Accelerating Private Capital to Overcome Climate Finance Gap in India

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Introduction

According to climate experts, a 3.2°C increase in global temperatures might result in an 18 percent decline in global GDP. This would result in more frequent and severe floods in coastal areas, which would put countless lives in danger and have the potential to cost trillions of dollars in damages.[1] Good intentions alone won't be enough to stop climate change. To prevent the world from getting worse over the next few decades, adaptation and mitigation procedures need funding, which can come from both public and private sources.

Climate finance is "finance that aims at reducing emissions and enhancing sinks of greenhouse gases and aims at reducing the vulnerability of and maintaining and increasing the resilience of human and ecological systems to negative climate change impacts", as defined by the United Nations Framework Convention on Climate Change (UNFCCC) Standing Committee on Finance.

The Conference of Parties (COP) to the UNFCCC held its 21st session in Paris in 2015, ushering in a new era for climate financing, policies, and markets. By limiting global warming to well below 2°C over pre-industrial levels, the Paris Agreement has set a worldwide action plan to put the world on track to avert disastrous climate change. It comprises funding for initiatives and programmes aimed at reducing greenhouse gas emissions that are channelled through national, regional, and international organisations. To encourage and facilitate the shift towards low-carbon, climate-resilient growth and development through capacity building, research and development, and economic development, they include climate-specific support mechanisms and financial aid for mitigation and adaptation efforts.

The Paris Agreement and the accomplishment of its long-term objectives are centred on Nationally Determined Contributions (NDCs). NDCs represent each country's efforts to reduce carbon emissions at a national level and prepare for the effects of climate change. Each Party shall prepare, communicate, and maintain consecutive NDCs that it seeks to achieve as per Article 4, Paragraph 2, of the Paris Agreement.

The UNFCCC received India's Intended Nationally Determined Contribution (NDC) on October 2, 2015. The proposed programme was euphemistically referred to as "Panchamrita," which is Hindi for "five ambrosia," by Shri Narendra Modi, Prime Minister of India. India has committed to cut its GDP's emissions intensity by 45 percent from 2005 levels by 2030 and to install around 50 percent of its installed capacity for non-fossil fuel-based energy sources. However, concerns have arisen whether India would be able to adequately finance the ambitious climate action plan under its NDC given that financial flows are straggling not only in India but in all emerging and developing nations.

[1] "World economy set to lose up to 18% GDP from climate change if no action taken, reveals Swiss Re Institute's stress-test analysis."

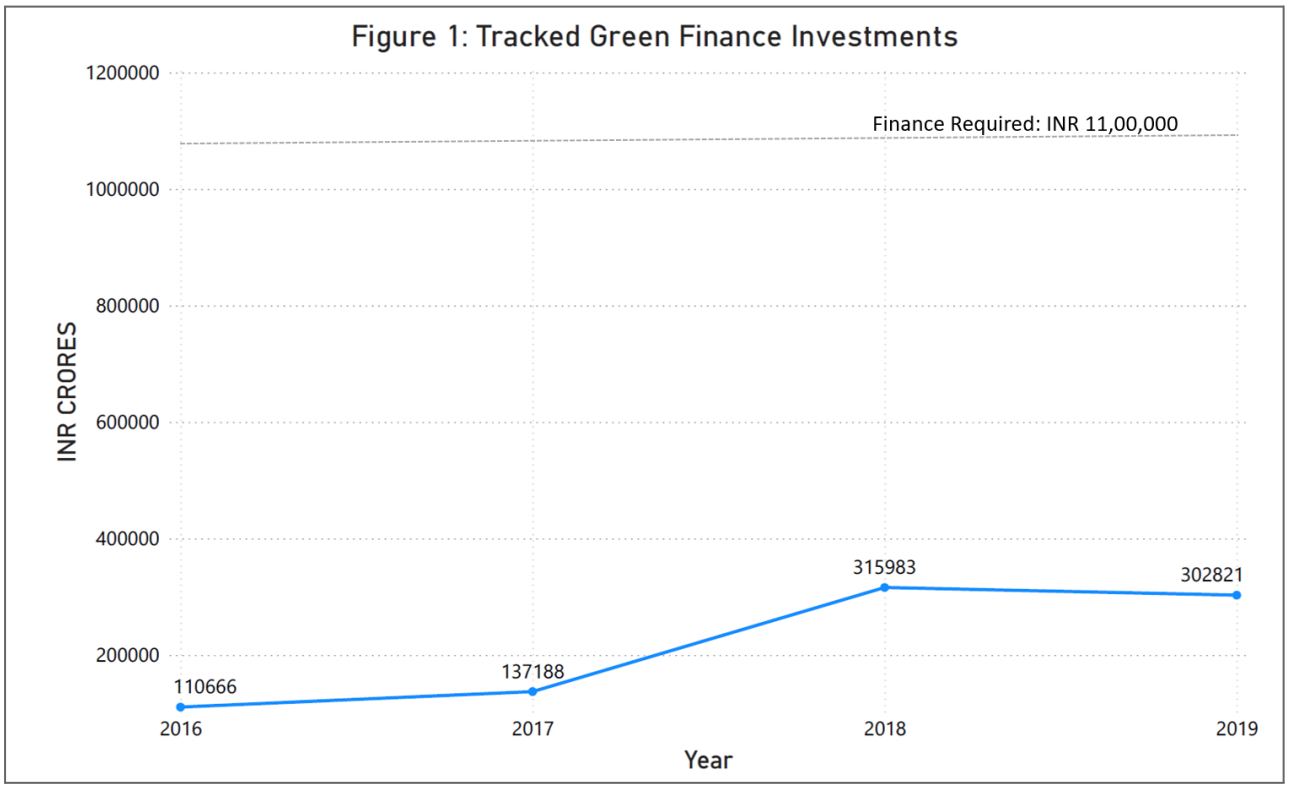
Understanding the Climate Finance Ecosystem in India

Given its extensive coastline, agriculture's reliance on the monsoon, and sizable agrarian economy, India is regarded as one of the world's most climate change-vulnerable nations. India's cumulative contribution to global emissions is under 4 percent (until 2019), and its per-capita emission is significantly lower than the global average. But the fact that climate change is a global phenomenon and requires collective efforts has been widely accepted and is the basis of the commitments made by India to pursue the goal of sustainable development. Through its NDCs, which include a comprehensive plan for global renewable energy transitions, it leads one of the strongest climate efforts. Despite the adverse impacts of the Covid-19 pandemic on the economy, the country has strengthened its climate ambition manifold and embarked on a long-term strategy towards a low GHG emission-based development. India has demonstrated leadership on a global level in the fight against climate change and pledged to achieve net-zero emissions by the year 2070.

Box 1: India's updated Nationally Determined Contribution (NDC)
1. To put forward and further propagate a healthy and sustainable way of living based on traditions and values of conservation and moderation, including through a mass movement for 'LiFE'– 'Lifestyle for Environment' as a key to combating climate change. 2. To adopt a climate friendly and a cleaner path than the one followed hitherto by others at corresponding level of economic development. 3. To reduce Emissions Intensity of its GDP by 45 percent by 2030, from 2005 level. 4. To achieve about 50 percent 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 Green Climate Fund (GCF). 5. To create an additional carbon sink of 2.5 to 3 billion tonnes of CO2 equivalent through additional forest and tree cover by 2030. 6. To better adapt to climate change by enhancing investments in development programmes in sectors vulnerable to climate change, particularly agriculture, water resources, Himalayan region, coastal regions, health and disaster management. 7. To mobilise 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. 8. 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.

However, India's climate finance flows are far insufficient to meet the nation's current needs. The amount of tracked green finance in 2019/2020 was ₹ 309 thousand crores (about USD 44 billion) a year, or around 14 percent of India's demands.

According to estimates, India will need about ₹ 162.5 lakh crores (USD 2.5 trillion) between 2015 and 2030, or nearly ₹ 11 lakh crores (USD 170 billion) per year, to achieve its Nationally Determined Contributions (NDCs) committed under the Paris Agreement. The amount of climate finance flows significantly increased from 2016 to 2018, with the public sector's share of contribution increasing more than that of the private sector. This indicates increased commitment from public sources – both domestic and international. The mobilisation of private sector finance must, however, surpass that of the public sector in the years to come given the amount of need and ambition.

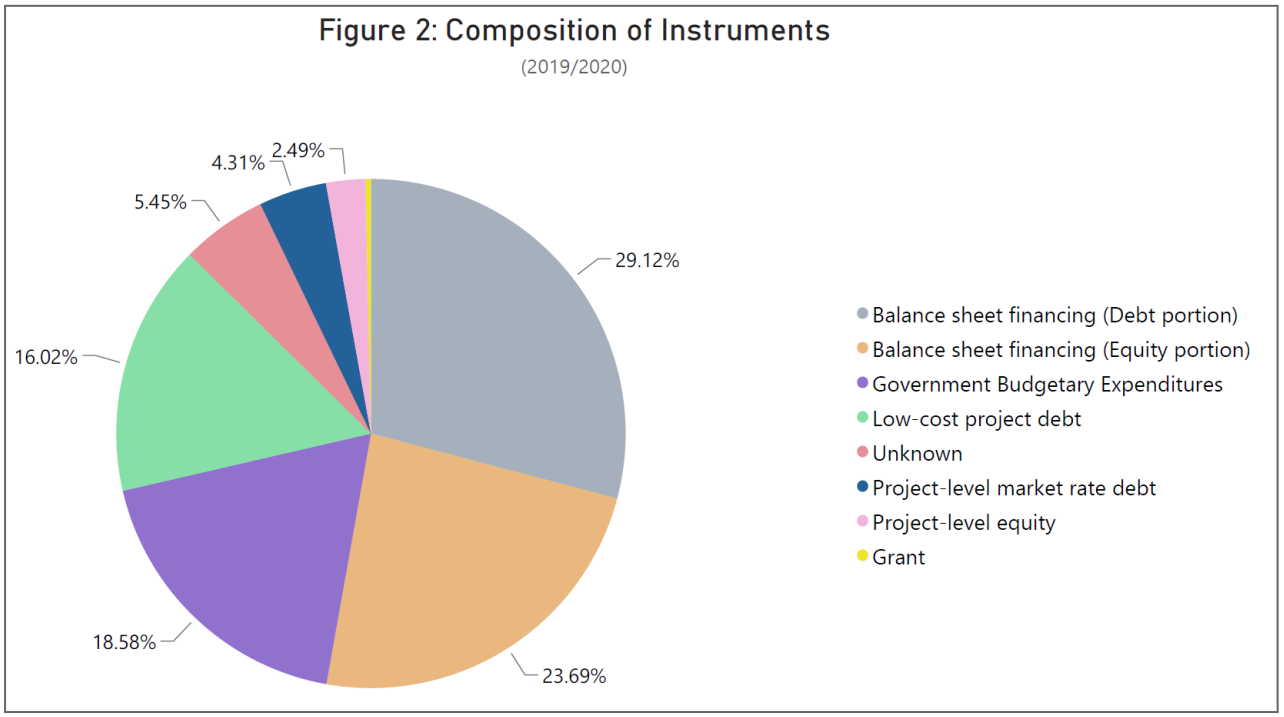


Source: Landscape of Green Finance in India 2022. Climate Policy Initiative

It's important to note that while domestic flows, and hence overall flows, to climate finance in India declined from 2019 to 2020 by 4 percent, there was an increase in flows from overseas sources of almost 27 percent.

Composition of Climate Finance Instruments

The major financial instrument used to channel climate investment has been debt, through project or corporate finance, at an average of ₹ 152 thousand crores (USD 43 billion) every year during 2019 and 2020. It made up 49 percent of the total tracked climate finance, which shows that financiers have faith in the projects being carried out.



Source: Landscape of Green Finance in India 2022. Climate Policy Initiative

Debt can play a huge role in accelerating finance given the limited time and huge quantum of finance required, what is now required is shift towards capital markets to boost liquidity and recirculate capital through securitisation. Huge opportunities lie in the bond market, the introduction of Sovereign Green Bonds by Union Budget 2022-23 recognises the need for a comprehensive green bond market and creating an environment for the same. The Sovereign Green Bonds framework of India is analysed in this paper further.

Importance of public sector undertakings in India's green journey

PSUs are companies and other entities in which the Government of India or State Governments have a financial or controlling interest. The purpose of establishing these businesses is to guarantee independent economic expansion.

PSUs are crucial distribution points for monies from the federal and state governments, bond markets, and international aid organisations. They themselves are important sources of green financing.

Flows from outside sources grew despite a 4 percent overall decline, demonstrating increasing confidence in India's strategy for achieving its NDCs.

Role of Private Capital

Insufficient funding for climate projects and ignored commitments of cooperation from the developed world continue to harm climate action. Therefore, private finance will need to play a

bigger part as developing economies work to both reduce their own greenhouse gas emissions and prepare for the effects of climate change. India has a strong and developed financial system, and in the past three years, the services industry has grown the most, thanks to the expansion of the banking, insurance, real estate, and business services sectors. Commercial banks, which account for over 60 percent of the financial system's total assets, dominate the financial sector. The insurance industry comes in second. Increased low-carbon investments have a lot of potential because of India's developed finance industry and its entrepreneurial business and industrial sector.

Over the past ten years, actions relating to India's mitigation and adaptation to climate change have been greatly aided by international finance. The national activities currently being carried out have made use of the financing, implementation, operation, and maintenance lessons learned through international sponsored pilots, programmes, and credit lines. India's climate and development ambitions require international financing now more than ever. Investment in renewable energy in India has accelerated thanks to the large part contributed by the private sector. Corporate entities and businesses have increased investment, supported by both domestic and foreign strategic investors. For India's dispersed and decentralised renewable energy generation, international financing flows may be crucial.

Table 1: Role of Private Institutions in Climate Finance

Private Institution	**Role of the Institution**
Venture Capital, Private Equity (domestic and overseas), Corporate Debt	Market entry support, Market upscaling, R&D
Indian Banks	Debt financing, Non-recourse project finance, Innovative finance
Multilateral Funding Channels	Payment guarantees, Capacity building (esp. due diligence), R&D
International Financial Investors	Private Equity, Non-recourse finance

Climate Finance Gap in India and Impact on SDGs

India lacks a significant amount of sustainable finance and it must be scaled up. The majority of funding flows went to industries including power transmission, energy efficiency, renewable energy, and sustainable transportation, including MRT and electric automobiles. According to a Standard Chartered report, the total investment required to achieve the UN's Sustainable Development Goals (SDGs) of USD 2.64 trillion[2]. India continues to score in the bottom end of the Global

[2] "India needs $2.64 tn investment to meet SDGs by 2030: Report", Economic Times

Hunger Index despite its social efforts, as evidenced by its ranking of 107th out of 121 countries in 2022—below nations like Bangladesh, Pakistan, and Myanmar. India ranked 126th out of 137 nations in the UN's World Happiness Report, which considers characteristics like social support, life expectancy, and GDP per capita. The nation performed poorly on the Human Development Index as well, ranking 132nd out of 192 nations. How quickly and effectively emerging nations like India address these issues while maintaining economic growth will determine the success of the SDGs and climate targets. For a smooth transition to a low-carbon and resilient global economy, cooperation is urgently required to ensure that appropriate long-term financing is given in a timely and consistent manner.

As much as 95 percent less was spent on solar and wind energy production in the last ten years alone. The tariff on wind and solar energy in India is already less than that of traditional coal-based energy. The viability of battery technology for storage and electric cars is also rising. Investors in green industries are already witnessing rising financial returns. Even so, private investors favour investing in climate initiatives in industrialised economies rather than emerging ones. An excellent illustration of this is ESG investment, which grew by 35 percent between 2018 and 2022 and now accounts for more than a third of all assets managed globally. Private investors still perceive developing economies like India as riskier investments due to specific beliefs, despite increasing returns and relatively huge markets. The lack of visibility for shovel-ready projects, inadequate reporting requirements and data limitations, large subsidies for fossil fuels, currency concerns, and uncertainty over future climate policies are some of the frequently stated problems. Banks have plenty of liquidity, but they are wary about expanding into new markets and offering long-term debt due to the significant risk involved. The cost of finance for green developers in developing countries is high due to this risk aversion.

Barriers to Private Climate Finance

Mobilising green capital under the current global climate finance system is a difficult task for an emerging economy like India. The major barriers that hinder climate finance mobilisation are discussed below:

1. **Information Asymmetry**

   The absence of uniform taxonomies and data disclosure standards, significant data gaps, and poor categorisation for sustainable investment are significant barriers to the private sector's participation in climate finance. The identification of domestic financial shortfalls and a detailed comprehension of climate finance requirements are further hindered by the lack of data. Given the inherent uncertainties in the process, estimating the timing, frequency, and severity of climate-related occurrences is a difficult task. Although there has been substantial progress made globally in creating scenarios and future-focused methods for estimating climate risks and hazards, it is difficult to estimate climatic events and their

financial impact due to the need for historical data and the unpredictability of climate change.

In India, tracking climate financing is difficult because no coordinated attempt has been made to create a system in this area. The availability, reliability, and robustness of investment data on the public and private sectors are major challenges for tracking climate finance.

2. **Managing risk while ensuring acceleration of climate finance**

Focusing on two main goals—increasing climate finance and managing climate-related risks that affect financial risk—is essential to the transition to a sustainable economy. Targeting both of these goals, though, can lead to a dilemma. As green loans and assets are now "perceived" to be of inferior credit quality, if we attempt to boost climate finance by policy and regulation, it tends to increase total financial risk. Therefore, increasing climate finance may result in a greater total credit risk profile, both at the level of the individual bank and at the macro-prudential level. On the other hand, if we concentrate on managing financial risks through climate policy and regulation, we can wind up decreasing climate finance flows since the 'perceived' higher risk of green loans and assets will result in a higher cost of capital. To resolve this possible conundrum, a delicate balance must be struck. In developing countries, private financiers face a different set of risks that discourage them from investing in various projects. Emerging nations are typically associated with high political and regulatory risks, including inconsistent rules or regulations that may negatively affect investments in infrastructure. The pandemic brought back risks connected to India's macroeconomic environment. Macroeconomic risks include significant debt vulnerabilities, foreign-exchange and liquidity risks, among others. Additionally, technical risks such as a lack of managerial and operating expertise add to the barriers to private players investing in climate-resilient initiatives.

3. **Institutional and Policy-level Complicacies and Uncertainties**

The political environment of the nation interprets the concept of cooperative federalism as requiring effective and ongoing coordination between various political institutions, such as the central government and state governments, to raise the necessary funds. As a result, there is a certain amount of uncertainty because provincial governments as well as the central government make investment decisions. This implies there is market segmentation within the nation, and both domestic and foreign investors rarely view India as a unified market. Due to this market segmentation, the investment market is volatile and short-term, which encourages investors to act opportunistically. Along with the aforementioned, policy-level concerns also cause investors to be sceptical, which makes banks hesitant to offer the necessary financing for the sector. Risks produce a great deal of uncertainty, which further complicates the availability of necessary financing.

4. **High cost Debt and inadequate Long-term Financing**

   Another major hindrance that has always existed in the Indian economy is the high cost of debt due to high-interest rates, short debt tenures, and lack of non-recourse debt compared to other countries. This ultimately makes investing in climate projects a less lucrative option for investors. Long-term financing is essential to meet the sector's financial needs, but it continues to be inadequate and poorly organised. For instance, the domestic bond market is at a very nascent stage and poorly designed. Investors have a propensity to place their money in low-risk bonds with high ratings, such as government bonds, AAA-rated bonds, or other low-risk investment alternatives. Thus if the government wants to go global to raise funds, India must focus on improving its credit rating as all bonds issued globally are closely linked to the credit rating of the issuing country.

India's Effort: Financial and Banking Sector at the Forefront

The atmosphere around the worldwide effort to tackle climate change has undergone significant changes since the 2015 Paris Agreement. India's commitment in Paris marked a dramatic departure from its customary strategy in international climate negotiations and revealed a fresh sense of hope for the nation's future growth and global standing. Since then, political leaders at the national and state levels have concluded that funding the green transition could rekindle the economic growth momentum that has been missing for some time. For the growth of climate finance, the Indian financial sector, particularly the banking sector, has been at the fore.

1. **SEBI mandated Business Responsibility and Sustainability Reporting**

   In response to the changes internationally, the Securities and Exchange Board of India (SEBI) established new guidelines for listed businesses' sustainability reporting as part of its ongoing efforts to improve disclosures on ESG criteria. The new reporting mandate is called Business Responsibility and Sustainability Report (BRSR) and it aims to establish links between a company's financial performance and its ESG performance. This can make it simpler for regulators, investors, and other stakeholders to assess the overall stability, growth, and sustainability of an organisation (up to now based solely on financial disclosures). From FY 2022–2023, the top 1,000 listed businesses (by market capitalisation) must comply with SEBI's mandate that the BRSR be in effect. The BRSR framework's disclosures would encourage green financing and assist banks and financial institutions in determining their exposure to these listed companies in terms of climate change.

2. **Sustainable finance instruments**

   In the sustainable finance sector, the Sustainability-Linked Bonds and Sustainability Linked Loans (SLBs and SLLs) markets have experienced rapid global growth over the last

three years. Sustainable financial instruments, such as sustainability-linked loans, have also been introduced in India. The Liberalised External Commercial Borrowings (ECB) framework has also made it possible for Indian companies to raise finance from abroad through green bonds, social bonds, and sustainability-related bonds. India's issuance of sustainable debt increased significantly throughout 2021, putting it in second place among emerging countries in terms of cumulative Green Bond Issuances, in keeping with global trends.[3]

a. Sustainability Linked Loans

With SLL loans, the borrower's sustainability performance is connected to an economic outcome. For instance, the interest on the loan will be lower if the borrower satisfies specific ESG goals designed for that business. The scope for flexibility is greater in SLL since they are often formulated as revolving credit facilities for general corporate purposes and don't require details of the proceeds when borrowing. The lack of any predefined eligible project gives ample flexibility in fund deployment. This is one of the prime factors responsible for the rapid growth of SLLs. Though SLLs give more flexibility, it is important that SLLs still lead a positive impact on the ESG initiative. Lenders are therefore eager to assess compliance, but SLL-related credit policies and environmental risk assessments are still being developed.

b. Green Bonds

Green bonds are financial instruments that produce income for projects that promote environmental and climatically appropriate development. Due to the increased attention being paid to the environmental sustainability of projects, Green bonds have gained popularity as a means of financing climate and environmental projects and command a considerably lower cost of capital than conventional bonds. Large energy corporations dominate the Indian green bonds issuers are heavily concentrated in the energy industry and use the revenues to fund renewable energy projects, particularly solar. The Government of India joined the Sovereign Green Bonds Club in early 2023 with the first issuance by the Ministry of Finance totalling a price of ₹ 80 billion (USD 1 billion two-tranche deal split equally between five and ten-year tenors), proceeds from which will go towards projects that meet India's decarbonisation targets. The debut green bond performed better than expected by accumulating an oversubscription of more than four times and both tranches achieved a greenium, i.e., cheaper financing costs.[4] But a huge bulk was picked up by domestic banks and insurance companies, and international investors continue to be wary of currency risk associated with the rupee currency. The evidence so far points out that green bonds are an essential

[3] Emerging Markets Green Bonds Report 2021, published by the IFC.
[4] "India's debut in the sovereign green bond market: first deal landed a greenium!"

long-term instrument that could reduce financing costs, increase access to capital, address asset-liability mismatch, and mitigate risk.

3. **Trading away climate change with the Energy Conservation (Amendment) Bill, 2022**

   By implementing a carbon credit mechanism, the Energy Conservation (Amendment) Bill aims to limit carbon emissions and consumption by large customers. The large users will receive carbon credits if they exceed expectations and obtain more of their energy needs from such greener sources of energy. If companies fall short of their goals or are unable to reach them, they will be penalised or forced to purchase carbon credits to make up for it. Carbon credits are widely exported from India. A research by S&P Global reported that 278 million credits were issued in the voluntary carbon markets in the period between 2010 and 2022, making about 17 percent of the global supply.[5] With the current push from the Ministry of Power, which published a draft of the Carbon Credit Trading Scheme (CCTS), India's carbon market is starting to take shape. Mobilising finance from the developed world to transition towards a low-carbon economy is difficult, but carbon trading offers opportunities to overcome this challenge. The Bureau of Energy Efficiency (BEE) envisages giving the domestic carbon market a concrete shape by June 2023.

Role of G20 in Accelerating Climate Finance in India

India's participation has always been vital in the G20 as India is one of the major emerging economies which can not be overlooked given its stake in the stability of the international economic and financial system. India's agenda has always been very clear– the need to bring inclusivity in the financial system of the group and avoid protectionist tendencies and ensure that the growth prospects of developing countries do not suffer in the process. This can be verified by India's welcome to the inclusion of development as an agenda item which was proposed at Seoul.
India has assumed the Presidency of the G20 for one year from 01 December 2022 to 30 November 2023 and this is expected to be a turning point for further expanding India's global influence and reaffirming its support for a global order characterised by shared peace and prosperity. The G20 Presidency for India is a watershed moment, it offers an unprecedented opportunity for convergence with the nineteen highly significant countries in trade terms. The main goals of the G20 are to maintain sovereign debt and ensure global financial stability.
The India's G20 Presidency would guide the discussion of the G20 under the theme of - "Vasudhaiva Kutumbakam (वसुधैव कुटुम्बकम्)" or "One Earth · One Family · One Future" which is drawn from the Sanskrit phrase that appears in the Maha Upanishad, it means "The World Is One Family" and thus encapsulates India's commitment to inclusivity. It highlights the importance of all life—human, animal, plant, and microorganism—as well as their interdependence on Earth and across the universe.

[5] "India works on market stabilisation fund details for upcoming carbon market."

G20 India has put forth six agenda priorities for the G20 dialogue in 2023[6]:-

1. Green Development, Climate Finance & LiFE
2. Accelerated, Inclusive & Resilient Growth
3. Accelerating progress on SDGs
4. Technological Transformation & Digital Public Infrastructure
5. Multilateral Institutions for the 21st century
6. Women-led development

The agenda themes under the summit hold the opportunity to provide advantages for India: such as, catalyse the country's financial sector progress along with the progress being made at the global level, enhancing bilateral and multilateral relations to create a global financial framework that works towards climate action, and to broker breakthroughs in building architecture for sustainable finance.

Markets can be changed by well-formulated public policies, which can include, among other things, fiscal spending, subsidies, monetary policies, financial regulations, carbon pricing, and carbon markets. The G20 is attempting to comprehend the effects of various policy levers and their potential to encourage sustainable investment. This discussion proves to be opportune to India, which has launched multiple initiatives for sustainable finance such as Sovereign Green Bonds and envisages introducing a cap and trade carbon emission system. The topics that will be discussed at the G20 should be viewed as a chance to bring about long-lasting improvements in the world financial system and address the most difficult situation humanity has ever encountered—a global climate crisis. History has demonstrated how well-positioned the G20 is to press for changes to the financial system. At the very least, there is still a crucial chance to encourage India's position in addressing the issues that lead to climate financing gaps and solutions to hindrances of mobilisation of funds to emerging economies and developing nations.

Recommendations

Despite the poor behaviour and failed pledges by the developed economies in terms of funding for climate action, India remains committed to the cause of global climate change. It has made many efforts to go green as the country with the second-largest population, the economy with the highest rate of growth, and the third-largest emitter in the world. It requires firm policy, robust regulation, and supportive investment markets to make such a change possible. Although climate finance flows have significantly increased, it still falls short of India's finance requirements. To guarantee that India reaches the Panchamrit goals, climate funding flows must accelerate. To generate climate finance and close the present investment gap, it is urgently important to concentrate on creating favourable policy and regulatory environments in India due to its sensitivity to climate change.

[6] Overview of G20

1. **Private Sector Investment:**

    a. Framework: The issue with private sector investment is a result of **political and policy unpredictability and uncertainty**. The private sector lacks the required short- to medium-term investment incentives as well as adequate **long-term market visibility**. Innovative financial tools and replicable financial arrangements will be crucial in attracting private sector funding, but they cannot replace governments' long-term political commitment or "investment-grade" regulatory and legislative frameworks. The most important factors to encourage private sector investment can be divided into two groups: **sending the proper economic signals** and **lowering investor risk**.

    b. Engagement of Private Sector in National/Regional Plans: In India, there has been little engagement with the business sector when developing plans and strategies for combating climate change. The most recent National Climate initiative–the **'Smart Cities Initiative'** had an **extensive involvement of the private sector**, thus can be taken as a positive step and an ideal model for private sector involvement in climate programs. Apart from the participation of private firms in national plans, the **government can engage in discussions of private enterprise's plans and projects**, this will not only help them with improving efficiency and accelerating innovation but also **create confidence** and **certainty** in the climate business environment. The government can also bring companies together to **exchange information** and create greater **industrial harmony** of green initiatives.

    c. Mobilising Private Climate Finance: Accelerating private capital should be India's top priority. India needs to understand that the shift in the climate gives it a chance to advance from obsolete technologies to modern ones. If India concentrates on it and immediately adopts supporting policy frameworks, it has the chance to create many trillion-dollar climate enterprises. If India wishes to be a true leader in this new economic revolution, it will be essential to take early action to create **leadership in emerging climate technology**. To enable transitions to happen quickly, the nation must create enabling policies in each of the major subsectors. Take, for instance, the National Green Hydrogen Mission, which has encouraged Indian corporations to invest in green hydrogen capacity at roughly the same time as others around the world are doing so. The quicker these transitions, the better opportunities for **first-mover advantage**. If actions are not taken, India would continue to be an importer of licensed climate technology which will come at a really high cost. In 2014, Indonesia became the world's first nation to have implemented a climate finance tracking and reporting system which makes use of national-level data on government spending, foreign aid and donor investments.

By 2022, Indonesia became one of the largest recipients of climate funds from the Global Environment Facility (GEF). [7]

2. **Accelerating finance from International Sources:**

International institutes also play an important role since **multilateral development banks (MDB) have increased their contributions to climate finance**. Smt Nirmala Sitharaman, the finance minister of India, has similarly made use of her country's G20 presidency to highlight MDB reforms in order to provide more concessional financing for developing countries like India while taking the lead in global coordination for debt restructuring. To prioritise MDB reform, India must make use of its bilateral relationships with important participants in these institutions, such as the US and the EU. It is important to take advantage of bilateral initiatives like the U.S.-India Climate Action and Finance Mobilisation Dialogue. These institutions can help to **bring down risks and costs by establishing multi-sovereign loan guarantees**. But India should **ensure regulations and standards are in place** which would make projects compliant with global standards of climate risk disclosure. Indonesia's presidency over G20 in 2022 turned out to be a monumental success for Climate Finance given that it launched the Just Energy Transition Partnership (JETP) in partnership with nations like the UK, Japan, USA, with the potential of scaling up to USD 20 billion worth of grants and concessional loans to accelerate coal phase-out and renewable energy investment. Indonesia had been taking steps towards laying strong foundations for accelerating green finance by launching its own Green Taxonomy, India too can take lessons and improve its preparedness.

3. **Defining a National Green Taxonomy:**

A Survey on Climate Risk and Sustainable Finance by RBI pointed out how the Indian financial stakeholders, especially the banks, have been very slow to take into account the climate risks and the need for financing climate action.[8] But all is not lost yet, Bankers have a strong grasp of risks, particularly those that are identified and quantified by regulatory authorities. Thus, RBI could bring a paradigm by **defining what constitutes "green risk"**. Agreement on definitions, terminology, measures, and units as well as the resolution of differences is one of the fundamental components of a financial system. India needs its own **green taxonomy** despite the fact that there are several of them in the world with various levels of misunderstanding and criticism. Cultural nuances, geographical concerns, market knowledge, a scientific mindset, and the capacity for simplification must all be taken into account. India can only access international climate funding with the aid of a sharply focused taxonomy. Globally, investors rely on green taxonomies for their financial decisions. Both green-washing and green-shaming are things they are wary about. A clear green taxonomy can **provide information symmetry** and **prevent the proliferation of**

[7] "Indonesia to Receive Largest Amount of GEF's Climate Finance Funds", Earth Journalism Network, November 2022
[8] Report of the Survey on Climate Risk and Sustainable Finance, July 2022

commercial interpretations of green. While framing India's own green taxonomy, it is essential to realise the sensibilities with which taxonomies around the world have been designed so as to ensure that it does not hinder financial flows (for example, green bond trading to the EU being ineligible due to EU's green taxonomy being different).

4. **Improving Sovereign Green Bonds Framework:**

The Sovereign Green Bonds structure was rated "Medium Green' and deemed to be sound by CICERO, although not without flaws.[9] It was discovered that although the framework specified that the Green Finance Working Committee (GFWC) will take vulnerability to physical climate change risks into account, it did not make clear how this cross-cutting consideration would be carried out. Therefore, it is **necessary to outline the screening criteria for climate resilience** that will be applied to project selection. The addition of CNG raises additional concerns and may deter investors. If low-emission transitional assets must be included, brown bonds or transition bonds rather than green bonds should be issued.

5. **Carbon Tax:**

India has employed a variety of fuel pricing strategies, including subsidies and administered market pricing, but the effectiveness of the policy tools is undermined by lax enforcement and, in particular, by low prices. The cost of fuels, the tax rate, and whether or not they are covered by the GST is not based on the carbon content or emission rate but rather on social, political, and financial factors. By establishing **a uniform tax rate and an additional levy based on the amount of carbon emissions** instead of usage, the GST legal framework creates a solid foundation for addressing these anomalies and including all fossil fuels within its purview. An **incremental carbon tax** will increase tax receipts, boost the tax-to-GDP ratio, and raise more money that may be used to reduce the tax burden on low-income groups and to support bigger expenditures in environmental and green programmes. Both advancing energy-efficient technology and enhancing public transport are priorities in Mexico. **Political communication** becomes a key tool to increase wider acceptance and drive compliance when efficiency and equity considerations are incorporated into the tax design. In Australia, the lack of political communication resulted in the abolition of the carbon tax in 2012, two years after it was first implemented.

6. **Cap-and-Trade System:**

Emission Trading System (ETS) pilots with the goal of lowering particulates have already been tested in India, and the results are encouraging. The first ETS programme for particulate matter (PM10) was introduced in Gujarat by the Gujarat Pollution Control Board (GPCB) in 2019. Based on these encouraging results, the Bureau of Energy

[9] Government of India, Green Bond Second Opinion, by CICERO, 28 October 2022

Efficiency (BEE) has introduced a **draft blueprint** for a national **Cap-and-Trade system**. The system is closely structured like the Emissions Trading System of the European Union (EU ETS). Subject to the economy's growth pace, the cap should seek to **set goals that are moderately aggressive in terms of absolute aims or the intensity of emissions per unit of GDP**. Setting goals for specific time periods might help industries plan for transitions in advance. Emission allowances can be freely distributed, with **a small percentage set aside to auction** in order to lay the groundwork for gradually raising the latter's share over time. Similar models are followed by many developing nations, such as Korea, where businesses in sub-sectors that are subject to auctioning are given free allocations of 90 percent or fewer allowances, and 100 percent for Emissions Intensive Trade Exposed industries (EITE) sectors.

Conclusion

India's challenge is to find ways to balance the demands of credit expansion, economic growth, and social development while also incorporating climate risk and ESG-related considerations into commercial lending and investment decisions. The Indian economy is at a stage where we need to grow quickly. Building on our early successes and tackling the difficulties of climate change would be greatly aided by collective engagement. The flow of funds from developed nations has been limited and they cite reasons of their own domestic pressures, India's stance on this is that Western developed nations have a greater responsibility to climate funding given their historical contribution to carbon emission. India has fervently supported the idea of "common but differentiated responsibilities and respective capabilities," according to which wealthy countries bear a greater share of the burden of mitigating climate change than underdeveloped ones. But India cannot afford to put off making investments in its own climate change. India must acknowledge that private sector resource mobilisation is the key to the answer even as it continues to put pressure on Western governments to uphold their moral and financial obligations.

Given its distinct economic and social conditions, India should not feel pressured to emulate or adopt Western policy frameworks, policies that reflect the Indian experience should be implemented in order to realise the national climate targets.

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