



# Coordinating Global Risk Mitigation

for Exponential Climate Finance

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Ghosh, Arunabha, and Nandini Harihar. 2021. *Coordinating Global Risk Mitigation for Exponential Climate Finance*. A GCF-CEEW Report. Stockholm: Global Challenges Foundation.

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## Executive Summary

**There can be little progress** on exponential climate action without a serious conversation about “exponential climate finance.”<sup>1</sup> By one estimate, developing countries need USD 3.5 trillion to implement climate pledges up to 2030. In 2009, developed countries promised developing ones USD 100 billion by 2020 in climate finance. This decade-long promise has been missed or grossly underdelivered, depending on how climate finance is counted. Moreover, discussions on climate finance have not managed to go beyond debates around the USD 100 billion commitment. A wider, more realistic conversation would need attention to a blend of different pools of capital, with innovations in global financial governance and new platforms to deliver international funds at scale.

Four major gaps persist. First, definitions of international climate and clean energy finance are contested. This is due to ambiguous and non-standardised accounting and lack of transparency. For instance, against the OECD’s claim of USD 78.9 billion of climate finance provided in 2018, Oxfam reported only USD 19-22.5 billion were paid in 2017-18.

Secondly, the volume of capital flows to developing countries for the clean energy transition are limited. Excluding large hydropower, of the total global investment in renewables of USD 2.6 trillion from 2010-19, only China, India, Brazil, Mexico and South Africa (along with developed countries) managed to secure investments exceeding USD 20 billion. Yet, emerging markets have vast renewable energy resources – 140 times greater than their energy demand.

Thirdly, investing in emerging markets is risky but the perceived risks often exceed real ones. Information gaps persist, which make investors unsure about projects in emerging markets. The perception of risk has two consequences: either the investors are unwilling to look favourably at clean energy opportunities in developing countries; or, they demand very high returns, which makes the cost of capital prohibitive in many instances.

Fourthly, private capital has largely not been unlocked for international climate finance. For instance, by OECD estimates, public climate finance at USD 64.3 billion (bilateral and multilateral flows and export credits) from developed to developing countries has been far higher compared to only USD 14.6 billion of private capital mobilised in 2018 for financing climate action in developing countries.

We analysed 26 international initiatives on clean energy finance, initiated between 2011 and 2021, which were meant to bridge at least one (or more) of these four gaps. The current reality is sobering. Only one initiative developed transparent principles to account for clean energy investments. Twelve cater to boosting mitigation efforts in low-to-middle-income developing countries but fund flows remain insufficient and have not substantially increased over time. Whereas 19 initiatives seek to unlock private capital (ten provide some funds as well), only nine initiatives are trying to tackle investment risks, without which it is unlikely that large volumes of private capital will flow to developing countries. In fact, the supply-side push of innovative finance initiatives must be matched with preparing the demand-side ecosystem in developing countries. In order to fill these striking gaps, there is need for a dedicated facility — a global clean investment risk mitigation mechanism.

For 2021 to be a banner year for climate finance, four shifts are necessary, relating to scale, regulation, balance, and risk. Capital is needed at a far greater scale than what has been negotiated. Regulation in developing countries must create an ecosystem for green finance. There must be balance both between public and private sources, and between mitigation and adaptation needs. Finally,



investment risk in relation to emerging markets and developing nations needs attention, otherwise green finance remains limited and costly.

Despite the above-mentioned reforms, projects in many countries might still seem too small for institutional investors. Moreover, developers would still struggle with combating the high cost of capital to hedge against risks over which they have little control. The largest share of the levelised cost of electricity (LCOE) from clean energy projects in developing countries is the cost of finance and capital. Generally, the poorer and less developed a country is, the higher the share of financing costs is in the LCOE.

Therefore, in order to reduce financing costs in developing countries, we must address two main challenges: first, reduce the costs of non-project risks (currency fluctuations, policy uncertainty, offtaker); and, secondly, promote the aggregation of typically small renewable energy projects to make them attractive and accessible for direct debt investment by large international money market investors.

## Proposal: Global Clean Investment Risk Mitigation Mechanism (GCI-RMM)

**In 2017-18**, a consortium of institutions in India (CEEW and CII), France (Terrawatt Initiative) and the Netherlands (The Currency Exchange Fund) proposed a common risk mitigation mechanism, with three components at its core: a digital platform to pool demand and establish a marketplace to connect financiers, project developers and insurers; a common guarantee to mitigate the risks that cannot be eliminated otherwise; a common regulatory and contractual framework. But this was never implemented.

Our renewed proposal for a **Global Clean Investment Risk Mitigation Mechanism (GCI-RMM)** stems from a recognition that international finance has continued to fail to address non-project risks and the worries that international investors have about investing in developing countries. This analysis set out in this report points to this glaring gap in international climate and clean energy finance. By addressing these challenges, this new global platform has the potential to reduce the cost of capital, increase international private investment, and strengthen the policy and regulatory systems in developing countries in order to attract clean investment at scale.

The GCI-RMM is designed to work on the principle of risk pooling, wherein risks are pooled across projects and across countries. Additional cost reductions in de-risking services could also accrue: (1) The mechanism would ease access to non-project risk management tools and reduce transaction costs; (2) It would work with financial institutions to optimise the available de-risking products; (3) The proposed intervention could increase overall volumes in risk markets, thereby increasing liquidity and giving insurance providers the option of more diversified portfolios to reduce de-risking costs; and (4) Higher volumes could also trigger learning effects and promote innovation in the future.

Although the platform would be funded through international public money, the amount required from public funds to mitigate risks would be lower than relying on limited public funds to finance clean energy and climate-related infrastructure (when adequate private capital is missing). Its potential could be to leverage public money several times in the form of private capital.

The operative word is coordination. Four sets of actors would be central in playing that coordination role.

- **Role of the UK COP-26 Presidency.** With its pole position in financial



services, the United Kingdom is arguably the most important for channelling global institutional capital. It has a central role in coordinating efforts between negotiating parties, key financial institutions, and strategic philanthropy seeking to scale climate finance.

- **Role of large sources and destinations of institutional capital.** The US, having convened the 2021 Climate Leaders Summit, would also have an interest in creating such a platform. It is a major source of international institutional investment. On the emerging economy side, India serves as a major destination of clean investment but is also host to the International Solar Alliance. It can help to aggregate demand and projects across dozens of member countries.
- **Role of multilateral and regional development banks.** MDBs and RDBs operate through country programmes. As a result, risk pooling of projects across countries becomes infeasible within such governance arrangements. Operationally, GCI-RMM could be hosted as a trust fund within a particular MDB or RDB or as a separate entity. Other development financial institutions could coordinate with the platform to provide de-risking services to their target countries. Bilateral donors could capitalise the GCI-RMM's guarantee fund.
- **Role of the financial and reinsurance industry.** The Climate Finance Leadership Initiative could host dialogues on the institutional division of roles between multilateral and bilateral financiers and the private insurance industry. This would give clarity regarding which institutional investors are interested in participating in the GCI-RMM platform and on the residual risk that the guarantee would have to bear.



# 1. Introduction

**Developing countries are** currently confronting three significant financial challenges, with pressures to find adequate resources to respond to the pandemic, invest in economic recovery and to deal with the foreboding climate crisis. When the worst of the pandemic's economic damage is over, countries and companies will continue to scramble for finance to pay for climate mitigation, adaptation and resilience.

There can be little progress on exponential climate action without a serious conversation about exponential climate finance, in particular for under-served developing nations. Against the trillions needed, discussions on climate finance are either trapped in the decade-long unmet promise of USD 100 billion, or devoid of the institutional and governance innovations needed for blended finance to scale.

This paper argues that most of the existing international initiatives designed to alleviate challenges in cross-border climate and clean energy financing are not responding sufficiently to four main gaps – namely, accounting ambiguities, limited capital flows to developing countries, risk perceptions and actual risks, and lack of private investment. It analyses 26 such initiatives to illustrate the limited extent to which these gaps are being addressed (see Annexure 1).

The paper, then, outlines the required areas of reform. Rather than getting drawn into a debate on definitions, we argue that there are other key shifts needed for international climate and clean energy finance: a recognition of the significant increase in the scale of financing needed; better policy and regulation to help attract private capital; better balance between public and private capital; and innovative instruments for mitigation of specific risks.

Yet, certain risks are outside the control of individual project developers. The paper outlines the idea of a common risk mitigation mechanism, to pool risks across projects and countries, which would make clean energy and related climate mitigation projects in developing countries more accessible to institutional investors, attract more private capital and reduce the cost of finance. Ideas like the CRMM will not succeed unless development finance institutions realise the limitations in their current governance and funding modalities and undertake reforms to trigger coordinated action.



## 2. The missing trillions

**By one estimate**, developing countries need USD 3.5 trillion to implement climate pledges up to 2030 (Yeo, 2015). But the conversation on climate finance is trapped between a negotiated maximum and a delivered minimum. In 2009, developed countries promised developing ones USD 100 billion by 2020 in climate finance (UNFCCC, 2010). This number has been anything but straightforward in its interpretation or accounting. The failure to deliver on the USD 100 billion commitment has undermined trust in climate negotiations.

Estimates range wildly. The Organisation for Economic Cooperation and Development (OECD) estimated that USD 78.9 billion of climate finance was provided in 2018 (OECD, 2020). In 2015, India had called OECD claims of providing USD 62 billion as “greenwashing of finance”, arguing that new and additional finance was only USD 2.2 billion (Ministry of Finance, 2015). It claimed that previously committed development aid had been diverted from other purposes to climate activities, so additional funds were far lower. Oxfam reported that in 2017-18, only USD 19-22.5 billion were paid (just a third for adaptation), after discounting for loan repayments, interest and administration costs (Oxfam, 2020). Even if OECD numbers were accepted, they stand in sharp contrast to other estimates that pegged global climate finance at USD 574 billion per year on average in 2017-18 (Macquarie, et al., 2020). Thus, developing countries claim they are not receiving anywhere near what was promised; and even the claims of developed countries are a fraction of total global climate investment.

During the last half decade (2013-18), multilateral climate funds approved only USD 10.4 billion for mitigation activities; and a mere USD 4.4 billion in adaptation funding (Chawla & Ghosh, 2019b). Even including bilateral funds and private investment, climate financing by one count was USD 463 billion in 2016 (Chawla & Ghosh, 2019b). As large as this number looks, it is woefully inadequate. The Reserve Bank of India (RBI) estimates that India, alone, needs USD 2.5 trillion in climate financing between 2015 and 2030 (RBI, 2019).

The refrain goes, there is a lot of capital waiting to be invested. More than USD 200 trillion worth of assets are under management in the world’s pension funds, insurance firms and sovereign wealth funds. Yet, the greatest challenge of our times — confronting climate change, especially in the most vulnerable countries — does not find enough suitors. Mobilising finance for investment and innovation in low-carbon energy solutions remains a critical challenge and is the key constraint to a global energy transition.

### Four gaps

**Whereas there is recognition** that climate finance and clean energy finance are central to a successful deal at COP-26, four major gaps persist and are not easy to overcome.

#### ACCOUNTING AMBIGUITY

**The first**, of course, relates to accounting ambiguities. As mentioned above, there are wide ranges in estimation of climate finance promised and delivered. The UNFCCC guidelines concerning what constitutes climate finance provide little clarity (Weikmans & Roberts, 2017). There is no internationally agreed-upon consensus on climate finance accounting, not even amongst developed economies such as the OECD and EU (Weikmans & Roberts, 2017). Moreover, the absence of any baseline makes it difficult to attribute and account for what counts



as a new or additional financial contribution (Stadelmann, et al., 2011).

Similar variations are found in accounting for clean energy investments. For instance, according to (REN21, 2021), new global investment in renewable energy (RE) reached USD 301.7 billion in 2019, a 5 per cent increase from 2018. However, the International Renewable Energy Agency (IRENA) and the Climate Policy Initiative (CPI) (IRENA and CPI, 2020) claim that RE investments in 2018 totalled USD 322 billion.

### LIMITED CAPITAL FLOW

**Secondly, capital flows** to developing countries for the clean energy transition are limited. In 2018, lower-middle and low-income countries (with more than 40 per cent of global population) received less than 15 per cent of energy investment. But 15 per cent of the world's population in advanced economies got more than 40 per cent of energy investment (Chawla & Ghosh, 2019b). Excluding large hydropower, of the total global investment in renewables of USD 2.6 trillion from 2010-19, only China, India, Brazil, Mexico and South Africa (along with developed countries) managed to secure investments exceeding USD 20 billion (UN Environment, Frankfurt School, and BNEF, 2019). Oddly, emerging markets have vast renewable energy resources, 140 times greater than their energy demand (Bond, et al., 2021). Rather than flow from capital-rich regions to capital-poor regions, clean energy investment is largely circulating within the advanced economies.

### HIGH PERCEIVED RISKS

**Thirdly, the delta** between the perceived and real risks of investing in emerging markets is still substantial. Risk-averse investors perceive renewable energy markets, especially in developing countries, as difficult for various reasons. Some are related to technology, such as the absence of grids to absorb clean energy. But intermittency is not a serious problem at the very low levels of renewable penetration (solar and wind are only 4 per cent of emerging market electricity supply), well below what experts believe is feasible for existing grids to absorb (Bond, et al., 2021). Investors also perceive other economy-wide risks, such as currency fluctuations, receivables (defaulting or non-compliant off-takers), counterparty risk, and policy and political risk (Chawla & Ghosh, 2019) (Chawla & Ghosh, 2019b).

But there remains a gap between the perception of risk and actual recorded risk, often resulting from lack of data or awareness of on-ground realities (Chawla & Ghosh, 2019). The perception of risk has two consequences: either the investors are unwilling to look favourably at clean energy opportunities in developing countries; or, they demand very high returns, which makes the cost of capital prohibitively high in many instances.

### LIMITED PRIVATE INVESTMENT

**The fourth challenge** is the lack of private investment. Although the private sector remains the leading provider of capital for renewables, accounting for 86 per cent of investments between 2013 and 2018, the total quantum of private finance is still limited (IRENA and CPI, 2020). In the same period, public financing (14 per cent of investments) came mainly from development financing institutions (~67 per cent) (IRENA and CPI, 2020). For the energy transition to sustain, a more active role by the private sector is crucial to bring in additional finances, better management and technical capacity (Chirambo, 2016).





## Are finance initiatives plugging these gaps?

**How are global financial initiatives** bridging the gaps identified above? How are they responding not just to the quantum of funds needed in developing countries but to the governance failures in clean energy finance? We analysed 26 such initiatives between 2011-2021, most of which were launched prior to 2018 (see Annexure 1). For this paper, we restricted our analysis to only climate mitigation and clean energy financing initiatives. The study includes 12 initiatives that provide funding for projects globally. The remaining 14 provide a platform to bridge the gaps by facilitating cooperation and knowledge sharing, generating awareness among financiers, and promoting more coherence across stakeholders in building clean energy markets.

### ACCOUNTING AMBIGUITY LARGELY UNADDRESSED

**In the last decade**, only one out of the 26 initiatives addresses ambiguity in accounting — and that, too, only partially. There is no international consensus on climate finance accounting, but the International Development Finance Club (IDFC) has tried to establish principles to account for clean energy investments. IDFC is a group of 26 national and regional development banks from around the world, a majority (21) of which are active in developing countries<sup>2</sup> (IDFC, 2019). In 2015, a joint climate finance group of multilateral development banks (MDBs) and IDFC formulated the Common Principles for Climate Mitigation Finance Tracking (“the Principles”). The purpose of this was to establish a consistent definition of what constitutes climate mitigation financing that IDFC members could use. This would ensure consistency in investments for climate finance for mitigation and support the development of standardised methodologies for estimating, tracking, and reporting the private finance mobilised (IDFC and CPI, 2020) (Lütkehermöller, et al., 2021). The Principles are currently limited to IDFC members. But the issues resulting from the absence of a baseline to quantify new or additional financial contributions persist. Unless ambiguity in climate finance accounting is addressed, it will be difficult to assess the scope and scale of climate finance being delivered.

### INITIATIVES TO INCREASE CAPITAL INVESTMENT NOT COMMENSURATE TO SCALE

**The second governance gap** in climate finance is the limited flow of capital to developing countries. Of the 26 initiatives, 12 specifically cater to boosting mitigation efforts in low-to-middle-income developing countries.

The International Climate Fund (ICF) aims to double climate finance to developing countries by at least GBP 11.6 billion over the next 4-5 years (from 2021-22 to 2025-26) (UK Government, 2020). In the past, ICF’s funding has been evenly split between adaptation and mitigation. By 2025, the Carbon Initiative for Development (Ci-Dev) hopes to mobilise USD 250 million in private finance to provide low-carbon energy for 10 million people in climate-vulnerable countries in Sub-Saharan Africa (World Bank and Ci-Dev, 2021). The Climate Investment Platform (CIP), launched by the Green Climate Fund (GCF), UNDP, IRENA and Sustainable Energy for All (SEforALL), also aims to mobilise USD 1 trillion in clean energy investments for 20 least developed countries (LDCs) by 2025 (IISD, 2019).

Similarly, U.S. International Development Finance Corporation (DFC) announced earlier this year its intention to achieve net-zero through its investment portfolio by 2040. It aims to increase climate-focused investment, particularly in clean energy in developing countries, to 33 per cent starting in FY 2023 (DFC, 2021). In addition to this, other initiatives such as Climate Investor One (CI1) and the Global Innovation Lab for Climate Finance (The Lab) have



also endorsed mobilisation of USD 2 billion and USD 2.45 billion, respectively, in renewable-energy projects in developing nations. Despite the specific targets, these ambitions are far lower than what is required. According to the (IEA, 2021), annual clean energy investment in emerging and developing economies needs to increase by more than sevenfold, reaching over USD 1 trillion by 2030 to put the world on track to reaching net-zero emissions by 2050. Moreover, only a few of the initiatives mentioned above laid out concrete roadmaps on how this finance would be disseminated to developing countries.

### UNMITIGATED RISKS

**The third issue** relates to how investment risks are treated and mitigated. This includes technology risk, economy-wide risk and risk perception, specifically in developing countries. Among the 26 initiatives, this is the second least addressed issue in the past decade. Only nine initiatives address investment risks, of which only five include initiatives that typically provide funding. Very few initiatives explicitly mention solutions to reduce perceived risks.

In terms of managing economy-wide risk, both CIP and the Renewable Energy Performance Platform (REPP) — an ICF-funded programme supporting renewable energy industries in Africa — focus on risks that the private sector cannot cost-effectively manage. CIP focuses on tailor-made country-specific solutions through well-defined and implemented energy policies to attract private capital (IRENA, 2020). The REPP provides project assistance and collaborates with local governments to establish regulatory improvements and policy stability to manage long-term investment risks and attract more investment (UK Government, 2018).

Two initiatives address investment de-risking and risk perception by establishing global guidelines and globally applicable labelling systems to facilitate discussions among financial institutions, project developers, investors, and government representatives on critical factors for reducing perceived risks in developing countries and mobilising finance for low-carbon technologies. For instance, the Climate Finance Leadership Initiative (CFLI) is developing a set of *Investment Readiness Guidelines* based on the experience of lenders and other financial investors to represent the most cross-cutting factors that affect an investor's consideration in a project (CFLI, 2021). Similarly, Finance to Accelerate the Sustainable Transition-Infrastructure (FAST-Infra) is creating a standardised labelling framework to identify and assess the factors that qualify as a sustainable infrastructure project (Buchner, et al., 2021). Such standardised norms enable markets to signal the sustainability of an asset, bridge the challenges with lack of data and awareness of the on-the-ground situation and build investor trust.

The Green Growth Knowledge Platform's *Green Finance Measures Database* complements CIP's initiative to reduce project-level risk through tailored-made, country-specific solutions. The *Green Finance Measures Database* tries to plug the global knowledge gap of different permutations and combinations of policy shifts and regulatory practices and the effectiveness of these interventions to advance green financing (Green Finance Platform, 2021a). At present, this global compendium with more than 500 national policy and regulatory measures is an effective tool for policy-makers and advisers, banks and investments firms etc. to make appropriate evidence-based country-specific decisions (Green Finance Platform, 2021b). If implemented well, it could also address the lack of data or awareness of on-the-ground realities in developing nations and an investor's hesitation to invest in emerging and developing markets.

Furthermore, DFC has announced its intention to launch a USD 50 million risk-sharing platform to provide technical assistance and feasibility studies for reducing risks through identification, design and implementation of DFC's



climate portfolio over the next five years (DFC, 2021). This was the only initiative to establish or even announce such a scheme, but details are missing about the timelines and modalities of implementing such a major investment.

One more persisting challenge is that the initiatives analysed here seldom try to build local capacity, among a range of stakeholders (not just regulators but also entrepreneurs and project developers) to reduce risks and how the cost the capital could be lowered against investors demanding high returns. The supply-side push of innovative finance initiatives must be matched with preparing the demand-side ecosystem in developing countries.

### **MANY ATTEMPTS TO UNLOCK PRIVATE CAPITAL**

**The fourth issue** relating to mobilising and unlocking private capital for renewable energy has 19 initiatives engaged. Eight initiatives coincide with those also scaling up finance in developing countries, including non-funding and funding initiatives. Ten initiatives that promote private capital mobilisation also provide some form of funding. We also found that four initiatives categorically mention specific amounts that they hope to unlock from the private sector. All of these categorically mention mobilising finance for developing countries.

**Across these 19 initiatives**, we notice three key patterns geared towards private capital mobilisation.

#### **1. USE OF DIFFERENT TYPES OF FINANCIAL INSTRUMENTS**

**The Global Infrastructure Facility (GIF)**, a partnership of governments, MDBs, private sector investors and financiers, aims to bridge the gap in sustainable infrastructure investments by creating a pipeline of bankable projects for private investors. Since its inception, the GIF has generated USD 50 billion in private finance out of total investments of USD 76 billion (Johansson, 2021). In partnership with UNDP-GISD (Global Investors for Sustainable Development) Alliance initiative, GIF is developing two downstream blended finance solutions. The first is a project-level credit enhancement facility to address the risks with refinancing and foreign exchange, and the second is a portfolio-level blended financial facility (Johansson, 2021). (Little information is available on the same.) Similarly, CII under the Climate Fund Manager (CFM) is a blended finance facility that provides loans for early-stage project development, followed by a construction equity fund to cover 75 per cent of the construction cost in line with the project benefactor (GCF, 2018). These two steps remove the complexity of multi-party financing, reducing the cost and time associated with renewable energy projects.

Apart from blended financing, other financial instruments such as loans, debt and equity investments also aid in bridging the shortfall in private equity capital in developing countries. For instance, the REPP provides loans to conduct feasibility studies, grid studies, environmental and social impact assessments to improve local capacity, reduce sectoral risks and attract private capital.

In 2011, the Partnership for Market Readiness (PMR), a decade-long programme, was launched to support developing and emerging economies design and deploy carbon pricing and market instruments to facilitate GHG emissions reduction. PMR provided funding and technical assistance to 23 countries, which accounted for 46 per cent of the global GHG emissions (PMI, 2021). In 2021, PMR was succeeded by the Partnership for Market Implementation (PMI) to address the growing demand for support for carbon pricing implementation. Similarly, the Transformative Carbon Asset Facility (TCAF) has also implemented market-based carbon pricing instruments to scale up climate commitments and create



conducive conditions to private-sector investment for low-carbon technologies in developing countries.

However, in all of the above cases, it is essential to understand and identify country-specific institutional and market barriers and develop tailor-made solutions to enhance the ability of the financial systems to unlock private capital.

## **2. CREATING REGULATORY DATABASES AND STANDARDISED GUIDELINES**

**The UNDP-GISD Sustainable Development Goal (SDG) Investor Platform**, developed in 2020, is a data-focused initiative to enable greater private sector investment contributions towards different SDGs. The map is intended to provide private sector investors access to country-level market intelligence, such as on-the-ground insights on the local investment landscape and investor connections that enable investors to identify impact sustainability areas (UNDP, 2021). FAST-Infra is also similarly aimed at unlocking private capital in developing and emerging markets by creating a sustainable infrastructure labelling system and undertaking targeted financial interventions, mainly through blended financing and guarantees.

## **3. ADDRESSING INVESTOR EDUCATION, ENGAGEMENT AND SHARING OF BEST PRACTICES**

**Ghosh, et al., 2014 highlighted** other critical steps to de-risk institutional capital. This involves exchanging knowledge, ideas and experiences amongst stakeholders and running investor workshops during the planning process to create a space for discussions among different stakeholders. Out of our list of 19, nine initiatives have platforms to facilitate dialogue to bridge the perception gaps among market participants by raising awareness and sharing knowledge.

This involves knowledge dissemination and sharing of best practices to create favourable conditions to mobilise private finance investment for low-carbon technologies and boost collaboration between public and private institutions; financial institutions and UN bodies (UNEP); national development banks, private financial institutions and participants in the financial markets; investors; and an exclusive platform for CEOs of top financial institutions from across the world.



### 3. Four shifts needed for sustainable finance

**There is clearly no dearth** of finance-related initiatives. The analysis above, however, reveals two overarching concerns. For one, nearly half the initiatives recognise that the flow of funds into developing countries is limited and have objectives targeting that gap. But these objectives have not translated into fundamental changes in the scale of finance. Moreover, there is a disconnect between a lot of initiatives wanting to mobilise private capital but very few focused on de-risking. These are related. One will not yield results if the other is ignored.

These two concerns underscore why the situation on the ground in developing countries is not changing fast enough, in the very economies where energy demand will rise rapidly as economies grow and individual aspirations rise. Consequently, countries remain trapped between the notion of the negotiated maximum and a delivered minimum.

How do we break out of this trap? For 2021 to be a banner year for climate finance, four shifts are necessary, relating to: scale, regulation, balance, and risk.

**First, capital is needed at far greater scale than what has been negotiated.**

We need much higher levels of investment commensurate with the economic development pathways of emerging economies. Otherwise, climate and clean energy finance will remain restricted to a silo of limited climate action rather than become part of the economic mainstream.

Against the substantial financial needs running into trillions of dollars, actual investment has been much lower. The RBI says India, alone, needs USD 2.5 trillion, but consider then that only USD 21 billion were invested as green finance in India in 2018 (Acharya, et al., 2020). Most of this was domestic capital, with foreign direct investment at just 5 per cent and bilateral and multilateral sources at only 11 per cent. Specifically for renewables, CEEW's Centre for Energy Finance and the International Energy Agency (IEA) find that USD 18 billion was invested in 2019. Although higher than thermal power investments for the previous half-decade, it is still well short of more than USD 30 billion needed annually. Domestic institutional debt dominates but project developers seek more international bond financing. The fundamental challenge is that international financial institutions have not evolved from giving project finance to scaling up their efforts to provide a "bridge to international capital markets" (Donovan, 2021).

It must be recognised that developed and developing countries are under severe fiscal constraints due to the pandemic. Therefore, scale in climate and clean energy finance cannot come from public funds, which instead have to play a catalytic role in crowding in private capital. There are growing calls to use a portion of the new allocation of USD 650 billion as Special Drawing Rights (SDRs) for climate action in developing countries. One proposal calls for a Global Risk Pooling Reserve Fund, capitalised from a portion of the SDRs, to create an insurance cushion against climate shocks (Ghosh, 2020).

The Economic Commission for Africa, in partnership with Pacific Investment Management Company, LLC (PIMCO) (a large asset manager) has created a Liquidity and Sustainability Facility (LSF), to lower governments' borrowing costs by increasing the demand for their sovereign bonds. But this does not help crowd in more investment (UN Economic Commission for Africa, 2021). While critical to



deal with financial shocks induced by the pandemic or the climate crisis, LSF does not guarantee additional funds for clean infrastructure investment. And yet, with limited sunshine, the United Kingdom has more installed solar capacity than all of Africa (Donovan, 2021).

From the philanthropic world, new ideas are also emanating. The newly formed Bezos Earth Fund is exploring how to cover for the remaining sums associated with the USD 100 billion climate finance commitment. This would involve paid up capital combined with guarantees as well as grants to lower the cost of borrowing from multilateral financial institutions. In turn, the money could be potentially leveraged to get billions of dollars' worth of private investment.

**Secondly, regulation in developing countries must create an ecosystem for green finance.** The scale of investment will always fall short if countries do not create the conditions to welcome large volumes of climate and clean energy capital. Climate negotiators have locked horns on how to define climate finance. While important, a more practical and proximate response could come from domestic policy in developing countries. Recent analysis suggests that countries with strong policies to attract capital get many times more investment than those without such frameworks. For instance, in 2019, 53 countries with no auctions for renewable energy got USD 10 billion in new-build clean energy asset finance, whereas 48 countries with auctions received USD 42 billion (Climatescope, 2020). Only 20 countries used tenders and auctions in 2009; now more than 100 countries do so. India now has used auctions to bring down the cost of solar to among the lowest in the world. Auctions also helped to halve Sri Lanka's solar and wind tariffs during 2012-2016 (Dutt, 2020).

In order to attract more investment, broader policy changes are needed. Internationally financed projects in Indonesia were discounted at more than 20 per cent compared to those relying on domestic finance (Dutt & Chawla, 2020). In India, the RBI gave priority sector lending status to small renewables in 2015 and has shown interest in deepening green bond markets. The Securities and Exchange Board of India issued green bond guidelines in 2017.

But more steps are needed. Taking India as an example, several measures could trigger more interest from international private investors. First, mandatory reporting on climate risk exposures for legacy and planned infrastructure to prioritise resilient projects or write down stranded assets. Secondly, a green taxonomy would help sift out genuine from greenwashed investments. Green tagging increases visibility of assets and their climate impacts for potential investors. Thirdly, tax incentives could encourage green bond issuances. Fourthly, reducing information asymmetries (about investment opportunities, risks, market developments) could create larger portfolios of investment for emerging markets. Fifthly, public funds should create pipelines of securitised, low-risk green projects (leveraging expected cash flows while underwriting them with a guarantee fund). By supporting these guarantees, developed countries could reduce cost of capital in developing and emerging markets. Finally, there must be greater coordination in regulatory forums, such as the Basel Committee on Banking Supervision or the Network for Greening the Financial System, to set standards but also building capacity of developing country financial regulators (Chawla, et al., 2021).

**Thirdly, there must be balance between public and private sources.** It is clear that public funds cannot sufficiently pay for a low-carbon transition. Even OECD estimates of climate finance show that public climate finance at USD 64.3 billion (bilateral and multilateral flows and export credits) were far higher compared



to only USD 14.6 billion of private capital mobilised in 2018 (OECD, 2020). The ratios have to be inverted: public capital must be leveraged to crowd in private investment. But the world's largest sovereign wealth funds, pension funds and institutional investors shy away from developing countries, considering them risky destinations.

Within developing countries, public funds almost always have to guarantee private investments in infrastructure. In Africa, for instance, there is limited role of the private sector in financing or building infrastructure. Instead, governments and state-owned enterprises are responsible for 95 per cent of infrastructure projects (Eyraud, et al., 2021). This becomes a limited condition for scaling investment in clean infrastructure.

At the same time, there is an opportunity now to transform private investment in greenfield areas. There is growing interest from private financial institutions in green bonds and ESG-driven (environmental, social and governance) investing. Green bonds issuances rose from USD 36 billion in 2014 to USD 271 billion in 2019 (CPI and IRENA, 2020). Of this, the Asia-Pacific region had a substantial share of USD 67 billion. The question is how can South America and Sub-Saharan Africa also tap into these shifts in new channels of private financing.

Moreover, mitigation and adaptation must be balanced as well. It is increasingly evident that investment can serve both ends concurrently (say, in climate-smart agriculture to withstand heat stress, increase drought resilience and boost soil carbon retention). There is still very limited insurance against climate shocks. According to reinsurance giant Swiss Re, of USD 146 billion in damages from natural disasters in 2019, only USD 60 billion was insured (Swiss Re Institute, 2020). The ten-year average is much larger with USD 212 billion of losses annually. A rebalancing of climate finance would mean more blended capital, more resources for mitigation-cum-adaptation, and more insurance for climate-resilient infrastructure.

**Fourthly, investment risk needs attention, otherwise green finance remains limited and costly.** Emerging markets suffer from underdeveloped domestic bond markets; hence refinancing is challenging. International debt markets are deeper, but they provide more expensive capital after hedging for various non-project risks. But this is not just a debt problem. Expected equity internal rates of return for solar photovoltaic projects in India were about 15 per cent during 2019-20. These edged up from 14 per cent in the first half of 2019, to 16-17 per cent over the second half of the year through mid-2020 (Dutt, et al., 2020).

Embedded in these expectations were worries about offtaker risk and regulatory uncertainties. Without de-risking instruments, capital requirements for transitions in clean energy, sustainable mobility and low-carbon industry would be impossible to meet.

In Africa, three risks seem to dominate large infrastructure projects (Eyraud, et al., 2021). These include project risks, or the lack of “investment-ready” pipeline of projects. This is a common refrain from many institutional investors and underscores why multilateral financial institutions would have a role in project preparatory assistance to create such a pool of bankable projects. It is also important to create the aggregating and warehousing facilities to bring together a large number of small-scale.

Like in Asia, currency risks dominate in Africa too. Currency depreciation during the lifetime of the project could shave substantial shares of the expected returns to investors. The first best option is stable macroeconomic policy and prudent management of foreign exchange reserves. But many countries without substantial forex reserves have little choice but to turn to currency hedging. The



Currency Exchange Fund (TCX) offers up to 25 year-tenor cross-currency swaps for more than 90 countries in the OECD Development Assistance Committee's list. It serves as a market maker for currency risks by channeling risk assets to specialised investment funds and institutional investors.

A third risk for Africa is the fear that investors have of not being able to exit the project and recoup their gains. This happens when there are fewer refinancing options or there are restrictions on capital repatriation from the country.

What is evident from the above is that in many cases, project developers have little control over some of the risks that investors perceive. These are related to broader economic conditions. But they result in downgraded credit ratings for individual projects.

Support from multilateral institutions should be, then, targeted at either resolving these economy-wide challenges or find innovative solutions to improve the credit rating and make the projects more bankable. Of course, the support must come from host country governments as well, in conjunction with multilateral or bilateral or philanthropic support. Together these incentives can help to attract private capital. It is also evident that the very few initiatives focused on risks (as analysed in section II) did not focus on many of these non-project risks outside the control of project developers.

In short, developing countries need three categories of blended finance, using limited public funds to underwrite risks for institutional investments. One is de-risking utility-scale renewables in emerging markets, by targeting non-project risks (exchange rate fluctuations, policy and political, offtaker). We address this in the next section. Another is to reduce the cost of finance for distributed energy solutions for small businesses, to clean their energy mix and upgrade production processes. A recent proposal is for a platform to bring investment into and create value in firms seeking to use distributed energy for productive, income generating purposes (Jain, et al., 2021). A third category is risk capital for R&D investment in disruptive technologies (such as green hydrogen or advanced biofuels). Pooling resources across countries can help developing countries participate in technology platforms and co-develop next generation technologies (Ghosh & Chhabra, 2021). The share of public funding in each would vary, but all need partnerships across governments, multilateral financial institutions and private institutional investors and insurers.





## 4. Mitigating several risks — simultaneously<sup>3</sup>

**The first best solution** of domestic policy reform to create a green finance architecture has two challenges. The development of green taxonomies, creating the auditing capability to verify projects, building the information platforms to showcase on-ground activities, and so forth, will not happen overnight. They require multilateral and bilateral support for many emerging economies, not as short-term “technical assistance” programmes, but as a longer engagement in developing the enabling policy framework.

The second challenge is that, despite the reforms, projects in many countries might still seem too small for institutional investors. Moreover, developers would still struggle with combating the high cost of capital to hedge against risks they have little control over. Combined with the perceptions of risks, it is likely that notwithstanding the opportunities for a leapfrog to renewables-based electricity, emerging markets would continue struggling to attract private investment at scale in line with the shifts outlined in the previous section. While in the United States the levelised cost of electricity (LCOE) for solar and wind are below those of newly built gas and coal plants, this cost advantage can still not fully play itself out in most developing countries due to the high financing costs.

The largest share of the LCOE in developing countries is the cost of finance and capital. Variations across countries are significant, but generally the poorer and less developed a country is, the higher the share of financing costs in the LCOE. In other words, the poorest pay the dearest for clean energy or clean transport and will, thus, continue to choose to use/import fossil fuels rather than clean technology if these financing costs were not reduced.

In order to reduce financing costs in developing countries, we must address two main challenges: First, reduce the costs of non-project risks (currency fluctuations, policy uncertainty, offtaker) and, secondly, promote the aggregation of typically small renewable energy projects to make them attractive and accessible for direct debt investment by large international money market investors.

In 2017, a common risk mitigation mechanism was originally designed by a consortium of institutions in India, France and the Netherlands, on the request of 17 member countries of the International Solar Alliance (ISA), as a single access point to offer a comprehensive bundle of well-priced, non-project risk mitigation instruments. Although endorsed by President Macron of France, Prime Minister Modi of India, and President Kagame of Rwanda, the idea has not yet been operationalised because of multilateral financial institutions have not managed to develop a governance mechanism by which risks can be hedged across countries and across projects.

In the run up to COP-26, there is need for a renewed effort to revive the idea and solve for the governance gaps in international climate and clean energy financing. A **Global Clean Investment Risk Mitigation Mechanism (GCI-RMM)** could homogenise renewable energy cash flows at investment grade and make them easier to bundle across developing countries. As discussed earlier, non-project risks include currency risk, offtaker risk and political risk. In country after country, solar, wind or energy storage costs are mostly dependent on these non-project risk categories. If these risks can be mitigated and project developers are able to tap into lower costs of mitigating the risks at the tendering stage itself, they can focus and compete on true project-related costs (technology, design and construction, and operations and maintenance).



## How would it work?

**The GCI-RMM is designed** to work on the principle of risk pooling but in this case, the risks are pooled across projects and across countries. This approach helps to diversify the risks across different jurisdictions, but it also nudges policy reforms in order to benefit from lower costs of de-risking.

The other advantage is that it does not substitute for but complements existing specialised providers for non-project risks, both from private markets and the development finance community. Additional cost reductions in de-risking services come from several improvements, such as access to risk management tools for small projects in developing countries, more harmonised de-risking products to reduce insurance premiums, and increased volume of transaction and economies of scale in reducing de-risking costs.

By offering a suite of non-project risk mitigation instruments in a one-stop framework for projects, the GCI-RMM could not only enhance the credit rating of projects but could also help aggregate cash flows from such investments by making them more homogeneous across developing countries.

By supporting the bundling of projects for solar, wind, or electric mobility across geographies, the GCI-RMM could help portfolios reach deal sizes that support secondary trading. This, in turn, would increase liquidity in debt markets for clean energy and related investments and potentially trigger a positive cycle between growing volumes, more liquidity, and continued declining costs of finance.

## Institutional design for transparency, risk guarantee and wider coverage

**The GCI-RMM could be structured** as a separate platform/institution or embedded in an existing multilateral financial institution. But for the core value proposition to work, it has to be built as a solution for projects across many participating countries. This is a major governance gap in existing multilateral financial institutions, which operate through country programmes. A reformed approach would give members of the GCI-RMM a faster route to access larger volumes of finance at lower costs.

One component would be a digital platform to encode information about clean energy tenders in participating economies, increase transparency, and help trace the project development from tendering to construction, operation and maintenance, to the stages of refinancing and, if needed, the risk guarantee. This level of transparency and digitisation would also help to reduce the temptation of a moral hazard once the non-project risks have been hedged.

In addition, a common guarantee would provide dedicated swaps and guarantees on a list of main risks. The guarantee entity (an existing multilateral financial institution, or a dedicated trust fund) would minimise its capital requirements by transferring a large part of the subscribed risk to existing insurance and hedging instruments offered by multilateral development banks (including World Bank Group, European Investment Bank, European Bank for Reconstruction and Development, Inter-American Development Bank, Asian Development Bank), development finance institutions (such as Agence Française de Développement, KfW, Netherlands Development Finance Company, CDC Group, DFC), as well as to private or semi-private insurance and reinsurance entities (TCX, GuarantCo, ATI, AXA, etc.). Existing de-risking mechanisms could thus, benefit from better access to a larger pipeline of clean energy projects.



The GCI-RMM itself would be funded through international public money, with the risk mitigation bundle for non-project risk being priced with market/risk-reflective premiums. The capital for the guarantee may be provided in the form of paid-in and committed capital to give donors the option to give differentiated support to the initiative.

But the amount required from public funds to mitigate risks would be lower than relying on limited public funds to finance clean energy and climate-related infrastructure (when adequate private capital is missing). Ultimately, the platform's purpose is to aggregate projects on one side and connect them with existing insurance/reinsurance entities but at lower costs. The public funds, serving as the guarantee, would only take up the residual risk. It could leverage its capital several fold in the form of private clean energy and related investments. Under preliminary calculations conducted earlier, in order to mobilise USD 20 billion in clean energy and related investments, the initiative would require initial capitalisation of only about USD 660 million.<sup>4</sup>

For maximum impact, it would work best when countries make progress towards macroeconomic stability and have sound institutional and governance structures, such as independent central banks, inflation targeting, legislative limits on fiscal deficits, etc.

But there could be ways to expand its coverage to even harder to finance geographies. For instance, a trust fund(s) could finance additional concessions in regions that have to cover for additional capital costs imposed due to external factors, such as the impact of climate change on local non-project risks. This could be through country-level support interventions made either by national governments, or through overseas development assistance.



## 5. Governance equals coordination

**For the financial system to respond** to the climate crisis and channel the hundreds of billions of dollars needed in developing countries, it would be imprudent to assume that simplistic solutions will work. Three decades after the UN Framework Convention on Climate Change was agreed, climate and clean energy finance remains out of reach for most of the world's poor countries. While trillions of dollars sit in institutional funds in the rich world and emerging markets need new sources of capital to finance clean infrastructure, no real bridge has been created that understands the complexity of project financing. As a result, finance has come in the form of small grants, direct project financing by single investors or bilateral/multilateral funds, or from limited financial support from developing country governments.

Reality is more complex. Finance comes in many shades of green with many layers of risk and governance associated with it. The world's financial capitals are laden with institutions of many shapes and sizes — from vanilla commercial banks to investment banks, from hedge funds to private equity investors, from venture capitalists for early-stage product development to reinsurance firms that facilitate the exit of early investments, and from sovereign wealth funds that guarantee risky bets in clean tech to pension funds that are happy to offer long tenor investments in return for safe returns. It is odd, then, to presume that a similarly complex but well-coordinated financial architecture would not be needed for emerging economies seeking to leapfrog to a cleaner energy future and greater climate resilience.

The operative word is coordination. The broader shifts in climate finance and the specific idea of the GCI-RMM face an overwhelming challenge, namely the lack of coordination among different categories of financial institutions. This situation must be turned around in a year when innovations in climate finance will likely determine whether trust is regained in international climate efforts. Four sets of actors would be central in playing that coordination role.

### ROLE OF THE UK COP-26 PRESIDENCY

**With its pole position** in financial services, the United Kingdom is arguably the most important for channeling global institutional capital. It is also the host of the COP-26 climate negotiations. It has a central role in coordinating efforts between negotiating parties (in the developed and developing world), the key financial institutions, and strategic philanthropy seeking to scale climate finance.

The concept proposed here has been designed for all participating countries around the world that face the challenge of constrained capital flows for clean energy markets, with huge applicability across the emerging economies. Any one or more of such economies could partner/sponsor the concept as a showpiece of international cooperation, coordinated by the COP-26 Presidency. A similar approach was followed by India and France (the latter as the host of COP-21) to promote the International Solar Alliance in 2015.

### ROLE OF LARGE SOURCES AND DESTINATIONS OF INSTITUTIONAL CAPITAL

**The US, having convened** the Climate Leaders Summit in April 2021, would also have an interest in creating such a platform that could underwrite some of the risks and unlock the capital needed to meet enhanced climate pledges. It is a major source of international institutional investment and could play a central



role in leveraging investments by its Treasury and the role of the Development Finance Corporation.

On the emerging economy side, India serves as a major destination of clean investment but is also host to the International Solar Alliance with nearly a hundred signatory countries. The ISA was designed primarily to aggregate demand and reduce the cost of capital for clean energy investments in developing countries (Ghosh & Chawla, 2021). India has played a central role since inception in hosting the ISA and its domestic policies have made it a clean energy powerhouse. It can help to aggregate demand and projects across dozens of members.

### ROLE OF MULTILATERAL AND REGIONAL DEVELOPMENT BANKS

**The design of the GCI-RMM** requires multilateral and regional development banks (MDBs and RDBs) to also coordinate efforts. While efforts have been made to detail the idea further, it has not been implemented so far.

The World Bank–Energy Sector Management Assistance Program (WB-ESMAP), in partnership with Agence Française de Développement (AFD), IRENA and ISA, developed the Solar Risk Mitigation Initiative (SRMI). This effort has been partially based on the original concept of the common risk mitigation mechanism. The SRMI offers technical assistance to help countries develop evidence-based solar targets and implement a solar programme, offers public investments to support integration of variable renewable energy or finance solar park infrastructure, and try to cover residual risks.

The problem, however, is that the offering is limited to individual countries. While it is an improvement on what has been on offer thus far, the SRMI falls short of the most innovative aspect, namely pooling risks across projects and across countries. The reason for this is that MDBs and RDBs operate through country offices, which have their respective governance routes for consultations with national governments and executive board approvals of country-specific loans and grants. As a result, risk pooling of projects across countries becomes infeasible within this governance arrangement.

Yet, public development banks (including multilateral, regional, national and subnational development banks) globally have the capacity to provide more than USD 400 billion in climate finance per year (GCF and IDFC, 2020). If leveraged via appropriate mechanisms like the one proposed in this paper, trillions of dollars could be crowded in from the private sector. Moreover, these institutions can catalyse markets by creating de-risking institutions. For instance, the GCF is assisting the Development Bank of Southern Africa (DBSA) to set up its first private sector facility on the African continent, using the green bank model (GCF and IDFC, 2020). But again, it is restricted to a single country.

The coordination challenge here has two dimensions, changing the governance rules and finding the right institutional home for a multi-country risk mitigation facility. Since the former is less likely, the focus should be on the latter. Should GCI-RMM be hosted within a particular MDB or RDB, other development financial institutions (with specific country mandates) could work with the platform to provide the de-risking service. Bilateral donors could, in turn, contribute into the guarantee fund to capitalise it.

### ROLE OF THE FINANCIAL AND REINSURANCE INDUSTRY

**Finally, coordination is needed** within the financial industry. Many institutions might be interested in projects in emerging economies but are encumbered by the existing risk profiles and parameters.

This concept has been discussed among a range of institutions, such as insurers



and reinsurers (ATI, MIGA, GuarantCo), commercial banks (BNP Paribas, Standard Chartered, Société Générale), development financial institutions (AfDB, AfD, EBRD, World Bank Group), and international organisations, such as IEA, IRENA and ISA.

In order to operationalise it, the next stage should be to have a dialogue on which kind of institution would play what role. The CFLI could convene this conversation. This would give clarity on the number of private institutional investors that would want to participate in the platform and offer their de-risking services based on the quality of the portfolios that it manages to aggregate. This would also give the MDBs and RDBs a sense of the residual risk that they would have to fund via the guarantee fund. National governments would also get feedback on how their domestic policies and regulatory reforms attract more international investors, while enjoying the benefits of reduced cost of de-risking.

**Developing countries must** certainly hold rich countries accountable for not honouring their climate finance commitments. Beyond a point, however, it can distract from a richer conversation that is urgently needed about the scale of total finance, regulating a green finance architecture, balance via blended finance to attract private capital, and guaranteeing differentiated risks. The institutional design for pooled risks outlined in this paper requires coordination across the political, multilateral and financial stakeholders. If that happens, in the lead up to COP-26 and the processes unleashed through COP-26, there could be a step change in the trust that is a necessary cementing agent for climate negotiations.

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## Annexure 1: List of 26 climate and/or clean energy finance initiatives

Sr. No.	Name of Initiative (Acronym)	Date initiated	Type of funding or knowledge sharing	Scale of funding	Gaps targeted			
					Ambiguity in accounting	Limited capital flows	Investment risks	Limited private capital
1	Carbon Initiative for Development (Ci-Dev)	2011	Ci-Dev will utilise the Clean Development Mechanism (CDM) to quantify, verify and certify the emission reductions while transitioning to Paris Agreement-compliant portfolio approaches post 2020 (World Bank and Ci-Dev, 2021)	Ci-Dev will purchase emission reductions from 13 energy access projects worth ~USD 76 million. Of this 12 projects will be based in Sub-Saharan Africa and 1 in South Asia (Lao) (World Bank and Ci-Dev, 2021)		✓		✓
2	International Development Finance Club (IDFC)	2011	In 2019, almost 97% of the commitments (~USD 190 billion) were provided as loans, with a similar trend in previous years. The share of grants has increased since 2016. In 2019, grants valued at USD 4 billion (IDFC and CPI, 2020)	IDFC is the first provider of climate finance with combined assets of USD 4 trillion and annual commitments averaging more than USD 600 billion in the past five years (IDFC, 2019)	✓		✓	✓
3	International Climate Fund (ICF)	2011	ICF mobilises public finance from sources outside the UK, while private financing includes equity, debt and guarantees from non-public sources (UK Government, 2020)	ICF mobilised £4.1 billion and £2.2 billion in public and private finance respectively for climate change purposes in developing countries between 2011/12 to 2019/20 (UK Government, 2020)		✓	✓	✓
4	Partnership for Market Readiness (PMR)	2011	PMR provides grant financing for countries to build market readiness components (Climate Funds Update, 2019)	Cumulative pledges to the Fund amounted to ~USD 130 million (November 2020) (Climate Funds Update, 2019)		✓		
5	Global Investor Coalition on Climate Change (GIC)	2012	GIC provides a global platform for investors and governments to share best practices and collaborate on investment risk management and credit analysis to accelerate low-carbon investment and corporate action to support Paris Agreement targets.				✓	
6	Green Growth Knowledge Platform (GGKP)	2012	GGKP's <i>Green Finance Measures Database</i> addresses the knowledge gap on country or project-level risks for different stakeholders to take evidence-based decisions in a specific market context (Green Finance Platform, 2021a)				✓	



Sr. No.	Name of Initiative (Acronym)	Date initiated	Type of funding or knowledge sharing	Scale of funding	Gaps targeted			
					Ambiguity in accounting	Limited capital flows	Investment risks	Limited private capital
7	Cities Climate Finance Leadership Alliance (CCFLA)	2014	CCFLA identifies new and existing financial models and opportunities to mobilise private investment. Through its multi-stakeholders platform, it works with supply-side actors to increase investment flows in climate resilient and low-carbon infrastructure (UNEP-DTU, 2021b) (UNFCCC, 2015)					✓
8	Global Innovation Lab for Climate Finance (The Lab)	2014	The Lab is an investor-led initiative with more than 90% of measured private finance coming from institutional investors and commercial banks and a small proportion from private equity investors. Private investors also co-invest in projects on the ground (The Lab, 2021).	The Lab, since 2014, has collectively mobilised ~USD 2.3 billion, including 800 million from the private sector (Tonkonogy, et al., 2020)				✓
9	Climate Action in Financial Institutions Initiative (CAFI)	2015	CAFI provides public and private financial institutions to share best practices and collaborate to systematically integrate climate change across their strategies, programs and operations (I4CE, 2017)					
10	Climate Fund Manager (CFM)	2015	CFM uses blended financing to attract public and private capital in emerging economies (CFM, 2019)	Climate Investor One (C1) – a blended finance facility - aims to mobilising ~USD 2 billion in finance developing countries for renewable energy (GIIC, n.d.)		✓		✓
11	Transformative Carbon Asset Facility (TCAF)	2015	TCAF creates favourable market conditions to mobilise private capital for low-carbon technologies and implement market-based carbon pricing mechanisms in middle-income countries (World Bank, 2020)	TCAF has a total fund endowment of ~USD 210 million (Climate Cent Foundation, 2021)		✓		✓
12	Global Infrastructure Facility (GIF)	2015	GIF funding involves two downstream approaches to blended financing – project-level credit enhancement to address risks and a portfolio-level blended financing facility (Johansson, 2021)	As of April 2021, GIF has supported 104 infrastructure projects in 52 emerging markets and generated USD 74 billion in investment, of which USD 51 billion was mobilised from private finance alone (GIF, 2021)		✓	✓	✓
13	Green Bank Network (GBN)	2015	GBN is a knowledge exchange platform for collaboration among existing Green Banks to shares best practices to facilitate private investment into clean energy solutions. Member banks finance through loans, equity, issuance bonds and public and private capital	GBN is expected to overshoot their 2019 target (USD 40 billion), and collectively mobilise USD 41 billion in public and private finance or green infrastructure projects globally (UNFCCC, 2018)				✓
14	Green Finance Study Group (GFSG)	2016	GFSG identifies country-based institutional and market barriers to green finance and enhance the ability of the financial system to mobilise private capital investment					✓



Sr. No.	Name of Initiative (Acronym)	Date initiated	Type of funding or knowledge sharing	Scale of funding	Gaps targeted			
					Ambiguity in accounting	Limited capital flows	Investment risks	Limited private capital
15	Green Finance for LAC	2016	Green Finance LAC Platform is a knowledge exchange platform for National Development Banks and private financial institutions to learn about green finance			✓		✓
16	International networks of financial centres for sustainability (FC4S)	2017	FC4S works with the financial centres to promote strategic action on green and sustainable finance, expand the green assets pipeline, and build capacity of financial centres in developing countries (FC4S, 2021)	FC4S includes 33 members managing 80% of the global equity market that represents ~USD 74.6 trillion in equity market capitalisation (FC4S, 2021)		✓		
17	Climate Action 100+	2018	Climate Action 100+ is the largest investor engagement initiative globally focusing on clean energy transition and climate-induced financial risks to company assets and liabilities	Investors participating in this initiative manage combined assets worth USD 52 trillion, with a total market cap of USD 8.4 trillion for all focus companies (UNEP-DTU, 2021)			✓	
18	Investor Agenda	2018	Investor Agenda calls on five priority actions before COP26, including private investments incentivising into zero-emissions solutions by investors (The Investor Agenda, 2021)	The Investor Agenda includes 457 investors with a combined asset of ~USD 41 trillion, or 37% of global assets under management (The Investor Agenda, 2021)				✓
19	Climate Finance Leadership Initiative (CFLI)	2019	CFLI is developing a set of <i>Investment Readiness Guidelines</i> to reduce perceived risks, and mobilise private foreign direct investment in emerging markets through existing and new equity financing mechanisms and country specific policies to build investor confidence (EDFI, 2021) (UK Government, 2021)	CFLI is a consortium of seven major private-sector institutions, representing ~USD 4.5 trillion in assets under management, and market capitalisation of ~USD 500 billion, with more than USD 25 billion in clean energy asset finance over the last decade (CFLI, 2019)		✓	✓	✓
20	Climate Investment Platform (CIP)	2019	CIP is building country-specific policies and local capacity through project assistance, and de-risking investor ready projects and supporting access to capital markets to connect clean energy investors with projects to mobilise private capital and reduce project-level investment risks (CIP, n.d.)	CIP aims to directly mobilise USD 1 trillion in clean energy investment in 20 least developed countries (LDCs) by 2025 (IISD, 2019)		✓	✓	✓
21	U.S. International Development Finance Corporation (DFC)	2019	The DFC's lending capacity provides debt financing through direct loans and guarantees, direct equity investment and private equity funds and insurance for development projects (DFC, n.d.)	In FY 2020, DFC committed to USD 1 billion for projects in energy sector, that would benefit 8 countries advance energy security (DFC, 2020)		✓		✓
22	Global Investors for Sustainable Development (GISD)	2019	GISD provides private sector leadership to mobilise private capital and advise on barriers and solutions for scaling up long-term investment for sustainable development					✓



Sr. No.	Name of Initiative (Acronym)	Date initiated	Type of funding or knowledge sharing	Scale of funding	Gaps targeted			
					Ambiguity in accounting	Limited capital flows	Investment risks	Limited private capital
23	Net-Zero Asset Owner Alliance (NZAOA)	2019	NZAOA aims to transition member investment portfolios to net-zero GHG emissions by 2050 by establishing intermediate targets every five years and through regular reporting.	NZAOA's 42 asset owner manage a combined USD 6.6 trillion in assets (UNEP-FI, 2021)				
24	International Platform on Sustainable Finance (IPSC)	2019	IPSC is multilateral knowledge transfer forum to scale up private capital mobilisation through integrated markets and coordinating efforts on environmentally sustainable finance (European Commission, 2020)					✓
25	Finance to Accelerate the Sustainable Transition-Infrastructure (FAST-Infra)	2020	FAST-Infra de-risking investments and mobilises private financing in emerging markets by creating a sustainable infrastructure labelling framework for assessing projects (Buchner, et al., 2021)			✓	✓	✓
26	SDG Investor Platform	2020	SDG Investor Platform mobilises private investment by building on the <i>SDG Investor Maps</i> that provide investors access to country-level market intelligence like on the local investment landscape, investor connections and identify sustainability areas with high return (UNDP, 2021)					✓

Source: Authors' compilation

Note: Not all the initiatives give funds directly, hence several cells for scale of funding remain blank.



## Endnotes

1 The Exponential Roadmap Initiative, for instance, seeks to bring together “innovators, transformers and disruptors” to take the actions that could keep the world within 1.5oC above pre-industrial levels. This would require halving global emissions by 2030. See: Exponential Roadmap Initiative, 2020, Exponential Roadmap Initiative. [Online] Available at: <https://exponentialroadmap.org/> [Accessed 09 September 2021]. But it would also require a step change in how finance is accessed to invest in the disruptive technologies.

2 Here we have included banks in countries like Croatia, Russia and Turkey under “developing nations,” as per International Monetary Fund, 2018. World Economic Outlook. Washington DC: International Monetary Fund. and United Nations, 2020. World Economic Situation and Prospects 2020. New York: United Nations publication..

3 This section primarily draws upon internal notes drafted for the COP-26 presidency (by Arunabha Ghosh, Kanika Chawla and Harald Hirschhofer) as well as the original technical design for a Common Risk Mitigation Mechanism. See, Council on Energy, Environment and Water, Confederation of Indian Industry, The Currency Exchange Fund, and Terrawatt Initiative, 2017. Common Risk Mitigation Mechanism Feasibility Report. New Delhi: Council on Energy, Environment and Water. Available at: <https://www.ceew.in/publications/common-risk-mitigation-mechanism> [Accessed 09 September 2021].

4 This is based on initial risk assessment and capital requirement calculations done in 2018. More updated calculations can be done by market participants and supportive governments once the idea gets political support.





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