

Eco-Equity: Balancing Progress And Preservation Through Carbon Tax Innovation In India

*Dr. G. Indira Priyadarsini

Funding Acknowledgment: The author gratefully acknowledges the financial support provided by the Pradhan Mantri Uchchatar Shiksha Abhiyan (PM-USHA), under the Multi-Disciplinary Education and Research Universities (MERU) Grant sanctioned to Sri Padmavati Mahila Visvavidyalayam, Tirupati, for facilitating this research publication

* Assistant Professor, Department of Law, Sri Padmavati Mahila Visvavidyalayam, Tirupati

Abstract

The pressing need to address climate change and its negative effects has prompted researchers to investigate a range of policy options. Carbon taxes is a perfect tool to strike a balance between environmental safeguarding and economic development. The present study explores the intricacies and probable merits of instituting a carbon price policy in India. India being a fast-developing nation with high carbon emissions, enacting a carbon price could be a crucial step in the itinerary triumph for sustainable development. India's economy is epitomized by rapid urbanisation and industrial growth, together contributed to carbon emissions. Nevertheless, vitally two important challenges in front of India are ensuring equitable fiscal advancement and poverty alleviation. A significant factor coordinating economic growth with ecological sustainability could be the implementation of a carbon fee. Carbon tax can act as incentive for companies and individuals in decreasing carbon footprint, thus fostering the development of green technology and energy efficiency. The study is derived from the idea that carbon tax shall have potential to yield significant revenue which may be utilised for the purpose of funding public facilities and eco- friendly infrastructure. This revenue also can be used towards improving the development of renewable energy sources, enhancing public transport, and raising residential and commercial energy efficiency levels. In addition, social justice can be accomplished by a well-devised carbon tax by distributing tax revenues to vulnerable areas and low-income households, who are disproportionately impacted by the shift to a low-carbon economy and climate change. This research aims to evaluate the effects of carbon emissions on the ecology and the economy and also to assess the feasibility and effectiveness of carbon tax. Data on carbon emissions taken from dataset were quantitatively analysed. The inclusive approach of the study firmly establishes policy suggestions and an accurate understanding of the possible effects of a carbon tax can be ensured. Initial findings indicate that India could make significant reductions in its carbon footprint and encourage the adoption of eco-friendly technologies and can raise revenue through the implementation of a carbon tax. However, it is imperative that the issues need careful consideration and ensure stringent enforcement procedures are in place. The researcher recommends establishing a progressive carbon tax system and integrating it into existing legal energy and climate frameworks. In summary the research suggests that implementation of a carbon tax in India is a feasible approach for striking a balance between ecological sustainability and economic development. This initiative could lead to decrease in greenhouse gas emissions, foster innovation, create green jobs, and promote social justice by accurate carbon pricing. Success of policy implementation needs careful planning, transparent execution and wide support of stakeholders. In order to secure a sustainable future for India, this study emphasises the significance of eco-equity and advocates for a carbon price that balances both progress and preservation.

Key Words: Carbon Tax, Emissions, Environmental sustainability, Eco-equity, Climate Policy

INTRODUCTION

The acute need to tackle climate change on a global level has led nations to investigate diverse policy tools, with carbon taxing emerging as a prominent consideration owing to its ability to strike a balance

between safeguarding the environment and growth in the economy. India, a country that is industrializing swiftly but has high carbon emissions needs to explore the establishment of a carbon tax as a vital strategy for attaining equitable growth. The article investigates the idea of a carbon tax in the wider context of India, focusing on the ways it might lower emissions, generate funds, and achieve social justice. In recent decades, India's economic growth has been accompanied by a rise in carbon emissions. There are substantial environmental issues as a result of the country's substantial dependence on fossil fuels for energy and its growing industrial and transportation sectors. It is critical to take strong action to reduce carbon emissions since climate change poses a serious threat to India's water supplies, agriculture, and general economic stability. The basis for the study is the diverse strategy of introducing a carbon tax in India. In order to ensure that market prices accurately reflect the true environmental costs of economic activity, a carbon tax would first internalise the external costs of carbon emissions. This pricing signal can encourage companies and people to use greener practices and technology, which will lower emissions overall. Second, a carbon tax has the potential to raise significant amounts of money that the government can employ to finance social programmes that assist low-income families and vulnerable communities as well as renewable energy and public transit. Evaluating the viability and efficacy of a carbon tax in lowering emissions and advancing sustainable development, the study attempts to determine the effects of carbon emissions on the environment and the Indian economy. For the purpose of creating and executing a successful carbon tax system in India, the researcher examines the effects of carbon pricing on numerous societal and economic domains. The methodology adopted for this study is a descriptive and analytical methods approach. Quantitative data on carbon emissions from dataset¹ are analysed to understand the current state of carbon emissions and the potential need of a carbon tax. Additionally, stakeholder consultations with policymakers, industry leaders, environmental experts, and representatives of vulnerable communities are conducted to gather diverse perspectives on the feasibility and implications of a carbon tax.

Table 1- Carbon emissions in India²

| States | per capita CO ₂ (kg per person) | per capita CO (kg per person) | per capita CH ₄ (kg per person) | Per thousand infant mortality rates |
|--------------------|---|----------------------------------|---|--|
| Andhra Pradesh | 974.17 | 27.18 | 16.97 | 25 |
| Arunachal | 405.9 | 17.43 | 25.82 | 29 |
| Assam | 340.91 | 16.63 | 21.29 | 40 |
| Bihar | 179.01 | 8.83 | 9.59 | 29 |
| Chattisgarh | 1963.88 | 17.56 | 22.37 | 40 |
| Goa | 2662.51 | 23.12 | 7.62 | 8 |
| Gujarat | 1310.58 | 24.01 | 12.26 | 25 |
| Haryana | 1381.86 | 17.9 | 21.57 | 27 |
| Himachal Pradesh | 784.16 | 16.98 | 18.28 | 19 |
| Jammu & Kashmir | 509.03 | 15.59 | 14.42 | 20 |
| Jharkhand | 1403.43 | 15.02 | 15.39 | 27 |

¹ <https://www.kaggle.com/code/sarahlenet1/carbon-emissions-in-india>

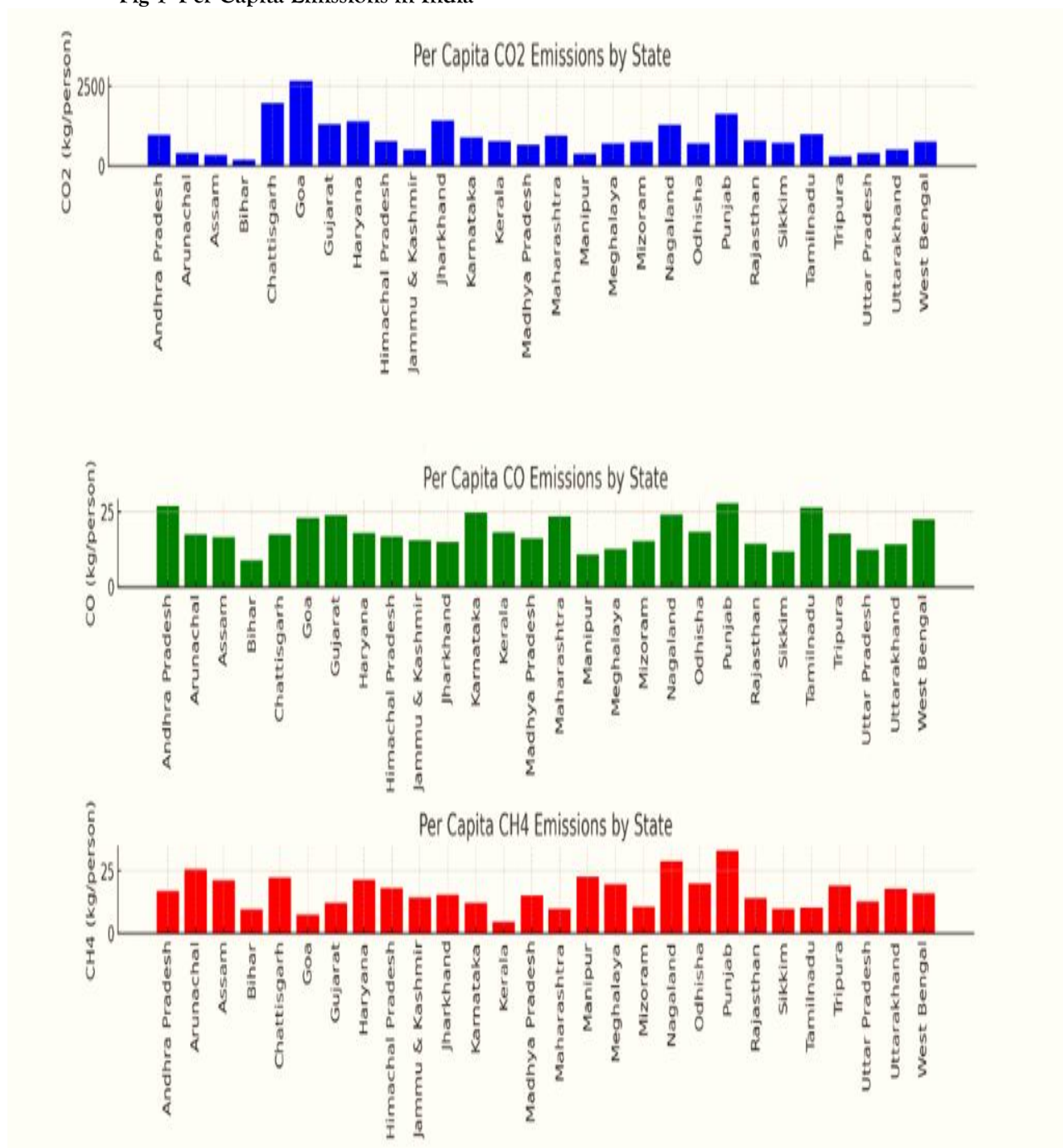
² Supra note 1

| | | | | |
|----------------|---------|-------|-------|----|
| Karnataka | 888.86 | 24.93 | 12.2 | 21 |
| Kerala | 780.12 | 18.29 | 4.52 | 6 |
| Madhya Pradesh | 656.37 | 16.14 | 15.15 | 46 |
| Maharashtra | 936.7 | 23.58 | 9.8 | 17 |
| Manipur | 379.2 | 10.8 | 22.63 | 10 |
| Meghalaya | 691.53 | 12.65 | 19.8 | 33 |
| Mizoram | 754.71 | 15.4 | 10.72 | 3 |
| Nagaland | 1275.27 | 24.13 | 29.08 | 3 |
| Odisha | 700.13 | 18.4 | 19.88 | 38 |
| Punjab | 1618.08 | 27.9 | 33.38 | 19 |
| Rajasthan | 793.69 | 14.33 | 14.18 | 35 |
| Sikkim | 711.39 | 11.68 | 10.04 | 5 |
| Tamilnadu | 985.7 | 26.6 | 10.4 | 15 |
| Tripura | 295.64 | 17.76 | 19.23 | 21 |
| Uttar Pradesh | 404.26 | 12.4 | 12.87 | 41 |
| Uttarakhand | 493.01 | 14.28 | 17.93 | 27 |
| West Bengal | 763.13 | 22.69 | 15.99 | 20 |

Table 1 presents the intricate relationship between health outcomes and environmental pollution. Even while industrialised states have larger emissions, their rates of infant mortality differ greatly, suggesting that strong healthcare systems might lessen some of the harmful effects of pollution. On the other hand, states with fewer emissions yet have high infant mortality rates, which suggests that there are problems with the socioeconomic and healthcare infrastructure. These findings highlight the necessity of region-specific, well-balanced strategies that target both environmental sustainability and advances in public health. Four major variables are included in the data, which spans different Indian states: the infant death rate per thousand, per capita CH₄ emissions, per capita CO₂ emissions, and per capita CO emissions. In certain Indian states where per capita emissions of CO₂, CO, and CH₄ are high, there is a correlation between environmental pollution and infant mortality, but this correlation is not always present. For instance, Goa has the lowest rates of infant mortality despite having the greatest CO₂ emissions. Conversely, states with higher infant mortality rates than the largest polluters, such as Madhya Pradesh and Uttar Pradesh, have significantly lower emissions. Regional differences can be seen in the high emissions of industrialised and highly urbanised states like Goa, Punjab, and Tamil Nadu, which are a result of increased industrial activities and energy consumption, and the low emissions of less industrialised states like Bihar, Manipur, and Tripura, which are associated with lower levels of industrial activity. With reference to health and emissions The lowest infant mortality rates are found in states with very low CH₄ emissions (4.52 kg/person) and relatively low CO₂ and CO emissions, such as Kerala. This suggests that there may be a link between improved air quality and lower infant mortality. However, states with relatively high CH₄ emissions, like Nagaland and Punjab, also have significantly low infant mortality rates, indicating the possibility of other factors, such as inadequate health infrastructure. Higher infant mortality rates in areas such as Madhya Pradesh, Uttar Pradesh, and Assam indicate the contrary, in addition to environmental pollution levels, socioeconomic variables, healthcare facilities, and public

health policies have a substantial impact on health outcomes. A study of the per capita emissions of carbon dioxide (CO₂), carbon monoxide (CO), and methane (CH₄) in different Indian states is included in the data. Understanding the regional intensity and distribution of these emissions is made easier by the data's visual depiction. In contrast to states like Punjab and Nagaland with high CH₄ emissions, which are primarily

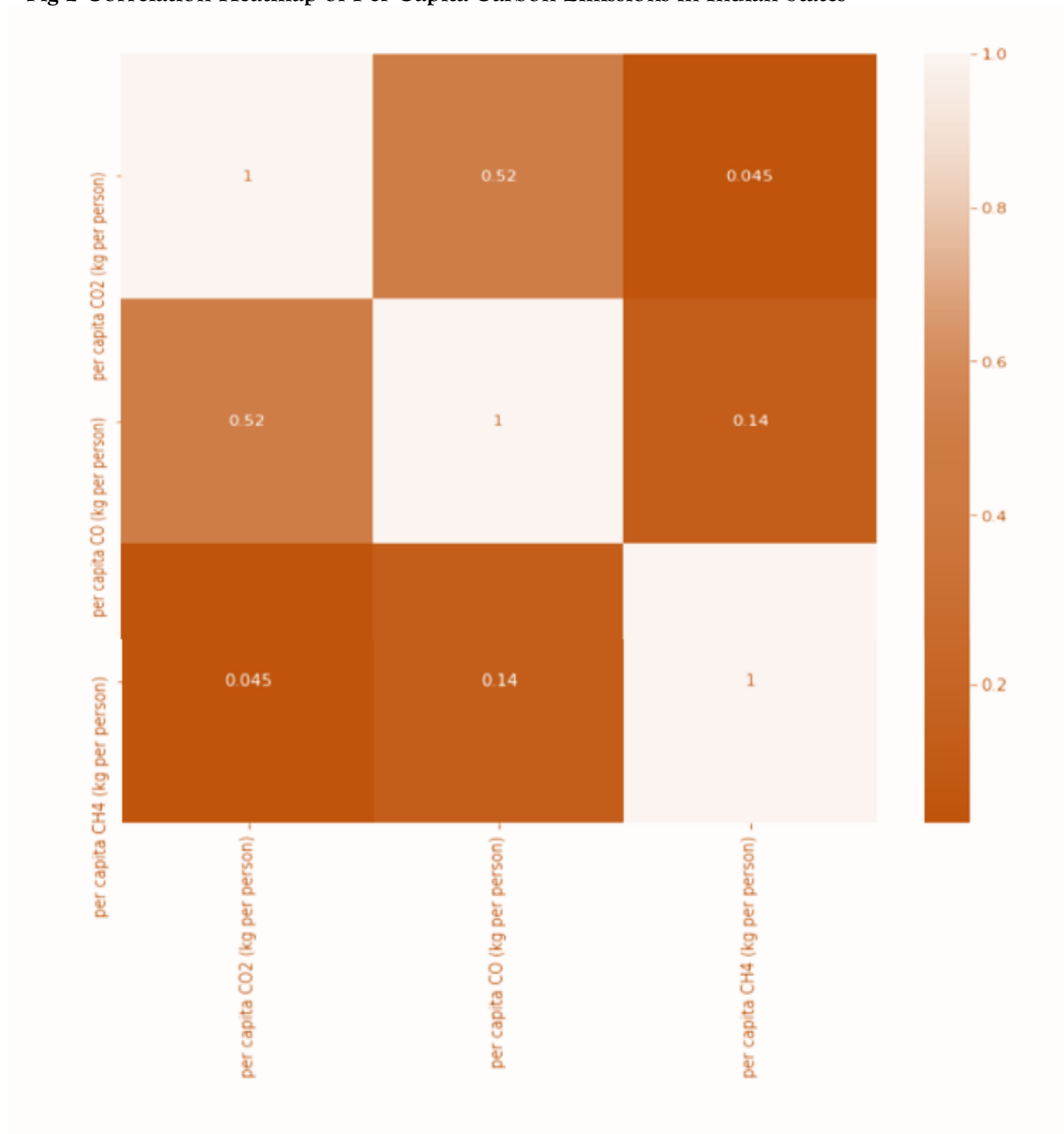
Fig 1- Per Capita Emissions in India



agricultural and where methane emissions are caused by practices like rice paddies and livestock rearing, states with high CO₂ emissions, like Goa and Chhattisgarh, are typically more industrialised, reflecting higher fossil fuel consumption. States with more industrial activity tend to have higher CO₂ emissions as

well as higher CO levels; this is a correlation. States that primarily engage in agriculture, on the other hand, emit more CH₄. States differ greatly from one another, suggesting that environmental regulations and economic activity are not the same throughout the nation. The rural lifestyle is highlighted by the northeastern states' generally lower CO₂ and CO emissions but greater CH₄ emissions. The examination of per capita emissions in the various Indian states demonstrates a range of environmental legacies, significantly shaped by the main economic pursuits in each area. While the heightened CH₄ emissions in agrarian states like Punjab emphasise the environmental impact of agricultural methods, the high levels of CO₂ emissions in industrialised states like Goa and Chhattisgarh point towards large fossil fuel consumption.

Fig 2 Correlation Heatmap of Per Capita Carbon Emissions in Indian States



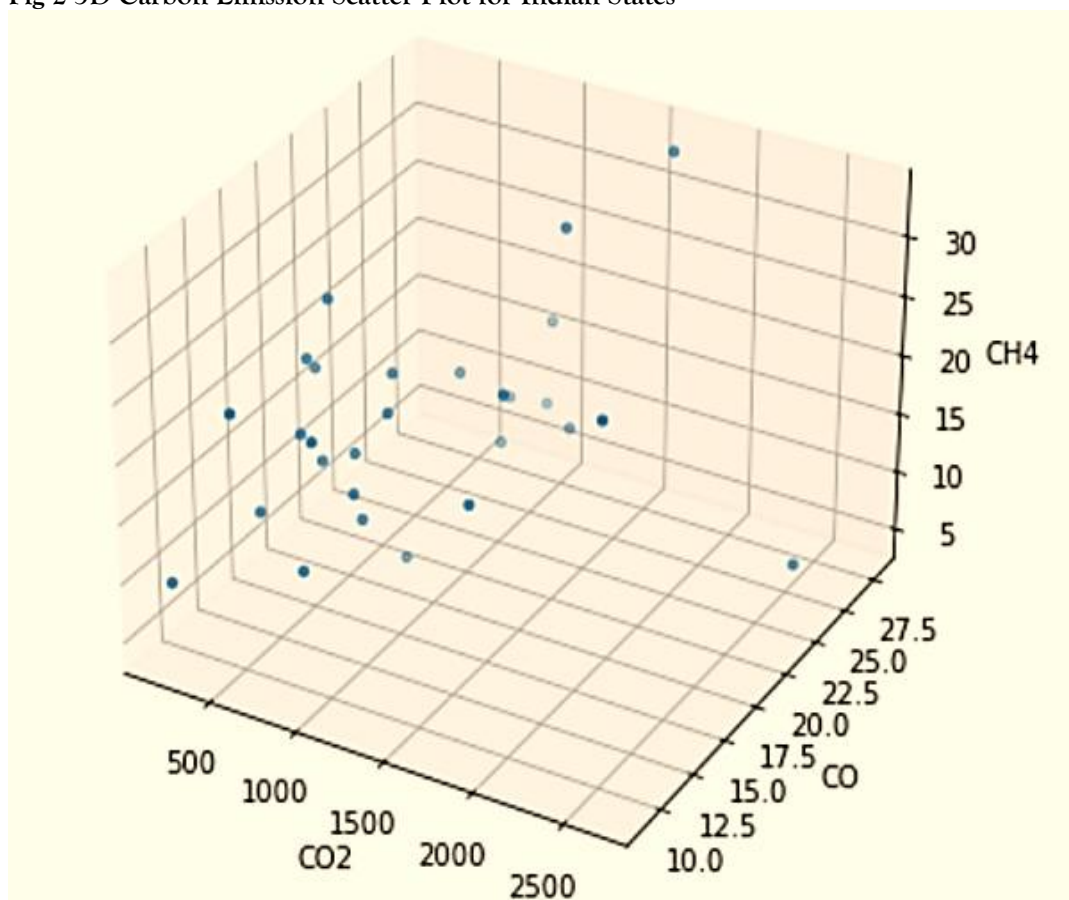
The association between per capita emissions of CO₂, CO, and CH₄ in different Indian states is depicted in the heatmap that is provided. The heatmap's values range from -1 to 1, with

- 1 denoting a perfect positive association.

- perfect negative correlation is denoted by a -1.
- value of 0 denotes no correlation.

The correlation shows that states with high levels of industrialization and fossil fuel use also have greater levels of CO₂ and CO emissions. The unique characteristics of their sources are shown by the low correlations between CO₂ and CH₄ and between CO and CH₄. This implies that sector-specific mitigation solutions are necessary. For instance, focusing on industrial emissions to reduce CO₂ and CO and agricultural techniques to reduce CH₄. Effectively illustrating the connections between various forms of carbon emissions in Indian states is the heatmap. The reasonable relationship between CO₂ and CO emissions points to an interconnected cause that can be the focus of coordinated mitigation actions. It is clear from the poor correlations involving CH₄ that source-specific and focused initiatives are required to reduce methane emissions.

Fig 2 3D Carbon Emission Scatter Plot for Indian States



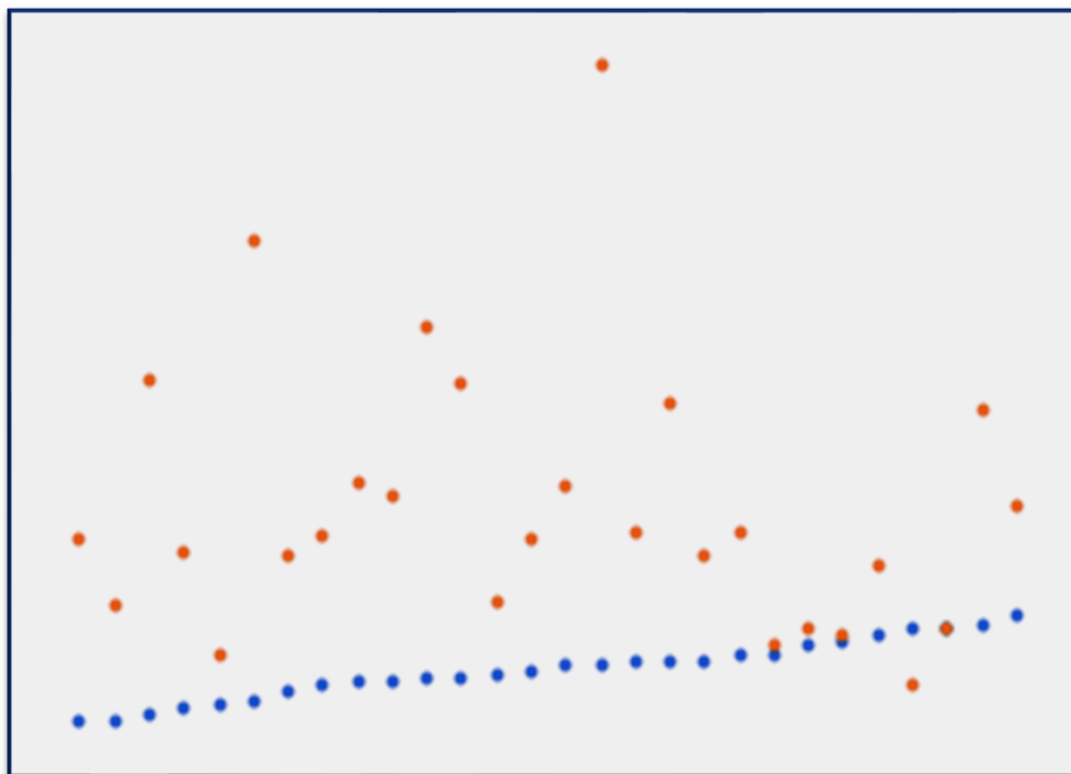
The above three-dimensional scatter map illustrates the per-person emissions of CO₂, CO, and CH₄ in different Indian states. Plotted along three axes, each point in the map reflects the emissions data for a specific state:

- X-axis (CO₂): Emissions of CO₂ per person (kg per person)
- Y-axis (CO): CO emissions per person (kg/person)
- Z-axis (CH₄): Emissions of CH₄ per person (kg/person)

High CO₂ emitting states typically have high CO emissions as well. The grouping of points along the higher end of the CO₂ and CO axes is indicative of this. High CH₄ emissions, however, do not consistently correlate with high CO₂ or CO emissions, indicating that CH₄ emissions come from distinct

sources or from separate contributing activities. There is a considerable difference in CO₂ emissions between the states; Goa and Gujarat have extremely high emissions, whereas Bihar and Uttar Pradesh have relatively low emissions. Differences in industrial operations, energy generation, and consumption patterns are probably the cause of this discrepancy. There is a moderate relationship between CO₂ and CO emissions. Higher CO emissions are also found in states like Gujarat and Haryana that have high CO₂ emissions. This association shows that a considerable amount of CO is also released by industrial operations that contribute to CO₂ emissions. Emissions of CH₄ are scattered more randomly. States with large CH₄ emissions, such as Punjab and Nagaland, are probably because of their substantial agricultural practices, which include raising animals and creating rice paddies, both of which are known methane generators. The lack of association shown between CH₄ and other gases emphasises the necessity of industry-specific mitigation solutions, such as waste management and agriculture. The necessity for diversified and customised solutions to address the many sources of emissions is highlighted by the 3D scatter plot, which also emphasises the heterogeneous nature of carbon emissions across Indian states. India can successfully lower its carbon footprint and make progress towards its environmental and climatic goals by prioritising integrated and sector-specific measures.

Fig 3- Scatter Plot of the Carbon emissions and Infant Mortality in India



The y-axis shows the rates of infant mortality and methane emissions, while the x-axis shows the states. A point's x-coordinate is its state, and its y-coordinate is either the methane emissions per capita or the infant mortality rate (IMR). Higher infant mortality rates typically signify worse socioeconomic conditions or healthcare systems in a state. Data points on the y-axis will be positioned higher for states with higher IMRs. A state's contribution to greenhouse gas emissions is reflected in its methane emissions per capita. Data points in states with greater emissions will be arranged higher on the y-axis. The dispersion and distribution of data points can reveal state-by-state variations in methane emissions and infant death rates. A distribution that is dispersed or concentrated may indicate regional differences or shared patterns amongst states. Seeing the scatter plot's overall trend, if any, can reveal important information. States having distinctive characteristics may be shown by outlying data points. For instance, a state's healthcare

system or other potential contributing factors may need more research if it has unusually high newborn mortality rates despite low methane emissions. Regional differences in methane emissions and infant death rates may be shown by clusters of data points. Identifying areas that have consistently high or low values can aid policymakers in more efficiently targeting initiatives. Policy choices like sustainability programmes, environmental laws, and healthcare infrastructure can all be influenced by the scatter plot. Targeted actions may be necessary in states with high rates of infant mortality and methane emissions in order to enhance healthcare access and lessen environmental impact. A useful visual depiction of the correlation between state-by-state methane emissions per capita and newborn mortality rates is provided by the scatter plot. Therefore, stakeholders can effectively address public health and environmental challenges by making informed decisions based on pattern analysis, outlier identification, and contextual considerations. India can significantly reduce its overall emissions and achieve sustainable development goals by analysing the carbon emissions data from datasets and tackling the particular environmental concerns of each state. Simultaneous reduction of both of these emissions may be possible with policies designed to encourage cleaner technology and lessen the use of fossil fuels. Therefore, an immediate action plan is required in light of the quantitative analysis of the information pertaining to carbon emissions, which indicates an increase in unsafe levels of carbon emissions. A carbon tax will be implemented as a remedy. In several nations, the carbon tax has been implemented.

International Carbon Tax Policies

India has ratified several international accords, including the Paris Agreement and the United Nations Framework Convention on Climate Change (UNFCCC), which bind nations to cut back on greenhouse gas emissions and improve climate resilience.³ Although carbon taxes are not expressly required by these agreements, they do offer a framework for national policies to be implemented in order to meet climate targets, including methods for pricing carbon.⁴ In order to create a carbon tax in India, it is crucial to look at other nations' experiences with similar legislation. Carbon taxes have been effectively implemented by a number of nations to lower emissions and advance sustainable development. A comparison of the carbon tax laws in Sweden, Canada, Australia, and Norway is presented in this part, along with an emphasis on significant conclusions and effective techniques.

Norway: Since the early 1990s, Norway has imposed a carbon tax on emissions originating from the petroleum and industrial sectors. With one of the highest tax rates in the world, it has encouraged investments in clean technologies and the reduction of emissions. Numerous environmental and climate-related projects, including as carbon capture and storage programmes, are funded in part by the carbon tax revenue.

Sweden: In 1991, Sweden enacted carbon taxes. The carbon content of fossil fuels determines the tax rate, which has risen over time. Other climate initiatives in Sweden, like energy efficiency programmes and subsidies for renewable energy sources, are in addition to the country's carbon tax. The strategy has been effective in lowering emissions without slowing down economic expansion.

Australia: In 2012, Australia introduced a carbon pricing mechanism. Prior to switching to a cap-and-trade system, the country placed a fixed price on carbon emissions. However, the programme was abandoned in 2014 as a result of political opposition. The experience of Australia emphasises how crucial popular support and government agreement are to the continuation of carbon price regimes.

Canada: A federal carbon tax is imposed on provinces without their own pricing systems as part of Canada's nationwide carbon pricing system, which was unveiled in 2019. Fossil fuel importers and producers are subject to a tax, the proceeds of which are either invested in climate mitigation initiatives

³ <https://unfccc.int/about-us/regional-collaboration-centres/the-ciaca/about-carbon-pricing#Can-countries-use-carbon-pricing-for-achieving-the>

⁴ <https://www.oecd.org/tax/tax-policy/tax-policy-and-climate-change-imf-oecd-g20-report-september-2021.pdf>

or given back to people in the form of refunds. Although there has been political pushback to the strategy, it has also led to large investments in clean energy and pollution reductions.

Environmental, Economic and Social Impact of Carbon Tax in India

Environmental Impact of Carbon Tax in India

Significant environmental advantages could result from the implementation of a carbon tax in India. A carbon tax would discourage firms and consumers from increasing their carbon footprints by increasing the cost of carbon emissions. Emission reductions, better air quality, and advantages to public health are all potential environmental effects of a carbon price in India. A substantial reduction in greenhouse gas emissions would result from a carbon tax pushing businesses to embrace greener technology and increase energy efficiency. It would especially affect industries that are significant producers of carbon emissions, such as manufacturing, transportation, and electricity generation. Significant improvements in air quality could be achieved by reducing reliance on fossil fuels and encouraging cleaner energy sources.⁵ The carbon tax innovative concept is very significant as air pollution is a serious threat to health in India. Healthcare costs would go down and health outcomes would be better with improved air quality. Better air quality is just one of the health advantages of a carbon tax. Public health would improve and productivity would rise as a result of decreased emissions of particulate matter and other pollutants, which would also reduce the prevalence of cardiovascular and respiratory illnesses.

Economic Implications of Carbon Tax in India

India's economy would be significantly impacted if a carbon tax were to be implemented. A carbon tax has an influence on the economy as a whole as well as on certain industries and consumers. It also looks at how money collected from the carbon price might be used to promote economic expansion.⁶ Carbon-intensive industries would incur higher expenses as a result of a carbon tax, which would reduce their ability to compete. But it would also encourage industry innovation and investment in greener technologies, which would pay off in the long run in terms of sustainability and efficiency. A carbon tax might result in higher pricing for products and services, which would be passed on to consumers. To ensure that the tax does not disproportionately affect the poor, the tax's revenue could be utilised to offset these expenses for low-income households in the form of refunds or subsidies. A substantial amount of money may be raised by a carbon tax and used to fund social programmes, renewable energy initiatives, and environmentally friendly infrastructure. This would encourage not only the reduction of emissions but also economic growth and employment.⁷ The effects of a carbon tax on economic competitiveness, especially in international markets, may be offset in the long run by the advantages of a more sustainable and clean economy. Adjustments to border taxes may also be necessary to shield home businesses from unfair competition from nations lacking comparable carbon pricing schemes.

Social Equity Considerations

One of the main issues with carbon taxes is how it might impact social justice. The design of a carbon tax to guarantee social equity, meet the needs of disadvantaged groups, and facilitate a fair shift to a low-carbon economy is examined in this section. Since they can disproportionately affect low-income households that spend a larger percentage of their income on energy and transportation, carbon taxes are

⁵ Carattini S, Carvalho M, Fankhauser S. Overcoming public resistance to carbon taxes. *Wiley Interdiscip Rev Clim Change*. 2018 Sep-Oct;9(5):e531. doi: 10.1002/wcc.531. Epub 2018 Jun 6. PMID: 31031823; PMCID: PMC6473478.

⁶ Kaiwen Chang, Lanlan Liu, Dan Luo, Kai Xing, The impact of green technology innovation on carbon dioxide emissions: The role of local environmental regulations, *Journal of Environmental Management*, Volume 340, 2023, 117990, ISSN 0301-4797, <https://doi.org/10.1016/j.jenvman.2023.117990>. (<https://www.sciencedirect.com/science/article/pii/S0301479723007788>)

⁷ Macaluso N, Tuladhar S, Woollacott J, McFarland JR, Creason J, Cole J. The Impact of Carbon Taxation And Revenue Recycling on U.S. Industries. *Clim Chang Econ (Singap)*. 2018;9(1):10.1142/S2010007818400055. Doi: 10.1142/S2010007818400055. PMID: 32123558; PMCID: PMC7050298.

frequently viewed as regressive.⁸ The tax design needs to take steps to safeguard vulnerable groups in order to address this. Revenue recycling, in which the proceeds from the carbon tax are transferred to households, especially those with lower incomes, is one method of ensuring social fairness. Direct financial transfers, refunds, or targeted subsidies for necessities can be used to accomplish this. Workers in industries that produce a lot of carbon dioxide may suffer as a result of the shift to a low-carbon economy. To ensure that these workers may find new employment possibilities in developing green sectors, it is imperative to support their retraining and reskilling.⁹ Involving stakeholders and impacted communities in the planning and execution of the carbon tax is another way to ensure social fairness. By addressing concerns, this participative approach can increase public support for the initiative.

Carbon Tax Supporting Provisions in India

Environmental and fiscal laws are the main regulators of carbon taxation, and they have the authority to impose taxes on carbon emissions.

Constitution of India: The legal foundation for sustainable development and environmental preservation is provided by the Constitution. The state and its inhabitants have a fundamental obligation to safeguard and develop the environment, as stipulated in Articles 48-A and 51-A(g).

Environment (Protection) Act, 1986: The central government is empowered under this legislation to take action to safeguard and enhance the environment. In order to reduce pollution and advance sustainable development, it offers the legal justification for enacting environmental levies, such as carbon taxes.

Finance Act: Every year, the Finance Act is modified to implement new tax legislation, such as environmental taxes. It offers an opportunity for the legal authorities to impose, collect, and spend the money raised by the carbon tax.

Coal Mines (Conservation and Development) Act, 1974: This law gives the government the authority to impose a cess (tax) on the production and sale of coal as well as to regulate coal mining activities in India. A tax on carbon will also be implemented in response to the environmental consequences of burning coal.

Goods and Services Tax (GST) Act: Goods and services, particularly those with inputs that are high in carbon, are priced in part because of the GST Act. The GST system may result in higher tax rates for carbon-intensive industries, which would obliquely represent the costs of carbon emissions to the environment. As an explicit carbon tax provision, if strictly enforced will surely mitigate climate change. In line with India's commitment to environmental stewardship and global climate action, these laws offer the legal foundation for enacting and managing carbon taxes at both the national and state levels.

Supreme Court Cases Relating to Carbon Tax

In major decisions pertaining to pollution control, climate change mitigation, and environmental protection, the Supreme Court created principles like polluters pay and precautionary principle, which indirectly contribute to the enforcement of carbon taxes. In span motels case the motel had used earthmovers and bulldozers to turn the course of the river Beas, create a new channel and divert the river's flow. The course of the river was diverted to save the motel from future floods. The case was finally decided by this court by its judgment dated December 13, 1996. The case had been placed before the court again only for determination of the quantum of pollution fine. The Court analysed the "polluter pays principle"

⁸ Edmond Noubissi Domguia, Taxing for a better life? The impact of environmental taxes on income distribution and inclusive education, *Heliyon*, Volume 9, Issue 11, 2023, e21443, ISSN 2405-8440, <https://doi.org/10.1016/j.heliyon.2023.e21443>.
(<https://www.sciencedirect.com/science/article/pii/S2405844023086516>)

⁹ Li B, Geng Y, Xia X, Qiao D. The Impact of Government Subsidies on the Low-Carbon Supply Chain Based on Carbon Emission Reduction Level. *Int J Environ Res Public Health*. 2021 Jul 16;18(14):7603. doi: 10.3390/ijerph18147603. PMID: 34300054; PMCID: PMC8306233.

including its history, international development and implementation in the national legal system. It emphasized that the polluter pays principle was widely accepted as a means of paying for the cost of pollution and control.¹⁰ In *Taj Trapezium case*¹¹ the Supreme Court recognized the environmental threat to the Taj Mahal's exotic beauty and cultural significance and finally delivered the Judgment on 30th December 1996 by a Division Bench. The main focus of the Judgment is to maintain the balance of protecting the interest of industries and its workers along with the conservation of ecology and environment of Taj Trapezium Zone by applying the principle of sustainable development, Precautionary Principle and Polluter Pays Principle. In *Vellore Citizens Forum case*, according to the preliminary survey nearly 35,000 hectares of agricultural land in the Tanneries Belt, had become either partially or totally unfit for cultivation. There was evidence that the tanneries and other industries had been exhorted for ten years to control pollution but to no avail. The court ordered the central Government to constitute an authority and confer on it all powers necessary to deal with the situation. The authority was to implement the precautionary principle and the "polluter pays" principle. It would also identify the families who had suffered from the pollution and access compensation and the amount to be paid by the polluters to reverse the ecological damage. In *Indian Council for Enviro-Legal Action case*¹² the apex court observed that Enforcement agencies are under an obligation to strictly enforce environmental laws. The 'polluter pays' principle held to be part of the environmental law requires that a polluter must bear the remedial costs along with the amount payable as compensation to the victims of pollution. Stringent action ought to be taken against contumacious defaulters and persons who carry on industrial or development activity for profit without regard to the object of the law. In *M.K. Ranjitsinh case*¹³ a three-judge bench of the Supreme Court, led by Chief Justice, D.Y. Chandrachud, formulated a new constitutional right to be free from the adverse effects of climate change by drawing upon Article 21 (the fundamental right to life and personal liberty) and Article 14 (the fundamental right to equality) of the Indian Constitution. M.K. Ranjitsinh sought directions for the preservation of an endangered bird species, the Great Indian Bustard (GIB). The judgement ultimately is deeply anthropocentric and insensitive to the court's own existing jurisprudence on ecocentric law and the legal recognition of the more-than-human in India. the court also appears to be entirely oblivious to the very harmful ecological and human rights impacts of large-scale renewable (solar) energy projects. Finally, the decision also reflects an excessive deference to cost-efficiency calculations and governmental assertions of technical possibility that many who recognise the urgency of the climate and biodiversity loss

Thus, Supreme Court though not specifically focused on carbon tax in number of environmental and climate change litigations, the broader judicial interventions in environmental matters contributed towards aiming at reducing carbon emissions. The above cases underscore the judicial support for imposition of carbon tax though not directly. Future legal developments and judicial interpretations related to carbon taxation is essential to mitigate climate change.

Recommendations of the Study

- Based on the analysis, the researcher proposes for designing and implementing an effective and equitable carbon tax in India.
- a progressive carbon tax approach with equitable rates based on the carbon concentration of fuels and economic capacity of industries.
- Device to reutilize carbon tax revenues so as to.
- Carbon tax revenues shall be used to support susceptible people, fund investments in renewable and energy efficient infrastructure.

¹⁰ *M.C. Mehta vs Kamal Nath & Ors* (1997) 1 SCC 388

¹¹ *Vellore Citizens Welfare Forum vs Union of India & Ors* 1996 (5) SCC 647

¹² *Indian Council for Enviro-Legal Action v. Union of India*, (1996) 5 SCC 281.

¹³ *M.K. Ranjitsinh vs Union of India* 2021 SCC online SC 326

CONCLUSION

India has a great chance to strike a balance between environmental preservation and economic growth with the implementation of a carbon tax. The variety of strategies, difficulties, and results related to carbon pricing are highlighted by the comparative examination of carbon tax laws across national borders. Even if every nation has a different setting, there are general lessons discovered and best practices that can guide India's development and introduction of a carbon tax. India may use carbon pricing as a potent weapon for accomplishing its climate goals and advancing sustainable development by learning from other countries' experiences and adjusting policy actions to the specifics of the region. India can encourage cleaner technologies, lower greenhouse gas emissions, and raise money for sustainable development projects by effectively taxing carbon emissions, according to a mathematical study of a Kaggle dataset on carbon emissions. On the other hand, cautious planning, open execution, and widespread stakeholder participation are necessary for a carbon price to be successful. Protecting low-income households and facilitating a fair transition for employees in carbon-intensive businesses are crucial steps in ensuring social fairness. With the ability to set the standard for global leadership in the battle against climate change, India is at a turning point in its development trajectory. India may improve its climate resilience, promote sustainable economic growth, and support international efforts to reduce climate change by implementing a well-thought-out carbon price. Eco-equity can only be achieved by striking a balance between development and preservation, so that ecological sustainability is not sacrificed for economic growth. India may attain this balance and ensure a sustainable future for future generations by implementing policies with consideration and dedication. The implementation of a carbon tax regime in India has the potential to promote innovation, harmonise economic incentives with environmental goals, and quicken the shift to a low-carbon economy. The tax system can help India meet its climate targets under the Paris Agreement by encouraging investments in clean energy infrastructure and improving energy efficiency by internalising the price of carbon pollution. This study emphasises the significance of eco-equity and argues in favour of an innovative carbon price that guarantees balanced advancement and preservation, protecting India's future sustainability.