



WORLD SUSTAINABLE DEVELOPMENT SUMMIT

**TOWARDS A RESILIENT PLANET:
ENSURING A SUSTAINABLE AND EQUITABLE FUTURE**

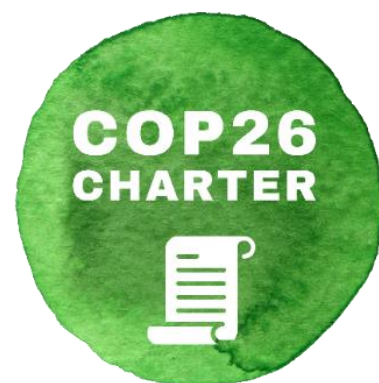


COP26 Charter of Actions

Rallying the Global Community for an Equitable Climate Agenda

ABSTRACTS AND KEY MESSAGES

The 26th UN Climate Change Conference of the Parties (COP26), to be held on 1–12 November 2021 in Glasgow, will aim to mobilize the action on mitigation, adaptation, and resilience, and strengthen the narrative for better alignment with sustainable development goals. The Energy and Resources Institute (TERI) is preparing a COP26 Charter of Actions that will assimilate questions and challenges posed by key sectors in India, propose probable and sector specific options, which can advance climate action and ambition in the country, and propose a normative framework for a global agenda on climate ambition and action. The outcomes of COP26 and the messages from the Charter will also be discussed at a plenary session at the World Sustainable Development Summit (WSDS) to be organized by TERI on 16–18 February 2022.



1. Strengthening the Global Framework through Equity and Climate Justice

Authors

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Reviewer

Manjeev Singh Puri

Abstract

Equity, and common but differentiated responsibilities and respective capabilities are basic organizing principles under the United Nations Framework Convention on Climate Change and the Paris Agreement on climate change. Despite this, the dominant narrative on the issue of effort-sharing among countries is solely in the context of greenhouse gas emissions reduction and mitigation efforts. There are several approaches to view the issue of equity and climate justice. Major approaches consider aspects such as historical responsibility, utilitarian approaches, grandfathering, contraction and convergence, economic efficiency and greenhouse development rights. It is imperative that the progress made by countries is assessed considering the principles of equity well before the global stocktake that is to occur at COP28 in 2023. This chapter identifies areas of leadership for India in fields related to domestic actions and fostering international cooperation. Moreover, it highlights spheres where India can play a normative leadership role by further strengthening of shared understanding in areas such as adaptation, long term strategies, just transitions, sustainable consumption, and non-anthropocentric approaches to equity.

Key Messages

- It is imperative that the progress made by countries is assessed considering the principles of equity well before the global stocktake that is to occur at COP28 in 2023. The terrain of equity from the perspective of a developing country needs to be framed more comprehensively than mitigation and would need to consider aspects related to adaptation, climate finance and technology transfer.
- To ensure equity and climate justice, long term climate actions need to consider both mitigation as well as adaptation along with finance and technology needs. Article 7.2 of the Paris Climate Agreement recognizes the role of adaptation as being key to the long-term global response to climate change. However, long term strategies formulated and communicated under Article 4.19 of the Paris Agreement at the moment only focus on low greenhouse gas emission development strategies and do not consider adaptation to climate change.
- India is progressing well in terms of nationally determined contributions and is better placed to allow for measures to move away from fossil fuel reliance and not get locked into carbon-intensive industrial and infrastructural legacies. India has complemented domestic efforts by launching initiatives like the International Solar Alliance, Coalition for Disaster Resilient Infrastructure and Industry Transition Leadership Group.
- To be able to project itself as a norm leader, it is imperative that India leads in constructive processes that result in a better shared understanding on aspects related to sustainable consumption, adaptation and non-anthropocentric notions around equity and climate justice. To ensure climate justice, there is an urgent need for civil society to call for the factoring of climate change adaptation in the present discourse on 'just transitions,' which is being dominated by energy transitions and climate change mitigation.
- It will be crucial that India strengthens the call for action on strengthening the research and development of new breakthrough technologies that will contribute to the goals of mitigation, adaptation and climate stabilization.



2. Green Finance

Authors

Tamiksha Singh, Saumya Malhotra, Ria Sinha

Reviewer

RR Rashmi

Abstract

An increasing global push for faster and deeper mitigation and adaptation action needs to be complemented by better mobilization of green finance. The practice of encouraging the financial sector towards becoming more climate inclusive is being adopted globally; it has especially been accepted at a faster pace in the Indian policy landscape. However, there is still a lag in implementing this transformative change, where key barriers include lack of standardized definition of green finance, weak regulatory framework, and lack of capacity, all of which result in slowing the uptake of a low-carbon or green transition. In this context, and with mounting green finance requirements, there is a need to focus on feasible means of mobilizing finance from across a broad range of stakeholders, in the implementation phase of the Paris Agreement. From a long-run perspective, it is necessary to ensure that the green lens is mainstreamed on a large scale into investment decisions by 2050 while ensuring equity from international and domestic sources of financing.

Key Messages

- Post COVID recovery, in the short term, there is a critical need to lay the foundations for an enabling environment for green finance while building awareness and capacity of key stakeholders. Defining green finance and developing a standardized taxonomy helps direct investors and financial institutions to allocate capital towards priority climate relevant activities and areas that are not conventionally perceived as green, such as infrastructure, manufacturing, and transport. There is also an urgent need to distinguish climate finance from green finance, the former being a subset of the latter and is a specific area of concern for climate negotiations.
- In the medium term, which follows the timeline of up to 2030, there is the need for a mechanism or system in place, where both the demand side and the supply side of green finance are structured and lead to a smooth flow of finance for relevant activities in the interest of sustainability, climate actions, and economic growth of the country.
- Decision-making processes for state budgeting and national budgeting have the potential to be reformed using NDC-aligned and SDG-aligned budgeting or green budgeting framework, for better alignment of government spending with environmental objectives and sustainable development goals, and to maximize the impact of budget allocations.
- The barriers to financing the low-carbon or green transition are not stand-alone problems with single solutions. These problems are closely intertwined with the state of consumer preferences, behavioural choices, available technologies, commercial viabilities, and existing regulatory mechanisms. They can be addressed in the long term under the overall aim of transitioning to a domestic financial system that can support a comprehensive range of climate interventions up to 2050. Such a green financial system would entail the promotion of standardized green finance practices, the market development to support green investments at the national level, and finally a comprehensive national sustainable finance roadmap.



3. Climate Resilient and Just Adaptation Pathway

Authors

Dhriti Pathak, Kavya Michael, Manish Anand, Swati Pillai, Smita Chakravarty

Reviewer

Suruchi Bhadwal

Abstract

The Adaptation and Resilience chapter of the Charter of Actions puts forth the need to recognize the skewed impacts of climate change on vulnerable groups owing to existing socio-economic inequalities. This chapter acknowledges the initiatives undertaken by the state in addressing adaptation concerns and emphasizes the need to mainstream climate action in existing developmental interventions. Along with ensuring the need for mainstreaming climate action, it is crucial that these transitions deliver just and equitable adaptation outcomes. As changes in the climate cut across all sectors, solutions can be yielded by cross cutting interventions that can address these compounding risks. The way forward comprises developing targeted strategies to be implemented in the short, medium, and long term that are based on extensive consultations with stakeholders at all levels from different regions of the country, thereby highlighting and addressing varying vulnerabilities faced across India.

Key Messages

- Despite the inherent need of adaptation in strengthening climate action, a key area of concern remains the inability to quantify or map the progress in absolute terms. In the absence of such measures, momentum in addressing adaptation needs may be lost.
- In the short term, synergies between developmental interventions, disasters and climate risks should be enhanced by integrating climate change adaptation with disaster risk reduction at the district level, which can be continued up to 2025 in order to raise the scale and coverage of adaptation action in the country. Research gaps need to be addressed by investing in science-based tools and building datasets; moreover, the role of private sector should be augmented in adaptation and resilience building
- By contrast, in the medium term, policies should focus on addressing gaps in existing interventions and identifying new areas for adaptation.
- Lastly, in the long term, focus could be on devising entirely new strategies arising out of recent assessments and risk identification that could address climate risks.
- With the passage of time, decision making processes in the adaptation domain must become more inclusive and participatory through effective engagement of stakeholders at all levels.
- Even though the country is replete with examples that reflect how climate change has been tackled by various levels of governance, the support from the international community and organizations in terms of both technical and financial capacity support is crucial to their successful completion. Example-led solutions are ways by which regional differences can be overcome and countries can benefit from knowledge and information sharing to combat climate change.



4. Nature-based Solutions and Role of Agroforestry

Authors

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Reviewer

Prodipto Ghosh

Abstract

Nature-based solutions (NbS) are the actions to protect, sustainably manage, and restore natural or modified ecosystems. Whereas technological solutions for mitigating and adapting climate change are expensive, NbS are low-cost methods that address societal challenges effectively and adaptively and provide human well-being as well as biodiversity benefits. India probably is the world leader in demonstrating the success of NbS. These solutions can be demonstrated in various sectors where the suggested solution would take into account the commitments made in the Paris Climate Agreement. For achieving India's nationally determined contributions in forestry, an afforestation approach involving large-scale plantation on non-forest land through agroforestry practice becomes crucial. Agroforestry is seen as an emerging NbS in India as it improves farm resilience due to increased farm diversification, self-sufficiency, reduced production costs, improved community resilience, and enhanced mitigation through, for example, carbon sequestration and reduced mineral fertilizer needs. Thus, the promotion of agroforestry through various policies and plans will not only enhance the income of farmers but also help India to move forward towards carbon neutrality.

Key Messages

- Agroforestry can contribute more than 2 billion tonnes of CO_{2e} by 2030 if the government puts in place appropriate incentive mechanisms for farmers or producers. Owing to the lack of mechanisms such as minimum support price, whenever there is a glut in the market, farmers have to sell timber at throwaway prices. However, agroforestry can supplement farm income by selling the carbon credits in the carbon markets, enable risk reduction and contribute towards climate resilience.
- Other recommendations to promote agroforestry in the country is to generate quality planting material (QPM) and increase its supply to farmers; a statutory and institutional mechanism need to be established for certification of QPM (planting stock and clonal plants) and an accreditation system should be in place for nursery planting stock; for example, the National Horticulture Board has developed a protocol for accreditation of nurseries set up to supply QPM.
- Regular timber markets need to be established to ensure transparent timber trade and prevent exploitation of farmers; provisions for harvesting and transportation of agroforestry produce should be made less stringent and working plans should be prepared for agroforestry works.
- To address the global sustainable development goals, there is a need for mainstreaming nature into decision-making, building multi-stakeholder partnerships, and strengthening good governance so that the agency, dignity, and human rights of at-risk communities inform global action while fulfilling goals.
- The Paris Agreement also notes 'the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity, recognized by some cultures as Mother Earth'. International mechanisms such as REDD + are well known. To achieve the larger goals of climate stabilization, it is essential that the international community also focuses on marine based nature-based solutions.



5. Business and Industry

Authors

Taruna Idnani, Arupendra Mullick

Reviewers

Girish Sethi

Abstract

Indian businesses are uniquely positioned to create low-carbon sustainable economy; they have embarked on a number of voluntary initiatives on climate change that can significantly contribute towards achieving India's nationally determined contributions (NDC) goals. Despite the pandemic and associated economic uncertainties, Indian businesses are at forefront of committing to climate actions and emission reduction targets. The increasing collaborative approach between policymakers and industry help develop more effective emissions reduction policies for industry and inspire greater climate action.

Key Messages

- Indian businesses are uniquely positioned to create low-carbon sustainable economy; they have embarked on several voluntary initiatives on climate change that can significantly contribute towards achieving India's NDC goals. Finance is a critical enabler for climate action and accelerating low carbon transition. The industry is working collaboratively to accelerate financing by following a systematic and consistent approach while also working individually on new products and models to enable financing for delivering a low carbon economy.
- In terms of future actions and recommendations, in the near term, the focus would be on economic recovery from the pandemic. The growing eminence of sustainability disclosures through SEBI introducing BRSR guidelines would motivate a large number of businesses to mainstream ESG and climate action efforts while strategizing their action plans and also aid financial institutions like banks, credit rating agencies, and other financial institutions in investment decisions.
- The roadmaps to decarbonize the industrial sector with inclusion of sector-specific targets (especially for hard to abate sectors) for industries in the NDC commitment will help in strategizing ways to decarbonize the sector.
- In the medium to long term, the role of industries in developing disruptive technologies, especially in hard-to-abate sectors, would be crucial. Global collaborations for industrial decarbonization with other countries will facilitate knowledge sharing alongside the technology transfer. Sharing knowledge and resources with technologically advanced countries is a way forward for exploring innovative technologies.
- In the long term, industrial decarbonization will transform India towards sustainable futures and further towards deep decarbonization.
- Private sector can be leveraged to enhance country's adaptation efforts and also build climate resilient infrastructure complementing the goals of initiatives such as the Coalition for Disaster Resilient Infrastructure.



6. Renewable Energy

Authors

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Reviewers

Ajay Shankar, A.K. Saxena

Abstract

Today, around 80% of the total energy requirement in India is met through fossil fuels with a significant contribution from imports of oil and gas. The decarbonization of the energy-intensive sectors such as mobility, industries, and power thus become inevitable to mitigate the emission rise and ensure a clean and continued sustainable growth of the country. The electricity sector in India is undergoing transition owing to consistent efforts towards achieving the country's nationally determined contribution (NDC) targets, increasing consumer expectation coupled with changing consumer behaviour, various supply-side technology innovations and price discoveries. The decline in the cost of renewable energy (RE) technologies and that of energy storage holds promise that the transition may be sustainable, or it could even witness acceleration depending on the trajectory of cost decline. India has consistently stepped up its RE capacity targets to 175 GW by the year 2022, and 450 GW by 2030. These national targets are aligned with India's climate commitments made at the 21st Conference of the Parties of the United Nations Framework Convention on Climate Change (UNFCCC), also known as the Paris Agreement, which came into force in November 2016. This chapter will discuss options and policy imperatives for India to meet the 450 GW by 2030 renewable target.

Key Messages

- The degree of confidence for meeting the 450 GW target by 2030 is increasing; however, India would have to add a capacity of 40 GW annually. For power sector de-carbonization through large-scale deployment of renewable energy, viable energy storage alternatives will be needed to meet evening peak demand.
- High renewable energy integration in the Indian power system is not only the need of the current times from a climate perspective but also a least-cost supply option to cater to future demand and for ensuring energy access. In this regard, policy measures in the short, medium and the long term are required from not only the central government but also from state and local governments.
- India has a surplus in generation capacity with a huge renewable expansion plan; there is a need to electrify more end-use sectors. However, this demand must be met by green sources of energy. Smart charging, grid support, and demand response must be incentivized further to enable electric vehicles charging at renewable energy sources.
- As the global momentum for variable renewable energy generation grows, least-cost optimization models for power system operations and capacity planning play an increasingly important role in helping decision-makers understand the potential synergies and conflicts associated with electricity system transitions.
- To realize Goal 7 of the SDGs, along with large scale renewable energy deployment, there is need to raise awareness and deploy innovative models for ensuring energy access for improved livelihoods and well-being in rural areas through options such as distributed renewable energy.
- There is also a strong need to further enhance partnerships through better engagement with subnational, national and international stakeholders along with communities to ensure effective uptake of renewable energy solutions.



7. Low Carbon Transport

Authors

Promit Mookherjee, Sharif Qamar, Viral Joshi, Palak Passi, Faiz Jamal

Reviewer

Shri Prakash

Abstract

Transport is among the fastest growing and energy-intensive sectors in India. Driven by economic growth and a low base, passenger and freight transport is estimated to grow three and sevenfold by 2050, respectively. The sector could become a major constraint in carbon emission mitigation efforts of the country. Significant efforts have already been made in line with the focus areas of the nationally determined contribution (NDCs) with mixed results. Decarbonization strategies to achieve near zero carbon emission may include electrification of road vehicles, long-term hydrogen-based fuel cells, increased usage of CNG/LNG and biofuels, enhanced fuel efficiency, and increasing market share of railways particularly in hard-to-abate freight transport. Increased investments in low carbon transport technologies, namely, railways, riverine transport, and coastal shipping, may help in transport decarbonization efforts. This chapter identifies gaps and areas for higher ambitions and suggests a charter of actions in the short and long term, primarily with the objective of assisting policymakers to define priority areas for decarbonization and take remedial actions.

Key Messages

- There needs to be increased adoption of electrical vehicles for two-wheelers, three-wheelers, and passenger cars, with higher budgetary provision for improving the public transport. Low carbon vehicle technologies needs to be identified for long-distance bus operations as well as for the trucking sector. It is very important to increase the share of railways both in the passenger and freight segment to bring down carbon emissions at the national level. The need of the hour is to revisit and reframe railway policies and operations.
- For the longer-term, institutions need to be established within the central and state governments for holistic transport planning. Going forward, stricter criteria will need to be set while assessing investment in transport infrastructure. There should be a focus on the lowest cost options while giving higher importance to investment in low carbon infrastructure.
- To ensure that the loss in revenue does not affect investment in decarbonization infrastructure, alternate sources of revenue will need to be established. Congestion pricing, limiting subsidies, and user access charges for using public infrastructure could be some of the strategies for mitigating this.
- A common fund for low carbon transport can be set up, with contribution from higher income countries matching the investments made by India. India faces a stronger budget constraint compared to other developed countries owing to its development needs. Thus, international governments and industry will need to support investment in India through direct investment in projects as well as low interest loan.

