the dual objectives of developing a cost-effective method of emission mitigation and spurring innovation.⁴¹ In December 2013, the Central Pollution Control Board (CPCB) released guidelines for continuous emissions monitoring systems (CEMS) and mandated the installation of CEMS across 17 categories of highly polluting industries in February

³⁸ <https://www.orfonline.org/expert-speak/pricing-carbon-trade-offs-opportunities-india/> (accessed on August 19, 2022)

³⁹ <https://www.livemint.com/opinion/online-views/a-carbon-market-that-suits-india-would-help-fight-climate-change-11660579520004.html> (Accessed on August 19, 2022)

⁴⁰ <https://www.livemint.com/news/india/electricity-amendment-bill-2022-to-be-tabled-in-parliament-in-monsoon-session-rk-singh-11659717436110.html> and <https://prsindia.org/billtrack/the-energy-conservation-amendment-bill-2022> (accessed on August 19, 2022)

⁴¹ Vaidyula M., Rittenhouse K., Sopher P., Francis D., and Swartz J., May 2015, "INDIA: AN EMISSIONS TRADING CASE STUDY", CDC Climate Research, EDF, and IETA

2014.⁴² A 2015 baseline survey in the three chosen states revealed significant potential for emission reductions, and CEMS were then progressively installed at Surat as part of a trial in four phases from 2015 to 2019. No information is available on the pilot ETS in Maharashtra and Tamil Nadu after 2015.

The Surat Emission Trading Scheme Model – A Pilot Project

In 2019, the Government of Gujarat in collaboration with researchers from Harvard Kennedy School, Yale, the Energy Policy Institute at the University of Chicago (EPIC), and The Abdul Latif Jameel Poverty Action Lab (J-PAL), further launched the world's first emissions trading system for particulate pollution, as a pilot project in Surat.⁴³ This emissions trading program was built on the earlier innovation by the Gujarat Pollution Control Board (GPCB) that is the use of continuous emissions monitoring systems to track industry emissions in real time. About 350 industries around Surat had installed continuous emissions monitoring systems and would transmit real-time, high-quality emissions data. This new scheme took advantage of this technology's modern, transparent approach to monitoring. Under the Surat ETS, in its third phase which began on November 16, 2019, the cap on the total mass of suspended particulate matter emissions was set at 276 tons per industrial unit.⁴⁴ The cap was based on an assessment of emissions data from the government's continuous emissions monitoring system (CEMS). For the November 16 to December 31 trading period in 2019, the GPCB distributed 80 per cent (220.8 tons worth of emissions) of permits free to participant industries at the start of trading. The pro-rata allocations were based on the boiler and heater capacity of an industrial unit. The remaining 20 per cent of emission permits were auctioned by GPCB through the National Commodities and Derivatives Exchange (NCDEX) Limited e-market. A preliminary survey of the 158 participating plants in the scheme, by EPIC India stated that the Surat ETS is projected to reduce particulate emission by 29 per cent while lowering the cost of particle emissions, and increase average and individual industry profits, relative to status quo regulations.⁴⁵ Media report suggests that, further research has found that the ETS pilot succeeded in reducing emissions by 24 percent with little cost to the industry.⁴⁶

⁴² <https://science.thewire.in/environment/india-emissions-trading-pollution-crisis/> (accessed on August 19, 2022)

⁴³ <https://epod.cid.harvard.edu/news/india-launches-worlds-first-particulate-emission-trading> (accessed on August 20, 2022)

⁴⁴ <https://www.indiaspend.com/explainers/surat-emission-trading-scheme-gujarat-works-to-reduce-air-pollution-763554#:~:text=Under%20emissions%20trading%20systems%2C%20it,Ludhiana%20plan%20to%20follow%20suit> (accessed on August 20, 2022)

⁴⁵ https://epic.uchicago.in/wp-content/uploads/2019/10/ETS_INDIA_ResearchSummaryFinal-.pdf (accessed on August 20, 2022)

⁴⁶ <https://www.hindustantimes.com/india-news/gujarat-to-launch-india-s-first-carbon-trading-market-among-large-polluters-101653415939802.html> (accessed on August 20, 2022)

Present Scenario

Three years later, in May 2022, the same parties signed a strategic agreement to launch the first carbon trading market in India.⁴⁷ Media reports suggest that the initial proposal is to identify large emitters in power and manufacturing sector and set up a cap (or maximum level) for CO₂ emissions. Post this, a nodal agency of the Government of Gujarat would issue permits equal to this target, allowing firms to trade. Thus, firms would either restrict their emissions till the cap or buy additional limit from other firms at a higher price who emit below the cap thus allowing industries to reduce their emissions inexpensively to receive payments from those that find it more costly to do so. The initial proposal is that this market be restricted to existing participants and new entrants in these sectors, although there is flexibility to allow others to participate over time. A few key features will be similar by design to the California, Quebec, Regional Greenhouse Gas Initiative of US, and EU cap-and-trade markets for CO₂ such as a set cap, safeguards against price spikes, and a mix of allocations and auctions of permits to help industries make the transition. The project also envisages covering the same GHG pollutants covered in the California market.

The Bureau of Energy Efficiency (BEE) has also released a blue print for national carbon market in India. NSE IFSC, an international exchange in GIFT city, announced launch of International Sustainability Platform which facilitates listing and trading of sustainability products including voluntary carbon.

Recommendations

Despite the evolution in the carbon emission market in India and the ongoing policy reforms towards creating a green economy, multiple challenges exist in India's green sustainable financing space. The following are the recommendations of the NSE-PIF seminar on carbon trading to mitigate some of the immediate challenges.

Creating Market Infrastructure

Post clearance of the Energy Conservation (Amendment) Bill, 2022 in Rajya Sabha, the Ministry of Environment, Forest and Climate Change (MOEFCC) should hold wide ranging consultation with market experts and stakeholders prior to drafting of the regulations. This should be done considering the fact that that the emerging markets are not the same as green emerging markets. Further, policymakers must create market

⁴⁷ <https://www.hindustantimes.com/india-news/gujarat-to-launch-india-s-first-carbon-trading-market-among-large-polluters-101653415939802.html> (accessed on August 20, 2022)

intermediary, ensure oversight, enable assurance and put out disclosures prior to commencing of trade. Regulations can further develop as the market grows.

Determining a Baseline for Sectors

EU ETS which included shipping sector in its trading system in May 2022 started analysing monetary reporting and verification of the sectors way back in 2018. This was undertaken to ascertain the correct baseline for the sector. In India, national NDCs must be made as per sector with a common baseline, where the baseline must be ascertained by taking into account monetary and compliance report from last five years.

Need for Standardisation in Taxonomy

To ensure the development of a vibrant carbon trading market, policymakers need to ensure common taxonomy for the Indian market. This must include clear definitions and uniform guidelines demarcating investment that can be termed as “green”.

Setting up a Decarbonisation Fund in India

India should think of setting up a decarbonisation fund that may fund eligible projects to invest in decarbonization technology and sectors where innovation needs to move toward carbon neutrality. Such a fund may be linked to the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) which is meant to promote afforestation and regeneration activities as a way of compensating for forest land diverted to non-forest use or the District Mineral Foundation Trust (DMFT) funds which are royalties contributed by mining companies to uplift communities affected by mining activities. An estimated INR 50000 crore is lying with states which can be used in afforestation or in green projects and the voluntary credits may be passed on to companies contributing to such funds.

Alternatively, domestic companies can work with overseas investors to create such technology and get licenses with shared intellectual property rights (IPR) which can be further shared with countries willing to import such technology. Foreign investors could also secure carbon credits through such practices.

Carbon Offset v/s Carbon Credit:

Currently, there is an opaqueness in the definition of carbon offset and carbon credit among Indian investors. While carbon offset is a voluntary market instrument to compensate for emissions by funding saving of an equivalent amount of carbon dioxide

elsewhere to balance out these emissions, carbon credits are free allowances that are auctioned primarily by governments to companies to limit their emissions, through a cap-and-trade system. In other words, carbon credits represent the right to emit that carbon, whereas carbon offsets represent the production of a certain amount of sustainable energy to counterbalance the use of fossil fuels. Policymakers need to clearly define this subtlety to educate companies and investors to invest responsibly.

Amendment of the Energy Conservation (Amendment) Bill, 2022

Presently, the Energy Conservation (Amendment) Bill 2022 amends the Energy Conservation Act, 2021 relating to energy and power sector, focusing specifically on emission of carbon and GHG during production of electricity. However, this does not take into account the absorption, sequestration or avoidance of carbon dioxide produced during industrial activities. To ensure a carbon neutral economy, India needs a more holistic approach to integrate every aspect of the energy generation by taking the other parameters too into account and hence the Energy Conservation (Amendment) Bill should be further amended to include these parameters.



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