



# **Adaptation Finance**

## **Preventive and emergency adaptation to extreme weather events**



MINISTÉRIO DAS  
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EXTERIORES

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## G20 Environment and Climate Sustainability Working Group - ECSWG

### Adaptation Finance: Preventive and emergency adaptation to extreme weather events

This technical paper is a result of discussions during the Environment and Climate Sustainability Working Group (ECSWG) meetings in 2024, supplemented by written inputs of the G20 member states, engagement with civil society, and technical support from experts. The Brazilian Presidency strived to address all feedback received including from G20 member states, but the paper remains the sole responsibility of the Brazilian government.

#### EXECUTIVE SUMMARY

The global impacts of climate change highlight the need for more adaptation action, particularly in developing countries, and the G20 has recognized the importance of adaptation and reiterated commitments related to adaptation finance. Brazil's presidency of the G20 has placed climate change as one of its priorities, with adaptation being one of the four themes of the Environmental and Climate Sustainability Working Group (ECSWG). The ECSWG Adaptation Agenda focuses on the challenges of financing adaptation. Despite not being the only challenge, the Brazil G20 Presidency believes the focus should be on adaptation finance given the group's leading position in international finance and capacity to leverage actions of global nature.

**Adaptation and sustainable development.** Investments aimed at increasing resilience and adapting to climate change impacts fully align with those aimed at meeting the needs of developing countries to expand their infrastructure, enhance and improve the quality of services, and promote economic and social inclusion of their populations. They also fully align with policies aimed at ending poverty and inequality, and fighting gender, race and ethnicity injustice—inequalities that lead to an asymmetry of the distribution of impacts from climate change.

**Financing needs for adaptation by developing countries.** Globally, the costs of inaction in the face of the climate crisis can be very high. Estimates of such costs differ greatly due to assumptions about climate scenarios and the resulting potential social and economic impacts. Recent estimates are in the order of 20 per cent of global Gross Domestic Product (GDP) by 2100. The adaptation investments needed to minimize or offset these impacts are also large, but the required value is a fraction of the estimated losses due to inaction. In addition, investments in adaptation not only minimize losses from potential climate impacts, but also induce economic and development benefits, and additional social and environmental benefits.

**Current investments in adaptation.** It is challenging to precisely define the boundaries between strict adaptation and broader development projects, and thus to quantify overall

investments in adaptation, but it is estimated to be US\$ 30 billion annually—roughly a third of total climate finance. Despite uncertainties, it is clear a significant adaptation finance gap remains. Developed countries have committed to at least double adaptation finance from 2019 levels by 2025. Closing the gap will require transformative actions and to look beyond public financing.

**Past efforts by the G20.** Climate change has been a priority on the G20 agenda since the Brisbane meeting in 2014. The Declaration of Heads of State at that time stated “...we support strong and effective action to combat climate change... We reaffirm our support for mobilizing finance for adaptation and mitigation ...”. Strong support also came in the last meetings in Rome (2021), Bali (2022) and New Delhi (2023).

**Existing initiatives.** The global architecture of climate finance is complex and constantly evolving. Apart from private finance, which is (also) crucial for adaptation, funds flow through multilateral channels, both within and outside the United Nations Framework Convention on Climate Change, and increasingly through bilateral, regional and national climate change channels and funds.

Multilateral Development Banks play a prominent role in delivering climate finance mainly in their general support to countries. The largest and most important multilateral channels or institutions include the World Bank and the Regional Development Banks, the Global Environment Facility, the Adaptation Fund, the Green Climate Fund and the International Development Finance Club.

**Presidency recommendations: Scaling-up and expediting adaptation financing and strengthening institutional capacity.**

While adaptation finance needs to significantly increase to cover the current financing gap, developing countries also face limited capacity to identify and assess climate risks based on solid scientific evidence, prepare projects that minimize such risks and to mainstream adaptation into development plans. The ECSWG prioritizes a focus on mechanisms to address and implement both measures: (i) increase the volume of adaptation finance; and (ii) strengthen capacities to access financing promptly and to implement effective adaptation measures. They are addressed in four groups of recommendations, summarized below:

**1. Institutional capacity, policy and project preparation.** The G20 commits to support and fund, as necessary, the existing channels and initiatives aiming to build and strengthen science-based institutions in developing countries, as well as capacity for policy and project preparation. The G20 will also encourage the use of programmatic approaches for developing adaptation project pipelines and support the creation and better utilization of existing of national/regional platforms for adaptation.

**2. Alignment between adaptation policies and economic and fiscal policies.** The G20 commits to maintaining the climate emergency at the highest level of attention in its agenda, and to shift the present narrative— of adaptation being unaffordable, separate or an incremental cost competing with development priorities—to one where it is a central

ingredient of social and economic development, which aligns climate, economic and fiscal policies. The G20 will also help ensure that developing countries' adaptation actions give priority to people and populations facing greater capacity constraints and that are the most vulnerable to climate change, and to quantitatively assess the economic, fiscal and social risks of climate change and the financial and economic returns on adaptation investments.

**3. Increasing and accessing adaptation financing.** The G20 commits to increase financing for adaptation through existing channels, to promote and to support efforts to mainstream climate adaptation at the highest political level in all countries, and to develop a framework or a platform for investments in adaptation. This will involve elevating the discussion to the political level, bringing finance ministers and Heads of Government to the table. G20 countries will also enhance access to adaptation finance by making it more accessible, expedient and attractive, consolidating the landscape of climate funds and enhancing monitoring mechanisms.

**4. Attracting private capital and innovative adaptation financing mechanisms.** The G20 commits to establish a working group—including private sector representatives, multilateral and bilateral financing institutions and governments—to identify and to promote innovative financing mechanisms for adaptation and implementation of countries' National Adaptation Plans. The G20 is also committed to promoting private sector engagement in adaptation financing. This involves providing better information on the various business opportunities, leveraging private investment by sharing risks, providing guarantees and also identifying innovative financial mechanisms for climate change adaptation.

## Introduction

The global impacts of climate change highlight the need for more adaptation action in both developed and developing countries, even though the latter are more vulnerable and less prepared to cope. The G20 has recognized the importance of climate adaptation and reiterated commitments related to adaptation finance. Brazil's G20 Presidency has placed climate change as one of its priorities, with adaptation being one of the four themes of the ECSWG, along with Oceans, Payment for Ecosystem Services, Waste and Circular Economy.

The overall goal of the ECSWG adaptation agenda is to identify mechanisms to expedite the implementation of measures that contribute to adaptation to climate change and strengthen the resilience and adaptive capacities of societies, economies and ecosystems<sup>1</sup>. It focuses on the challenges of financing the implementation of adaptation actions, ensuring synergies with the Disaster Risk Reduction Working Group (DRRWG), Infrastructure Working Group (IWG), Sustainable Finance Working Group (SFWG) and the Task Force for Global Mobilization against Climate Change (TF-CLIMA).

The context of adaptation finance in developing countries is critically different from developed countries, as "... they face debt and fiscal crises which constrain the fiscal space and the ability to leverage private capital. Although climate finance has increased in recent years, it currently only represents 1% of global GDP with the biggest share in developed economies and China. Climate finance remains insufficient and unfairly distributed ..."[1]<sup>2</sup>, with adaptation lagging significantly behind mitigation, increasing the challenges for countries to deal with climate change impacts.

Although financing is not the only challenge of climate adaptation for developing countries— other challenges include institutional capacity, science-based adaptation plans and projects, alignment between climate and economic and fiscal policies, more private capital—the Brazil G20 Presidency considers it appropriate for the G20 to focus on adaptation financing, given the group's leading position in international finance and capacity to leverage actions of global nature.

The paper is outlined as follows: (i) discussion of the main issues related to climate change adaptation and its financing; (ii) recent efforts within the G20, covering initiatives and documents from previous presidencies on climate and adaptation; (iii) a brief overview of major global initiatives on climate adaptation; and (iv) prospects of approaches to overcome barriers and to expand/expedite investments in adaptation.

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<sup>1</sup> While the focus of the paper is on adaptation finance, it recognizes other aspects of the adaptation policy cycle—including assessment of risks and vulnerabilities, planning, implementation, monitoring and evaluation—as central to pave the way for a holistic and transformative approach of adaptation. As indicated in the paper, these and other elements are all important to be considered alongside with finance to help countries ensure that finance resources are efficiently used to reduce climate vulnerabilities.

<sup>2</sup> As justified in the paper, adaptation finance falls short from what is needed by developing countries, in particular, and unfairly distributed between rich and the poor, more vulnerable countries.

## 1. Context of climate adaptation financing

### 1.1 Adaptation and sustainable development

Climate change and the increasing frequency and intensity of extreme events make investments in adaptation more urgent and important. It is critical to increase investments in adaptation and climate risk reduction, bridging gaps in relation to the global commitments made under the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement adopted thereunder, prioritizing, expediting and enhancing the quality of current investments. If covering the gap is not urgently addressed, the impacts and their costs will only escalate to uncertain levels.

Investments aimed at increasing resilience and adapting to the adverse effects of climate change align with those aimed at meeting the needs of developing countries to expand their infrastructure, enhance and improve the quality of services, and promote economic and social inclusion of their populations. The objectives of increasing resilience to climate events and sustainable development are in fact almost inseparable—as noted in projects such as expanding or improving infrastructure that serve as foundations for growth, agricultural adaptation projects through more resilient crops that increase household income and food security, housing improvements in vulnerable areas that increase resilience to climate events and enhance people's quality of life. Conversely, higher levels of socioeconomic development are associated with a greater capacity to cope with adverse climate conditions.

This suggests that climate adaptation policies should be fully aligned with sustainable development. The UNFCCC highlights that actions preventing dangerous anthropogenic interference with the climate system should be achieved “within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.”<sup>3</sup> Such perspective is also highlighted in Article 2.1.b of the Paris Agreement. The Intergovernmental Panel on Climate Change (IPCC) affirms that multi-sectoral solutions that address not only climate risks, but also social inequities increase the feasibility and effectiveness of adaptation action [2].

While adaptation measures are conducive to sustainable development, the type of investments for adaptation and resilience cannot be fully equated to those regarded by traditional development financing agendas. Given that developing countries already struggle to cope with present climate threats due to limited stocks of physical capital and public services, investments in improving and expanding these infrastructures and services can contribute to adaptation, to the extent that they directly or indirectly contribute to increasing resilience to climate events.

In the same context, it is crucial to emphasize the centrality of policies aimed at ending poverty and inequality, in all its forms and dimensions, to reduce climate vulnerabilities, stemming from historical socioeconomic inequalities, considering social justice including

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<sup>3</sup> Article 2, United Nations Framework Convention on Climate Change.

gender, race and ethnicity. The multidimensional nature of inequalities is reflected in the asymmetry of the distribution of impacts from climate change events. In the context of sustainable development and of efforts to eradicate poverty, adaptation policies should primarily focus on the most vulnerable—countries and people—the adverse effects of climate change, which typically coincide with those who are the poorest, discriminated against and lacking physical and social infrastructure. Additionally, it is important for adaptation action to align with local contexts and priorities, integrating locally defined knowledge and solutions, as recognized in Decision 2/CMA.5<sup>4</sup> adopted at COP28.

Reflecting the multidimensional nature of adaptation, within the UNFCCC and negotiations between countries, COP21 in Paris established the Global Goal on Adaptation (GGA) aiming to “increase adaptation capacity, strengthen resilience, and reduce vulnerability to climate change, with a view to contributing to sustainable development and ensuring an appropriate adaptation response ...” [Ibid.]. Decision 2/CMA.5 on the GGA outlines targets for 2030 and progressively beyond: significantly reduce water scarcity by building water and sanitation resilience; agricultural and food distribution resilience; resilience against health risks; reduce impacts on ecosystems and biodiversity; increase resilience of infrastructure and human settlement to climate change impacts; reduce adverse effects of climate change on economically vulnerable populations, with poverty eradication and social inclusion; and protect cultural and historical heritage.

## 1.2 Financing needs for adaptation by developing countries

The costs of inaction in the face of the climate crisis can be very high globally. The IPCC’s Sixth Assessment Report (AR6) [2] affirms that climate change has already caused substantial damage and increasingly irreversible losses to human systems, and altered terrestrial, freshwater and ocean ecosystems worldwide, with significant differences across systems, regions and sectors. According to the AR6 Report, “the largest adverse impacts have been observed in locations and/or communities in Africa, Asia, Central and South America, LDCs, Small Islands and the Arctic, and globally for Indigenous Peoples, small-scale food producers and low-income households.”

Estimates of the costs of inaction, or business-as-usual scenarios (BAU), differ greatly due to assumptions about climate scenarios and the resulting potential social and economic impacts. But analysis developed by the Network for Greening the Financial System indicates that they can reach 20 per cent of global GDP by 2100 [3]. A very recent estimate indicates that “the world economy is committed to an income reduction of 19% within the next 26 years independent of future emission choices... These damages already outweigh the mitigation costs required to limit global warming to 2 °C by sixfold over this near-term time

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<sup>4</sup> Global Goal on Adaptation – Decision 2/CMA.5, Paragraphs 9 and 10. The document mentions: “The Parties recognize that adaptation actions should follow a country-oriented, gender-responsive, participatory and fully transparent approach, taking into account vulnerable groups, communities and ecosystems, and should be based on the best available science and, as appropriate, on traditional knowledge, indigenous peoples’ knowledge and local knowledge systems, with the aim of integrating adaptation into relevant socio-economic and environmental policies and actions.”  
[https://unfccc.int/sites/default/files/resource/cma2023\\_16a01\\_adv\\_.pdf](https://unfccc.int/sites/default/files/resource/cma2023_16a01_adv_.pdf)



frame” [4]. Another recent work [5] estimates that “... at +3 °C global average losses reach 10% of gross domestic product by the end of the century, with worst effects (up to 17%) in poorer, low-latitude countries”.

Although the adaptation investments needed to minimize or offset these impacts are also large, the required value is a fraction—maybe an order of magnitude or more—of the estimated losses of the BAU scenarios indicated above. “Research conducted by the IMF and others suggests that the public costs of adaptation will reach around 0.25% of global GDP per year in the coming decades. Although they may seem manageable globally, they are not representative of the scale of the challenge for many poor and vulnerable countries [6].”

It is important to emphasize that investments in adaptation not only minimize losses from potential climate impacts, but also induce economic and development benefits, and additional social and environmental benefits. When these other benefits are included in benefit-cost analyses, the ratios often significantly increase, as indicated in a World Resources Institute (WRI) dedicated review of such adaptation investments [7]. The narrative of adaptation being an unaffordable, separate and incremental cost competing with development and other climate priorities needs to evolve into adaptation as a critical ingredient for sustainable development.

Costing adaptation needs has been challenging and precise estimates are difficult to achieve. A 2010 World Bank study [8] estimated global financing needs for adaptation between US\$70 billion and US\$100 billion annually. Several subsequent studies increased these estimates. For example, the United Nations Environment Programme (UNEP) estimates [9] that developing countries alone have an annual demand for adaptation investments of US\$215 billion during this decade (the range is between US\$130 billion and US\$415 billion), with these costs expected to increase significantly by 2050 due to growing climate risks – Figure 1.



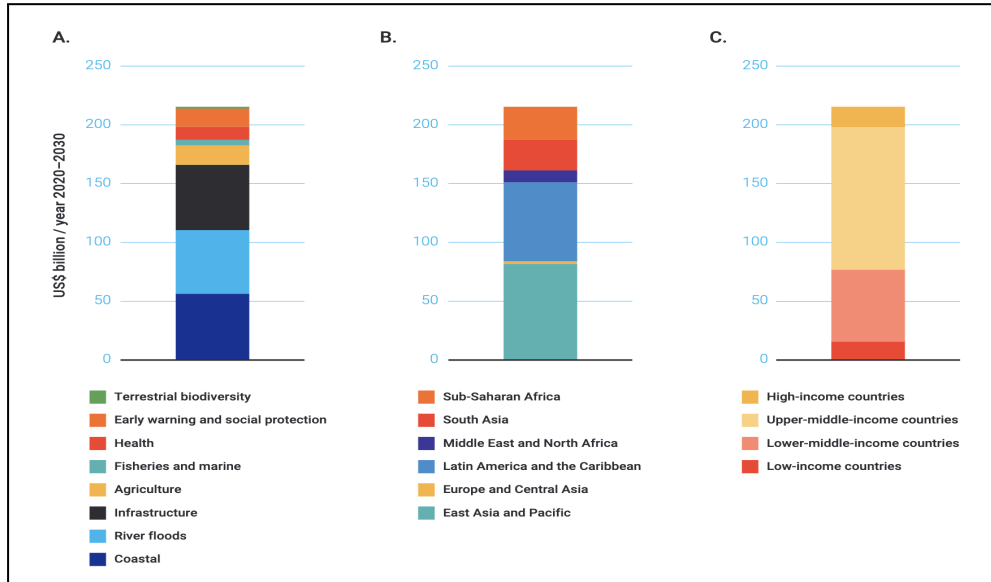


Figure 1. Estimated costs of adaptation for developing countries by sector (panel A), region (panel B) and income group (panel C) for 2030 (indicative central values) (Source: UNEP Adaptation Gap Report 2023)

Decision 1/CMA.3 urged developed country Parties to at least double their 2019 levels of collective provision of climate finance for adaptation to developing country Parties by 2025, in the context of achieving a balance between mitigation and adaptation, recalling Article 9, paragraph 4, of the Paris Agreement. The Standing Committee on Finance (SCF) report on the doubling of adaptation finance [10] highlights challenges in establishing a firm baseline, but suggests “... a baseline from 2019 of USD 19.4 billion on average across all included channels, thus indicating a doubling to USD 38.8 billion by 2025”.

### 1.3 Current investments in adaptation

Understanding current investments is the next step in determining the potential adaptation financing gap. Financing for climate adaptation can come from international public sources, the private sector, domestic budgets and other potential innovative sources. Existing data sources only allow analysis of international public finances—hence, increased transparency and strengthened capacity to report and track financing coming from the private sector and national and local budgets could play an important role.

There are still challenges in defining what constitutes an adaptation project [11], [12].<sup>5</sup> Some taxonomies attempt to clearly define the types of funded actions. Despite these efforts, a recent report from the Climate Policy Initiative (CPI) suggests that “... although some resources are apparently allocated to climate resilience projects, specific details are, in most cases, extremely limited [13].” The SCF [10] also suggests that “tracking and reporting adaptation finance is challenging owing to a number of factors and limitations ... (including) methodological issues underlying the adaptation finance data from the various sources of information”.

The 2023 Adaptation Gap Report (AGR) from UNEP—an annual publication that seeks to take stock of progress on adaptation cycles, including finance, suggests that the total international public financing for adaptation remained well below US\$30 billion per year between 2017 and 2021, 33 per cent of total climate financing – Figure 2.

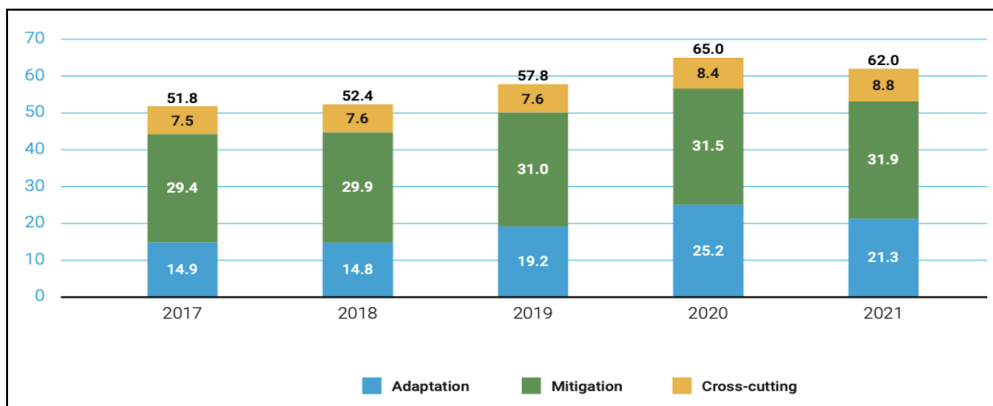


Figure 2. Climate-specific finance commitments from developed to developing countries per year for the period 2017–2021 (US\$ billions, constant prices) (Source: UNEP 2023, *op. cit.*)

UNEP’s AGR 2023 numbers are very close to those indicated in other reports. The aforementioned Multilateral Development Institutions (MDBs) Report estimates that in 2022, a total of US\$25.2 billion was allocated to climate adaptation financing, with 90 per cent committed to low and middle-income economies. The Organisation for Economic Co-operation and Development (OECD) [14] indicates that international adaptation funding fell 14 per cent to US\$24.2 billion in 2021 in comparison to 2020, but it reached US\$32.4 billion in 2022, up from US\$24.6 billion in 2021 and three times the 2016 level. The CPI [13] estimates that international financing for adaptation for developing countries in the biennium 2021–2022 reached a historic record of US\$56 billion, which yields an average annual amount above the previous references, but with recognition of it being a historical peak.

<sup>5</sup> Probably the most widely used are the Joint Methodology of the Multilateral Development Institutions (MDBs) for Monitoring Climate Financing (see footer below) and that of the Green Climate Fund (also footer below). Both basically distinguish a climate adaptation project by the fact that the response is clearly linked to an observed or projected impact of climate change. This involves (i) identification of current or future climate threats, (ii) identification of the project’s explicit intention to reduce vulnerabilities, and how, (iii) alignment with government strategies, and (iv) monitoring and evaluation.

## 1.4 Adaptation financing gap

Data on actual demand and supply for adaptation financing vary due to the different methodologies adopted by institutions regarding what precisely constitutes climate financing, as well as the inclusion of domestic and private sources. Nevertheless, it is clear from all estimates that there is a significant current adaptation finance gap, with a tendency to increase significantly as investment demand rises due to the higher incidence and intensity of climate events and the increased submission of adaptation projects.

In the biennium 2021–2022, a record of US\$56 billion was tracked for international adaptation flows to developing countries. But this still falls far short of the estimated overall needs of US\$212 billion per year by 2030 for the same countries alone. More strikingly, mitigation financing has been growing proportionally even more than adaptation, leading adaptation to decrease in relative importance, dropping from seven per cent in 2019–2020 to five per cent of total financing in 2021–2022 [13].

Closing the adaptation financing gap will require transformative actions and a look beyond public financing. While it plays a crucial role in long-term climate resilience and establishing favourable conditions, private financing is necessary to complement investment needs. Good recent examples include the US PREPARE Call to Action in 2022<sup>6</sup> and IMCA<sup>7</sup>, a multi-country and multi-institutional initiative that aims to mobilize billions of US Dollars in private capital to de-risk climate investments in mitigation, adaptation, biodiversity and nature.

Various works from public and private institutions consistently indicate the high returns on investment in adaptation. A joint report from Boston Consulting Group, Global Resilience Partnership and the United States Agency for International Development (USAID) suggests that “adaptation and climate resilience financing is an opportunity for companies and private investors – not a burden” [15]. The Global Commission on Adaptation indicates [16] that “investing US\$1.8 trillion globally in five areas from 2020 to 2030 could generate US\$7.1 trillion in total net benefits (a 1:4 ratio) – with benefit-cost ratios of strengthening early warning systems reaching 9:1”. Interventions in developing countries demonstrate some of the highest benefit-to-cost ratios. The existence of these opportunities and the lack of investments suggest gaps in information, incentives, guarantees, institutional arrangements and perceived risks.

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<sup>6</sup> The initiative brought 31 multinationals to mobilize US\$3 billion in adaptation in developing countries investing in new adaptation technologies, upskilling adaptation practitioners to improve the resilience of supply chains and expanding their services into new markets.

<sup>7</sup> IMCA is a collaborative partnership between the USAID, SIDA, Finland’s Ministry for Foreign Affairs, NORAD, the Ministry of Foreign Affairs of Denmark and Denmark’s Investment Fund for Developing Countries (IFU). The World Climate Foundation is an operating partner.

## 2. Past efforts of the G20

Climate change has been a priority on the G20 agenda since the Brisbane Meeting in 2014. The Declaration of Heads of State at that time stated, “...we support strong and effective action to combat climate change... We reaffirm our support for mobilizing finance for adaptation and mitigation, such as the Green Climate Fund” [17]. The interest and support were reinforced in subsequent declarations from Buenos Aires (2018) and Osaka (2019).

Strong support for the issue came in the last several meetings in Rome (2021), Bali (2022) and New Delhi (2023). The Rome Declaration [18] is assertive regarding adaptation:

*“The impacts of climate change are being experienced worldwide, particularly by the poorest and most vulnerable. We stress the importance of the effective implementation of the global goal on adaptation and will submit communications on adaptation. ... We also commit to scale up adaptation finance, with a view to achieving a balance with funding for mitigation, to address the needs of developing countries ... We recall and reaffirm the commitment made by developed countries to the goal of mobilizing jointly US\$100 billion per year by 2020 and annually through 2025 to address the needs of developing countries, in the context of meaningful mitigation actions and transparency on implementation and stress the importance of meeting that goal fully as soon as possible.”*

In the same year, as part of the Rome Meeting, G20 ministers of Energy and Climate adopted a final communiqué with specific passages relevant to adaptation and adaptation finance:

*“We are committed to enhance, accelerate, and scale up support for adaptation actions, particularly for the poorest and most vulnerable, guided by ambitious plans at global, national, sub-national and local levels, including National Adaptation Plans. To this end, we highlight the importance of scaling up effective and accessible financial resources for developing countries, recognizing the importance of adequate and predictable financial resources, with the aim to achieve a balance between adaptation and mitigation, considering country-driven strategies.*

*We acknowledge that climate adaptation and resilience can be further mainstreamed within domestic and international finance flows. We also recognize the importance to further mobilize public and private finance to both adaptation and mitigation actions, including by exploring alternative sources of finance, crowding in private capital, improving enabling environments to better manage physical climate risks in infrastructure and investment decisions, and working on markets for disaster risk finance, early action and preparedness. We acknowledge the importance of ensuring the consideration of current and future climate risks throughout the investment and policy agendas ...”.*

The Bali Declaration [19] reinstated the importance of climate finance and fulfilling the financial commitments to promote adaptation action:

*“We also recall the Glasgow Climate Pact urging developed countries to at least double their collective provision of climate finance for adaptation to developing countries, from 2019 levels, by 2025, in the context of achieving a balance between mitigation and adaptation in the provision of scaled up financial resource, recalling Article 9 of the Paris Agreement.”*

The Delhi Declaration [20] advances commitment and recommendations on mechanisms for the mobilization of timely and adequate resources for climate finance:

*“We welcome the recommendations of the Sustainable Finance Working Group (SFWG) on mechanisms to support the adequate and timely resource mobilization for climate finance... as well as expanding blended finance and risk-sharing mechanisms... We emphasize the importance of maximizing the effect of concessional resources, such as those from multilateral climate funds, and call for ambitious replenishment of the Green Climate Fund for its next programming period of 2024-2027.*

*We call all on Parties to set an ambitious, transparent and trackable New Collective Quantified Goal (NCQG) of climate finance in 2024 ... taking into account the needs and priorities of developing countries in fulfilling the objective of the UNFCCC and implementation of the Paris Agreement.*

*Recalling paragraph 18 of the Glasgow Climate Pact, we urge developed countries to fulfill their commitment to at least double their collective provision of adaptation finance from 2019 levels by 2025.*

*We call on all relevant financial institutions, such as multilateral development banks and multilateral funds, to further strengthen their efforts, including by setting ambitious adaptation financing targets and announcing, as appropriate, revised and enhanced projections for 2025.”*

Finally, it should be noted that during the Brazilian Presidency of the G20, in addition to the ECSWG, other initiatives address the issue of adaptation from different perspectives:

- Disaster Risk Reduction Working Group (DRRWG): Addresses global issues related to crisis and disaster management. Many of the proposed preventive actions should consist of adaptation actions considered in this Group.
- Infrastructure Working Group (IWG): Discusses various aspects of infrastructure financing, such as identifying and suggesting innovative instruments to ensure financial investment resources. This year, special attention is being given to unlocking private financing for climate-resilient infrastructure.
- Sustainable Finance Working Group (SFWG): Focuses on sustainable finance to support global growth and stability, promoting transitions to greener, more resilient and inclusive societies and economies. The adaptation theme is being addressed cross-sectionally in the four workflows proposed by the Brazilian Presidency this year.



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RELAÇÕES  
EXTERIORES

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MUDANÇA DO CLIMA



- Task Force for Global Climate Mobilization (TF-Climate): Although not specifically focused on adaptation, this TF will contribute to this theme by addressing national plans for a just transition and structural changes in the global financial system towards alignment with 1.5°C.
- Agriculture Working Group (AWG): discusses, among other topics, the sustainability of agrifood systems in their multiple paths and the contribution of international trade to food and nutritional security, aligning efforts to promote safe and nutritious food for all and the need to enhance resilience in the production system.

### 3. Existing initiatives

This section provides an overview of existing initiatives related to global climate finance, and focuses on adaptation. It is not an exhaustive review but includes the most important initiatives, integrating information from the Climate Funds Updates [21], an independent website maintained by the Overseas Development Institute (ODI) and Heinrich-Böll-Stiftung that provides information and data on multilateral climate finance initiatives dedicated to developing countries.

The global architecture of climate finance is complex and constantly evolving. Apart from private finance, which is (also) crucial for adaptation, funds flow through multilateral channels, both within and outside the UNFCCC and increasingly through bilateral, regional and national climate change channels and funds. Various developed countries have also established their own lines of climate financing or are channelling funds through their bilateral development institutions. Developing countries have also created regional and national funds and collaborative channels to receive climate finance. Annex 1 provides an overview of the global architecture of climate finance, with a special focus on public financing mechanisms.

#### 3.1 Multilateral channels for climate finance covering adaptation

**Global Environment Facility (GEF):** Operational entity of the financial mechanism of the UNFCCC and the Paris Agreement adopted thereunder, with a long history of environmental financing. It serves as a financial mechanism for several other conventions, such as biodiversity and desertification. The GEF also administers the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF) under the guidance of the UNFCCC COP and the CMA, the Parties of the Paris Agreement.

**Adaptation Fund (AF):** Formally linked to the UNFCCC, it was funded through a two per cent levy on the sale of emission credits from the Clean Development Mechanism (CDM) of the Kyoto Protocol. Now with the mandate to serve the Paris Agreement, a new automated funding source is being created. After the agreement at COP26 in Glasgow, the AF will receive five per cent of the revenue share from the sale of emission credits under the new mechanism replacing the CDM. The AF receives guidance from the CMA (Paris Agreement Conference of the Parties) and the CMP (the Parties to the Kyoto Protocol).

**The Green Climate Fund (GCF)** was agreed upon at the COP in Durban and acts as an operational entity of the financial mechanism of the UNFCCC and the Paris Agreement adopted thereunder under the guidance of the COP and the CMA. As the largest source of climate finance on concessional terms, the GCF already offers more resources for adaptation (54 per cent) than mitigation (46 per cent). At this moment it seeks to support country-driven plans in developing countries in line with its governing instrument and recently adopted Updated Strategic Plan.



**The Climate Investment Funds (CIFs)**, established in 2008, is managed by the World Bank and operated in partnership with regional development banks. The CIFs finances programmatic interventions in selected developing countries with the aim of improving understanding of how public financing is best scaled to help transform development trajectories. They include a Clean Technology Fund (CTF) and a Strategic Climate Fund (SCF), composed of the Pilot Program for Climate Resilience (PPCR) and the Forest Investment Program (FIP).

**Multilateral development banks (MDBs)** play a prominent role in delivering climate finance mainly in their general support to countries but also by catalysing and leveraging additional public and private finance. For example, the World Bank manages the BioCarbon Fund, a public-private partnership that mobilizes and provides financing for carbon sequestration or conservation in the land use sector. The African Development Bank finances climate finance readiness in African countries through the Africa Climate Change Fund (ACCF). The Inter-American (IDB) and the Asia Development Bank (ADB) have also been major regional implementors of global and regional climate funds.

**The International Development Finance Club (IDFC)**, created in 2011, is the leading group of 27 national and regional Public Development Banks from all over the world, a majority active in emerging markets. The IDFC is the largest provider of public development and climate finance globally, with US\$4 trillion in combined assets and annual commitments above US\$600 billion, including over US\$175 billion per year for climate finance. IDFC members work together to implement the Sustainable Development Goals (SDGs) and the Paris Agreement agendas [22].

**The Adaptation for Smallholder Agriculture Programme (ASAP)**, administered by International Fund for Agricultural Development (IFAD), supports smallholder farmers in scaling up adaptation to climate change in rural development programmes.

A recent initiative adopted by the G7 Climate, Energy and Environment Ministers' Meeting Communiqué in Turin, named the G7 Adaptation Accelerator Hub, aims to promote partnerships to foster actions in developing countries to accelerate the implementation of their National Adaptation Plans (NAPs) and other instruments, including by strengthening existing adaptation initiatives such as the NAP Global Network and NDC Partnership.

### **3.2 Bilateral channels for climate financing**

About one-third of climate public financing is spent bilaterally and administered largely through existing development agencies. Some countries have also established special bilateral climate funds. There is relatively less consistency in the reporting on some of these financings, which follow different classification and reporting criteria.

“Official development assistance (ODA) with climate objectives has been gradually increasing over the last decade. In 2021-22, it reached nearly 50 billion USD on average annually, representing 32.9% of total bilateral allocable ODA from DAC members, an increase

from 30.6% over 2020-21. Of all climate-related activities in 2021-22, 34% addressed adaptation” [23]—see Figure 3.

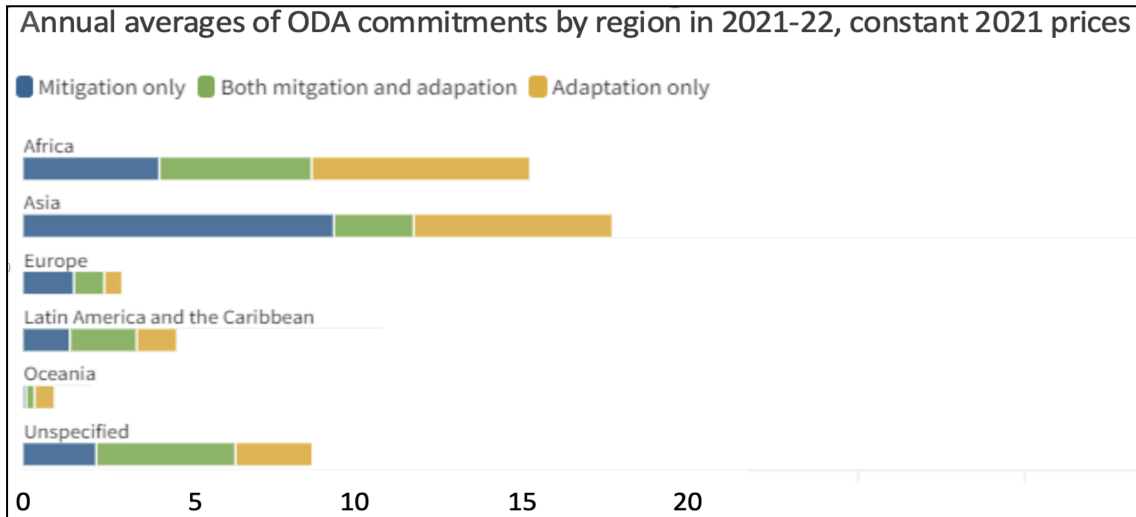


Figure 3. Regional allocation of climate-related bilateral ODA, USD billion (Source: OECD 2024, op.cit)

### 3.3 Regional, national and inter-country funds and channels for climate change collaboration

The UNFCCC has created six regional collaboration centres covering all regions of the world, with the objective of supporting national climate action through capacity-building, technical assistance and strategic networking. Since the Paris Agreement they have the task of supporting the implementation of NDCs, Article 6, adaptation, climate finance and other of its results.

Several developing countries and groups of countries have established regional and national channels and funds with a variety of forms and functions, with resources coming from international financing and/or domestic budget allocations and the national private sector. The Boston University Global Development Policy Center has developed the National Climate Funds Tracker trying to monitor the activities of different climate funds in 99 developing countries, but the information is extremely inconsistent between funds and countries [24]. The Brazil Climate Fund (Fundo Clima), established in 2010, was recently recapitalized with the issuance of US\$2 billion in bonds for domestic mitigation and adaptation actions.

Regional cooperation and coalitions of particularly vulnerable states are also generating climate financing flows. The Caribbean Catastrophic Risk Insurance Facility (CCRIF), established in 2007 with support from the World Bank and other partners, is a risk pool of 22 countries and offers parametric insurance. In 2014, the Facility was restructured into a segregated portfolio company to facilitate offering new products and expansion into new geographic areas and is now named CCRIF SPC. The Pacific Catastrophe Risk Insurance Company (PCRIC) and Southeast Asia Disaster Risk Insurance Facility (SEADRIF) have similar



MINISTÉRIO DAS  
RELAÇÕES  
EXTERIORES

MINISTÉRIO DO  
MEIO AMBIENTE E  
MUDANÇA DO CLIMA



objectives. Similarly, the African Risk Capacity (ARC) offers index-based drought insurance as a specialized agency of the African Union. Likewise, the Pacific Resilience Fund (PRF) supports Pacific Islanders’ long-term efforts to mitigate the worst effects of climate change by supporting programmes that build communities’ long-term resilience to climate change as the communities themselves define it.

Launched in 2022 by the Caribbean countries, the Bridgetown Initiative calls for innovative solutions on climate finance to address climate vulnerability in developing countries. The key action areas include liquidity support, debt sustainability, increased finance flows to support investments in the Sustainable Development Goals, mobilization of the private sector and a reform of international financial institutions to ensure they are aligned with the 2030 agenda.

The Climate Vulnerable Forum (CVF) and the Vulnerable 20 Group of Ministers of Finance of the CVF—a South-South collaboration platform established in 2009—recently created a Joint CVF and V20 Multiple Donor Fund. The fund is supported by public and philanthropic contributions and was established in 2020 as a voluntary financial and implementation tool fostering climate cooperation among the 58 members of the CVF and V20.

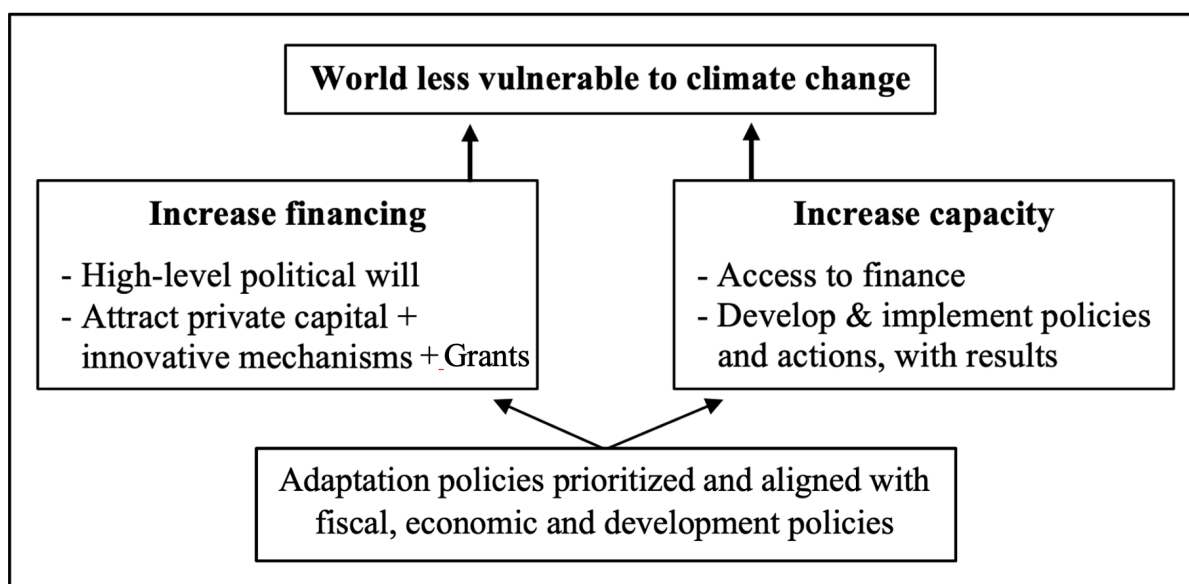
#### **4. Presidency recommendations: Scaling-up and expediting adaptation financing and strengthening institutional capacity**

From the review of past works and statements of the G20 itself, there is broad recognition of the financing gap for adaptation and the G20's fundamental role in minimizing such gap by increasing its financing commitments, though recognizing different roles of G20 members. The connections between climate adaptation and the growth needs of developing countries, the need to leverage greater private investment, and expediting the access to funds are also evident. This has been also underlined during the workshop under the Sharm-el-Sheikh Dialogue, at the 60<sup>th</sup> session of the Subsidiary Bodies of the UNFCCC, that focused on adaptation investments and the consistency of financial flows with a climate-resilient development pathway as well as linkages to broader sustainable development co-benefits and impacts.

While financing may be (significantly) short of adaptation needs, developing countries face limited capacity to identify and assess climate risks (based on climate models and solid scientific evidence), prepare projects that minimize such risks, prepare, implement and monitor adaptation policies and plans that align or integrate with countries' development plans while also generating economic, social and environmental benefits. Such limitations largely reflect overall conditions that distinguish developed from developing countries to adapt to climate change and reemphasize the nexus between adaptation and development.

Bearing in mind the above two key challenges, considering the efforts of developed countries to at least double adaptation finance from 2019 levels by 2025, and acknowledging the relative consensus on the main measures to expedite disbursements and ensure results, the ECSWG will focus on mechanisms to address and implement both measures: (i) increase the volume of adaptation finance; and (ii) strengthen capacities to access financing promptly and to implement effective adaptation measures.

The diagram below illustrates the rationale of the recommendations and the key associated issues that need to be addressed and that are in turn discussed below: (i) institutional capacity, policy and project preparation; (ii) alignment between adaptation policies and economic and fiscal policies; (iii) increasing and accessing adaptation financing; and (iv) attracting private capital and innovative adaptation financing mechanisms.



## 1) Institutional capacity, policy and project preparation

Sound institutional capacity is central in the design and implementation of government policies and programmes, and this is the case in adaptation finance. G20 Member States try to ensure and enhance their own domestic capacity and call governments, MDBs and developed countries to enhance their support to developing countries to achieve strong institutional capacity related to adaptation, adaptation finance, support and increase gender-responsive investment in adaptation and resilience to climate change especially for the most vulnerable groups, women and girls, in all their diversity, Indigenous Peoples and marginalized groups.

- **Support the development of organizational-level capacities.** In the case of governments, capacity for planning, generating, analysing and integrating data and other information on vulnerabilities, exposure and risks, identifying priority actions, prioritizing budgetary expenditures and investment projects contributing to adaptation, quantification and valuation of adaptation measures. Such efforts can be made through direct support to individual governments and through the existing initiatives mentioned above. Interministerial collaboration is also important to ensure capacity is strengthened across government agencies, as may be training programmes with this specific objective.
- **Support and facilitate the preparation of adaptation projects and programmes** and leverage the processes of developing and implementing NAPs to identify countries' adaptation needs and priorities. In addition, identify and cost priority projects and interventions—ensuring they are investable, based on solid technical grounds (built upon science climate data and forecasts) and consider traditional knowledge of local

communities—and communicate them to funding sources. Specific reference can be made to the UN Secretary General's Adaptation Pipeline Accelerator that promotes programmatic approaches to adaptation.<sup>8</sup> Early warning systems are a good universal example of priority actions with particular benefits to the most vulnerable.

- **Expand the use of programmatic approaches** for developing adaptation project pipelines to increase the effectiveness and scalability of financing. Incorporating various interconnected projects within programmes aligned with national strategies facilitates government adherence and greater integration of adaptation in a holistic and cross-sectoral manner. This recommendation is fully in line with the TF-Clima's mandate to support mechanisms and actions beyond project-level towards national transition plans and country platforms that put economies on track, making them achieve own climate ambitions and delivering full and effective implementation of the UNFCCC, the Paris Agreement adopted thereunder and the 2030 Agenda. Programmatic approaches also facilitate mainstreaming with other sector policies and actions, notably economic policies (see section below).
- **Support the creation of national/regional platforms for adaptation, and/or better and effective utilisation of existing platforms.** Incorporating support and co-financing efforts, linking investors and advancing financial instruments that contribute to adaptation efforts, thus promoting a more collaborative, effective and flexible adaptation financing ecosystem. They could be informed through the disclosure of adaptation-related data on climate public finance and the private finance they mobilize. Strategies to implement adaptation need to be coordinated with the country platform discussions of TF-Clima, as well as with NAP processes to avoid duplication and identify synergies.
- **Support the establishment of knowledge exchange arrangement/hub** on integration, communication, training, development of climate data and forecasts, early warning systems, exchange of experiences and other adaptation policies. This would need to be coordinated or supportive of existing initiatives such as the UN Secretary General's Early Warning for All, the Nairobi Work Program on impacts, vulnerability and adaptation to climate change under the UNFCCC, and the World Meteorological Organization's Systematic Observation Financing Facility.
- **The G20 concrete commitment under this topic is to support and to fund, as necessary, the existing channels and initiatives aiming to build and to strengthen science-based institutions in developing countries, as well as capacity for policy and project preparation.**

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<sup>8</sup> Championed by the UN Secretary-General's Climate Action Team, this accelerator will support a representative group of 21 developing countries in turning a set of NAP adaptation priorities and/or adaptation components in NDCs into investment plans and project pipelines.

## 2) Alignment between climate policies and economic and fiscal policies

The G20 is committed to supporting governments to develop sound adaptation policies. That requires alignment with economic and fiscal policies, so they are incorporated in plans and budgets and mainstreamed in national development strategies. The recommendations below aim to further mainstream climate change into the global economic agenda.

- **Mainstreaming.** Climate risks must be considered in all relevant government policies, plans and programmes, with a multi-sectoral perspective. There is a need for both direct financing for adaptation and broader investments in development and resilience, as well as ensuring that public expenditures preserve or enhance resilience to climate change. The higher the level of mainstreaming, the higher the chances of adaptation being incorporated in all levels of government policies and sector policies. Beyond technical information, data and tools, mainstreaming requires identifying entry-points, integration with political processes, integration into budgets, sensitizing and informing government civil servants, strengthening institutional capacity and ensuring political will [25]. Bangladesh has been an inspiring example of mainstreaming adaptation and financing in broader government policies, despite challenges and limitations [26].
- **Climate adaptation actions must give priority to people and populations facing greater capacity constraints and that are most vulnerable to the impacts from climate change.** This is one of the essential interfaces between climate adaptation and social development actions that should be prioritized in G20 financing. The G20, MDBs and national governments may consider creating specific targets and indicators in adaptation finance to ensure it primarily benefits such vulnerable groups first. Such indicators should include human rights, gender and intergenerational equity to ensure the consideration of the different levels of vulnerability that women, youth, Indigenous Peoples, local communities and other groups are living due to climate change.
- **Support work with national and regional development banks and help MDBs improve the quality of adaptation investments,** including guaranteeing that funds are spent effectively and efficiently, by systematically assessing the effectiveness of investments, the development of adaptation products/services and the integration of assessment and reporting.
- **Measurement and tracking.** Enhance measurement of economic, fiscal and social risks posed by the impacts of climate change, and better measure the financial and economic returns on investments aimed at reducing these risks. Such measurement would help countries, donors and the private sector reach agreement on adaptation priorities, track financing and integrate adaptation priorities into national planning [27].



- The G20's concrete commitment under this topic is to maintain the climate emergency at the highest level of attention in the G20 agenda and to shift the present narrative of adaptation being unaffordable, separate or an incremental cost competing with development priorities to one where it is a central ingredient of social and economic development aligning climate, economic and fiscal policies.

### 3) Increasing and accessing adaptation financing

“Public climate finance remains central to build trust and promote international collaboration but is hampered by fiscal constraints in developed countries that have led to cuts in climate finance budgets and official development assistance broadly. It must be strategically targeted to countries and sectors that are difficult to support with other sources of finance.

Public finance from the conventional donor countries will not be able to reach the (estimated) US\$6 trillion needed between now and 2030 [28] ... presenting severe challenges for countries reliant on increased grant funding to implement their climate policies. A further challenge is that a definitive understanding of finance needs has not been settled, leading to several different estimates” [29], [1].

- **Political determination.** Any solution to scale up climate finance to meet the goals set out by the UNFCCC and the Paris Agreement adopted thereunder and to fulfil the commitments already assumed by the G20 on climate adaptation “require elevating the discussion to the political level, bringing finance ministers (as is the case of the Coalition of Finance Ministers for Climate Action) and Heads of Government to the table. Without this higher-level engagement, the actions needed globally to scale up finance will remain limited and uncoordinated” [1]. Political determination by developing country governments is also crucial to elevate own adaptation efforts and funding, as well as to leverage international funding.
- **Increase financing, coordination and integration.** Increased financing requires not only stronger single commitments, but the closer alignment of financial flows from all sources, including domestic resource mobilization and private finance, to maximize collective impact. If adaptation is to be one of the priorities in climate financing portfolios, international and national actors could benefit from a G20 framework for investments in adaptation, that should be aligned with the New Collective Quantified Goal on Climate Finance (NCQG)<sup>9</sup> and also be supportive and coordinated with the UAE Framework for Global Climate Resilience. While major fiscal constraints affect most developing countries, domestic sources are also important, both public and private. Much of the needed adaptation financing for developing countries and the poorest and most vulnerable countries has to be concessional and with a focus on

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<sup>9</sup> NCQG is a new global climate finance goal that the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) shall set from a floor of US\$100 billion per year, prior to 2025.

establishing appropriate enabling environments for private sector investments. This was explicitly acknowledged in the G20 New Delhi Declaration, as indicated in Section 2.

- **Make adaptation financing more attractive and accessible.** Adaptation policies must be designed in a way that allow financial institutions to become agents of adaptation financing by accessing and partnering with international climate funds, so they effectively carry out strategic climate interventions at local, regional and international levels. It is important to consolidate the landscape of climate funds, avoiding the creation of overlapping funds, further strengthening coordination and efficiency among existing funds and ensure smaller scale-actors—especially Least Developed Countries (LDCs) and Small Island Developing States (SIDS)—can participate and have easy access to relevant instruments as well.
- **Monitoring.** For both public and private financing, and in line with one of the targets of the UAE Framework for Global Climate Resilience, it is important that countries have monitoring, evaluation and learning systems in place to understand, monitor and evaluate the effectiveness of adaptation actions vis-à-vis resilience goals. While indicators should focus on tracking progress towards specific targets, they could include the disclosure of financial flows, risks and benefits, adaptation plans and broader theories of change [30].
- **The G20 concrete commitment under this topic is to increase financing for adaptation through existing channels, to promote and to support efforts to mainstream climate adaptation at the highest political level in all countries, and to develop a framework or a platform for investments in adaptation.**

#### 4) Attracting private capital and innovative financing mechanisms

While recognizing that public finance is the main source of adaptation finance due to the long-term and non-market-based nature of adaptation, “the private sector must be a key stakeholder in adaptation actions. It can engage both in terms of its own strategies towards (climate) risk minimization as well as financing actions of broader interest, complementing governments and individuals’ adaptation actions” [31].

Real and perceived risks constitute barriers to adaptation to private financing—such as limited revenue streams for many investments (mainly generating avoided losses), long investment horizon and size of projects, short-term perspectives and market inefficiencies that affect the accurate pricing and adequate consideration of natural hazard and climate-related risks, and the often lack of private sector technical capacities to fully understand the broader climate crisis and to integrate climate risk management into standard business operations [32].

To motivate and to attract private investments in adaptation, governments need to communicate information on climate risks and adaptation options, articulate the business case for adaptation actions and use financial incentives—like tax breaks, risk guarantees and seed financing for various products and initiatives. Governments must also ensure that the country’s legal and regulatory framework is conducive to businesses engagement in adaptation—stability in domestic laws and regulations influencing adaptation investment decisions. Some governments, including Brazil, have been integrating natural hazard risk measurement and management into the mandates and decisions of central banks and other financial and regulatory authorities to incentivize investments in risk reduction and resilience.

The private sector itself also has its own initiatives to help unlock private investment in adaptation, with or without links or direct participation of governments and multilateral agencies. Examples include the Coalition for Climate Resilient Investment, the Global Adaptation and Resilience Investment (GARI) Working Group and the GEF’s Challenge Program for Adaptation Innovation.<sup>10</sup>

The G20 is committed to promote private sector engagement both directly and through support to governments in incentivizing private engagement and financing in adaptation.

- **Adaptation offers various business opportunities.** Governments must provide information and put in place incentives for business to invest in them. Financing structures that provide substantial and predictable funds less susceptible to changes in national administrations, often involving partnerships between public, private and third-sector actors, need to be supported by funding dedicated to innovation [33].
- **Developed countries and climate finance providers could better reflect changes in the commercial dynamics of key sectors** by adapting their interventions to mobilize more private financing where such opportunities exist and redirect more public financial resources, especially concessional ones, to support other sectors and regions.
- **International providers could enhance their understanding of the links between private investors’ preferences,** mainly in terms of secure revenue streams, and the characteristics of adaptation activities. Mobilizing private financing for adaptation requires tailored interventions at the project and country levels, while a programmatic approach can make these interventions and the utilization of money more effective and efficient.

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<sup>10</sup> The Coalition for Climate Resilient Investment brings together industries and leaders across the finance and investment value chain to develop practical solutions to climate adaptation and resilience. The Global Adaptation and Resilience Investment (GARI) working group is a private sector, private investor-led initiative that brings together private and public sector investors, bankers, lenders and other stakeholders to discuss climate adaptation and resilience and investment with the objective of helping to assess, mobilize and catalyze action and investment. GARI aims to provide education, research and resources to build awareness and capacity in the private sector towards catalyzing investment in resilience. The GEF’s Challenge Program for Adaptation Innovation catalyzes innovation and harnesses the power of private sector actors to enhance the impact of climate change adaptation, by testing and validating scalable and bankable investment models and technologies.

- **High transaction costs** are a material barrier to adaptation financing. New processes and institutions—such as brokers, aggregators and trading platforms—can reduce initial costs by leveraging economies of scale, creating groups of specialized knowledge and reducing research costs, making innovative adaptation solutions accessible to a wider range of companies [34].
- **Leveraging.** Many adaptation actions are typically provided by the state—such as flood risk reduction, coastal protection and emergency recovery. The government plays a crucial role not only as a facilitator and regulator of private adaptation but also as a provider and funder of public goods adaptation. Public spending can also be used to match, leverage and reduce the risk of private investment by providing guarantees to enable private sector investment or subsidizing projects and programmes to allow for higher returns on investment. Domestic budgeting and finance can help to ensure predictability of resources available to implement adaptation priorities across different sectors and levels of government [35].
- **The sharing of risks (credit, exchange rate, buyer, political and liquidity risks) plays a key role in mobilizing private investment.** Instruments include the use of insurance, improved access to credit and the building up of reserves or rainy-day funds to counter market downturns or unexpected events. The public sector can also offer guarantees for development, in which they backstop financing for initiatives that advance social and economic development.
- **Innovative financing instruments.** “Current climate finance is mainly provided through debt instruments (61%). Grants only represent in 5% of climate finance flows globally and equity 34%. In the context of climate finance provided by developed countries’ public bilateral and multilateral actors, loans represented over two-thirds, grants represent around a quarter, while equity investments are marginal” [15].
- A comprehensive review of (innovative) financial instruments for climate change adaptation has been compiled by the NAP Global Network in partnership with the International Institute for Sustainable Development (IISD) [36] — see Annex 2. They have been classified as: (i) financing for adaptation that can include traditional loans, micro-credit, and green credit lines, as well as sustainability-linked loans and various types of bonds according to their objective (blue, green, climate-resilience, etc.); (ii) financial risk management that serves to transfer risks away from one party to another party that is better able to underwrite or manage the risk such as an insurer e.g. public-private partnerships, credit-enhancement tools and catastrophe bonds; and (iii) results-based financing, a method of funding through which the lender/funder provides capital that is contingent on the achievement of predefined and verifiable results. They are intended to improve development outcomes and accountability, as well as to drive innovation and efficiency. Examples include adaptation benefits mechanism, conservation impact bonds, biodiversity credits and payment for ecosystem services (one of the other three topics of the ECSWG).

- **Taxonomy.** The G20 recognizes the difficulty in having an exhaustive, one-size-fits-all universally accepted adaptation finance taxonomy and the need to have a structure and framework to attract investors and link funding with adaptation goals and strategies. The G20 welcomes ongoing work on broad criteria for adaptation activities, such as the ones proposed by different MDBs, the BRICS and others, and calls upon governments, donors and MDBs to work on fit-for-purpose taxonomies that are interoperable to enhance and facilitate adaptation finance.
- **The G20 concrete commitment under this topic is to establish a G20 working group, including private sector representatives, multilateral and bilateral financing institutions and governments, to identify and to promote innovative financing mechanisms for adaptation that can support implementation of countries' National Adaptation Plans.**

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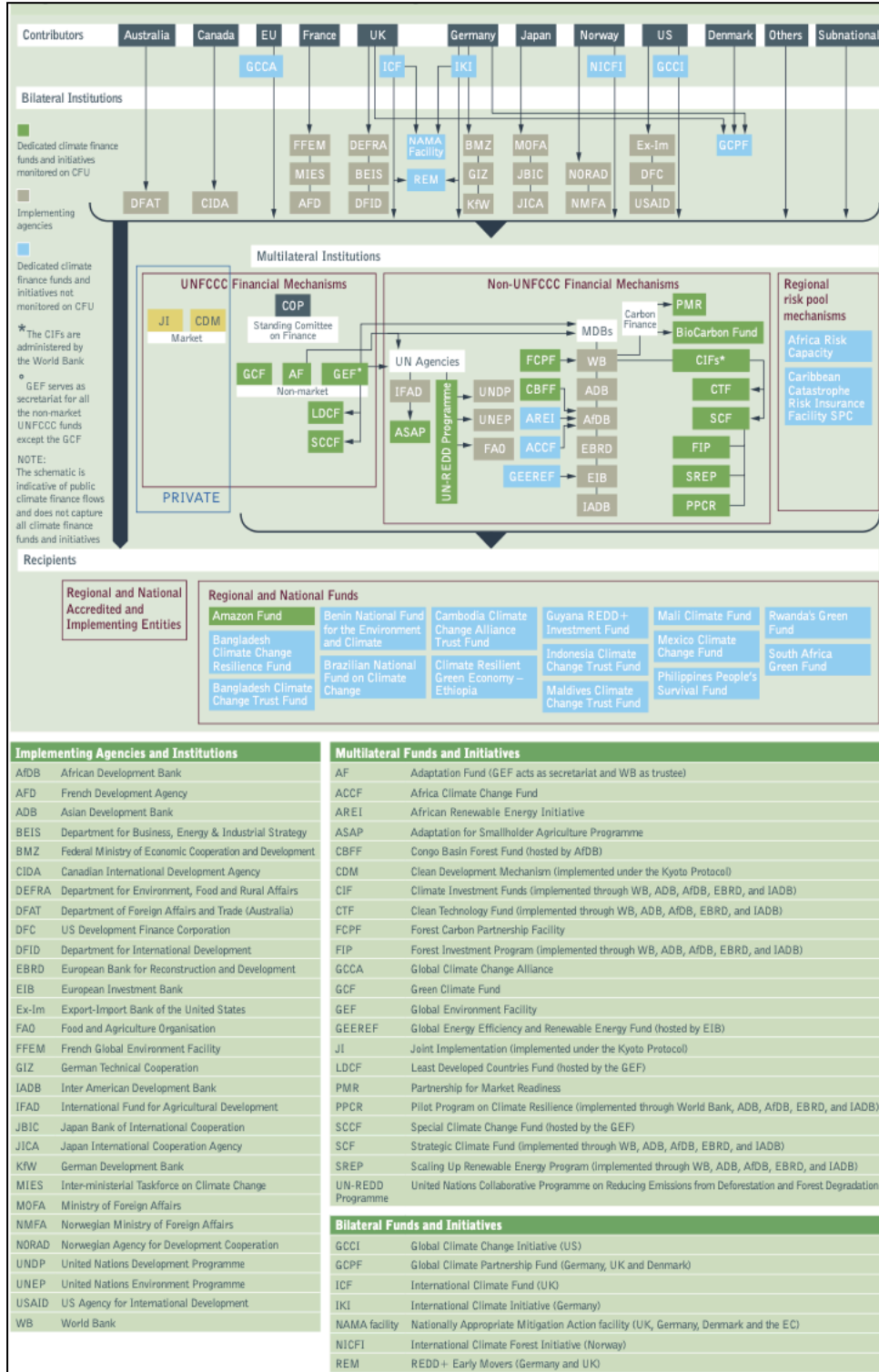
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**ANNEX 1. Diagram of the global climate finance architecture<sup>1</sup>**



1 - Canada's CIDA is now GAC. Source: Climate Funds Update, 2023 (op.cit)

## ANNEX 2. Innovative financial instruments for climate change adaptation

Category	Sectors for current or potential use									
	Crop and food production	Ecological services/nature-based infrastructure	Water supply (infrastructure)	Coastal and riverine protection and management	Disaster risk reduction	Energy infrastructure	Transport infrastructure	Other built environment and infrastructure	Social infrastructure	Industry and manufacturing
<b>Instrument</b>										
<b>Debt instruments</b>										
● Green bonds	■	■	■	■	■	■	■	■	■	■
ⓘ Climate (resilience) bonds	■	■	■		■	■	■	■	■	■
ⓘ Blue bonds	■	■	■	■						
ⓘ Social bonds	■		■		■			■	■	
ⓘ Sustainability bonds	■	■	■	■	■	■	■	■	■	■
ⓘ Sustainability-linked bonds		■	■			■	■	■		■
ⓘ Green loans	■	■	■	■	■	■	■	■	■	■
ⓘ Sustainability-linked loans	■	■	■	■	■	■	■	■	■	■
<b>Results-based financing instruments</b>										
ⓘ Biodiversity credits				■						
○ Conservation impact bonds				■						
ⓘ Environmental impact bonds		■	■	■				■		
○ Restoration insurance service companies				■	■					
● Stormwater credit trading programs				■				■		
● Payments for ecosystem services	■	■	■							
○ Adaptation Benefits Mechanism	■	■	■		■	■				
<b>Financial risk management instruments</b>										
● Pooled investment funds	■	■	■	■	■	■	■	■	■	■
ⓘ Crowdfunding and investment platforms	■		■	■				■	■	
● Public-private partnerships	■	■	■			■	■	■	■	
● Credit guarantees	■	■	■	■	■	■	■	■	■	■
ⓘ Contingent line of credit – Liquidity facility					■				■	
● Green revolving funds		■	■	■	■					
● (Parametric) catastrophe bonds					■					
● Debt-for-nature swaps		■	■	■	■					
● Tax increment financing			■	■			■	■	■	
ⓘ Green securitization			■			■	■	■		
ⓘ Work for taxes schemes	■	■	■		■	■	■	■	■	
<b>KEY</b>										
● Mature instruments, or instruments that have been used for many years for other purposes that could be adjusted to										
ⓘ Emerging instruments, or newer instruments that may or may not have been developed specifically to finance climate										
○ Pilot instruments, or instruments that are currently being developed to finance climate adaptation and may be applied										
■ Sector in which an instrument may be used or location in which there is a case study in the inventory										

Source: NAP Global Network (op.cit.)