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Climate Transparency and India's Leadership

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Abstract

The enhanced transparency framework (ETF), a crucial part of the rulebook of the Paris Agreement, was agreed upon and adopted at the 26th Conference of Parties (COP26). The ETF aims to help better understand countries' progress on their commitments and build mutual trust among participating countries by tracking their progress on commitments. This will create a learning process between nations and establish a platform where their challenges are discussed and addressed. To achieve such multilateral climate governance, transparency of climate actions is pivotal. However, nations are at different starting points with respect to their capabilities and capacities. The newly agreed upon ETF demands more granular information than before, which suggests that member states—especially India and other developing countries—would need more enhanced support than before to adhere to these obligations.

This policy brief explores the evolution and significance of the ETF in the multilateral process. So far, India has participated in the transparency negotiations and complied with the associated obligations. However, given India's vast landscape and complex governance structure, it would need more financial and technical support to effectively report and build sustainable institutional and technical capacity to regularly communicate, share, and review its climate efforts. The brief further maps India's efforts to enhance reporting under the monitoring, reporting, and verification (MRV) arrangement, discusses existing challenges, India's role, and offers recommendations for India to build capacity to fulfil these obligations.

1. Introduction

The Paris Agreement (PA) necessitates all countries to continuously enhance their climate targets in the form of nationally determined contributions (NDC) to limit the rise in temperature to less than 2°C while pursuing efforts to limit it to 1.5°C above pre-industrial levels. Regular monitoring and reporting are crucial to ensure that efforts by all countries are adding up and their challenges are discussed and addressed. Therefore, the enhanced transparency framework (ETF) was established under Article 13 of the PA under the United Nations Framework Convention on Climate Change (UNFCCC) to track countries' progress, build mutual trust, and create a learning process among countries. Transparency is vital to keep countries informed about each other's climate intentions and actions, enhance confidence and cooperation, and ultimately inspire more ambitious climate actions from all, given the complexity and breadth of the challenges within climate change negotiations (Appunn, 2018).

As a signatory to the PA, India is obligated to adhere to the ETF and submit biennial transparency reports (BTR) every two years (UNFCCC, 2021). The BTR demands information on greenhouse gas (GHG) emissions and domestic climate actions and supports the monitoring of the execution of their NDCs by providing necessary data. It serves the purpose of showcasing India's progress internationally but also enables the country to make informed climate policy decisions, learn from its experience, and attract international financial, technological, and capacity-building support.

However, adhering to the reporting obligations poses multiple challenges not only for India but also for other developing and least-developed countries due to significant institutional, technical, and financial capacity deficits in undertaking this exercise (UNFCCC Secretariat, 2022). With the first set of reports to be submitted by 2024, the expectation is that India will enter a new era of transparency (Initiative for Climate Action Transparency, 2019). However, the question is: How will India comply with the more stringent transparency requirements of the PA, given the challenges in adhering to the previous simpler transparency arrangements?

2. How Have the Transparency Negotiations Evolved?

For decades, countries have been engaged in the debate for transparency in climate action and support under the UNFCCC. At the 16th Conference of Parties (COP16) held in 2010, the monitoring, reporting, and verification (MRV) framework was established under the Cancun Agreements (UNFCCC, 2011)[1] and subsequently operationalised through the modalities adopted in Durban[2] at COP17 in 2011 (UNFCCC, 2012). Following these arrangements, developed countries followed rigorous reporting and review obligations and were subjected to detailed disclosure of sectoral GHG emissions. On the other hand, developing countries, such as India and others, were not subjected to detailed sectoral emissions and, consequently, had relatively simpler reporting obligations and facilitative sharing of views instead of stringent reviews (Prasad & Gupta, 2019).

It is critical to acknowledge that India and other developing countries are at different starting points in terms of their MRV capabilities. Their lack of capacity is evident from the fact that only 27 non-annex parties, mainly developing countries, out of 154 have submitted their third biennial update report (BUR)—a pre-2020 reporting obligation for developing countries—to date (Table 1) (UNFCCC, 2023).

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[1] Decision 1/CP.16 (UNFCCC, 2011).
[2] Decision 2/CP.17 (UNFCCC, 2012).

Table 1: Submission of Biennial Update Reports (BURs) by Non-Annex I Parties (Developing Nations)

First BUR	Second BUR	Third BUR	Fourth BUR
92	39	27	12

Source: UNFCCC, 2023.

The differences in MRV capacities have influenced how countries have approached negotiations on transparency. Between 2011 and 2015, developed countries continued to push for a common transparency framework for climate change actions, while India, along with developing countries, was inclined towards a differentiated approach owing to varying capacity constraints (Third World Network, 2016).

Eventually, in 2015, the PA established an enhanced transparency framework whereby all signatory countries to the PA—developed and developing—are subject to common enhanced reporting and review obligations. Therefore, all countries are now obligated to submit the BTRs that not only cover reporting on detailed sectoral emissions, NDC progress, projections, mitigation, and adaptation but also delineate flows of support received and provided on finance, technology transfer, and capacity-building. Additionally, it also encourages countries to report on measures to tackle loss and damage. However, it allows India and other developing countries to avail built-in flexibility in adhering to these obligations considering their capacity constraints (UNFCCC, 2019). These flexibilities can be "self-determined", where countries indicate where flexibility is availed, elucidate constraints, and offer self-determined time frames for improvement on reported constraints.[3] However, this flexibility is not granted automatically. The country requesting flexibility needs to identify, update, and include areas of improvement, called plans, for the flexibilities availed in the BTRs (UNFCCC, 2019). To ensure continuous progress, these plans should be based on a comprehensive mapping of the country's current capacity constraints, set clear objectives, and assess the progress in the defined time frame in light of the support—knowledge and financial—received.

With this being said, it becomes important for India to define a pathway for adhering to the reporting obligations, thus increasing its capacity as well as accountability while shaping the direction of climate transparency. As the newer reporting requirements demand more detailed information, India should see this as an opportunity to attract additional international support and increase accountability, given that complying with the new requirements under ETF requires further investments in resources and commitment.

3. How Has India Performed Under the MRV Arrangement So Far?

India has adhered to the international climate reporting obligations with utmost sincerity and dedication. Thus far, India has submitted two national communications (NC) and three BURs. These reports were acknowledged and applauded for their depth, clarity, and integrity by the negotiators at the conference during the facilitative sharing of views.[4] The preparation of the BUR is a comprehensive and resource-intensive process and is conducted by specialised institutions with sector-specific expertise, along with inputs from diverse ministries, government departments, and public sector undertakings. All this is challenging to accomplish when the past is marred by inaction, unfulfilled climate commitments, and poor flow of finance and technology—the two pillars of collaborative climate action—from developed countries.

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[3] Decision 18/CMA.1 (UNFCCC, 2019).
[4] One of the two steps defined under the international consultation and analysis process for non-annex I parties is a brief presentation on the BUR by the party or parties concerned, followed by oral questions and answers among parties.

In India, the reporting process is overseen by the National Steering Committee (NSC), chaired by the secretary of the Ministry of Environment, Forests, and Climate Change (MoEFCC). A technical advisory committee, consisting of members from the government, academia, and civil society, provides essential technical guidance to undertake this mammoth exercise (MOEFCC, 2021). To monitor its domestic climate actions, India's policies are designed with an inbuilt evaluation or MRV process. The MRV for operational designs is implemented in a decentralised manner, with responsibilities allocated at multiple levels of governance (MOEFCC, 2021). The core elements of the MRV framework aim to track the effectiveness of domestic sustainable development programmes and schemes and monitor energy efficiency and emissions-related indicators in addition to other climate co-benefits. For example, the perform, achieve, and trade (PAT) regulatory instrument sets energy efficiency targets for key industrial sectors and firms that are then permitted to trade energy savings certificates (ECerts). The Bureau of Energy Efficiency (BEE) has developed stringent reporting procedures and guidelines, ensuring a reliable MRV framework to track the effectiveness of PAT and has been one of the most successful schemes (Express News Service, 2022).

In its third BUR, India also reported other efforts and the extensive work undertaken on updating and creating technical data repositories and dashboards and improving their access to the public (MoEFCC, 2021). Further, the Government of India (GoI) has developed several web portals and digital dashboards—especially in energy-related sectors, which impact emissions reduction, such as power, renewables, industry, and transport—for effective tracking of performance across all states on a single platform. Creating these web portals reiterates GoI's intention of moving towards a digital India while simultaneously showcasing successful examples of transitioning towards transparency in governance (MoEFCC, 2021). Here are some examples:

- In the energy sector, the National Power Portal developed by the Central Electricity Authority (CEA) provides information on installed renewable capacity and its generation.

- In the transport sector, the Faster Adoption and Manufacturing of (Hybrid and) Electric Vehicles in India (FAME India) scheme is monitored by the FAME dashboard, displaying the key outcomes and associated indicators (Ministry of Heavy Industries, n.d.).

- Within the agricultural sector, a farmers' portal has been developed for estimating baseline emissions[5] (Ministry of Agriculture and Farmers Welfare, n.d.).

- In the forestry sector, the Bhuvan geospatial portal provides services and applications related to satellite remote sensing data for public use.

- In the waste sector, the Swachh Bharat-Urban and Gramin dashboards track progress towards achieving their programme targets (Ministry of Housing and Urban Affairs, n.d.; Ministry of Jal Shakti, n.d.).

- To track India's progress on sustainable developmental goals (SDGs), the NITI Aayog launched the SDG India Index, which monitors at the level of states and union territories the outcomes of government interventions and schemes related to the SDGs (NITI Aayog, 2022).

In addition to these initiatives, several mobile applications—such as BEE Star Label,[6]

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[5] The portal includes details on livestock census, fertiliser use, crop varieties grown, total area, yield, and other necessary information.

[6] BEE Star Label is a programme run by the Indian government's Bureau of Energy Efficiency, under Ministry of Power, that promotes energy efficiency.

MERIT,[7] and Meghdoot[8]—are used to widen the reach of government initiatives and monitor their implementation. Further, there are several initiatives by non-governmental stakeholders such as the GHG Platform India (GHG Platform India, n.d.), the Renewable Energy Data Portal by Prayas (Kulkarni, Sahasrabudhe, Chunekar, & Dixit, 2019), Centre for Energy Finance (CEF) by Council on Energy, Environment and Water (CEEW) (CEEW, n.d.), and the India GHG Program led by World Resources India (WRI) India, Confederation of Indian Industry (CII), and The Energy and Resources Institute (TERI) amongst others to support India's domestic capacity to manage and measure GHG emissions in Indian businesses (GHG Platform India, n.d.).

The range of such efforts demonstrates India's leadership and commitment to its transparency obligations. While these efforts are laudable, India still requires support to further enhance its institutional capacity to report accurate data on time and address existing MRV challenges. Drawing on the experiences of diverse MRV systems established under various policies, India should plan for an integrated system that will be on par with international standards. To achieve this, India must address the existing MRV gaps, including some of the following key areas of action:

- **Lack of data and data management systems:** The availability of quantifiable information is critical for policymakers to analyse and draw useful interpretations. However, the information provided by ministries and departments represents merely a portion of the data that is available across the plethora of publications. Further, it is in a form that makes it difficult to be used seamlessly in conjunction with other data sources, especially in alignment with the ETF guidelines. Poor or non-availability of data and lack of regular

updates often lead to imprecise estimates of emissions for the unorganised industrial sector and various sections of the formal manufacturing sector.

- **Limited collaborative institutional arrangements:** The lack of the necessary mandate to share data in easy-to-use formats within and across departments and ministries precludes a comprehensive evaluation of all efforts and inputs. While India already has an established network of institutions at almost every level of governance, closer coordination between them is necessary to address information gaps in the context of climate change mitigation actions and GHG inventories.

4. Implications of the Enhanced Transparency Framework for India

Though India has sound arrangements and processes in place to report on climate actions (Prasad & Gupta, 2019), it requires more formal and institutionalised arrangements focused on interdepartmental synergy and capacity retention. This is especially relevant in the context of ETF, which obligates reporting on areas where India has no prior experience. Table 2 provides a brief overview of the newer elements expected under the ETF.

Table 2 highlights the newer and enhanced reporting obligations for countries to adopt and adhere to, some of which signal fresh MRV challenges. For instance, India's capacity to report on the 59 common reporting tables is varied. Thus far, India has reported through summary tables related to national GHG inventories across sectors for all gases and emission factors and tiers. In addition, substantial capacity exists for reporting on the energy sector. However, India may have to avail the flexibility option for reporting on certain sub-sectors of energy due to little clarity on emissions from the informal sector, lack of data for all sub-sectors at the desired

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[7] MERIT: Merit order despatch of electricity for rejuvenation of income and transparency.
[8] Meghdoot is a joint initiative of India Meteorological Department, Indian Institute of Tropical Meteorology, and Indian Council of Agricultural Research. It aims to provide important information to farmers through a simple and easy-to-use mobile application.

Table 2: New Elements Under the Enhanced Transparency Framework

Aspects	New Elements or Modifications
Nationally determined contributions (NDCs)	Information is required in the form of **structured summaries and tables** to track progress in implementing and reaching its NDCs under Article 4 of the PA
Common reporting tables	Reporting is required in 59 tables that can be broadly categorised into sectoral, summary, recalculation and completeness, and trends aspects. Out of these, **sectoral, recalculation, and trend tables** are completely new, and India has no prior experience with them
Guidelines	Adherence to the modified guidelines. Use the **2019 Refinement to the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories**
Gases	Reporting requirement on nitrogen trifluoride (NF3), which has been included as an **additional gas** in addition to the six gases (CO_2, CH_4, N_2O, HFCs, PFCs, SF6, and NF3)
Time series	Requirement of consistent annual **time series emission from 1990**, with the flexibility to report from reference year for its NDC, and a consistent annual time series from at least 2020 onwards
Projections	Projections to be reported under the following categories: (i) with measures, (ii) with additional measures, and (iii) without measures, from the most recent year in the inventory to **at least 15 years** beyond the next year ending in zero or five and done on a sectoral basis and by gas
Adaptation	Information related to climate change impacts and adaptation is to be reported separately as "adaptation communication"
Loss and damage	Consider providing information regarding loss and damage as part of the BTR

Source: Author's compilation based on various sources.

frequency, mismatch in sectoral details across different published documents, and the technology advancement required to measure emission factors at regular intervals across industries (Prasad & Gupta, 2019). An overview of the sectoral tables shows that India can report on industrial processes and product use; agriculture; land use, land-use change and forestry; and waste with some degree of flexibility. However, India would be required (with flexibility) to report consistent time series from 1990 and develop projections on GHG emissions of fifteen years for which it has no prior experience and would have to build capacity.

Due to the extensive reporting obligations required under the ETF and the lack of domestic MRV capacity, India will need more financial and technical support as compared to other countries to meet the reporting

requirements. Moreover, given its vast landscape and three-tier governance structure, it would be challenging for India to cover a larger area for reporting without adequate resources. Consequently, India will need dedicated technical and financial support to invest in the development of the requisite expertise and capacity to report on these elements.

5. Recommendations

Despite decades of cooperation under the UNFCCC, India and most developing countries are yet to build sustainable institutional and technical capacity to regularly communicate, share, and review their climate efforts. With their first BTRs due in 2024, the window to prepare for the transition from the current MRV requirements to the ETF is narrow. In this context, the following are key:

- First, developed countries need to provide targeted financial, technical, and capacity-building support for establishing a sustainable ETF mechanism in India. They should help in designing and implementing programmes that are scaled to meet reporting obligations by addressing acute MRV gaps between existing domestic arrangements and required capacities. On the other hand, India, along with other developing and least-developed countries, should develop a platform for wider stakeholder engagement for South-South cooperation to learn from each other's experiences as the experiences of the Global North may not be replicable to the domestic realities and capacities in the Global South. The focus should be to put institutional and knowledge capacities in place to allow seamless operationalisation of the ETF.

- Second, the Consultative Group of Experts (CGE)—the UNFCCC's official mandated body—also has a crucial role in supporting the transition. This includes the continuous provision of technical advice and support to India to fulfil its obligations. India should make use of existing tools to help the CGE understand its capacity constraints. For example, an enhanced transparency framework-capacity building tool (ETF-CBT) is currently being developed by the CEEW in partnership with the UNFCCC (CGE) to aid developing countries in reporting on climate change. This tool helps identify critical capacity needs and challenges, enabling the provision of commensurate resources (CEEW, 2022).

- Third, partnerships between different stakeholders, such as multilateral organisations, civil society, academia, and the private sector, must be explored to develop lasting practices and processes to enhance the capacity of individuals and institutions regularly to support India's efforts toward transparency and accountability. While multiple research institutions function in this policy landscape, there is little to no provision to ensure knowledge transfer between them.

Hence, inclusive mechanisms should be designed, across all levels of governance, that proactively engage all stakeholders and facilitate learning and knowledge transfer among them to standardise tasks and identify priorities for future improvement.

- Fourth, encourage non-party stakeholders to supplement India's efforts toward transparency and accountability. Non-governmental organisations could do so by improving data for reporting; conducting independent assessments for reviews; informing the global stocktake; and assessing the collaborative platforms and initiatives that were launched in parallel to the PA (Ghosh & Prasad, 2017). States should make the participation of non-party stakeholders a more formal and legitimate part of the new transparency mechanism. For their part, research and independent non-governmental organisations (RINGOs) should form a task force with the mandate to share practices, develop common standards, and support capacity building. Philanthropic foundations, the Capacity-building Initiative for Transparency (CBIT) Trust Fund, and host governments should provide financial assistance for this exercise, along with support from developed and developing countries (Ghosh, 2018).

Transparency is the backbone of the Paris Agreement that builds confidence in the multilateral process. The evidence-based knowledge that all countries are equally committed and working hard towards a common goal infuses the much-needed trust in the international system. These are some suggestions that can possibly play a meaningful role in supporting India and other developing countries in their transparency-related capacity-building journeys. Given the limited time left to reduce global emissions and achieve climate-resilient societies, efforts must be towards smarter, effective, and sustainable implementation of the ETF and related capacity building. This must be done through integrated efforts and with regular support from the developed countries.

References

Appunn, K. (2018). *Germany wants transparent global climate reporting to ensure trust.* Retrieved from Clean Energy Wire: https://www.cleanenergywire.org/news/germany-wants-transparent-global-climate-reporting-ensure-trust

CEEW. (2022, March 24). *UNFCCC and CEEW join hands to develop capacity-building tools for developing countries [Press release].* Retrieved from https://unfccc.int/news/unfccc-and-ceew-join-hands-to-develop-capacity-building-tools-for-developing-countries

Council on Energy, Environment and Water (CEEW). (n.d.). *Centre for Energy Finance.* Retrieved from https://www.ceew.in/cef/

Express News Service. (2022, December 3). *PAT success to boost energy conservation across industrial sector.* Retrieved from The New Indian Express: https://www.newindianexpress.com/states/andhra-pradesh/2022/dec/03/pat-success-to-boost-energy-conservation-across-industrial-sector-2524638.html

GHG Platform India. (n.d.). *GHG Platform India.* Retrieved from https://www.ghgplatform-india.org

Ghosh, A. (2018, December 3). *Living up to the deal: Expectations from COP-24.* Retrieved from Council on Energy, Environment and Water: https://www.ceew.in/sites/all/themes/ceew/images/CEEW_Press_Briefing_Living_up_to_the_deal_Expectations_from_COP_2403Dec18.pdf

Ghosh, A., & Prasad, S. (2017). *Shining the Light on Climate Action: The Role of Non-party Institutions.* Waterloo, Canada: Centre for International Governance Innovation.

Ministry of Environment, Forest and Climate Change. (2021). *India: Third biennial update report to the United Nations Framework Convention on Climate Change.* Retrieved from https://unfccc.int/sites/default/files/resource/INDIA_%20BUR-3_20.02.2021_High.pdf

Kulkarni, S., Sahasrabudhe, A., Chunekar, A., & Dixit, S. (2019). *About the Electricity Supply Monitoring Initiative (ESMI).* Retrieved from https://energy.prayaspune.org/our-work/article-and-blog/about-the-initiative

Ministry of Agriculture and Farmers Welfare. (2021). *Farmer's portal: One stop shop for farmers.* Retrieved from https://farmer.gov.in/

Ministry of Heavy Industries. (2022). *FAME India Scheme Phase II.* Retrieved from https://fame2.heavyindustries.gov.in

Ministry of Housing and Urban Affairs. (n.d.). *Swachh Bharat Mission Urban.* Retrieved from http://sbmurban.org

Ministry of Jal Shakti. (n.d.). *Swachh Bharat Mission - Gramin.* Retrieved from https://swachhbharatmission.gov.in/sbmcms/index.htm

NITI Aayog. (2022). *SDG India: Index and dashboard.* Retrieved from https://sdgindiaindex.niti.gov.in/#/

Prasad, S., & Gupta, V. (2019). *A capacity building assessment matrix for enhanced transparency in climate reporting.* Retrieved from https://www.ceew.in/publications/capacity-building-assessment-matrix-enhanced-transparency-climate-reporting

Third World Network. (2016, May 25). *North-south divide over transparency framework in the Paris Agreement[News update].* Retrieved from https://www.twn.my/title2/climate/news/Bonn18/TWN_update11.pdf

Initiative for Climate Action Transparency. (2019). *Unfolding the reporting requirements for developing countries under the Paris Agreement's Enhanced Transparency Framework.* Copenhagen: UNEP DTU Partnerships. Retrieved from https://climateactiontransparency.org/wp-content/uploads/2019/11/ICAT-MPGs-publication-final.pdf

United Nations Framework Convention on Climate Change (UNFCCC). (2011). *Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010.* Retrieved from https://unfccc.int/sites/default/files/resource/docs/2010/cop16/eng/07a01.pdf

UNFCCC. (2012). *Report of the Conference of the Parties on its seventeenth session, held in Durban from 28 November to 11 December 2011.* Retrieved from https://unfccc.int/sites/default/files/resource/docs/2011/cop17/eng/09a01.pdf

UNFCCC. (2016). *Report of the Conference of the Parties on its twenty-first session, held in Paris from 30 November to 13 December 2015.* Retrieved from https://unfccc.int/resource/docs/2015/cop21/eng/10a01.pdf

UNFCCC. (2019). *Report of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on the third part of*

its first session, held in Katowice from 2 to 15 December 2018. Retrieved from https://unfccc.int/documents/193407

UNFCCC. (2021). *Report of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on its on its third session, held in Glasgow from 31 October to 13 November 2021.* Retrieved from https://unfccc.int/sites/default/files/resource/cma2021_10_add1_adv.pdf

UNFCCC. (2023). *Biennial update report submissions from non-annex I parties.* Retrieved from https://unfccc.int/BURs

UNFCCC Secretariat. (2022). *Sharm el-Sheikh Climate Change Conference - November 2022.* Retrieved from https://unfccc.int/cop27