INTERNATIONAL AND COMPARATIVE LAW RESEARCH CENTER

Climate Policy Brief: India (Bharat)[1]

Abbreviations

BEE — the Bureau of Energy Efficiency

CEA — the Central Electricity Authority

CCC — Carbon Credit Certificate

CCTS — Carbon Credit Trading Scheme (the scheme for reduction of carbon emissions)

Commission — the Central Electricity Regulatory Commission

Committee — National Steering Committee for Indian Carbon Market

COP26 — the 26th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change

ESCerts — Energy Saving Certificates

GDP — gross domestic product

GHG — greenhouse gas

LT-LEDS — Long-Term Low Emission Development Strategy, or Long-Term Low-Carbon Development Strategy

NAPCC — National Action Plan on Climate Change

NDC — Nationally Determined Contribution

PAT — Perform, Achieve and Trade scheme

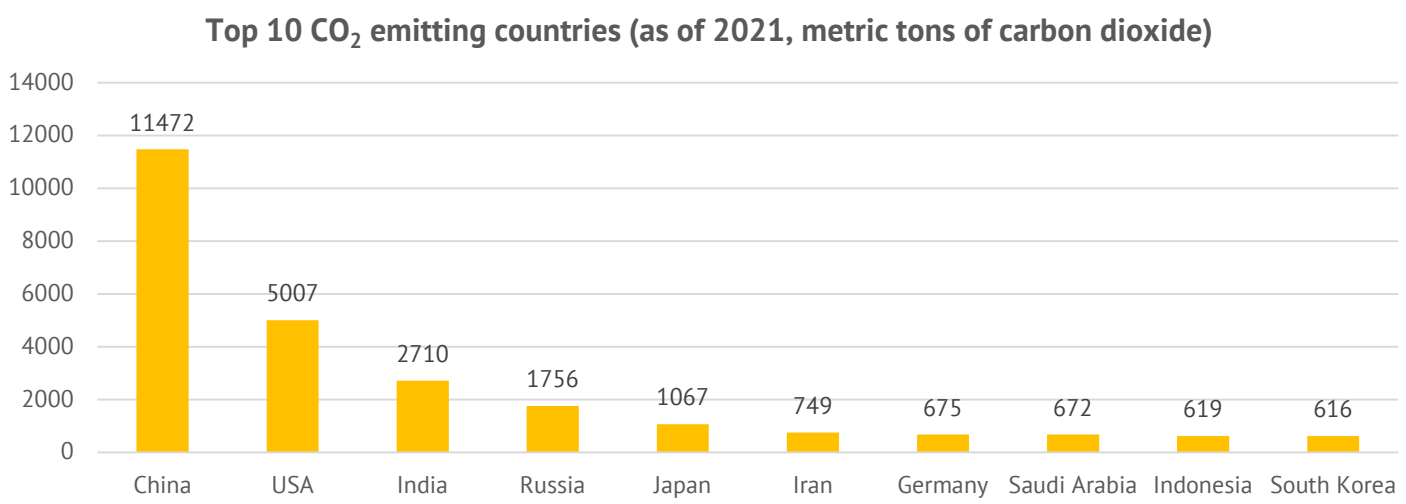
REC — renewable energy certificate

UNFCCC — the United Nations Framework Convention on Climate Change

[1] This dataset is intended solely for general informational purposes. Its content is collected from open sources and shall not be considered exhaustive.

Level	Block	Description
1	**Overview**	
1.1	Key facts	With the world's second-largest population of 1.4 billion[2] and the fifth largest economy with an annual GDP of $3.1 trillion in 2022,[3] India is also ranked third globally in terms of carbon emissions. In 2021, the country emitted 2.7 billion metric tons of CO_2 or 7% of the global total.[4] India ratified the UNFCCC in 1993, the Kyoto Protocol in 2002,[5] and the Paris Agreement in 2016. In 2021, Prime Minister Narendra Modi announced that India would achieve the target of net zero emissions by 2070.[6] The main document establishing the national regulatory framework is the NAPCC[7] that outlines a national strategy to adapt to climate change and enhance environmental sustainability. The CEA estimates[8] that renewable energy will be around 55% of the total installed capacity by 2026-2027 and 66% by 2031-2032, contributing about 35% and 44% to the total energy mix respectively. In addition to solar and wind, hydropower, pumped storage plants, small hydro and biomass are part of the renewable energy sources considered in this estimate.

[2] World Population Review. India Population 2022. URL: https://worldpopulationreview.com/countries/india-population (accessed: October 5, 2023).
[3] IMF. World Economic Outlook Database. URL: https://www.imf.org/en/Publications/WEO/weo-database/2022/October/download-entire-database (accessed: October 5, 2023).
[4] Global Carbon Atlas. CO_2 Emissions. URL: http://www.globalcarbonatlas.org/en/CO2-emissions (accessed: October 5, 2023).
[5] Environment & Climate Change Laws and Regulations India 2023. Environment & Climate Change Laws and Regulations. URL: https://iclg.com/practice-areas/environment-and-climate-change-laws-and-regulations/india (accessed: October 5, 2023).
[6] India can achieve its goal of being carbon neutral much before its target of 2070. Energy World from the Economic Times. URL: https://energy.economictimes.indiatimes.com/news/renewable/india-can-achieve-its-goal-of-being-carbon-neutral-much-before-its-target-of-2070-imf-md/98152360?redirect=1 (accessed: October 5, 2023).
[7] National Action Plan on Climate Change. Ministry of Environment, Forest and Climate Change. December 01, 2021. URL: https://static.pib.gov.in/WriteReadData/specificdocs/documents/2021/dec/doc202112101.pdf (accessed: October 5, 2023).
[8] National Electricity Plan. Central Electricity Authority notifies the National Electricity Plan for the period of 2022-32. Ministry of Power. URL: https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1928750 (accessed: October 5, 2023).

		Coal will contribute about 59% to the total energy mix by 2026-2027.[9] The Energy Conservation (Amendment) Bill, 2023 includes provisions for the establishment of a carbon market[10] in the country, but no carbon pricing schemes are currently operational.[11] This document includes provisions for the establishment of a carbon market through the introduction of the CCTS by the Central Government.
1.2	Annual emissions, world rank, with and without LULUCF	In 2021, India was the third largest greenhouse gas emitter behind China and the US.[12]  *Source: Global Carbon Atlas. URL: https://globalcarbonatlas.org/emissions/carbon-emissions/ (accessed: October 5, 2023).*

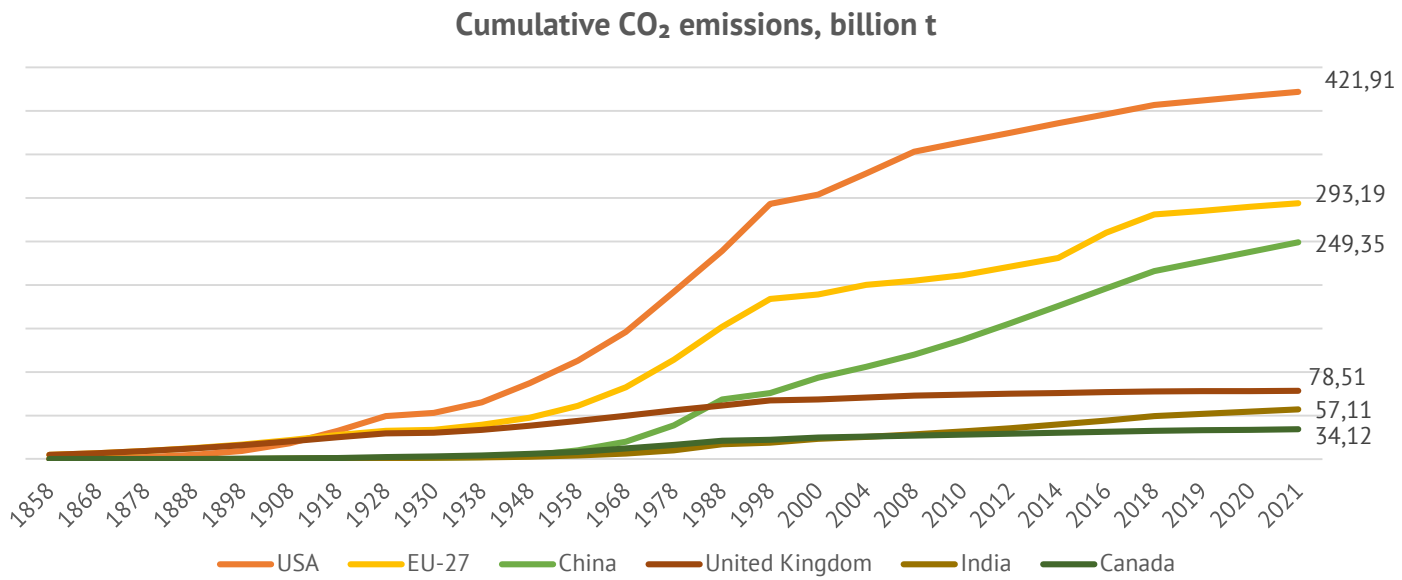
[9] Pranav Sinha. India's renewable capacity estimated to increase, while reliance on coal to continue, indicates National Electricity Plan. URL: https://india.mongabay.com/2023/06/national-electricity-policy-2023/ (accessed: October 5, 2023).

[10] The Climate Action Tracker. India. URL: https://climateactiontracker.org/countries/india/policies-action/ (accessed: October 5, 2023).

[11] Rituraj Baruah. Voluntary carbon trade to start in 2023. Livemint. URL: https://www.livemint.com/news/india/voluntary-carbon-trades-to-start-in-2023-11674498997601.html (accessed: October 5, 2023).

[12] The Carbon Brief Profile: Russia. URL: https://www.carbonbrief.org/the-carbon-brief-profile-russia/ (accessed: October 5, 2023).

In 2021, India was the fifth highest carbon emitter by historically accumulated emissions, responsible for some 3.29% of global cumulative CO_2[13] (India — 57.11 billion t, the world — 1.74 trillion t).



Source: Our World in Data. URL: https://ourworldindata.org/co2/country/india (accessed: October 5, 2023).

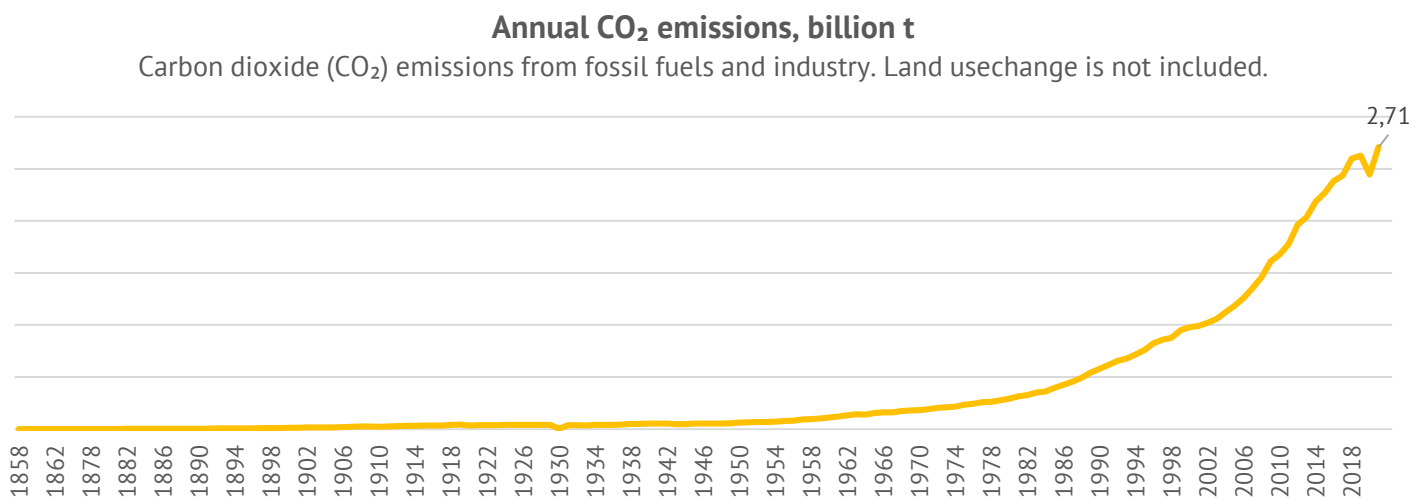
Annual share of global CO_2 emissions — 7.3%.[14]

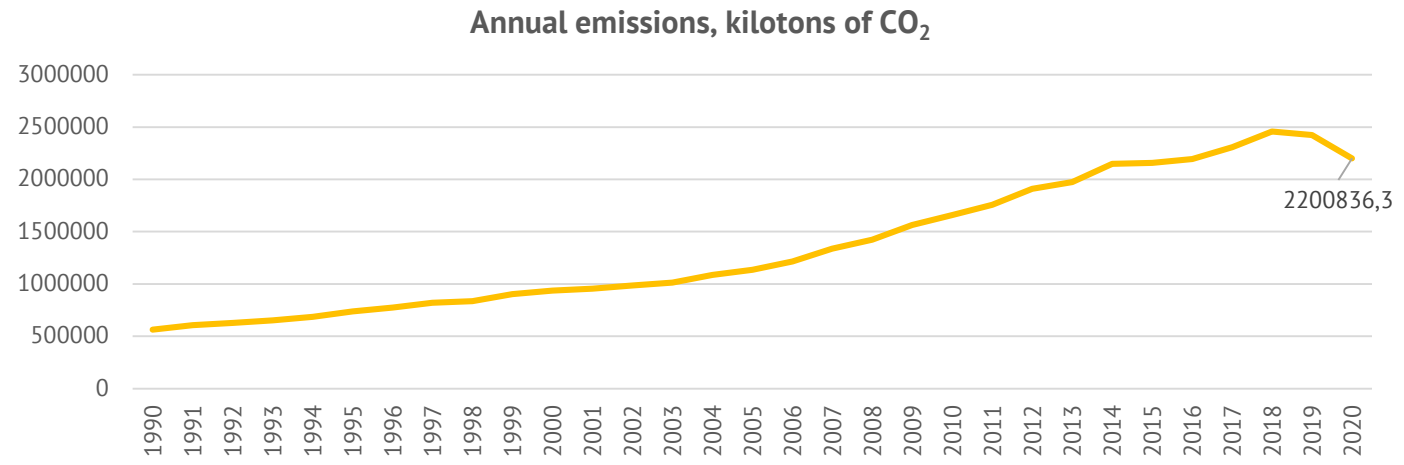
Annual CO_2 emissions from fossil fuels and industry in 2021 without LULUCF:

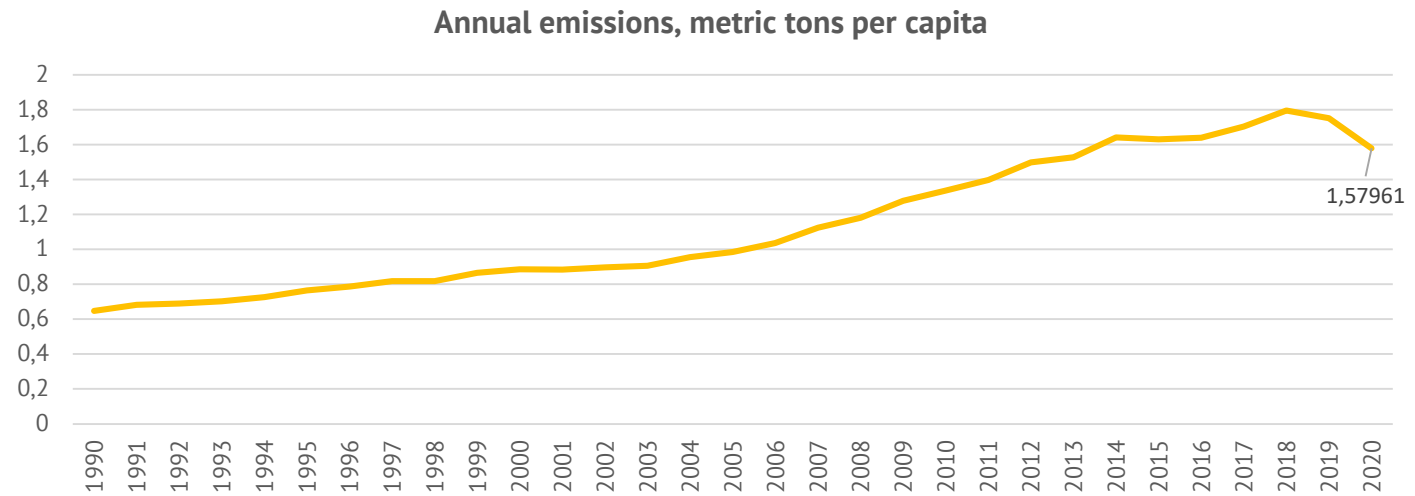
- India — 2.71 billion t;

[13] Share of global cumulative CO_2 emissions. Cumulative emissions are calculated as the sum of annual emissions from 1750 to a given year. This includes fossil fuel and industry emissions. Land use change is not included. Database "World in data". URL: https://ourworldindata.org/contributed-most-global-co2 (accessed: October 5, 2023).

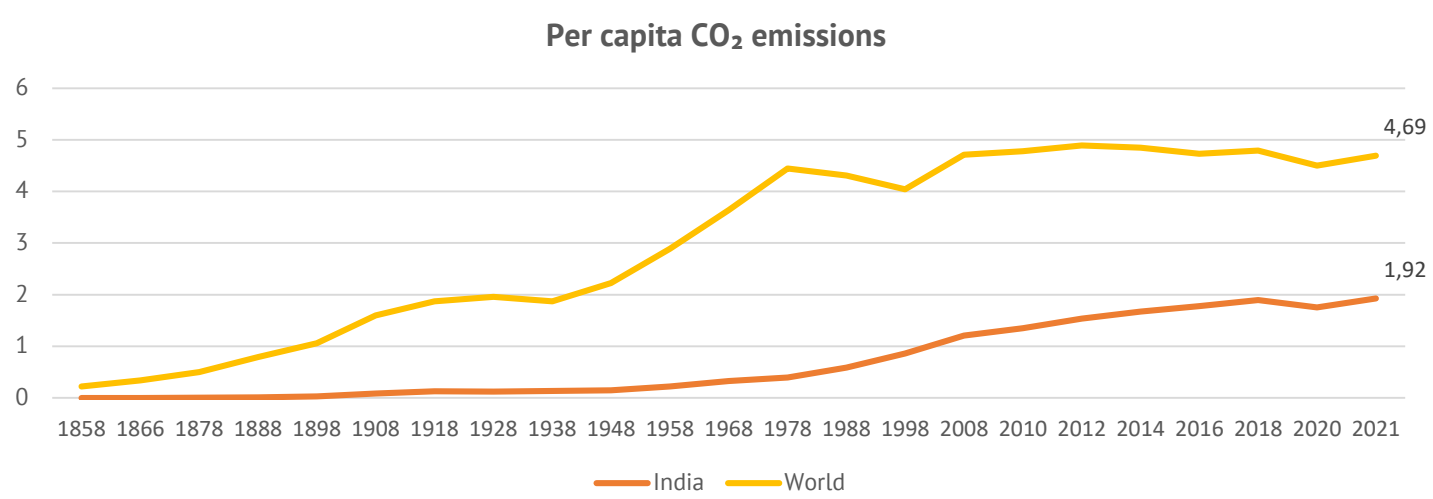
[14] Hannah Ritchie, Max Roser. India: CO_2 Country Profile. Database "World in Data". URL: https://ourworldindata.org/co2/country/india (accessed: October 5, 2023).

		– The world – 37.12 billion t. The dynamics are presented below.  *Source: Our World in Data. URL: https://ourworldindata.org/co2/country/india (accessed: October 5, 2023).*
1.3	Annual emissions in 1990 and 2005	1990 – 563,575.40 kilotons of CO_2 / 0.65 metric tons per capita. 2005 – 1,136,466.40 kilotons of CO_2 / 0.98 metric tons per capita.





Source: India Carbon (CO_2) Emissions 1990-2023. URL: https://www.macrotrends.net/countries/IND/india/carbon-co2-emissions (accessed: October 5, 2023).

1.4	Emissions per capita, world rank	CO_2 emissions from fossil fuels and industry. Land use change is not included.  *Source: Our World in Data. URL: https://ourworldindata.org/co2/country/india (accessed: October 5, 2023).*
2	**NDC and national climate goals**	
2.1	NDC	In August 2022, India updated its NDC, and its current version includes the following goals:[15] – to reduce emissions intensity of its GDP by 45% by 2030, compared to the 2005 level; – to achieve about 50% cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030, with the help of transfer of technology and low-cost international finance including from the Green Climate Fund;

[15] India's Updated First Nationally Determined Contribution Under Paris Agreement (2021-2030). Government of India. August 2022 Submission to UNFCCC. URL: https://unfccc.int/sites/default/files/NDC/2022-08/India%20Updated%20First%20Nationally%20Determined%20Contrib.pdf (accessed: October 5, 2023).

		– to put forward the concept of LiFE (Lifestyle for Environment) to promote and foster sustainable lifestyles and consumption patterns. Other NDC goals are:[16] – to adopt a climate friendly and a cleaner path than the one followed hitherto by others at corresponding level of economic development; – to create an additional carbon sink of 2.5 to 3 billion t of CO_2 equivalent through additional forest and tree cover by 2030; – to better adapt to climate change by enhancing investments in development programs in sectors vulnerable to climate change, particularly agriculture, water resources, Himalayan region, coastal regions, health and disaster management; – to mobilize domestic and new & additional funds from developed countries to implement the above mitigation and adaptation actions in view of the resource required and the resource gap; – to build capacities, create domestic framework and international architecture for quick diffusion of cutting edge climate technology in India and for joint collaborative R&D for such future technologies. The Union Cabinet chaired by the Prime Minister Shri Narendra Modi has approved India's updated NDC to be communicated to the UNFCCC. According the press release, "India's updated NDC will be implemented over the period 2021-2030 through programs and schemes of relevant ministries/departments and with due support from States and Union Territories."[17] India's LT-LEDS was submitted to the UNFCCC in 2022.

[16] Ibid.

[17] Cabinet approves India's Updated Nationally Determined Contribution to be communicated to the United Nations Framework Convention on Climate Change. Press-release of the Union Cabinet. URL: https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1847812 (accessed: October 5, 2023).

2.2	National climate goals	India formally set the goal of reaching net zero by 2070 in the NDC of 2022 and announced five goals of the decarbonization strategy ("Panchamrita strategy"):[18] – Increase non-fossil electricity generation capacity to 500 GW by 2030; – Meet 50% of its energy requirements from renewable energy by 2030; – Reduce the total projected carbon emissions by one billion metric tons from now (presumably 2022) through 2030; – Reduce the carbon intensity of its economy by at least 45% by 2030 compared to 2005 levels; – Achieve the target of net zero by 2070.[19] The key pillars of India's LT-LEDS are: – Low-carbon electricity systems consistent with development; – Integrated, efficient, and inclusive low-carbon transport systems; – Energy and material efficiency in buildings; – Decoupling growth from emissions and developing an efficient, low-emission industrial system; – CO_2 removal and related engineering solutions; – Enhancing forest cover consistent with socioeconomic and ecological considerations; – Increasing climate resilience in poverty eradication and employment creation.

[18] National Statement by Prime Minister Shri Narendra Modi at COP26 Summit in Glasgow. Press Information Bureau. URL: https://pib.gov.in/PressReleseDetail.aspx?PRID=1768712 (accessed: October 5, 2023).

[19] Kaushik Deb, Pranati Chestha Kohli. Assessing India's Ambitious Climate Commitments. Center on Global Energy Policy at Columbia University, School of International and Public Affairs. URL: https://www.energypolicy.columbia.edu/publications/assessing-india-s-ambitious-climate-commitments/#:~:text=Reduce%20the%20total%20projected%20carbon,of%20net%20zero%20by%202070. (accessed: October 5, 2023).

		India has not yet committed to phasing out coal power or a future without fossil gas. Its latest electricity plan includes an additional 25.5 GW of coal capacity for the second half of the decade, on top of the 25.6 GW already under construction.[20] The Central Government has dropped its plans to add further gas power to its electricity generation but is still committed to its vision of creating a gas-based economy more broadly, despite India's dependence on gas imports.
3	**National regulation**	
3.1	Key climate-related laws and policies	**The Forest Conservation Act of 1980** aims to preserve and safeguard the forests in India. It also seeks to balance the competing interests of development and environmental conservation. Its key objectives are to conserve forests and ensure their sustainable management, to regulate the diversion of forestland for non-forestry purposes, such as mining, industrial projects, or infrastructure development, to ensure that any diversion of forestland is done only for a specific purpose and with the prior approval of the Central Government, to compensate for any loss of forest cover that may occur due to such diversion by undertaking afforestation and reforestation activities. The Act also provides for a State Government to constitute any forestlands or wastelands, which are property of the Central Government over which the Central Government have proprietary rights, a reserved forest. **The Air Prevention and Control of Pollution Act of 1981** lets the State regulate the standard for emission of air pollutants. The Act empowers the State to inspect any factory and check any control equipment and manufacturing process. It further allows the State to take the necessary steps to control air pollution. No industry can operate without meeting the requirements mentioned in this act. **The Environmental Protection Act of 1986** confers power on the Central and State governments for the purpose of 1) protecting and improving the quality of the environment, 2) preventing and abating environmental pollution. **The Energy Conservation Act of 2001** provides a legal framework for the efficient use of energy. The Act enables the Central Government to indicate standards and principles of energy efficiency to be followed by

[20] The Climate Action Tracker. India. URL: https://climateactiontracker.org/countries/india/policies-action/. (accessed: October 5, 2023).

		various industries when using electric power. Standards and measures of energy efficiency and conservation are likewise to be set for apparatuses, hardware, and building. The Act enables State Governments to authorize its different provisions, sets up the BEE under the Central Government to determine qualification and certification procedures for energy inspectors and directors who will audit the utilization of energy by enterprises. Under the Act, the Central Government should endorse energy preservation building standards for proficient utilization of energy and its conservation in new commercial buildings having an associated load of 500 kW or a contract demand of 600 kVA or more.[21] **The Electricity Act of 2003** consolidates the laws relating to generation, transmission, distribution, trade, and use of electricity and generally for taking measures conducive to development of electricity industry, promoting competition therein, protecting interest of consumers and supply of electricity to all areas, rationalization of electricity tariff, ensuring transparent policies regarding subsidies, promotion of efficient and environmentally benign policies. **National Action Plan on Climate Change of 2008** outlines a national strategy that aims to enable the country to adapt to climate change and enhance the environmental sustainability of India's development path. There are eight National Missions representing multi-pronged, long term and integrate strategies for achieving key goals in the context of climate change. These Missions are National Solar Mission, National Mission on Enhanced Energy Efficiency, National Mission on Sustainable Habitat, National Water Mission, and National Mission for Sustaining the Himalayan Eco-system, National Mission for a Green India, National Mission for Sustainable Agriculture, and National Mission on Strategic Knowledge for Climate Change. **The NMEEE** is one of the eight missions released under the NAPCC. The implementation plans for the NMEEE were entrusted with the Ministry of Power and the BEE. NMEEE unrolled the following four initiatives: PAT, Market Transformation for Energy Efficiency, Energy Efficiency Financing Platform, and Framework for Energy Efficient Economic Development.

[21] Anaya Jain. An overview of the Energy Conservation Act, 2001. Law Sikho Agency. URL: https://blog.ipleaders.in/overview-energy-conservation-act-2001/ (accessed: October 5, 2023).

		The National Green Tribunal Act of 2010 was enacted to govern the National Green Tribunal. This Tribunal was established to ensure the fast and effective disposal of cases that relate to the protection of the environment. The Tribunal has a presence in five zones — North, Central, East, South and West.[22] The Tribunal is tasked with providing effective and expeditious remedy in cases relating to environmental protection, conservation of forests and other natural resources, and enforcement of any legal right relating to environment.[23] **LT-LEDS, 2022.** It establishes a detailed roadmap toward climate change mitigation and energy security with measures that will be taken across the economy to cut GHG emissions and increase the country's energy resilience. It includes plans to develop the electricity sector, low-carbon transport, sustainable urbanization, and low-emission industrial systems, to remove CO_2 and facilitate related technologies, enhance forest and vegetation cover and finance low-carbon development. **The National Green Hydrogen Mission, 2023.** It aims to provide a comprehensive action plan for establishing a green hydrogen ecosystem and catalyzing a systemic response to the opportunities and challenges of the sector. Its objectives are the creation of export opportunities for green hydrogen and its derivatives, the reduction in dependence on imported fossil fuels and feedstock, the development of indigenous manufacturing capabilities, etc. The Central Government plans to mandate the use of green hydrogen in such sectors as steel, refineries, and fertilizer and cement industries, through green hydrogen consumption obligations. The Mission outcomes projected by 2030 are green hydrogen production capacity of at least 5 million metric ton per annum with an associated renewable energy capacity addition of about 125 GW, the creation of over six million jobs, the abatement of nearly 50 million metric tons of annual greenhouse gas emissions, etc.

[22] Important Climate Change Laws in India. ENVIS HUB (Environmental Information System). URL: https://envis.haryana.gov.in/important-climate-change-laws-in-india/ (accessed: October 5, 2023).

[23] National Green Tribunal. URL: https://www.greentribunal.gov.in/faqs#:~:text=The%20National%20Green%20Tribunal%2C%20established,environmental%20cases%20in%20the%20country (accessed: October 5, 2023).

		The National Electricity Plan, 2023 serves as a comprehensive framework for India's long-term electricity sector development. It encompasses various power generation options, including conventional sources like coal, natural gas and hydro, as well as renewables such as solar, wind and biomass. The CEA has adopted the National Electricity Plan for the period of 2022-2032[24] that includes the review of the last five years (2017-2022), a detailed plan for the next five years (2022-2027), and the prospective plan for the following five years (2027-2032). **Notification of Ministry of Power, 2023** provides for the creation of a national carbon market. Notification of the regulator provides for the maintenance of the so-called Carbon Credit Trading Scheme, 2023 (CCTS). The document specifies the main tasks of the regulatory authorities and lists the primary market participants.[25] **Energy Conservation (Amendment) Bill, 2023** includes provisions for the establishment of a carbon market.[26] As Shri R.K Singh, Union Minister for Power and New and Renewable Energy, stated, "As per the framework laid down by COP; if any carbon credit is sold outside the country; it cannot be used for meeting the NDCs of the originating country. Carbon credit will on priority be used within the country to meet our NDCs. In specific cases; where carbon credits are created by high technology expensive assets, these may be permitted to be externally marketed by the National Designated Authority created by the Central Government which shall exercise and perform functions that inter-alia include to receive projects for evaluation and approval of host party."[27]
3.2	Carbon tax	No

[24] National Electricity Plan 2022-32. Central Electricity Authority. URL: https://cea.nic.in/wp-content/uploads/irp/2023/05/NEP_2022_32_FINAL_GAZETTE-1.pdf (accessed: October 5, 2023).
[25] Notification of the Ministry of Power. The Gazette of India: extraordinary. F. No. 21/6/2022-EC. URL: https://egazette.gov.in/WriteReadData/2023/246859.pdf (accessed: October 5, 2023).
[26] The Climate Action Tracker. India. URL: https://climateactiontracker.org/countries/india/policies-action/ (accessed: October 5, 2023).
[27] Shri R.K Singh. Creation of Carbon Markets. URL: https://pib.gov.in/PressReleasePage.aspx?PRID=1883921 (accessed: October 5, 2023).

3.3	Carbon levies and fees	No
3.4	Emissions trading (description and key operating rules)	The PAT scheme was launched in 2012 as a market-based compliance mechanism to accelerate improvements in energy efficiency in energy-intensive industries (aluminium, cement, chlor-alkali, fertiliser, iron & steel, paper & pulp, railways, thermal power, and textile). Under PAT, the energy savings achieved by regulated industries are converted into a tradable instrument called ESCerts.[28] The ESCerts, after issuance by the BEE, are traded at power exchanges. India also has a REC trading system, under which the authorities issue RECs to a renewable energy generator that can sell them to specified entities that are required to derive a part of their energy requirements from renewable energy. These specified entities have RPO, an obligation to purchase specific quantity of renewable energy for their energy requirements, intended to promote demand for renewable energy and reduce GHG emissions. Other industries can also voluntarily purchase RECs according to the rules of RECs under the Electricity Act.[29] In October 2021, the BEE published a draft blueprint of the national carbon market framework for stakeholder consultation, particularly, for the phased introduction of a national cap-and-trade system and a voluntary carbon market. According to this document, the PAT scheme — a mandatory energy efficiency scheme covering more than 1,000 entities from 13 sectors — should be gradually transitioned into a compliance carbon market. The carbon market would utilize the existing measurement, reporting, and verification guidelines and administrative infrastructure. Similar to the PAT scheme, the compliance carbon market is planned to be intensity-based.[30]

[28] Perform Achieve and Trade. Bureau of Energy Efficiency. URL: https://beeindia.gov.in/en/pat-read-more#:~:text=Perform%20Achieve%20and%20Trade,efficiency%20in%20energy%20intensive%20industries (accessed: October 5, 2023).
[29] Shardul Amarchand Mangaldas & Co. Renewable energy and carbon capture in India. URL: https://www.lexology.com/library/detail.aspx?g=9b04e056-3fae-4b48-ac39-e63bba0b8c40 (accessed: October 5, 2023).
[30] India's ETS Description. International Carbon Action Partnership. URL: https://icapcarbonaction.com/en/ets/india (accessed: October 5, 2023).

		Subsequently, the Energy Conservation (Amendment) Bill 2023 empowers the Central Government to specify the CCTS. Section 14 of the Bill grants the Central Government or any authorized agency the power to issue CCCs for the reduction of carbon emissions to obligated entities under and compliant with the CCTS.[31] These CCCs may then be sold in the market. A carbon credit is a tradeable permit to produce a specified amount of carbon emissions.[32] However, key details are still missing: the timeline for implementation, the nature of the registered entities, how the credits will be generated and certified, and what agencies will be involved. On June 28, 2023, the Indian Ministry of Power published a notice in *The Gazette of India* notifying the launch of the CCTS on the day of publication. The Notification outlines each institution's specific responsibilities for putting the Indian carbon credit trading plan into action. The obligated entities will be required to achieve the GHG emission intensity targets. The obligated entities that overachieve the set targets will be issued CCCs and entities that fail to achieve the targets will meet the shortfall by purchasing CCCs.[33] IETA experts note that the CCTS is designed as a baseline-and-credit system and will set emissions intensity targets for the obligated entities. This makes the CCTS different from many other long-running compliance markets such as the European Union Emissions Trading System that sets emission caps for covered industries. The first draft of the CCTS, which was published in March 27, 2023, provided for the establishment of two mechanisms: – **A Compliance Mechanism** under which the obligated entities shall comply with the GHG emission norms set by the central government;

[31] India establishes framework for voluntary carbon market and outlines pathway towards Cap-and-Trade System. International Carbon Action Partnership. URL: https://icapcarbonaction.com/en/news/india-establishes-framework-voluntary-carbon-market-and-outlines-pathway-towards-cap-and-trade (accessed: October 5, 2023).

[32] The Energy Conservation (Amendment) Bill, 2022. PRS Legislative Research. URL: https://prsindia.org/billtrack/prs-products/prs-bill-summary-3977 (accessed: October 5, 2023).

[33] Ministry of Power notifies Carbon Credit Trading Scheme, 2023 – Key highlights. PWC. URL: https://www.pwc.in/assets/pdfs/news-alert/regulatory-insights/2023/pwc_regulatory_insights_6_july_2023_ministry_of_power_notifies_carbon_credit_trading_scheme_2023.pdf (accessed: October 5, 2023).

		– **A Voluntary Mechanism** where the non-obligated entities can register their projects for GHG emission reduction or removal for issuance of CCCs.[34] The final version of the document provides for the creation of only one of these — the Compliance Mechanism.[35] According to the adopted document, the Indian carbon market framework is a national framework established with an objective to reduce, remove, or avoid the GHGs emissions from the Indian economy by pricing the GHG emission through trading of the CCCs. The Central Government shall establish a Committee that shall monitor how the Indian carbon market operates and make recommendations to the BEE for the development of carbon market regulations and processes. The BEE will become an administrator and with prior approval of the Central Government shall determine the procedure, including eligibility criteria, for accreditation of any agency to function as the accredited carbon verification agency. It conducts studies for sectors or obligated entities to recommend targets in tons of tCO_2e per unit of production after taking into account all relevant aspects, including available technologies and the likely cost of their implementation. Further, based on the recommendations of the BEE, the Ministry of Power shall determine the sectors and entities that will have to comply with the GHG standards approved by the central government. Next, the Ministry of Environment, Forest, and Climate Change sets GHG emission intensity targets to all covered entities under the Environment Protection Act. The obligated entities shall be required to achieve the targeted GHG emission intensity and to meet any other targets that may be set by the Ministry of Power under the Act and amended from time to time such as the use of non-fossil energy consumption or specific energy consumption. The obligated entities that fail

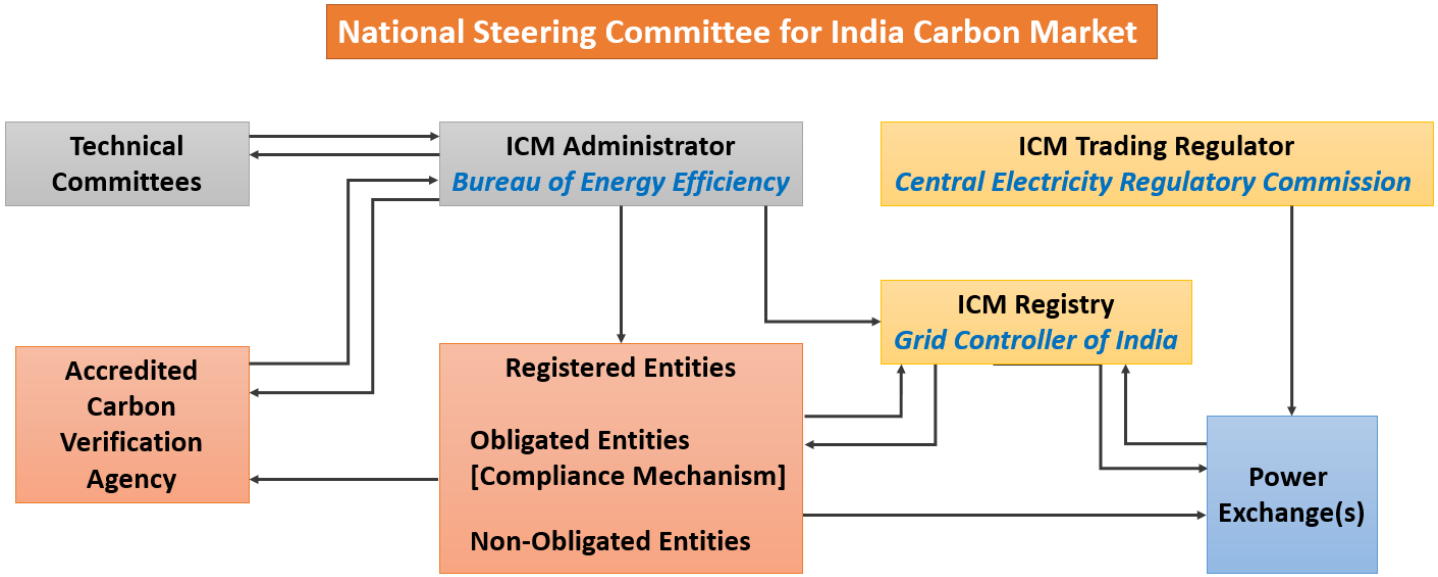
[34] Notification of the Ministry of Power. The Gazette of India: extraordinary. F. No. 21/6/2022-EC. URL: https://india-re-navigator.com/public/tender_uploads/wind_utility_policy-6424292d1dbb3.pdf (accessed: October 5, 2023).
[35] Ibid.

		to achieve their targeted GHG emission intensity reduction shall compensate by purchasing CCCs from the Indian carbon market. The Commission shall register the power exchanges and approve the CCCs trading in the Indian carbon market, from time to time. According to the latest news, the data from Reuters' experts specifically, India will set carbon emission three-year intensity benchmarks and reduction targets for companies in four sectors: petrochemicals, iron and steel, cement, and pulp and paper. The market trading cycle will be annual. Companies that exceed their targets earn CCCs that they may sell to firms that fall short of their goals. The intensity benchmarks and reduction targets will be applicable from 2024-2025 and the carbon trade will start in 2025-2026. The targets will be aligned with the country's emission intensity reduction goals submitted to the United Nations.[36]
3.4.2	Geography	Undefined
3.4.3	Covered entities	There are two types of admitted entities: 1) **Non-obligated entities** – registered organizations that can purchase CCC on a voluntary basis; 2) **Obligated entities** – registered organizations that are notified under the compliance mechanism. In turn, according to the last notification of the Ministry of Power, registered entity includes designated consumers registered for CCTS.
3.4.4	Covered greenhouse gases	Include, but not limited to, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

[36] Sarita Chaganti Singh. India to set emission reduction mandates for 4 sectors, to start carbon trading from 2025 -sources. Reuters. URL: https://www.reuters.com/sustainability/climate-energy/india-set-emission-reduction-mandates-4-sectors-start-carbon-trading-2025-2023-09-26/ (accessed: October 5, 2023).

3.4.5	Covered industries	Undefined
3.4.6	Key regulators	**Administrator (The Bureau of Energy Efficiency)** formulates the complete framework, sets the system sand the methodologies for carbon market, identifies sectors and potential for reduction of GHG emissions in such sectors, develops trajectory and targets for the admitted entities under the Compliance Mechanism, issues CCCs, develops the procedure for accreditation and functioning of accredited carbon verification agencies and accredits them. **Supervisor (National Steering Committee for Indian Carbon Market)** is constituted by the Central Government. It will manage and directly oversee the carbon market, make appropriate recommendations to the BEE on the development of the carbon market.[37] **Registry (The Grid Controller of India Limited)** undertakes registration of obligated or non-obligated entities, maintains records of all transactions, shares the transaction records with power exchange and the BEE, functions as meta-registry for India.[38] **Meta-registry (The Grid Controller of India Limited)** is a national GHG registry that manages data, including Market Based Mechanisms and National Inventory Management Systems. It establishes linkages with other national or international registries as approved by the Central Government. **The Commission** regulates matters relating to trading of CCCs, including its frequency, protects interests of both sellers and buyers. It also registers the power exchanges.[39] **Accredited carbon verification agency** means an agency accredited by the BEE to carry out verification activities under the CCTS.

[37] Carbon Credit scheme. India RE Navigator. URL: https://india-re-navigator.com/energy-storage/policy/1238 (accessed: October 5, 2023).
[38] India Introduces a Trading System for Carbon Credits. Indian Chemical Regulation Helpdesk. URL: https://indianchemicalregulation.com/india-introduces-a-trading-system-for-carbon-credits/ (accessed: October 5, 2023).
[39] Carbon Credit Trading Scheme, 2023. India environment portal. URL: http://www.indiaenvironmentportal.org.in/content/475326/carbon-credit-trading-scheme-2023/ (accessed: October 5, 2023).

		Power exchanges – an electronic trading platform registered as a Power Exchange under regulation of the Central Electricity Regulatory Commission (Power Market) Regulations of 2021.  *Source: The BEE – Stakeholder consultation for accredited carbon verifiers under ICM.*
3.4.7	Eligible carbon credits, issuance and circulation	Carbon Credit Certificate.
3.4.8	Accounting for carbon assets and operations	The obligated entities shall be entitled to purchase or sell the CCC. All transactions with CCCs will be registered in the Registry (The Grid Controller of India Limited).
3.5	**Carbon reporting**	
3.5.1	Covered entities	The issue is not regulated yet.

3.5.2	Description and reporting procedure	The issue is not regulated yet.