

Global Climate Finance Workshop Report

Perry World House with Wharton Climate Center



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➤ EXECUTIVE SUMMARY

The climate crisis is escalating worldwide, and the financial resources needed to address it are not in place. Developed countries have not yet met their 2009 commitment to jointly mobilize \$100 billion annually by 2020 for climate action in developing countries.¹ Growth in climate impacts is far outpacing efforts to adapt to them, and the adaptation gap is widening, meaning available finance is increasingly insufficient.² Further, finance for mitigation and adaptation is imbalanced, with mitigation capturing 75 to 80 percent of committed concessional finance across all sources.³ Meanwhile, the world remains far from achieving the Paris Agreement’s call for all global financial flows to be “consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.”⁴

To advance policy solutions to these unmet and critical financial needs, Perry World House, in collaboration with the Climate Center of the Environmental, Social and Governance (ESG) Initiative of the Wharton School, convened an expert workshop to determine the actions policymakers could take to fulfill climate finance needs and realize agreed goals. At the convening, panels of experts debated how to improve the quantity, quality, accessibility, and impact of climate finance. Workshop participants also looked to the future, exploring the financial steps needed to move the world toward a post-carbon and fully climate change-resilient future.

An opening expert panel discussed measures to increase finance flows for adaptation, especially in countries most vulnerable to climate change impacts. They considered how adaptation projects might be bundled, de-risked, and made more attractive to private investment. Participants recommended, inter alia, leveraging local capacity where it exists, improving adaptation project pipelines through public-private partnerships, and establishing a uniform taxonomy for climate finance terms. They also called for increased and more accessible data to inform the decision-making of citizen, public, and private initiatives.

A second workshop panel investigated how to make climate finance more accessible and impactful. Experts recommended that multilateral development banks (MDBs) prioritize lending to vulnerable countries over maintaining AAA credit ratings and reduce due diligence where countries have successful track

1 Jocelyn Timperley. “The Broken \$100-Billion Promise of Climate Finance—and How to Fix It,” *Nature*, October 20, 2021. <https://www.nature.com/articles/d41586-021-02846-3>.

2 United Nations Environment Programme. *Adaptation Gap Report 2021: The Gathering Storm*. Nairobi: United Nations Environment Programme, October 31, 2021. <https://www.unep.org/resources/adaptation-gap-report-2021>.

3 The Standing Committee on Finance of the UNFCCC highlights that the continued rise in public climate finance flows contributing toward both adaptation and mitigation complicates this assessment, as they are not necessarily allocated to one or the other.

4 International Bank for Reconstruction and Development. *Transformative Climate Finance: A New Approach for Climate Finance to Achieve Low-Carbon Resilient Development in Developing Countries*. Washington, DC: World Bank, 2020. <https://openknowledge.worldbank.org/bitstream/handle/10986/33917/149752.pdf>.



records of utilizing climate finance. In addition, discussants encouraged lenders to establish concessional triggers that track vulnerability to climate change rather than relying on metrics like the Human Development Index or Gross National Product per capita. Experts also underscored that debt extended to low- and middle-income countries by global financial institutions be sustainable over the long term and not increase debt burdens.

Debating the steps needed to move beyond the climate crisis, experts called for tools to monitor, analyze, and quantify climate risks to illuminate the relationship between climate impacts and structural change. With regard to the private sector, they recommended dividing the components of environment (E), social (S), and governance (G) metrics, or “ESG,” to better reveal trade-offs and inform decision-making. Participants also called for the G-7 to internalize the climate emergency and push for the capital needed to address it.

Overall, the workshop offered a venue where experts discussed mechanisms and pathways for closing global climate finance gaps. Workshop participants included leading economists, philosophers, historians, lawyers, former mayors, multilateral policymakers, private-sector representatives, and country ambassadors. They hailed from the countries of Ecuador, Guatemala, Maldives, and Mali; the African Adaptation Initiative, BlackRock Sustainable Investing, Glasgow Financial Alliance for Net Zero (GFANZ), United Nations Framework Convention on Climate Change (UNFCCC), and Vinson & Elkins as well as the Universities of Swarthmore, Tufts, and Pennsylvania.

Together, this mix of experts advanced the policy ideas that are expounded in this report. Workshop proceedings built on prior Perry World House programming, in particular its 2022 spring colloquium, “Islands on the Climate Front Line: Risk and Resilience⁵,” and a prior workshop convened with the Penn Institute for Urban Research and the Kleinman Center for Energy Policy on finance for urban climate adaptation⁶. Workshop outcomes also formed the basis of some interventions taken forward by the University of Pennsylvania delegation to the UNFCCC COP27 (the 2022 United Nations Climate Conference) in Sharm El-Sheikh, Egypt.

5 Perry World House, “Islands on the Climate Front Line: Risk and Resilience,” April 20-21, 2022. <https://global.upenn.edu/perryworldhouse/islands-climate-front-line-risk-and-resilience>.

6 PennIUR, “Financing Urban Adaptation to Address Climate Change,” February 2023. Penn Institute for Urban Research. <https://penniur.upenn.edu/events/urban-adaptation-climate-change>.

➤ INTRODUCTION

Climate change is one of the most significant social, economic, and environmental policy challenges facing the world today,⁷ and most countries do not have the financial resources they need to address it. The 2022 Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report warned that the world is on course to warm more than 1.5 degrees Celsius above preindustrial levels, meaning that all countries and regions will experience severe, if not devastating, climate impacts in the coming decades.⁸ Many already are. Approximately 30 weather disasters with over \$1 billion in damage were recorded in 2022. These included floods in Pakistan, heat waves and drought in China and Europe, and Hurricane Ian in the Caribbean.⁹

While disasters affected many nations, the least developed countries and small island developing states remained among the most vulnerable to the impacts of global warming. Most lack the resources they need to prepare for, protect themselves against, and recover from climate-driven catastrophes.

The Paris Agreement on Climate Change is the globally agreed blueprint for responding to the climate crisis. A legally binding international treaty, it is founded on three pillars of action: (1) mitigation (referring to the reduction of greenhouse gas emissions); (2) adaptation (the need to adjust to and prepare for climate impacts, both current and anticipated); and (3) means of implementation (the finance and other resources needed by all countries, especially the most vulnerable, to respond to climate change).¹⁰ The availability of resources—finance in particular—underwrites the achievement of the Paris Agreement and its central ambition to limit global warming to well below 2 degrees Celsius, preferably to 1.5 degrees Celsius, and avert the worst impacts of global warming.

7 Kristalina Georgieva and Tobias Adrian. "Public Sector Must Play Major Role in Catalyzing Private Climate Finance." IMF Blog, August 18, 2022. <https://blogs.imf.org/2022/08/18/public-sector-must-play-major-role-in-catalyzing-private-climate-finance/>.

8 IPCC. "Sixth Assessment Report — IPCC." Intergovernmental Panel on Climate Change. 2019. <https://www.ipcc.ch/assessment-report/ar6/>.

9 Jeff Masters. "World Rocked by 29 Billion-Dollar Weather Disasters in 2022." *Yale Climate Connections*, October 19, 2022. <https://yaleclimateconnections.org/2022/10/world-rocked-by-29-billion-dollar-weather-disasters-in-2022/>.

10 UNFCCC. "The Paris Agreement." *United Nations Framework Convention on Climate Change*, 2016. <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>.



“We know we have reached a point where finance makes or breaks the program of work that we have ahead of us.”¹¹

—COP26 President Alok Sharma, on the first day of the 27th Conference of the Parties to the UNFCCC (COP27) in Sharm El-Sheikh, Egypt

Without means of implementation—meaning money—there is no meaningful action on climate change. Tackling climate change requires significant financial resources. For instance, a combined report from the UNFCCC and the presidencies of the 26th and 27th Conferences of the Parties to the UNFCCC (COP26 and COP27)¹² calls for \$1 trillion per year in external finance for developing countries to meet their nationally determined contributions (NDCs).^{13,14}

The Paris Agreement also provides important language on the shape this finance should take. It calls for more

financial resources that (1) reflect the notion of common but differentiated responsibilities;¹⁵ (2) are balanced between mitigation and adaptation; (3) can be efficiently accessed; and (4) reach those countries most affected by and least able to cope with the impacts of global warming.

This means that capital flows must be large, fast, accessible, and targeted, assuring maximum impacts where they are needed most. As an overarching determination, the Paris Agreement (Article 2c) calls for global financial flows to be “consistent with a pathway

11 Sam Meredith. “Where’s the Money? COP27 Climate Summit Opens with a Rallying Call for Rich Nations to Pay Up.” CNBC, November 6, 2022. <https://www.cnbc.com/2022/11/07/climate-cop27-opens-with-a-rallying-call-for-rich-nations-to-pay-up.html>.

12 The 26th and 27th Meeting of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC).

13 Vera Songwe, Nicholas Stern, and Amar Bhattacharya. *Finance for Climate Action: Scaling Up Investment for Climate and Development*. Report of the Independent High-Level Expert Group on Climate Finance. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science, 2022. <https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2022/11/IHLEG-Finance-for-Climate-Action-1.pdf>.

14 NDCs are the efforts defined and submitted by each country party to the Paris Agreement to reduce national emissions and adapt to the impacts of climate change. The Paris Agreement (Article 4, paragraph 2) requires each party to prepare, communicate, and maintain successive NDCs that it intends to achieve. See: United Nations Climate Change. “Nationally Determined Contributions (NDCs): The Paris Agreement and NDCs.” n.d. <https://unfccc.int/ndc-information/nationally-determined-contributions-ndcs>.

15 The concept of Common But Differentiated Responsibilities (CBDR) was enshrined as Principle 7 of the Rio Declaration at the first Rio Earth Summit in 1992. The declaration states: “In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.” Similar language exists in the Framework Convention on Climate Change; parties should act to protect the climate system “on the basis of equality and in accordance with their common but differentiated responsibilities and respective capabilities.” See: ATD Fourth World. “Policy Brief and Proposals: Common But Differentiated Responsibilities.” UN.org, 2021. <https://sustainabledevelopment.un.org/getWSDoc.php?id=4086>.

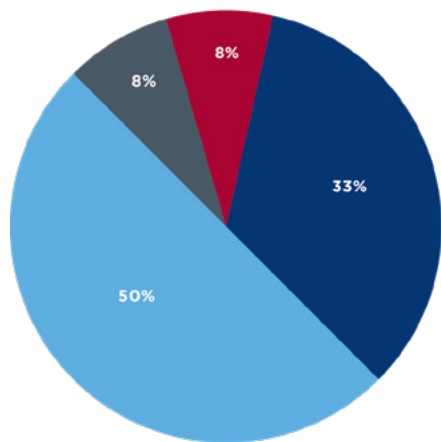
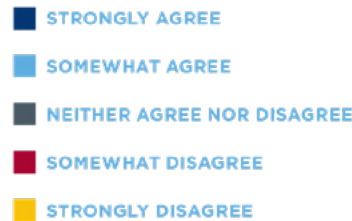


Figure 1: The availability of climate finance is the most important element of an internationally negotiated and agreed path to tackling climate change.



Note: Perry World House surveyed workshop participants to better understand their thoughts on critical policy issues. Their responses, some of which are featured in this report, informed workshop discussions.

towards low greenhouse gas emissions and climate resilient development.”¹⁶

Despite the framework of the Paris Agreement, the climate crisis is escalating, and the financial architecture needed to address it is not in place. As a result, the world is unprepared to provide the resources described and called for under the UNFCCC. For instance, developed countries have not yet met their 2009 commitment to jointly mobilize \$100 billion per year by 2020 for climate action in developing countries—a goal that donor Parties will likely continue to miss through 2025¹⁷ and that, when met, will still fall dramatically short of actual needs.¹⁸ Further, the United Nations Environment Programme estimates that the new costs of adaptation alone will be approximately \$140 to \$300 billion per year by 2030 and \$280 to \$500 billion per year by 2050 for developing countries.^{19,20} The agency’s 2021 Adaptation Gap Report found that growth in climate impacts is far outpacing efforts to adapt to them—and that the adaptation gap is widening.²¹ As it stands, climate finance is far skewed

toward mitigation, with the UNFCCC Standing Committee on Finance reporting that adaptation finance garners 20 to 25 percent of committed concessional finance across all sources, meaning mitigation captures the lion’s share of 75 to 80 percent.²²

Leading up to COP27, the United Nations Climate Change High-Level Champion for Egypt Mahmoud Mohieldin said that the “finance architecture of climate is inefficient, insufficient, and unfair.”²³ Developing countries face institutionalized hurdles in accessing finance through dedicated multilateral climate funds like the Adaptation Fund, the Green Climate Fund, and the Global Environment Facility, which countries note can be discriminatory and overly bureaucratic. Further, many developing countries are taking on additional debt to cope with the impacts of climate change, which limits their fiscal space for climate action. Of the \$62.2 billion in public finance that developed countries mobilized to address climate change in 2018, only \$12.3 billion was for grants. At the same time, the global share of public climate finance

16 UNFCCC. “The Paris Agreement.” United Nations Framework Convention on Climate Change, 2016. <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>.

17 Oxfam. “Poorer Nations Expected to Face up to £55 Billion Shortfall in Climate Finance.” Oxfam GB, September 20, 2021. <https://www.oxfam.org.uk/media/press-releases/poorer-nations-expected-to-face-up-to-55-billion-shortfall-in-climate-finance/>.

18 Jocelyn Timperley. “The Broken \$100-Billion Promise of Climate Finance—and How to Fix It,” *Nature*, October 20, 2021. <https://www.nature.com/articles/d41586-021-02846-3>.

19 United Nations Environment Programme. “Adaptation Gap Report 2021, Key Messages.” *UN.org*, 2021. https://wedocs.unep.org/xmlui/bitstream/handle/20.500.11822/37298/AGR21_KMEN.pdf.

20 United Nations Environment Programme. *Adaptation Gap Report 2021: The Gathering Storm*. Nairobi: United Nations Environment Programme, October 31, 2021. <https://www.unep.org/resources/adaptation-gap-report-2021>.

21 Ibid.

22 The UNFCCC Standing Committee on Finance highlights that the continued rise in public climate finance flows contributing toward both adaptation and mitigation complicates this assessment, as they are not necessarily allocated to one or the other.

23 Aidan Lewis. “Egypt Climate Champion Calls for New Metric on Climate Finance.” *Reuters*, September 12, 2022, sec. Middle East. <https://www.reuters.com/world/middle-east/egypt-climate-champion-calls-new-metric-climate-finance-2022-09-12/>.



The workshop convened experts from around the world to examine how the global financial system can support more sustainable climate initiatives.

issued as loans rose from 52 percent in 2013 to 74 percent in 2018. Meanwhile, the global share of grants decreased from 27 percent to 20 percent.²⁴ Developing countries are entangled in a climate-debt trap.

DISCUSSING SOLUTIONS

Perry World House, in partnership with the Wharton Climate Center,²⁵ convened this workshop to discuss solutions to these critical policy challenges. Participants explored how more money could be directed toward adaptation initiatives, especially as climate impacts (e.g., extreme weather events such as tropical cyclones, fires, and droughts) escalate, and how financial resources could be made more accessible and impactful nationally as well as locally. The convening also looked to the future, exploring what steps might be needed to underwrite financial flows sufficient to move the world toward a post-carbon and fully climate change-resilient future.

A diverse array of leading economists, philosophers, historians, lawyers, former mayors, multilateral policymakers, private-sector representatives, and country ambassadors participated in these proceedings. They hailed from the countries of Ecuador, Guatemala, Maldives, and Mali; the African Adaptation Initiative, BlackRock Sustainable Investing, Glasgow Financial Alliance for Net Zero, UNFCCC, and Vinson & Elkins as well as the Universities of Swarthmore, Tufts, and of

course, Pennsylvania. Together this mix of experts put their varied lenses on workshop deliberations. The policy ideas they discussed are the focus of this report.

This workshop also built on past Perry World House programming. For instance, in the April 2022 Perry World House colloquium, “Islands on the Climate Front Line: Risk and Resilience,” finance emerged as a main policy avenue for stemming and responding to the worst impacts of climate change and for pursuing climate justice in small island developing states.²⁶ Prior to the spring colloquium, the Penn Institute for Urban Research, Perry World House, and the Kleinman Center for Energy Policy jointly convened three dozen urban policy and finance leaders to discuss how to spur investment in urban adaptation to climate change.²⁷ Springboarding off of these meetings, this Global Climate Finance workshop offered a platform where academics and policymakers could further discuss how to hasten, widen, and improve the financial architecture for global funding of climate action—not just in islands or cities. This workshop’s outcomes were then immediately taken forward by some members of the Penn Delegation to the UNFCCC COP27 in Sharm El-Sheikh, Egypt, a meeting where finance emerged as a key agenda item. Going forward, Perry World House will continue to develop the ideas put forward by experts at this convening through an informed research agenda and in additional multilateral fora.

24 Stockholm Environment Institute. “Climate Finance Needs to Acknowledge the Unmitigated Debt Crisis.” *SEI Perspectives*, November 2, 2021. <https://www.sei.org/perspectives/climate-finance-acknowledge-debt-crisis/>

25 The Environmental, Social and Governance (ESG) Initiative of the Wharton School houses the Wharton Climate Center.

26 Perry World House. “Islands on the Climate Front Line: Risk and Resilience.” *Perry World House Global Shifts Colloquium*, University of Pennsylvania, April 20-21, 2022. <https://global.upenn.edu/perryworldhouse/islands-climate-front-line-risk-and-resilience>.

27 On March 23 and 24, 2022, Penn Institute for Urban Research, Perry World House, and the Kleinman Center for Energy Policy jointly convened three dozen urban policy and finance leaders to find ways to spur investment in urban adaptation to climate change. See: Penn Institute for Urban Research. “Financing Urban Adaptation to Address Climate Change.” *Events*, PennIUR, March 23, 2022. <https://penniur.upenn.edu/events/urban-adaptation-climate-change>.

> FINANCING ADAPTATION

The Global Climate Finance workshop opened with a panel of experts discussing the challenge of channeling more financial resources to meet the growing need for and cost of adaptation globally, especially in those countries most vulnerable to climate change impacts. The discussion featured Jessica Feingold Thye, director, BlackRock Sustainable Investing; Ambassador Seyni Nafo, coordinator, Africa Adaptation Initiative; Mauricio Rodas, former mayor of Quito, Ecuador, and visiting scholar and fellow, University of Pennsylvania; and Luke Taylor, John B. Neff Professor in Finance, Wharton. Professor Sarah E. Light, faculty co-director of the Wharton Climate Center, moderated the panel.

Panel discussions were rooted in a common understanding of two competing challenges: (1) the need for adaptation is growing, and (2) the gap for financing adaptation action is widening. Despite increasing needs for adaptation investment, current research shows that approximately 75 to 80 percent of available capital resources flow toward mitigation-related pursuits. To understand what academics, policymakers, and practitioners thought about this imbalance, Perry World House surveyed workshop participants. That most resources flow toward mitigation action stood in sharp contrast to survey respondents' views. Approximately 33 percent of respondents thought that 50 percent of all global climate finance should be directed to adaptation finance, while another 33 percent thought the share of adaptation finance should be as high as 75 percent.

Against this backdrop, this first panel discussion investigated policy options and pathways to redress this imbalance and increase resources for adaptation, especially in climate-vulnerable countries. More specifically, discussants aimed to identify innovative financing mechanisms to expand adaptation investment, national and local best practices to coax more funding, and ways to make adaptation as attractive an investment as mitigation. The panelists consequently focused their discourse on a range of distinct but interrelated topics: the nature of adaptation; the role of cities, which emit 70 percent of the world's greenhouse gasses and house over 50 percent of its people; risk and insurance; and the responsibilities of the private sector versus the public sector. Panelists also raised important challenges to address going forward, including the need for more precise technical definitions and higher-quality data.

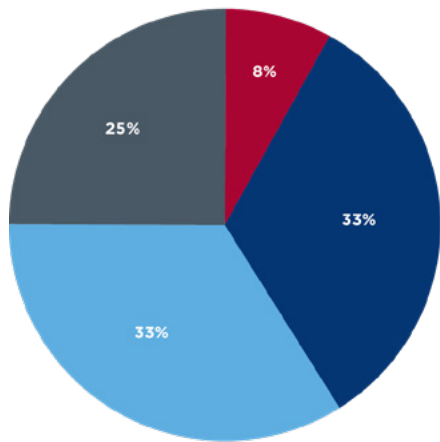
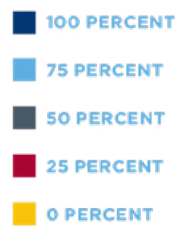


Figure 2: What percentage of all global finance should be adaptation finance?



OVERCOMING THE NATURE OF ADAPTATION: SMALL, LOCAL, AND MISUNDERSTOOD

Funneling and Bundling

Adaptation is locally specific, meaning different regions, nations, cities, and even communities require distinct adaptation projects and programs based on various socioeconomic and environmental factors. In a thought piece drafted for the workshop, Frank Diebold discussed the local nature of adaptation, noting that “different areas and sub-areas have different exposures to different climate risks, and adaptation efforts can themselves be adapted to those differences.”²⁸ Panelists highlighted that the locally specific nature of adaptation creates serious challenges for financing it. They noted that the outstanding question to answer was how to funnel large-scale institutional capital into small-scale, locally relevant projects.

Panelists addressed this question from a private-sector perspective. They pointed out that channeling institutional capital to adaptation projects entails overcoming two distinct hurdles. First, adaptation projects must be aggregated to make them investable at scale. Aggregating these initiatives will require, inter alia, better and more high-quality data. Second, to make institutional investment more attractive, the risks associated with small-scale projects must be reduced, which may require guarantees or credit-enhancement facilities. Calls for improved data and processes to reduce investment risk and to support decision-making emerged as a common thread throughout all workshop panel discussions.

Panelists also investigated the adaptation finance gap question from a public-sector perspective, noting that attracting institutional capital also presented challenges. They emphasized that public officials must

²⁸ Frank Diebold. “On the Financing of Climate Change Adaptation in Developing Countries.” *Workshop on Global Climate Finance*. Perry World House and Wharton Climate Center, University of Pennsylvania, 2022.



The workshop's panels led to thoughtful conversations about policy solutions to critical challenges.

understand and develop the project pipeline. This would include considering whether and how adaptation projects could be aggregated into investable financial instruments. It would also mean identifying adaptation needs, followed by a set of projects with outcomes that addressed them. Panelists emphasized the importance of defining adaptation requirements to ensure that investors could understand and meet them. Otherwise, resources would flow elsewhere.

Financing Adaptation and Resilience in Cities

Panelists agreed that cities have an important role to play in both mitigation and adaptation, and, therefore, must be included in any conversation about financial and other climate-related resource flows. One panelist noted that cities produce approximately 70 percent of the world's greenhouse gas emissions and house over 50 percent of the world's population. Given this reality, some discussants highlighted that meeting any global goals on climate change would require participation, ingenuity, and implementation on the part of cities. With metropolises, particularly in Asia and Africa, expected to grow significantly in the coming decades, they noted that there will be ample opportunities to direct financing toward the development of both low-emission and high-resilience urban centers.²⁹

Yet, panelists pointed out that reform is needed to ensure that cities receive the capital they require to adapt and grow resiliently. Panelists noted that while many developing countries face difficulties accessing

climate finance, the landscape is even more challenging for cities. Climate finance institutions are designed to serve national and not local entities or governance structures. Discussants underscored that no specific framework provides cities with reasonable access to capital. As one panelist stated: “[We expect] cities to be heroes but [do not provide] them with capital. Less than 20 percent of 500 cities in the developing world are creditworthy, [and this problem is] way worse for medium and small cities. Cities cannot access the capital they need.” Panelists concluded that, given the opportunities for mitigation and the need for adaptation in urban areas, climate finance institutions must be redesigned to be more city-friendly. They suggested establishing specific funds to provide cities with direct access to needed capital investment.

In addition to access, panelists highlighted the challenges of aggregating adaptation projects to better attract institutional capital at the local level, much like at the national level. They underscored that many cities lack the requisite capacities to identify, plan, and manage investable adaptation projects. One panelist observed that public officials do not have the same skills as investment bankers. Panelists agreed that developing local capacity to create fundable projects that meet investment criteria for a variety of capital (e.g., mutual funds, private equity, venture capital, etc.) is of utmost importance. Other discussants noted that local governments lack the high-quality data needed to support project pipeline management and financing. For example, one panelist explained that it is not clear

²⁹ United Nations. “2018 Revision of World Urbanization Prospects.” United Nations Department of Economic and Social Affairs. *UN.org*, 2018. <https://www.un.org/development/desa/publications/2018-revision-of-world-urbanization-prospects.html>.

how much cities spend on nature-based solutions and that this opacity prevents municipalities from showcasing the profitability of this particular intervention to investors.

Persuading the General Public

In the context of city governance and national affairs, panelists pointed out the difficulty that government officials have in communicating the importance of adaptation projects to their constituencies. Because the structure and outcome of mitigatory actions are more easily visible and profitable, mitigation becomes more politically attractive than adaptation, especially given the length of political terms. As a result, elected leaders are often hesitant to adopt a strong stance on local adaptation projects, especially to a cost-conscious electorate.

Panelists argued that effective communication is therefore key to rebalancing investment in mitigation and adaptation. This means persuading governments and citizens that prudent adaptation planning can and will save lives, especially when adaptation projects target threats like storm surges and heat waves. In addition, better communications tools and strategies can help convince wary citizens and their elected leadership that adaptation endeavors are worth the cost and in the public's interest.

(De)Risking and Insuring

In addition to being characterized as small, local, and misunderstood, adaptation projects also carry risks. Panelists discussed how to assess and mitigate project risks as a way to increase investment. One panelist noted that the optimal environment for private-sector

investment is one in which projected risk and return can be reliably calculated. However, others said that forecasting risk is not enough. Even when a given adaptation project's risk and expected return is calculable, the initiative may still be too risky for investors to fund. There was broad agreement that "de-risking" adaptation projects is paramount to attracting investment, and panelists pointed out the important role that governments and multilateral development banks could play in this regard.

In their deliberations, panelists explored creative ways to consider and attenuate risk. One discussant remarked that green bond issuance by insurance companies may be a promising pathway to explore. Another panelist suggested that instead of continuing to subsidize insurance in flood zones, policymakers focus on relocating populations to areas less prone to extreme weather events. Additionally, governments could use new subsidies to help offset the cost of building resilient infrastructure in these areas. Overall, panelists agreed on the need to develop new mechanisms to assess risk in an increasingly uncertain future.

THE ROLES OF THE PRIVATE SECTOR AND PUBLIC SECTOR

Panelists elaborated on the differentiated roles the public and private sectors could play to increase finance for adaptation. They agreed that the private sector plays a crucial role in funding mitigation and adaptation projects. However, some discussants suggested that private capital take a more prominent role in funding. Almost 60 percent of respondents to the workshop survey thought that half of global climate finance should come from the private sector. Currently, less than 2 percent of adaptation funding comes from the private

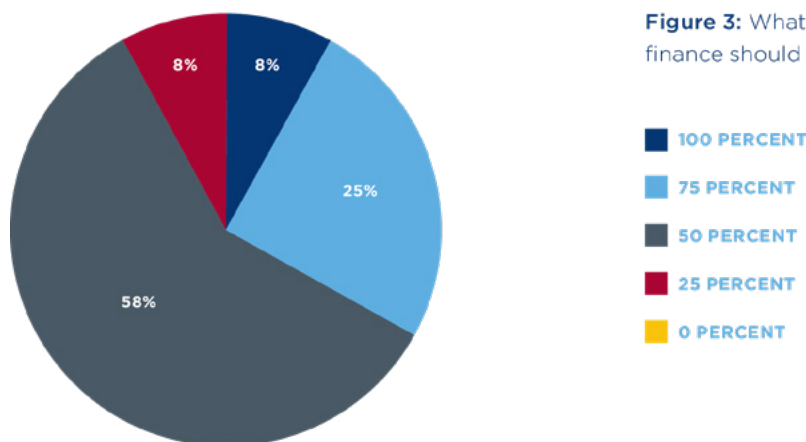


Figure 3: What percentage of all global climate finance should come from the private sector?



The workshop's first panel discussed the need to finance adaptation to climate change, specifically looking at countries most vulnerable to its effects.

sector.³⁰ Panelists also pointed out that private-sector entities are well positioned to identify and address specific types of problems in the market, as profits incentivize businesses to finance and develop solutions to acute needs. Some noted that venture capital is adept at identifying current challenges and anticipating future problems, even in advance of market demand. Others said that private-equity funds are well suited to invest in climate resilience, providing resources like equipment and technical acumen that can have a meaningful impact.

Subsequent discussions stressed that, despite the private sector's unique abilities to address certain challenges, innovative financial products are not what is needed. Rather, panelists highlighted that a shift in mainstream attitudes on societal adaptation is required. They noted the Lightsmith Group as an example of this shift, pointing out that it invests in growth-stage companies addressing critical societal needs; and it leads the Adaptation SME (small and medium enterprise) Accelerator to build an ecosystem for emerging market SMEs with technologies, products, and services that respond to climate change.³¹ With regard to this shift, Lucian Taylor noted in his thought piece: "If we can make capital cheaper for green activities and more expensive for pollutive activities, the economy will naturally become greener. Of course, changing firms' cost of capital cannot by itself solve the climate crisis, but it can be part of the solution."³²

Discussing the public sector, panelists agreed that governments need a more comprehensive approach to ensuring national and local projects receive funding. They noted that public officials must clearly define the problems and identify desired outcomes. To address the impacts of climate change, governments can adopt policies that tilt investment toward companies that are developing resilience solutions, even if they are not decarbonizing (or contributing to mitigation). They cited low-energy heat pumps and drought-resistant seeds as examples of technologies that can respond to heat waves and droughts, respectively. Panelists noted that it was challenging to identify what companies are best positioned to advance these solutions. Beyond this hurdle, they concluded that governments play a crucial role in incentivizing private investment in climate adaptation (and mitigation) solutions and that multilateral development banks should aim to make financing as concessional as possible for areas of need.

30 World Economic Forum. "Climate Adaptation: The \$2 Trillion Market the Private Sector Cannot Ignore." World Economic Forum, November 1, 2022. <https://www.weforum.org/agenda/2022/11/climate-change-climate-adaptation-private-sector/>.

31 The Lightsmith Group. "The Adaptation SME Accelerator Project." n.d. <https://lightsmithgp.com/asap/>.

32 Lucian Taylor. "Sustainable Investing and Green Returns." Workshop on Global Climate Finance. Perry World House and Wharton Climate Center, University of Pennsylvania, 2022.



Panelists examined a wide array of topics on how to finance adaptation, touching on how adaptation can be made an attractive investment.

Panelists also touched on the promise of government-issued “green bonds”³³ as a relatively cheap source of capital. They noted the recent example of the German government, which issued green bonds alongside traditional bonds with identical coupons and maturity dates and found that the green bonds traded at a higher price, indicating investor demand. Panelists pointed out that although the green bonds did not trade at a significantly higher price, the willingness of investors to pay a premium for them indicated that similar instruments might offer a funding stream for green projects in the future. One discussant was optimistic that these types of bonds, or similar ones, may present insurers with an opportunity to innovate around resilience.

DEFINITIONS AND DATA

Panelists broadly agreed on the need for clearer definitions of climate-related investment terms like climate finance, adaptation, and resilience. They also concurred that a more uniform nomenclature would enable more efficient and effective financing. They underscored that effective communication and data collection are challenging without a uniform taxonomy. Concerning improving the quantity and quality of data, they suggested creating adaptation data clearinghouses to collect, verify, and present information to both private and public sectors. They noted that accessible data are needed to improve planning at the local level, as well as ESG accounting and auditing, which will impact climate finance.

³³ Green bonds are financial instruments that finance green projects and provide investors with regular or fixed-income payments. See: World Bank. “What You Need to Know About IFC’s Green Bonds.” World Bank, December 8, 2021. <https://www.worldbank.org/en/news/feature/2021/12/08/what-you-need-to-know-about-ifc-s-green-bonds>.

POLICY RECOMMENDATIONS

Panelists broadly agreed on the need to focus locally, including on cities, to scale up, channel, and target financial resources toward impactful adaptation practices. This would require more and higher-quality data and enhanced communications strategies that can educate the public, improve local-level decision-making, and guide and attract investment. Specific policy recommendations to increase finance for adaptation included:

- Public officials should develop their adaptation project pipelines by identifying adaptation needs and sets of projects to meet them.
- Public officials should explore and pilot new mechanisms, such as green bonds, subsidies, and the aggregation of smaller adaptation projects to help de-risk and attract investment.
- Financial institutions should establish specific funds to provide cities with direct access to finance for climate action.
- National and local governments should close human capital capacity gaps (e.g., financial acumen, communications, etc.) to improve the creation of fundable projects that meet investment criteria for a variety of capital, like mutual funds, private equity, and venture capital, and they should leverage capacity where it exists.
- Climate finance stakeholders should establish a uniform taxonomy for climate finance terms (e.g., adaptation, resilience, investment, etc.).
- National governments should increase and improve data collection and communications to inform citizen, public, and private initiatives' decision-making; this could include the creation of adaptation data clearinghouses to collect, verify, and present information.



QUESTIONS FOR FUTURE RESEARCH

What mechanisms can reduce risk sufficiently to attract private-sector investment?

How can the project pipeline of adaptation projects be aggregated to meet large-scale institutional investor demand while at the same time ensuring that these projects generate locally desired outcomes?

What changes must be made to the financial system to ensure that non-creditworthy cities and small localities have reliable access to affordable adaptation finance?

> ACCESSIBILITY AND IMPACT

Following a discussion on how to increase the finance and resources flowing toward climate adaptation, the workshop's second panel investigated how to make climate finance more accessible and impactful. The panel convened against two critical considerations. First, "across sectors and regions, the most vulnerable people and systems are observed to be disproportionately affected" by climate change.³⁴ Second, the global infrastructure through which climate finance flows is designed and governed by those countries that have benefited the most from industrialization and therefore caused the climate crisis.³⁵ Panelists, therefore, investigated how climate finance might be structured, channeled, and accessed so as not to worsen historically driven inequity, marginalization, and exclusion of those most exposed to climate change impacts.

Panelists included: Susanna Berkouwer, assistant professor, Wharton; Ayse Kaya, professor, Swarthmore College and Wharton School; Rachel Kyte, dean of The Fletcher School, Tufts University; Jimena Leiva Roesch, director of Global Initiatives and Head of Peace, Climate, and Sustainable Development, the International Peace Institute; and Ned Shell, global head of climate finance policy, Bloomberg, and secretariat lead, the Glasgow Financial Alliance for Net Zero. Michael Weisberg of Perry World House moderated the panel. The group's deliberations focused on leveraging local capacity and institutional knowledge, multilateral development bank reform, and affordable debt.

34 Intergovernmental Panel on Climate Change. AR6 Climate Change 2021: *Impacts, Adaptation and Vulnerability*. Geneva: IPCC, February 27, 2022. <https://www.ipcc.ch/report/sixth-assessment-report-working-group-ii/>.

35 Liane Schalatek. "A Climate Finance Rethink Can Help Those Most Impacted by Climate Change." *New Security Beat*, n.d. <https://www.newsecuritybeat.org/2022/06/climate-finance-rethink-impacted-climate-change/amp/>.



They debated how the global landscape for climate finance and the institutions that administer it might be made fairer, more accessible, and more impactful. They considered how to make climate finance more available to countries in need; how to redesign global governance institutions to provide developing countries with more of a voice; and how to ensure that investments target, reach, and positively impact the most vulnerable communities in the most impacted countries.

LEVERAGING LOCAL CAPACITY AND INSTITUTIONS

Panelists commenced their discourse by highlighting the need to employ the finance that has already been allocated for climate-related projects. They said that states need to create mechanisms to facilitate the flow of this capital to where it is most needed. Toward this end, discussants recommended seeking out and leveraging institutions with advanced capacity for climate action. They noted that local organizations grounded in a given region or country would likely use climate finance more effectively than outside or foreign actors. They observed that local institutions might also be more effective at converting project plans into investment plans and, thus, structuring a project pipeline attractive to private capital.

Panelists pointed out that leveraging the existing capacity of local institutions is one way to “work within the current system,” and they cited “Last Mile Health,” an organization that strengthens community-based healthcare systems, as an example of a specialized, local,

and effective entity.³⁶ These types of “boots on the ground” nongovernmental organizations may provide insight on how governments can reach climate-vulnerable populations. One panelist suggested that this type of expertise may also exist in non-obvious organizations.

While not “local,” Coca-Cola, for instance, can be found in some of the most remote regions in the world, meaning that this company has figured out the logistics of reaching people with its product.

WORKING WITHIN EXISTING SYSTEMS

In the 2022 Kofi Annan Inaugural Memorial Lecture, Barbadian Prime Minister Mia Amor Mottley called on the International Monetary Fund (IMF) to make a slew of changes that would facilitate climate finance to countries most vulnerable to the impacts of global warming. In what is referred to as the Bridgetown Initiative,³⁷ Mottley recommended that the IMF return to pre-pandemic access to credit and financing, suspend interest charges for debt-burdened countries, repurpose at least \$100 billion in unused special drawing rights to countries in need, operationalize the Resilience and Sustainability Trust to provide concessionary funding to climate-vulnerable countries, and consider aggressive debt service suspension measures for low- and middle-income countries.³⁸

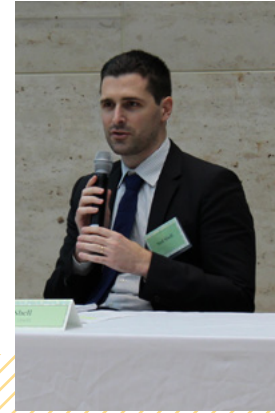
Mottley also recommended that multilateral development banks (MDBs) expand lending by \$1 trillion, focusing on concessional finance to build climate resilience.³⁹ In their deliberations, workshop panelists

36 Last Mile Health supports some 8,000 frontline health workers and serves over 5 million community members. See: Last Mile Health. <https://lastmilehealth.org>.

37 Ministry of Foreign Affairs and Foreign Trade. “The 2022 Bridgetown Initiative.” Foreign Affairs and Foreign Trade: Barbados, September 23, 2022. <https://www.foreign.gov.bb/the-2022-barbados-agenda/>.

38 Mia Amor Mottley. “The Inaugural Kofi Annan Lecture Delivered by Hon. Mia Amor Mottley.” Kofi Annan Foundation, September 23, 2022. <https://www.kofiannanfoundation.org/vision-annan/kofi-annan-lecture-2022-mia-mottley>.

39 Ibid.



The panel discussed ways the global landscape for climate finance can be more accessible, and ease the burden on countries in need.

agreed that working within the existing structures of MDBs would be crucial to meeting global climate finance goals. As Ayse Kaya noted in her thought piece: “There is a great need for money, especially for the most vulnerable communities within the most impacted but poor pockets of countries,” and “MDBs possess great potential to lead in climate finance.”⁴⁰

Panelists highlighted multiple reasons for focusing on MDBs, along with the potential benefits of such a policy focus. First, MDBs have the capacity to house additional climate finance flows, especially on adaptation. Second, MDBs have access to more and less expensive capital, and their power to issue AAA-rated bonds should not be underestimated. However, panelists also noted how MDB lending practices that protect AAA ratings might limit developing countries’ access to finance. Finally, they noted that dropping the rating to AA+ could result in more available finance and serve as one way to address the private sector’s aversion to risk, as discussed in the first panel. These topics also surfaced at the COP27, during which lead US Climate Envoy John Kerry called for an overhaul of MDBs, arguing that plans should not require new money from donors or force a change in credit rating.⁴¹

In a thought piece written for the workshop, Ayse Kaya recommended creating an MDB Climate Finance Oversight Committee. She argued that this committee could be charged with ensuring that only climate and environment-related funds are designated as climate

finance. It would also develop a unified framework for MDB adaptation and mitigation project selection, ensure that climate finance flows do not add to the debt burden of poor countries, and manage an open-access database for climate-related project-level data.⁴² The panelist concluded her brief by stating that, by taking climate change seriously and instituting requisite changes, MDBs could fulfill their responsibility to dispense climate-related funding to low- and middle-income countries.

Panelists broadly agreed that working within the current global financial architecture was the most promising approach to closing the climate finance gap. Even though it may seem like new institutions are needed to free capital, they posited that developing new institutions would likely take too much time. Instead, panelists thought the best and most expedient way to improve access to climate finance was to reimagine the current system by making strategic changes.

Panelists recommended multiple ways to get the vast amount of capital available in the system flowing toward climate action and countries/communities in need. First, they called for a better definition of “climate finance.” Much like the first panel, they noted that building a universal climate finance taxonomy could ensure that transactions run smoothly. Second, a climate finance oversight committee appointed by the UNFCCC could signal the importance of climate finance access to stakeholders, better track finance flows, and hold key

40 Ayse Kaya. “Multilateral Development Banks and Climate Finance: More Words than Action.” *SDG Knowledge Hub*, IISD, November 9, 2022. <https://sdg.iisd.org/commentary/guest-articles/multilateral-development-banks-and-climate-finance-more-words-than-action/>.

41 Valerie Volcovici and Simon Jessop. “U.S. Climate Envoy Kerry Wants Development Banks Overhaul Plan by April.” *Reuters*, November 15, 2022, sec. COP27. <https://www.reuters.com/business/cop/us-climate-envoy-kerry-wants-development-banks-overhaul-plan-by-april-2022-11-15/>.

42 Ayse Kaya. “Multilateral Development Banks and Climate Finance: More Words than Action.” *SDG Knowledge Hub*, IISD, November 9, 2022. <https://sdg.iisd.org/commentary/guest-articles/multilateral-development-banks-and-climate-finance-more-words-than-action/>.

actors accountable. Third, national governments or other actors that devise large and sweeping climate finance packages could include clauses that address adaptation. For example, one panelist pointed out that projects under the recently passed Inflation Reduction Act in the United States could repurpose fossil fuel plants for renewable energy production—an adaptation within the context of the energy transition. Overall, however, discussants advocated more for incremental reform, rather than sweeping changes.

Panelists strongly agreed that the project lifecycle is “low-hanging fruit,” ripe for improvement. One discussant recommended avoiding “excessive due diligence,” underscoring that some countries in need of climate finance have strong institutional capacity, including ex-post auditing and monitoring. They argued that if projects in these countries were not subject to excessive scrutiny, this could vastly hasten access to climate finance. This also translates to funding bodies not requiring upfront contracting requirements, which currently result in substantial delays and other process-related costs for borrowers.

Finally, at the institutional level, panelists raised concerns about the speed by which institutions could change. Specifically, the panelists highlighted concerns that slow-moving, bureaucratic institutions that govern the financial landscape would be unable to take timely and decisive action. They noted that with long lead times, it takes a while to realize projects’ benefits.

Moreover, complex legal frameworks can be inaccessible. For example, people working at the local level may not have the technical expertise to navigate the legal landscape of an MDB. Removing bureaucratic bottlenecks and simplifying processes is paramount, discussants concluded.

AFFORDABLE DEBT

Panelists also discussed climate finance in the context of debt. They broadly agreed that financing climate change projects should not make vulnerable countries poorer. In reality, however, climate-related projects often strain developing countries’ finances, increasing their debt burdens. This, in turn, limits their fiscal capacity to adapt to and mitigate climate change. Executive Secretary of the United Nations Development Programme Achim Steiner recently warned that more than 50 developing countries are at risk for default and that the looming debt crisis might impede these countries’ ability to tackle climate-related challenges.⁴³ Meanwhile, Prime Minister Mottley is leading a call, inter alia, for the suspension of interest charges for debt-burdened countries.

Against this context, panelists affirmed that international financial institutions (IFIs) have an opportunity to address countries’ debt burdens in the context of climate change. One panelist said that multilateral finance institutions must devise ways to use debt to meet the needs of less affluent countries. Global



Panelists explored ways to steer capital toward climate action.

43 Fiona Harvey. “More than 50 Poor Countries in Danger of Bankruptcy’ Says United Nations Official.” *The Guardian*, November 10, 2022. <https://www.theguardian.com/environment/2022/nov/10/54-poor-countries-in-danger-of-bankruptcy-amid-economic-climate-cop27>.

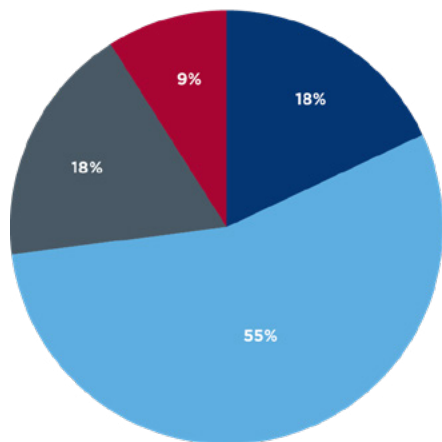
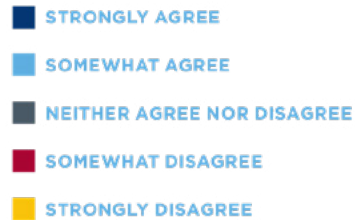


Figure 4: Changes in accounting will improve flows of climate finance.



institutions, it was proffered, should not just focus on providing access to loans, but also ensuring that the debt is financially sustainable over the long term. Panelists noted that access to affordable debt alleviates the need for countries to finance projects using equity, which discussants agreed would siphon off future profits. One panelist recommended that policymakers take steps to ensure that debt is not prone to political capture. Another stated that lenders must take care in crafting the conditions of loans, especially rates, maturity dates, and covenants. Circling back to prior discussions on risk, others highlighted that while developing countries need lower-than-market rates, private-sector lenders are hesitant to lend at those rates for various reasons, including the possibility of shareholder lawsuits.

MEASUREMENT

Lack of data was a common challenge highlighted throughout the workshop’s discourse, with panelists underscoring the impacts that better data on capital flows would have on allocating resources. For instance, insufficient project-level data prevents institutions from determining what projects are receiving funding and how much. Moreover, understanding where international development banks are lending can increase accountability.

From the perspective of private financial institutions (e.g., banks, asset managers, etc.), better measurement may result in more useful ESG reporting and auditing. Panelists discussed how many financial institutions find great value in marketing themselves as “climate-

friendly” or “green” and that many shareholders want to see a declining carbon footprint across their portfolios. In the context of balancing mitigation and adaptation funding, they noted that there is, given this scenario, a disincentive for funding adaptation projects in developing regions, given that the projects are relatively carbon-intensive. More data, combined with new, more holistic ways of measuring overall impact, they suggested, could reduce this tension and pave the way for adaptation finance to reach those projects that need it most. When surveyed, almost three-quarters of respondents agreed that changes in accounting would improve global flows for climate finance.

Panelists also noted that the MDBs are keen to protect their AAA rating, to the detriment of access to loans by developing countries. They pointed out that measuring impact rather than credit rating might unlock more capital for areas and projects needing it most. In a thought piece drafted for the workshop, Ayse Kaya stated that “the World Bank should commit to channeling at least 50 percent of its lending to climate-related activities and publicly announce a rigorous metric for designating the contribution of projects to this end.”⁴⁴ Following the workshop, at COP27, the World Bank announced a new facility, the Global Shield Financing Facility, to assist countries that suffer economic losses due to climate change–driven disasters.⁴⁵ Reform will also be on the agenda of the World Bank 2023 spring meetings.

Discussions also highlighted the importance of considering vulnerability, a particularly thorny problem

44 Ayse Kaya. “Multilateral Development Banks and Climate Finance: More Words than Action.” *SDG Knowledge Hub*, IISD, November 9, 2022. <https://sdg.iisd.org/commentary/guest-articles/multilateral-development-banks-and-climate-finance-more-words-than-action/>.

45 William James. “COP 27 World Bank Will Host Facility for Climate Disaster Risk–Malpass.” *Reuters*, November 8, 2022, sec. Sustainable Business. <https://www.reuters.com/business/sustainable-business/cop-27-world-bank-will-host-facility-climate-disaster-risk-malpass-2022-11-08/>.

for small island developing states. Because countries in this subset can have high Human Development Indexes and Gross Domestic Product per capita rankings, they often cannot access concessional finance, even though they are exceptionally vulnerable to devastating climate impacts like storms and sea-level rise. Panelists recommended that MDBs consider vulnerability in their lending and when analyzing the impact of their investments within countries.

POLICY RECOMMENDATIONS

Although large-scale institutional change is required to tackle the climate crisis, panelists recommended leveraging local capacity while working within the current global financial system, including through incremental change, as an expedient and efficient way to increase access to climate finance quickly and fairly. They also called for reforming existing finance mechanisms and structures, in particular, picking low-hanging fruit like lessening due diligence requirements. To complement international-level institutional reforms, panelists also suggested using local capacity where possible and filling in gaps where needed to bolster administrative capacity on the ground. For instance, reforms that improve ex-post auditing and monitoring can reassure funders that money will not be misspent.

Participants recommended that:

- MDBs should prioritize lending to countries vulnerable to climate change over maintaining AAA credit ratings.
- Lenders should establish concessional lending triggers that track vulnerability to climate change.
- MDBs should also reform the project lifecycle by removing bureaucratic bottlenecks, simplifying processes, and reducing due diligence where countries have established local capacity for appropriately absorbing and utilizing climate finance.
- Climate finance actors need to improve and refine data and data taxonomy to allow for better accounting and informed decision-making regarding finance allocations and impacts.
- Global financial institutions should ensure that the debt extended to low- and middle-income countries is financially sustainable over the long term.



QUESTIONS FOR FUTURE RESEARCH

What metrics exist for evaluating climate vulnerability, and how can they support countries' access to climate finance?

In the context of climate finance, what does MDB/IFI reform look like? What first steps should be taken?

How should an ex-post auditing and monitoring system for climate finance be designed to improve reporting and decision-making?

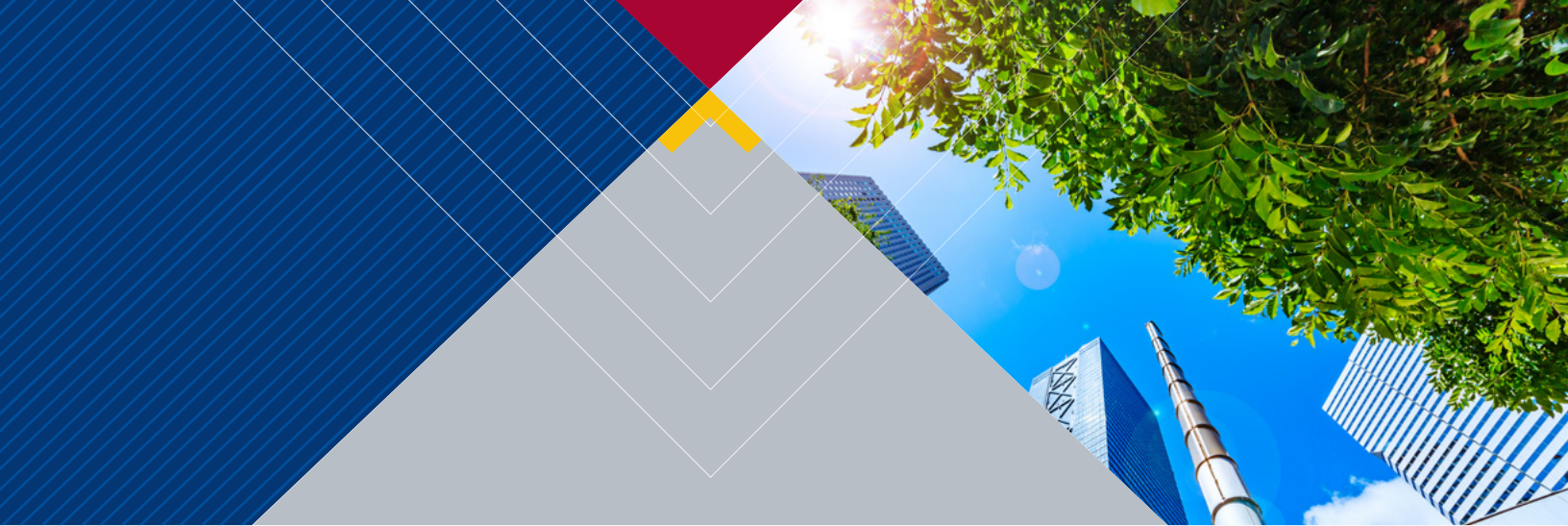
If an MDB Climate Finance Oversight Committee were created, what would it look like and how would it function?

> TRANSFORMATION

While the first two panels of the workshop scrutinized the current challenges of balance and access in climate finance, the third and final panel of the workshop looked to the future. In this discussion, experts examined what was needed to unleash financial resources at a scale necessary to move beyond the climate crisis and to a carbon-free world. In the context of the Paris Agreement, they investigated pathways to meeting Goal 2.1C, which calls for *all* global financial flows to be “consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.”⁴⁶

The panel featured: Francis X. Diebold, professor of economics, finance and statistics, University of Pennsylvania; Her Excellency Thilmeeza Hussain, special envoy of the president of the United Nations General Assembly, permanent representative of the Maldives to the United Nations; Margaret E. Peloso, partner, Environmental & Natural Resources division, Vinson & Elkins; and Koko Warner, then manager, Adaptation division, UNFCCC, and now director of the International Organization for Migration’s Global Data Institute. Michael Weisberg, senior faculty fellow and director of post-graduate programs, Perry World House, moderated the discussion.

⁴⁶ International Bank for Reconstruction and Development. *Transformative Climate Finance: A New Approach for Climate Finance to Achieve Low-Carbon Resilient Development in Developing Countries*. Washington, DC: World Bank, 2020. <https://openknowledge.worldbank.org/bitstream/handle/10986/33917/149752.pdf>.



The third panel explored how climate finance could be used to transform our future for a more sustainable global society.

In such a broad and forward-leaning conversation, panelists focused their discourse on the factors that could spur an equitable transition⁴⁷ to a climate resilient future, including big-picture thinking, society’s appetite for risk, and ESG reform.

UNDERSTANDING AND FRAMING RISK

In a thought piece drafted for the workshop, Koko Warner argued for “a modular approach that combines finance, technology, and capacity building to address the multiple adverse climate change impacts in the real economy.”⁴⁸ Among other things, the brief called for a “critical assessment of valuation and societal risk tolerance vis-à-vis the economic impacts of climate change.” Reflecting on the thought piece, one panelist posed a simple question: what is society’s tolerance for risk? In other words, how much can different societies bear, and what happens when they cannot bear any more? It was posited that answering this question and acquiring the corresponding data could help accelerate a global green transition and improve resilience. Moreover, such information could also inform the development of tools to monitor, analyze, and quantify climate risks, as well as help leaders understand the relationship between climate impacts and structural change.⁴⁹

Discussants agreed that a deeper understanding of climate risks is required, especially to balance them with other risks across the real economy. They noted that there are tools that could be used toward this end.

47 An equitable transition is one that does not disadvantage some countries or communities while favoring others.

48 Koko Warner. “A Modular Approach to Climate Finance for Adaptation and Addressing Adverse Climate Impacts.” Workshop on Global Climate Finance. Perry World House and Wharton Climate Center, University of Pennsylvania, 2022.

49 Ibid.



Members of the audience gained valuable insight on the different ways that climate finance can be used to support long-term planning, and how different sectors can be help support sustainable initiatives.

For instance, disclosures could illuminate what is known about certain risks. A question left on the table was whether there is a way to frontload investments to overcome the upfront costs and risks of transformational investment projects like capital-intensive renewable energy initiatives.

CROSS-BORDER CARBON MARKETS

Panelists also discussed creating a cross-border carbon market to shift the world beyond the climate change crisis. Some recommended short, guided steps to avoid cutting corners during a large-scale implementation of a global carbon market. They noted that a crucial first step would be to create a widely accepted standard for carbon markets. After that, governments could regulate the market to bolster credibility. Only at that point might cross-border carbon markets be more tenable. Some underscored that verifiability is a challenge that would need to be addressed, and they noted that options like Climate Trace, a nonprofit that tracks greenhouse gas emissions, are emerging.⁵⁰

Panelists further highlighted that cross-border mechanisms could help reduce overall emissions and produce a stream of revenue for developing countries. Since most carbon market participants are oil and gas companies that cannot explain their transition to net zero, one option, they noted, is to have them purchase carbon credits from developing countries that emit less. One panelist raised another novel arrangement in which developing countries that decommission coal plants would receive carbon credits. In turn, these could be

sold to oil and gas companies in developed countries. It was posited that an arrangement like this could result in private companies helping to finance emissions reductions in developing countries. Despite the intentions, such arrangements raise serious concerns, other panelists noted. A plan announced by US Climate Envoy John Kerry at COP27 was immediately criticized for attempting to avoid grants-based public finance for developing countries.⁵¹ In another instance, United Nations Secretary-General Antonio Guterres has warned that “shadow markets for carbon credits cannot undermine genuine emission reduction efforts.”⁵²

EQUITABLE TRANSITION

Panel discussions also touched on the concept of an equitable transition to a greener, more sustainable future, and in this context, focused on inclusion. One panelist suggested looking to past justice movements to glean lessons that could be learned. Another intervention drew parallels between the climate movement and the women’s movement, noting that there may be similarities between male vs. female power dynamics and fossil fuel vs. renewable energy dynamics. They highlighted that one feature of the women’s movement was that it provided women a platform and amplified their message. They suggested that the climate movement could also bring marginalized voices to the table to help those in power to better understand the challenges and how to redress them. Others noted that a transition would create winners and losers, and that care must be taken to protect disproportionately impacted and disadvantaged communities.

50 “Our Story: Climate TRACE.” n.d. Climatetrace.org. <https://climatetrace.org/our-story>.

51 Ivana Kottasová, Allegra Goodwin, Eve Brennan, Ingrid Formanek, and Ella Nilsen. “Kerry Announces—and Is Immediately Criticized for—a New Plan to Raise Money for Climate Action.” *CNN*, November 9, 2022. <https://edition.cnn.com/2022/11/09/world/cop27-kerry-finance-offset-plan-intl-climate/index.html>.

52 Jean Chemnick. “Kerry Pitches Climate Finance Plan. Other Countries Say It’s ‘Not Enough.’” *Politico*, November 9, 2022. <https://www.politico.com/news/2022/11/09/john-kerry-offset-plan-climate-finance-00065753>.

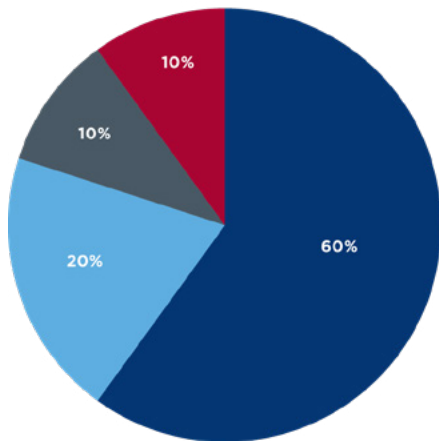
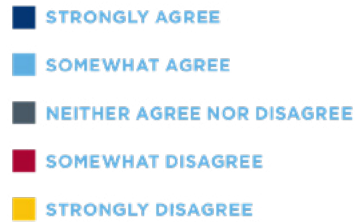


Figure 5: Greenwashing is a major problem in reporting on global climate financial flows.



ESG FRAMEWORKS

Panelists discussed the rise of ESG, a relatively recent framework increasingly employed by companies and investors to understand and address risks and opportunities in the context of climate change as well as sustainable development. For each of its three components—environmental, social, and governance—ESG has no universally agreed definitions, targets, or metrics, they noted. But as climate change and other socio-environmental challenges escalate, ESG is increasingly turned to as a way to understand and report on corporate impacts and responses. ESG has become prominent enough that the Wharton School of the University of Pennsylvania, which co-sponsored the Global Climate Finance workshop, launched ESG undergraduate and business school majors in 2022.

As part of their panel discussion, workshop participants discussed what was needed for ESG frameworks to guide private-sector decision-making and financial allocations toward sustainable and greener pathways. Despite its traction as a concept, panelists raised concerns over ESG products, especially ESG ratings that can mask the trade-offs that companies make. They noted the example of Tesla, a maker of electric vehicles, which was removed in 2022 from S&P’s ESG Index for lacking a low-carbon strategy and failing to maintain proper working conditions for employees. Meanwhile, S&P kept ExxonMobil in the index, despite it being one of the world’s biggest polluters and a main supplier of fossil fuels.⁵³ Despite the interdependency of the ESG components, panelists suggested separating and

delineating the E, S, and G components as a way to overcome the challenges resulting from their current packaging.

Further, to better understand the constituent parts of E, S, and G, panelists recommended providing scores for each category to illuminate corporate decision-making to investors and consumers. They also suggested that index providers and asset managers be more transparent concerning the compromises they make. For instance, index providers could clarify what is required for inclusion in a given index. Similarly, money managers could lay out how portfolios are constructed and how traders and portfolio managers balance trade-offs.

As it stands now, without firm definitions, metrics, and delineation between the three ESG components, “greenwashing”⁵⁴ is believed to be a major problem. Greenwashing is when companies market themselves or their products as good for the environment or ESG accountable, when in fact they are not, or are not sufficiently so. Approximately 80 percent of workshop survey respondents agreed or strongly agreed that greenwashing is a “major problem in reporting on global climate financial flows.” Standards, metrics, and transparent accounting practices need to be developed as do regulations and reporting methodologies to address this issue and steer resources to greener pathways.

53 Lora Kolodny. “Why Tesla Was Kicked out of the S&P 500’s ESG Index.” *CNBC*, May 18, 2022. <https://www.cnbc.com/2022/05/18/why-tesla-was-kicked-out-of-the-sp-500s-esg-index.html>.

54 Greenwashing is the process of conveying a false impression or providing misleading information about how a company’s products are environmentally sound. See: Pietro Calice and Ezio Caruso. “Increased Transparency for a More Climate-Friendly Financial Sector.” *World Bank Blogs*, June 23, 2021. <https://blogs.worldbank.org/psd/increased-transparency-more-climate-friendly-financial-sector>.



The panelists made many policy recommendations that would enable long-term solutions to for climate adaptation.

Overall, panelists broadly concurred that stakeholders must rethink ESG to properly channel financial flows toward climate-friendly entities and initiatives. Discussants suggested further research be undertaken to understand the impacts that companies with ESG principles have on communities and people as opposed to their counterparts that do not apply an ESG lens to their operations. Panelists also recommended looking into ways to coax companies away from the marketing element of ESG and toward the real business case for addressing risks and impacts in the context of climate change.

POLITICAL LANDSCAPE

Panelists also discussed the roles of the largest political and economic actors in spurring transition. They noted that China, as the world's largest emitter of greenhouse gas emissions,⁵⁵ will considerably impact climate change trajectories but could also have an outsized influence on climate finance, as China commands significant leverage over the developing countries to which it lends. Also, regarding global leadership, panelists thought the G-7 could play a more substantial role in international climate financing. One panelist noted that G-7 members do not take the climate emergency seriously, and the countries, as owners of IFIs, have not internalized it. Participants highlighted that if G-7 countries internalized the climate emergency, they may be inclined to act more quickly and free more capital from the MDBs. Others thought that the G-7 should revisit the numerous pots of money at its disposal, underscoring that they can act fast if properly motivated—and the window for climate action is quickly closing.

⁵⁵ BBC. "Report: China Emissions Exceed All Developed Nations Combined." *BBC News*, May 7, 2021, sec. Asia. <https://www.bbc.com/news/world-asia-57018837>.

POLICY RECOMMENDATIONS

Overall, in this third discussion, panelists agreed that enabling an equitable transition to a climate-resilient future will require new ways of thinking about current challenges. They discussed the short-term steps that could enable this long-term evolution. Specific policy recommendations included:

- Academic institutions, in partnership with policymakers and national governments, could conduct research on and pilot programs for cross-border carbon-offset markets.
- All actors should develop tools to monitor, analyze, and quantify sets of potential climate risks and acquire the data needed to illuminate the relationship between climate impacts and structural change.
- Investors and companies should seek the separation and delineation of the E, S, and G categories of the ESG concept; and they should research and implement strong metrics and reporting as well as transparency measures.
- International institutions and actors should spur the G-7 to internalize the climate emergency and push capital toward addressing it.



QUESTIONS FOR FURTHER RESEARCH

What insights and lessons learned can be gleaned from previous justice movements, such as the women's rights movement, and applied to a just transition beyond the climate crisis?

How can ESG metrics and definitions be designed to support honest reporting and transparency as well as a framework that supports the achievement of the Paris Agreement?

What data and information are needed to prepare the real economy for a future shaped by climate change risk?

> CONCLUSION AND NEXT STEPS

Sourcing and efficiently deploying adequate capital to address climate change mitigation and adaptation is critical to achieving globally agreed climate and development goals for many countries. For others, this financing is a matter of survival. Given the urgency of the climate crisis, this workshop examined and set forth policy recommendations and ideas to advance the equity, accessibility, and amount of climate finance globally.

Across its three panels, the workshop resulted in various pathways for research and policy action. To enhance finance for adaptation, experts called for, among other things, fostering public-private partnerships to improve the project pipelines in countries. Participants cited the importance of developing a uniform taxonomy for climate finance terms to aid in data collection, decision-making, and communications. Further along these lines, in a discussion on ESG, panelists recommended breaking apart the concepts so that decisions and trade-offs could be plainly understood and evaluated. They also recommended working within the current global financial architecture, focusing on various approaches to MDB reform and oversight that could unlock resources within that system.

In their deliberations, panelists uncovered research areas for further exploration. They asked, for instance, how adaptation projects could be aggregated to meet large-scale institutional investor demand. They wanted to know what a properly functioning ex-post auditing and monitoring system might look like for climate finance projects. They noted that ESG metrics and definitions need to be designed to support the Paris Agreement, and they asked how that might be achieved.

Participants also deliberated on how to move the world beyond climate crisis and toward environmental and socioeconomic security and sustainability. The steps they recommended included looking to past justice movements for lessons learned, assessing society's appetite for risk, and developing tools to illuminate the relationship between climate impacts and structural change.

Many of the discussions featured at this workshop were taken up at COP27, where finance for adaptation, especially for loss and damage, featured on the global agenda. Other ideas, which were novel to this meeting, will inform additional policy fora, practitioner agendas, and become the basis of future academic research. Regardless of the venue for further discussion, the discourse undertaken at Perry World House in partnership with the Wharton Climate Center will open new pathways and approaches to resourcing the immediate and vast action needed to address and hopefully end the climate change crisis.

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