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Carbon Market Design in India: A Review of the Carbon Market's Contribution to ESG

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Abstract- ***As the world's third largest emitter of green house gases, India has been revising its implicit carbon taxation policies to a more standardized carbon market by introducing Carbon Credit Trading Scheme (CCTS) in 2022. The present paper examines the evolving carbon policies of India, including coal cess, excise duties on fossil fuels, PAT scheme and Renewable Energy Certificate, and evaluates their collective contribution towards the E factor of ESG in India. Implicit carbon taxation encourages clean energy financing, but they have also remained inconsistent and fragmented. While emerging Indian Carbon Market puts much greater emphasis on transparency, efficiency and liquidity, it is expected to mobilize green finance, drive direct emission reductions and incentivize low carbon innovation. The paper thus concludes that a well-regulated and integrated carbon market and standardized policies will strengthen India's ESG performance and establish its position in global sustainable development.***

Keywords: Carbon Market, ESG, Carbon Pricing, Environmental Policy, India, Sustainable Development.

I. INTRODUCTION

India, as a rapidly developing economy with a large population, faces the dual challenge of sustaining economic growth while addressing its significant contribution to global greenhouse gas (GHG) emissions. Ranked as the world's third largest emitter of GHGs, following China and the United States, India's actions are critical to achieving future climate targets (Jindal et al., 2025). In response to this challenge, there has been a global emphasis on Environmental, Social, and Governance (ESG) performance, which serves as an important indicator of a firm's commitment to sustainable development (Tu et al., 2025). The environmental (E) component of ESG specifically evaluates a firm's dedication to environmental protection and sustainable practices (He et al., 2025). While India has historically adopted an implicit carbon pricing regime through various fuel taxes and cesses, it is now on the cusp of establishing a more formal and explicit carbon market. This system, known as the Carbon Credit Trading Scheme (CCTS), was introduced in December 2022 and aims to decarbonize the economy by pricing carbon and mobilizing finance to meet net-zero targets cost-effectively. A robustly designed Indian Carbon Market (ICM), emphasizing key properties such as homogeneity, efficiency, and transparency, holds immense potential to enhance corporate environmental responsibility, spur low-carbon innovation, and drive direct emission reductions. This paper delves into India's existing carbon-related laws and policies, including its implicit carbon taxes and the nascent Carbon Credit Trading Scheme (CCTS), and meticulously examines how these contribute to the environmental factor of ESG performance in the Indian context, exploring their mechanisms, observed effects, and the broader policy landscape.

The objectives of the study are:

1. To examine the major carbon-related laws and policies in India
2. To assess how such legislation and policy contribute to the E component of ESG

II. METHODOLOGY

This study is qualitative and exploratory in nature and is based on secondary data sources. The literature review was drawn from Scopus and Web of Science to provide insights into global and Indian carbon pricing mechanisms, as well as their linkages with ESG performance. In addition, official documents and reports from government sources like the Ministry of Power, Bureau of Energy Efficiency (BEE), Central Electricity Regulatory Commission (CERC), and the Press Information Bureau (PIB) were referred to in analyzing the policies. The thematic categorization involves carbon-related instruments, namely, carbon implicit taxes, PAT, REC, and the Carbon Credit Trading

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Scheme (CCTS), and their contribution to the environmental (E) factor of ESG.

III. CARBON-RELATED LAWS AND POLICIES IN INDIA

India has pursued a multi-pronged LCIG strategy since the beginning of the 2010s with focus on enhancing energy efficiency, promoting clean coal and non-fossil fuel energy, creating carbon sinks, and fuel-switching (Ojha et al., 2020). Various policy instruments include regulations, public funding for R&D, awareness campaigns, and market-based instruments such as emission trading schemes and carbon taxes have been adopted to help achieve this goal.

1. Implicit Carbon Taxes and Cesses

Even though India does not have an explicit, standalone carbon tax, it has implicitly or de facto imposed mechanisms for pricing carbon through its taxation on fossil fuels (Ojha et al., 2020).

1.1 Coal Cess/Clean Environment Cess: A "clean environment cess" was imposed in 2010 on coal, which had been steadily rising in magnitude (Ojha et al., 2020). The cess was levied in addition to other excise duties on coal (Ojha et al., 2020). After the reforms related to GST in July 2017, the excise duty on coal was replaced by a 5% GST (Ojha et al., 2020). Subsequently, the clean environment cess was subsumed by a GST compensation cess on coal or unblended fossil fuels (Esakki Ammal, 2024). In 2021, an estimate of the tax rate on coal was INR 284 per ton (Esakki Ammal, 2024). In the 56th meeting of the GST Council held in New Delhi removed Compensation Cess of ₹400 per tonne previously levied on coal and raised GST on coal from 5% to 18% (PIB,2025).

1.2 Excise Duties on Petrol and Diesel: Excise duties on petrol and diesel always existed and were considered primarily an important revenue source for the government rather than explicitly a policy for climate change mitigation (Ojha et al., 2020). This continues in the post-reform GST era, as fuel products continue to remain outside the GST system, with their rates continuously increasing (Ojha et al., 2020). These excise duties effectively become implicit carbon taxes by assigning a price to emissions, thus creating a price signal that will help reduce fuel consumption and, therefore, CO2 emissions (Ojha et al., 2020). The tax rate in 2021 was estimated at INR 1,850 per ton for oil and INR 48 per ton for natural gas (Esakki Ammal, 2024). This implies that the rates of implicit carbon tax in India are higher compared to the rates in other countries. According to Ojha et al. (2020), this reflects a greater commitment by India towards reducing carbon emissions. In addition, this regime has evolved in a haphazard manner to meet contradictory objectives without having overall consistency and a direct linkage to explicit carbon emission targets. It also argues against limiting the carbon tax to coal given that other fossil fuels, including refined oil and natural gas, will not have its full fuel-switching impact across all sources dependent on carbon.

2. Carbon Credit Trading Scheme (CCTS) / Indian Carbon Market (ICM)

India is currently in the process of setting up a national carbon trading market (Jindal et al., 2025). In December 2022, an amendment was made to the Energy Conservation Act, 2001 and a domestic Emission Trading System (ETS) named the Carbon Credit Trading Scheme (CCTS) was introduced (Malik et al., 2024). The CCTS is intended to be part of a wider Indian Carbon Market (ICM), which will also include a voluntary domestic offset market for non-obligated entities (Malik et al., 2024). The larger objective of the CCTS is to decarbonize the Indian economy by pricing carbon and mobilizing finance for decarbonization (Malik et al., 2024). It aims to ensure emission reduction cost-effectively and play a critical role in achieving India’s net-zero targets (Jindal et al., 2025). A prospective carbon market in India is also expected to help ensure a stable energy supply, improve its energy mix, and reduce carbon emissions to achieve its 2030 goals (Jindal et al., 2025). Under the CCTS, a 'National Steering Committee for Indian Carbon Market' has been constituted, comprising members across various ministries for governing and providing oversight (Jindal et al., 2025). The Bureau of Energy Efficiency (BEE) acts as the administrator, deciding targets, appointing verifiers, and issuing carbon credit certificates (Jindal et al., 2025). The Central Electricity Regulatory Commission (CERC) will regulate the trading of certificates, and the 'Grid Controller of India' will maintain the Indian carbon market registry (Jindal et al., 2025). The period from

2023 to 2025 will serve as a transition period for obligated entities to move from the Perform, Achieve and Trade (PAT) scheme to the CCTS (Malik et al., 2024). Under CCTS, entities will be given a greenhouse gas (GHG) emissions intensity target (tCO2e/t product), an output-based cap, similar to China and Indonesia ETSs (Malik et al., 2024). The detailed design guidelines for the ICM compliance mechanism are still under discussion, with trading expected to start by 2026 (Jindal et al., 2025). The ICM is envisioned as a broader and more integrated market mechanism, akin to the EU-ETS (Jindal et al., 2025). The recommended ICM design covers five key properties: homogeneity, low entry barriers, liquidity, efficiency, and transparency, operationalized through ten enabling features (Jindal et al., 2025).

In essence, India's plan sums up a 3-phase framework for an integrated, fully functional Indian carbon market over the next 10 years: Jindal et al., 2025.

(i) Development Phase (2025–2027): This preparatory phase focuses on capacity building, data collection, and the creation of required institutional frameworks, including training for regulatory bodies, businesses, and participants.

(ii) Transition Phase (2028–2031): This intermediate phase scales up operations to cover more sectors, increase market liquidity, and consolidates domestic linkages with other market instruments like PAT/REC. It involves the gradual inclusion of high-emission sectors such as the power sector, and a transition from free allocation of allowances toward auctioning.

(iii) Full Implementation Phase (2032–2035): This is the mature phase of the market, which will see full-scale implementation with wide coverage of sectors across the economy and probable linkage with international carbon trading systems (Jindal et al., 2025).

3. Perform, Achieve and Trade (PAT) Scheme

The PAT scheme was launched in India as a quantity instrument to improve energy efficiency in energy-intensive industries by allowing trading in energy efficiency certificates (Jindal et al., 2025). It was developed in 2012 as a mechanism for reducing energy use in large industries (Jindal et al., 2025). The PAT scheme utilizes a 'Plant Boundary condition' for calculating energy intensity, but it ignores energy used in the supply chain (Dwivedi et al., 2022). While PAT provides valuable lessons on operational dynamics and stakeholder engagement in the Indian context, it is not directly analogous to comprehensive emissions trading systems like the EU-ETS (Jindal et al., 2025). The ICM is expected to draw heavily from the PAT scheme, particularly in setting emissions intensity targets (Jindal et al., 2025).

Table: PAT Cycle

	Number of Designated Consumer notified	Sectors of DCs	Energy Saving Target (in MTOE)
PAT Cycle I (2012–13 to 2014–15)	478	Aluminum, Cement, Chlor- Alkali, Fertilizer, Iron & Steel, Paper & Pulp, Thermal Power Plant and Textile	6.686
PAT cycle II (2016-17 to 2018-19)	621	Aluminum, Cement, Chlor- Alkali, Fertilizer, Iron & Steel, Paper & Pulp, Thermal Power Plant and Textile, Petroleum refineries, Railways, Electricity distribution companies	8.869
PAT cycle III (2017-18 to 2019-20)	116	Thermal Power Plant, Cement, Aluminum, Pulp & Paper, Iron & Steel and Textile	1.06
PAT cycle IV (2018-19 to 2020-	109	Aluminum, Cement, Chlor-Alkali, Iron and Steel, Pulp and	0.6998

21)		Paper, Textiles, Petrochemicals, and Commercial Buildings (Hotels).	
PAT cycle V (2019-2020 to 2021-2022)	110	Aluminum, Cement, Chlor-Alkali, Commercial Buildings (Hotels), Iron & Steel, Pulp & Paper, Textile, and Thermal Power Plant	0.5130
PAT cycle VI(2020-21 to 2022-23)	135	Cement, Commercial buildings (hotels), Iron and Steel, Petroleum Refinery, Pulp and Paper and Textiles	1.277

Source: Urja Dakshata Information Tool

4. Renewable Energy Certificate (REC) Scheme

Another market-based quantity instrument, the REC scheme is also a major initiative under the NSM of NAPCC (Ojha et al., 2020). It aims to reduce the mismatch between the availability of renewable resources and the requirement of obligated entities in meeting their RPOs (Ojha et al., 2020). Like PAT, the REC scheme provides some insight into market-based instruments in India but not an ETS in totality (Jindal et al., 2025). Domestic linkage and fungibility of trading units between PAT and REC certificates are planned for the Indian carbon market (Jindal et al., 2025).

5. Other Climate and Environmental Policies

Other policies and initiatives of India for climate change mitigation and sustainable development are enumerated below:

5.1 Paris Agreement Commitments: India is a party to the Paris Agreement and has committed to reducing the carbon intensity of its GDP by 33-35% by 2030 over 2005 levels, revised recently to 45% at COP26 (Dwivedi et al., 2022). Further, it targets 500 GW of non-fossil energy capacity and 50% of energy needs from renewable sources by 2030, with net-zero emissions by 2070 (Jindal et al., 2025).

5.2 Energy Conservation Act, 2001: It targeted 15 energy-intensive sectors and resulted in the establishment of the BEE and the Energy Conservation and Building Code (ECBC) (Dwivedi et al., 2022).

5.3 Green Economy Initiatives: As one of the BRICS nations, India actively participates in the mainstream striving for resource efficiency, renewable energy, eco-friendly land use, green urbanization, and technology innovation for green growth (Song &Hua, 2024).

5.4 Environmental Protection Laws: ESG Laws in India, in terms of Protection of the Environment laws, also have the BRSR framework of SEBI, through which it makes sure that ESG disclosures are ensured with the topmost listed companies (Kharola et. al., 2025).

IV. CONTRIBUTION OF THESE LAWS AND POLICIES TO THE ENVIRONMENTAL (E) FACTOR OF ESG IN INDIA

The E component of ESG contributes to a firm's commitment in environmental protection, such as conserving natural resources, effectively handling pollution and waste, adopting green opportunities, and reducing carbon emissions (He et al., 2025). Carbon-related policies in India, to this factor, contribute through a blend of price signals, incentives for clean technologies, and regulatory pressure.

1. General Mechanisms of Carbon Pricing (Taxes and ETS)

Most economists agree that carbon pricing-either through a carbon tax or an ETS-is the most cost-effective regulatory approach to reducing GHG emissions (Haites, 2018).

1.1 Internalization of Externalities: Carbon taxation, in theory, internalizes the social and environmental cost of carbon pollution by making polluters pay for

monetary value created by their emissions to the atmosphere in general (Song &Hua, 2024). This financial impact provides an incentive for them to lessen the levels of emission in order to minimize costs (Nong et al., 2021). Similarly, an ETS sets a limit on emissions and issues allowances, which, when traded, create a price signal (Haites, 2018).

1.2 Price Signal for Emission Reduction: By pricing carbon, a market-based incentive exists for organizations to invest in cleaner technology, reduce carbon footprint, and practice sustainability (Song &Hua, 2024). This aligns with the broader objectives of a "green economy," which seeks to de-link economic growth from environmental degradation (Song & Hua, 2024).

1.3 Engaging in Environmental Protection: Green policies in terms of taxes are needed to encourage behavior for environmental protection and punish pollution and resource-depleting activities (Song &Hua, 2024). They offer financial incentives for renewable energy, technology advancement, and using energy sustainably (Song & Hua, 2024).

2. Contribution of Implicit Carbon Taxes

India's implicit carbon taxes, though haphazard in their evolution, have contributed to the 'E' of ESG:

2.1 Revenue Generation for Clean Initiatives: The coal cess specifically created the National Clean Energy and Environment Fund (NCEEF), which is used for financing R&D projects related to cleaner technology (Raghavendra et al., 2024). As a direct funding mechanism, this provides green innovation and infrastructure for environmental sustainability.

2.2 Price Signal, Albeit Imperfect: Although not specifically designed for climate policy, the excise duties on fossil fuels serve as implicit carbon taxes, sending a price signal to lower fuel use and ultimately cut down CO2 emissions. Ojha et al., 2020. It, therefore, leads to a shift from carbon-emitting fuels towards their alternatives, which fulfills environmental objectives. Esakki Ammal, 2024

2.3 Reducing Production Costs of Clean Energy: The carbon tax on fossil fuels reduces the relative price difference between renewable and fossil fuels, enabling faster penetration of renewable fuels. As Shukla et al. (2008) note that this supports investment in cleaner energy sources indirectly, this becomes one more constituent of the ESG environmental dimension.

3. Expected Contribution of Indian Carbon Market, 'CCTS'

The envisaged CCTS, drawing lessons from international ETS experiences, is likely to dramatically improve the environmental ESG performance of India:

3.1. Direct Emission Reduction and Decoupling: Carbon markets have also proved efficient in reducing GHG emissions at minimal cost. International experience such as the ETS pilot areas in China indicates carbon emissions have reduced by 15.5% compared to the non-pilot areas (Jindal et al. 2025). The CCTS looks forward to carbon emissions reduction from business-as-usual scenarios by providing a market incentive for enterprises to choose proper investment methods or technologies that reduce pollutant emissions (Han et al., 2024). It will also contribute to decoupling economic growth from energy consumption (Zhang et al., 2022).

3.2 Encouraging Cleaner Technologies and Green Innovation: The CCTS is designed to spur low-carbon innovation, especially in the industry sector Malik et al. (2024). By attaching a cost to carbon emissions, the market incentivizes firms to gradually shift away from using carbon-intensive fuels to renewable energy sources and cleaner technologies Yao et al. (2023). Therefore, green technological innovation is facilitated, which improves corporate ESG performance He et al. (2025). Indeed, studies have found that low-carbon city pilot policies, including carbon reduction policies, help improve the corporate ESG performance through the firm's enhanced internal controls and green innovation He et al. (2025).

3.3 Mobilization of Green Finance and Investments: Carbon markets are considered an efficient driver for investment in clean energy technologies Ojha et al. (2020). The CCTS is designed to mobilize finance toward decarbonization and, through auctioning allowances, it may bring in significant revenues to be reinvested in green technologies Jindal et al. (2025). This flow of money helps eco-

friendly projects and green infrastructure development Song &Hua (2024). 3.4 Enhanced Corporate Environmental Responsibility and Governance: CCTS obligates the firm to be concerned with resource management and utilize resources that emit the least carbon (Lee & Liang, 2024). That keeps a good working environment and links to better economic performance; therefore, this directly empowers 'E' of ESG. Carbon pricing mechanism like ETS has strengthened environmental responsibility in the real estate industry (Lee & Liang, 2024). Stringent environmental regulation encourages TFP at the firm level by influencing firms to adopt greener methods of production, low-carbon equipment, and expanding capacity sufficiently (Tu et al., 2025). 3.5 Pollution Haven Hypothesis Mitigation: Introduction of a carbon tax in India was found to deter the volume of inbound CBM&A, especially those with the motive of shifting carbon emissions (Raghavendra et al., 2024). This suggests that implicit carbon pricing in India acts as a "barricade" against becoming a pollution haven, thereby strengthening its environmental quality (Raghavendra et al., 2024). Strengthening environmental regulations is an important way to attract "green FDI" (Raghavendra et al., 2024).

4. Role of PAT and REC Schemes

The existing PAT and REC schemes, though not full-fledged carbon markets in themselves, contribute to the 'E' of ESG in their own right, and through their planned integration with the CCTS:

4.1 Energy Efficiency Improvements: The PAT scheme aims at improving energy efficiency in energy-intensive sectors. Offering incentives to reduce energy consumption directly translates into reducing carbon emissions and more sustainable operations, hence relating to environmental performance.

4.2 Renewable Energy Promotion: The REC mechanism, therefore, helps to bridge the gap between the availability of renewable energy sources and the needs of obligated entities, as illustrated by Ojha et al. (2020). This directly aligns with the transition into cleaner energy mixes, which means lower use of fossil fuels and greater environmental sustainability, as provided by Jindal et al. (2025).

4.3 Carbon Market Foundation: Gained experience from the implementation of PAT and REC schemes forms a useful foundation for the design and implementation of the ICM (Jindal et al., 2025). Their future linkage and fungibility of trading units are expected to integrate these efforts into a more comprehensive carbon pricing framework, enhancing overall environmental impact (Jindal et al., 2025).

V. CONCLUSION

India’s journey toward robust environmental ESG performance is significantly shaped by its carbon policies. While the existing implicit carbon taxes have laid a foundation by creating price signals and generating revenue for clean energy initiatives through mechanisms like the NCEEF, their impact is limited by their haphazard nature and lack of explicit linkage to carbon targets (Ojha et al., 2020). The nascent Carbon Credit Trading Scheme (CCTS), envisioned as a comprehensive national carbon market, holds immense potential to drive direct emission reductions, foster green innovation, mobilize substantial green finance, and enhance corporate environmental responsibility, drawing valuable insights from international ETS experiences (Jindal et al., 2025). Complementary schemes like PAT and REC further contribute by promoting energy efficiency and renewable energy, with plans for their integration into the broader ICM framework. Moreover, India's carbon pricing efforts have shown a positive impact in deterring the "pollution haven hypothesis" by making the country less attractive for carbon-intensive investments (Raghavendra et al., 2024).

REFERENCES

[1] Jindal, A., Puri, S., & Shrimali, G. (2025). Designing a prospective carbon trading market in India: Key properties, enabling features and linkages. *Applied Energy, 386,* 122071. https://doi.org/10.1016/j.apenergy.2025.122071

[2] Tu, Q., Wang, J., Zuo, L., Yao, Y., & Ji, Q. (2025). Can ESG enhance the efficacy of emissions trading systems on enterprise productivity: Evidence from China.*Research in International Business and Finance, 76,* 102845. https://doi.org/10.1016/j.ribaf.2025.102845

[3] He, Y., & Wang, H. (2025). The impact of carbon emission reduction policies on corporate ESG performance: Evidence from low-carbon city pilots. *Applied Economics,* 1–18. https://doi.org/10.1080/00036846.2025.2484027

[4] Ojha, V., Pohit, S., & Ghosh, J. (2020). Recycling carbon tax for inclusive green growth: A CGE analysis of India. *Energy Policy,144,*111708. https://doi.org/10.1016/j.enpol.2020.111708

[5] Ammal K., E. (2024). Carbon Tax as a Climate Solution: Feasibility and Impacts for India's Sustainable Future.*Journal of Environmental Law and Policy, 04*(03), 189-202. https://doi.org/10.33002/jelp040307

[6] Malik, A., Chaturvedi, V., Sandhani, M., Das, P., Arora, C., Singh, N., Cui, R., Iyer, G., & Zhao, A. (2024). Implications of an emission trading scheme for India's net-zero strategy: A modelling-based assessment. *Environmental Research Letters, 19*(6), 064033.https://doi.org/10.1088/1748 9326/ad64ec

[7] Dwivedi, A. K., & Soni, A. (2022). Drivers and critical paths of carbon emissions in India: a structural path decomposition analysis.*Energy Sources, Part B: Economics, Planning, and Policy*, *17*(1). https://doi.org/10.1080/15567249.2022.2084185

[8] Song, Y., &Hua, X. (2024). The role of carbon taxation in promoting a green economy for sustainability: Optimizing natural resource efficiency. *Resources Policy,91,*104874. https://doi.org/10.1016/j.resourpol.2024.104874

[9] Kharola, D. M., Goyal, M. S. & Saxena, D. S. (2025). Mandatory ESG Reporting in India: Legal Obligations and Management Strategies.*Journal of Marketing & Social Research, 2*(2), 167-177.

[10] Haites, E. (2018). Carbon taxes and greenhouse gas emissions trading systems: What have we learned? *Climate Policy, 18*(8),955–966. https://doi.org/10.1080/14693062.2018.1492897

[11] Nong, D., Simshauser, P., & Binh, D. (2021). Greenhouse gas emissions vs CO_2 emissions: Comparative analysis of a global carbon tax. *Applied Energy, 298,* 117223. https://doi.org/10.1016/j.apenergy.2021.117223

[12] Raghavendra, C., Mahesh, R., Khan, M., Dagar, V., Singh, S., & Alvarado, R. (2024). Impact of carbon emissions, renewable and non-renewable energy consumption on inbound cross-border mergers and acquisitions investment inflow. *Environment, Development and Sustainability,27,*14123–14142. https://doi.org/10.1007/s10668-024-04511-x

[13] Shukla, P., Dhar, S., & Mahapatra, D. (2008). Low-carbon society scenarios for India. *Climate Policy, 8*(sup1), S156–S176. https://doi.org/10.3763/cpol.2007.0498

[14] Han, A., Yu, T., Ke, Y., Liu, C., & Liu, Y. (2024). Study on the effect of carbon trading on the carbon emission intensity of enterprises—A mechanism test based on ESG performance. *Frontiers in Environmental Science, 12,* 1406577. https://doi.org/10.3389/fenvs.2024.1406577

[15] Zhang, Z., Hu, G., Mu, X., & Kong, L. (2022). From low carbon to carbon neutrality: A bibliometric analysis of the status, evolution and development trend. *Journal of Environmental Management, 322,*116087. https://doi.org/10.1016/j.jenvman.2022.116087

[16] Yao, R., Fei, Y., Wang, Z., Yao, X., & Yang, S. (2023). The impact of China's ETS on corporate green governance based on the perspective of corporate ESG performance. *International Journal of Environmental Research and Public Health, 20*(3), 2292. https://doi.org/10.3390/ijerph20032292

[17] Lee, C. L., & Liang, J. (2024). The effect of carbon regulation initiatives on corporate ESG performance in real estate sector: International evidence. *Journal of Cleaner Production,453,*142188. https://doi.org/10.1016/j.jclepro.2024.142188

[18] Yao, R., Fei, Y., Wang, Z., Yao, X., & Yang, S. (2023). The impact of China's ETS on corporate green governance based on the perspective of corporate ESG performance. *International Journal of Environmental Research and Public Health, 20*(3), 2292. https://doi.org/10.3390/ijerph20032292

[19] https://www.pib.gov.in