



## CLIMATE FINANCE AND INDIA

**Simran Sethi**

Assistant Professor, Department of Economics, Hansraj College, University of Delhi

E-mail: [simran.dse@gmail.com](mailto:simran.dse@gmail.com)

### ABSTRACT

This paper explores the critical role of climate finance in achieving global climate change mitigation, resilience, and adaptation goals. It highlights the global context of climate finance and emphasizes the need for significant financial resources to combat climate change impacts. The paper discusses global trends in climate and sustainable finance and then delves into the challenges faced by India in mobilizing sufficient climate finance, particularly the gap between required funding and current levels. The importance of developing an ecosystem comprising of policy and regulatory interventions, national climate finance taxonomy, financing instruments etc. - drawing inspiration from successful examples in the European Union, Philippines, and Malaysia - is a much-needed step for India. Such measures would provide clear definitions, prevent greenwashing, and facilitate the flow of funds towards climate-aligned activities. The paper then outlines key recommendations for India to unlock larger-scale green and climate finance. The paper concludes by advocating for the adoption of a climate finance taxonomy as a foundational step towards a robust policy framework for climate and sustainable finance in India.

**Keywords:** *Climate change, Climate and Sustainable Finance, Green Finance, Climate Finance Taxonomy*

### INTRODUCTION

Climate finance refers to a broad spectrum of financial funds and resources that are utilized for the purpose of progressing towards climate change mitigation, resilience, or adaptation. Such financial resources could be either public or private money and channelized through governments, development organizations, multi-lateral development banks, or the private sector. Based on its end-use, climate finance is usually categorized into financing for (a) climate change mitigation – which is primarily utilized to reduce carbon emissions, and (b) climate adaptation – used for financing responses to results of climate change.

The United Nations Framework Convention on Climate Change (UNFCCC) Standing Committee on Finance defines climate finance as "finance that aims at reducing emissions, and enhancing sinks of greenhouse gases and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts". The UNFCCC, established in March 1994, now has 198 countries as its members which have ratified the Convention. The types of climate finance range from multilateral climate funds managed by one or more national governments to funding provided by multilateral and bilateral development banks which support governments' social and economic initiatives mainly in the developing countries, as well as domestic public and private climate finance.



The multilateral climate funds are coordinated by the UNFCC and governed by national governments and comprise of the five main funds – the Green Climate Fund, the Adaptation Fund, the Least Developed Countries Fund, the Special Climate Change Fund, and the Global Environment Facility. The bilateral and multilateral development banks such as the World Bank, the Asian Development Bank etc. are another important source of climate finance and aim to utilize their funds towards financing investments and strategies aligned towards achieving the countries’ climate goals. Recently, these development banks have further streamlined their financing strategies to align with the Paris Agreement. Most of financing is via financial instruments such as green bonds (also known as climate bonds), carbon offsets and carbon credit trading, and blended financing.

As per the OECD Report (2024), “Climate Finance Provided and Mobilized by Developed Countries in 2013-22”, US\$ 115.9 billion was successfully mobilized for climate finance by the developed countries for developing countries. As per graph shown in the following page, financing sourced from multilateral and bilateral development organizations contributed the single largest source in the global climate finance mobilization. This was mainly driven by multilateral development banks (MDBs).

While sourcing, managing, and tracking international climate financing either via multilateral climate funds or through multilateral development agencies is comparatively easy, the biggest challenges arise in domestic climate finance. Thus, a more effective system for monitoring of such domestic climate finance flows, their contribution to project and program implementation and utilization is required. One such efficient system can be achieved by developing climate finance taxonomy for India. Such taxonomy can help in identifying and classifying specific economic activities which are aligned with climate goals as well as with the broader environmental commitments.



Note: The sum of components may not add up to totals due to rounding. The gap in time series in 2015 for mobilised private finance results from the implementation of enhanced measurement methods. As a result, grand totals in 2016-22 and in 2013-14 are not directly comparable.  
 Source: Based on Biennial Reports to the UNFCCC, OECD DAC and Export Credit Group statistics, complementary reporting to the OECD.

Figure 1: Climate finance provided and mobilized in 2013-22 (USD Billion), (OECD, 2024)

Source - OEDC (2024), Climate Finance Provided and Mobilized by Developed Countries in 2013-2022, Climate Finance and the USD 100 Billion Goal, OECD Publishing, Paris.

As per the United Nations Environment Programme (UNEP), “taxonomies provide clear definitions based on science, help avoid greenwashing and help identify eligible assets, activities or projects that are low-carbon, compatible with low-carbon economic development or environmentally sustainable”. Developing such taxonomies can also play a pivotal role in accelerating flow of funds directed towards climate change mitigation, resilience or adoption activities that require such financing by making available such capital. This section provides a brief introduction to climate finance. The next section shares the experience of various countries like the European Union, Philippines, and Malaysia that have successfully developed an ecosystem comprising of policy and regulatory interventions, national climate finance taxonomy and financing instruments to manage adverse effects of climate change. In section III, the paper summarizes key suggestions that India can undertake for adopting climate and unlocking sustainable finance. And the last section concludes by advocating for the adoption of a climate finance taxonomy as a foundational step towards a robust policy framework for climate and sustainable finance in India.



## LITERATURE REVIEW

There is significant focus on Climate Finance and India recently with a variety of literature published. A recent study by Chakravarty, M. et.al. (2024), states that India needs to urgently scale up green finance for low-carbon and climate-resilient development. The authors discuss the requirement of coordinated action by stakeholders to enhance government policies, create market-based incentives, and strengthen the roles of development banks and financial institutions. Enhancing adaptation finance requires collaboration across ministries, identifying funding gaps in state-level plans, and boosting private investment through public finance. Further policy interventions needed include developing a green finance taxonomy and introducing relevant legislation.

According to Srinivasan, M. et.al. (2023), India's energy transition risks can be mitigated through coordinated policies by Central and State governments. The stability of India's financial systems is linked to climate mitigation due to reliance on oil and gas imports. Financial stakeholders must integrate climate risks into their decisions. Private sector investment in adaptation is minimal, but financial and policy interventions can incentivize such investments. Redirecting investments from fossil fuels to low-carbon development and increasing international climate finance are essential for achieving climate goals and addressing infrastructure investment needs.

## EXPERIENCE IN OTHER COUNTRIES

This section discusses the cases of three countries- the European Union, Philippines and Malaysia, that have been successful in implementing policies in climate finance.

### *a) The European Union*

In July 2020, the European Union (EU) passed the Taxonomy Regulation that established four conditions for any economic activity in the EU to qualify as an environmentally sustainable activity. The EU achieved this determination of conditions by clearly delineating a technical screening criterion for each environmental objective. The Taxonomy Regulation has become the foundation for introducing transparency in the EU's sustainable finance mechanisms and in directing investments towards economic activities that require such funding the most.

Across the EU, various private sector organizations are adopting the taxonomy to define their climate goals targets and to substantiate their achievements on sustainability and controlling climate change. In turn, the EU taxonomy has enabled such companies in accessing climate financing geared towards achieving their objectives. The banks that lend to various companies and equity investors and sponsors have been able to conduct comparisons across companies and evaluate each companies' efforts in



sustainable transition and meeting the climate goals. As a result of this increased awareness and scrutiny by investors and lenders, the companies across EU have become more focused in their sustainability commitments while, at the same time, directing private capital and financial markets towards meeting climate goals and environment commitments.

### *b) Philippines*

Recognizing the need for developing a national sustainable financing framework, the Philippines first issued a government Circular on Sustainable Finance Framework in April 2020. The definition of sustainable finance encompassed climate finance to achieve environmental goals of climate change mitigation, adaptation, and resilience, along with other environmental goals, as well as social, economic and, governance targets for achieving a sustainable development. Thus, the circular recognized the critical need of linking sustainable finance with achievement of the Sustainable Development Goals (SDGs). The government issued a further detailed guidance document in the form of “The Philippine Sustainable Finance Roadmap” (The Bangko Sentral ng Pilipinas, 2021) which laid out the country’s high-level action plans to promote sustainable financing in the Philippines. The Phase-1 of this Roadmap was targeted towards a transition to a low carbon economy, greening the country’s financial ecosystem and financing sustainable activities in the country. The National Framework Strategy on Climate Change (2010-22) was adopted to further strengthen climate change mitigation and adaptation.

The Philippines also enacted the Philippine Development Plan (PDP) to include, among other elements, various cross-cutting strategies such as (i) developing streamlined processes for green and climate financing by creating a sustainable finance framework and roadmap; and (ii) scaling up measures for natural capital accounting and valuation processes of ecosystem services.

One of the most critical aspects was the need to create a principles-based taxonomy for creating a more uniform environment for sustainable and climate finance investments in eligible economic assets and activities. The development of such taxonomy was also envisaged to provide clarity to all actors in the sustainable finance sector and to establish a set of standard criteria for technical screening and evaluation of climate finance investments as well as to identify activities that can be considered green.

### *c) Malaysia*

In April 2021, the Bank Negara Malaysia developed and published Malaysia’s climate finance focused taxonomy for the financial sector and this was termed the “Climate Change and Principles-based Taxonomy (CCPT)”. The country’s CCPT established five key principles which would provide guidance to financial institutions, registered banks, insurers, development finance institutions, investors etc. to guide their investment and financing decisions. The CCPT also encouraged facilitating a standardized reporting process for climate-related exposures, channelizing financing towards supporting Malaysia’s



climate goals, assisting in ratings, and supporting the structuring of solutions and services pertaining to green and climate financing.

The five Guiding Principles (GPs) of Malaysia's CCPT were-

#### GP1: Climate Change Mitigation

An economic activity supports climate change mitigation if it makes a substantial contribution to the following objectives:

- Avoiding greenhouse gas emissions;
- Reducing greenhouse gas emissions; or
- Enabling others to avoid or reduce greenhouse gas emissions.

Economic activities that generally meet GP1 include the production and operation of renewable power generation facilities, operation of electric vehicles and reforestation.

#### GP2: Climate Change Adaptation

An economic activity supports climate change adaptation if it:

- Implements measures to increase one's own resilience to climate change (e.g., resilience against the increased risk of extreme weather events); or
- Enables others to increase their resilience to climate change.

Economic activities that generally meet GP2 include water conservation and rainwater harvesting, refitting buildings to cope with future climate conditions and building sea walls in coastal areas.

#### GP3: No Significant Harm to the Environment

In addition to climate impacts, FIs should take into account the impact of economic activity on the broader environment. An economy activity does no significant harm to the environment if it meets the following environmental objectives:

- Preventing, reducing and controlling pollution;
- Protecting healthy ecosystems and biodiversity; and
- Using energy, water and other natural resources in a sustainable and efficient manner.

FIs should apply environmental assessments to understand whether an economic activity significantly harms the environment, and are encouraged to seek certifications and assurances for such assessments. Environmental assessment criteria may include proper waste management practices, avoiding land use in protected areas and managing risks to water quality.

#### GP4: Remedial Measures to Transition

Importantly, the CCPT "considers the state of economic development of [Malaysia] and the nascent stage of climate risk management at which businesses and other economic agents are currently in." In this respect, the CCPT seeks to avoid the outright exclusion of economic activities that currently do not contribute to climate change objectives. This approach is intended to "avoid disruptive exclusions and dislocations" and ensure an "orderly transition of the economy."

FIs are instead expected to assess economic activities holistically. Rather than strictly prohibiting certain activities as "unsustainable", FIs should encourage, facilitate and account for remedial efforts and improvement programs undertaken by businesses to align less sustainable operations with a low-carbon and climate-resilient economy.





#### GP5: Prohibited Activities

At a minimum, FIs should verify and ensure that economic activities are not illegal and do not contravene Malaysian environmental law. Prohibited activities include:

- o Illegal deforestation;
- o Illegal waste management; and
- o Operations using fire for land clearance.

In addition to this minimum environmental safeguard, FIs are encouraged to assess whether economic activities comply with Malaysian human rights and labor laws, as well as the OECD Guidelines for Multinational Enterprise and UN Guiding Principles on Business and Human Rights.

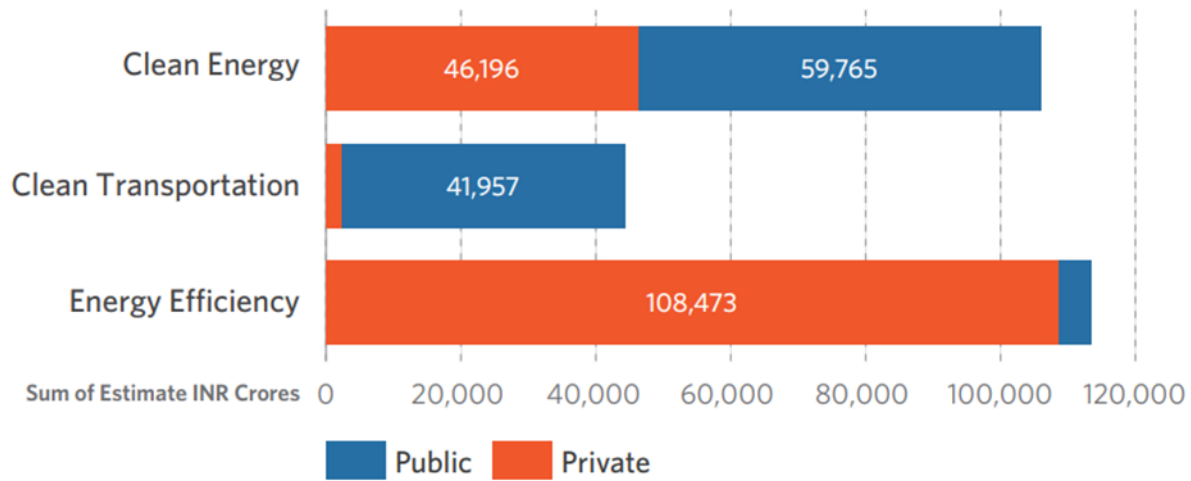
*Source- Bank Negara Malaysia, Central Bank of Malaysia, 2021. Climate change and Principle-based Taxonomy.*

## CLIMATE FINANCE IN INDIA

It is estimated that nearly US\$ 4.3 trillion funding is required world-wide annually by 2030 to avoid the dreadful impacts of climate change (Naran, et.al., 2022). While experts agree that such funding and liquidity is present in global markets, it is a challenge to channelize such finances towards combating climate change due to absence of national-level frameworks, policies, and regulations. At the same time, while private sector investors are becoming increasingly committed towards global and national net zero goals and climate finance objectives, national-level guidelines are much needed to ensure such investments are directed towards the appropriate activities.

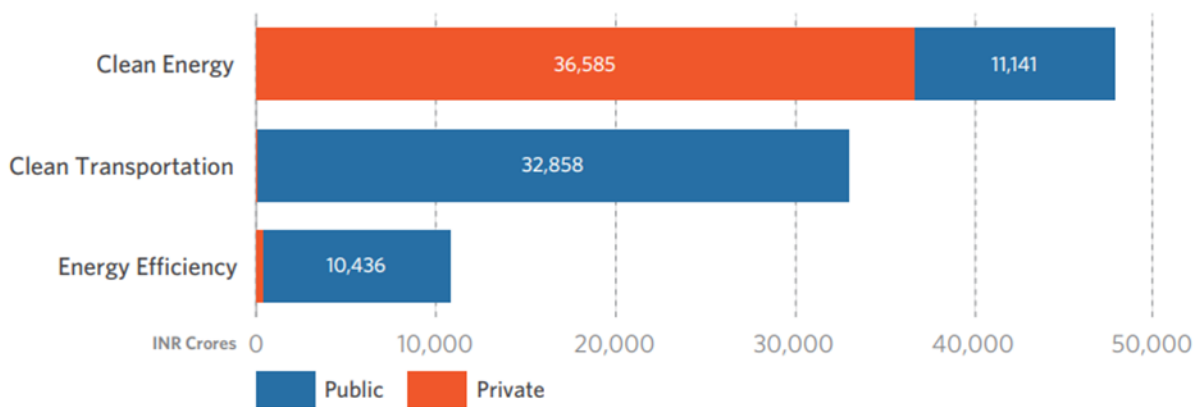
India is faced with the daunting challenge of achieving the 2030 Nationally Determined Contributions (NDC) targets which requires significant financing and capital mobilization over the next five years. At present, only about 30% of the required annual funding is being met, and this gap is increasing every year. Such significant shortfall also puts at risk the country's commitment to achieving the SDG targets. The Indian government has been projecting a requirement of at least US\$ 1 trillion from developed countries for climate financing goals. However, this is hampered by absence of nationally and globally acceptable taxonomy for climate finance, policy, and regulatory enablers for the actors in the climate and sustainable finance ecosystem and streamlining project objectives and needs with requisite and well-designed financing instruments.

At present, domestic green finance flows to mainly three sectors- clean transport, clean energy, and energy efficiency, as shown in the graph below (Khanna and Purkayastha, 2022). The Figure 2. below depicts that transportation attracted domestic clean finance mainly from public funding while majority of the green finance flows to energy efficiency were from the private sector. Clean energy witnessed almost 44% funding from private green financing while the remaining came from public sector green funds.



*Figure 2: Domestic green finance flows to mitigation sectors (INR Thousand Crores) (Khanna, N. and Purkayastha, D. (2022))*

On the other hand, international green finance flows to clean transportation and energy efficiency sectors can mainly from public funding while the clean energy sector saw private funding lead the international green finance flows as shown in Figure 3. below.



*Figure 3: International green finance flows to mitigation sectors (INR thousand crores) (Khanna, N. and Purkayastha, D. (2022))*





As can be seen from the above two graphs, renewable / clean energy continues to be to be the most critical and relevant sector for achieving India's climate goals. This sector has witnessed the highest quantum of finance flows from international organizations (particularly private sector). On the other hand, green finance for clean transportation has been sourced primarily from public funding sources. As India sets itself ambitious targets for electric vehicle penetration, the requirement of green and climate finance for clean transportation and funding from the public and private sector is expected to steeply rise. Financing for energy efficiency from the domestic green finance flows has been achieved through domestic commercial financial institutions.

Learning from international experience and global practices, India can consider the following for unlocking green and climate finance at significantly larger scale vis-à-vis the present financing mix:

- a. Develop a nationally accepted definition of the terms 'climate finance' and 'sustainable finance'.
- b. Design national guiding principles and climate finance taxonomy.
- c. Developing financing regulations and accounting standards for attracting private capital, public finance, and funding from multilateral development banks towards meeting India's NDCs and SDG targets as well as climate and sustainable financing requirements.
- d. Defining project-level parameters & characteristics for ensuring alignment of each project with climate goals as well as establishing technical criteria for screening, approvals and execution of projects aligned to climate finance objectives.
- e. Strengthening policy and regulatory interventions for introducing transparency for climate-related financing, as well as for promoting financial risk management and accurate reporting of climate finance flows. A robust policy ecosystem can significantly unlock large-scale green finance. These policy levers could include developing a green finance taxonomy, designing, and implementing an integrated measurement and verification system, and prioritizing hard-to-abate sectors that for attracting climate and green financing.
- f. Developing a national roadmap that defines the country's vision for long term sustainable and climate financing goals as well as identifies key sources of such financing via multilateral climate funds, multilateral and bilateral development banks, public financing, government budget allocation and private capital investments. The roadmap must also lay a clear path for protecting the financiers / lenders against the risks of greenwashing and encourage investments in nationally accepted and recognized activities that seek to achieve India's climate and environment goals. Adopting a climate finance taxonomy can be the first step towards a foundation for policies targeted towards climate and sustainable finance and financial products.



## CONCLUSION

This paper examined the recent trends in realizing climate finance to attain the global climate goals and India's climate goals as well. The paper analyzes the major sources of climate financing - international climate finance sourced from multilateral climate funds or multilateral development agencies, as well as examines the challenges in domestic climate finance. As per the OECD Report (2024), "Climate Finance Provided and Mobilized by Developed Countries in 2013-22", developed countries successfully mobilized US\$ 115.9 billion for climate finance for the developing countries. Experience in other countries suggests the need to adopt a multi-pronged approach including defining climate finance targets, adopting climate finance taxonomy, and developing a national-level sustainable financing framework and roadmap for providing guidelines to private sector and the financing institutions.

In India, green and climate finance are channelized to three main sectors – clean energy, clean transportation and energy efficiency. Clean energy and improving energy efficiency are considered to be the key sectors for achieving India's climate goals and a successful energy transition (Khanna and Purkayastha, (2022)). As a result, these sectors attract the majority of climate finance flows from international and domestic institutions and funds. India's focus on transport decarbonization has also emphasized the significance of clean transportation. This sector has attracted substantial green finance, but primarily from public funding sources. As India sets itself ambitious targets for electric vehicle penetration, the requirement of green and climate finance for clean transportation and funding from the public and private sector is expected to steeply rise.

The paper concludes by advocating for the adoption of a climate finance taxonomy as a foundational step towards a robust policy framework for climate and sustainable finance in India. This taxonomy would provide clear definitions of climate-aligned activities, prevent greenwashing, and facilitate the flow of funds towards critical activities. By learning from international experiences and global practices, India can unlock larger-scale green and climate finance through several key measures discussed in the paper. These steps are essential for India to meet its Nationally Determined Contributions (NDC) and Sustainable Development Goals (SDG) targets, ensuring a sustainable and resilient future.

## REFERENCES

- Bank Negara Malaysia, Central Bank of Malaysia (2021). Climate Change and Principle-based Taxonomy.
- Chakravarty, M. et.al. (2024). CPI 2024. Landscape of Green Finance in India. Available online: [climatepolicyinitiative.org/publication/landscape-of-green-finance-in-india-2024/](https://climatepolicyinitiative.org/publication/landscape-of-green-finance-in-india-2024/)
- Khanna, N. and Purkayastha, D. (2022). Landscape of Green Finance in India. Climate Policy Initiative.



- Naran, B. et.al. (2022). Climate Policy Initiative. Global Landscape of Climate Finance: A Decade of Data 2011-2020.
- OECD (2024), Climate Finance Provided and Mobilised by Developed Countries in 2013-2022, Climate Finance and the USD 100 Billion Goal, OECD Publishing, Paris, <https://doi.org/10.1787/19150727-en>.
- Srinivasan, M., Ghoge, K., Haldar, S., Bazaz, A. B., & Revi, A. (2023, November 27). Climate finance in India 2023. Indian Institute for Human Settlements. <https://doi.org/10.24943/CFI11.2023>
- The Bangko Sentral ng Pilipinas (BSP) (2021). The Philippines Sustainable Finance Roadmap (2021).. [https://www.bsp.gov.ph/Media\\_And\\_Research/Media%20Releases/2021\\_10/Sustainable%20Finance%20Roadmap.pdf](https://www.bsp.gov.ph/Media_And_Research/Media%20Releases/2021_10/Sustainable%20Finance%20Roadmap.pdf)