

COP27 High-Level Event Series

Background Note

Transformative Adaptation

Development strategies in a climate-constrained world



Executive Summary

Rising global temperatures are compounding a vicious development cycle that has been constraining resource mobilization, widening income gaps and weakening state capacities for decades. The devastation of both extreme and gradual climate impacts demands accelerated action on adaptation to prepare communities and economies for irreversible climate changes.

However, adaptation has long played second fiddle to mitigation in global climate diplomacy, both in terms of negotiated items and climate finance flows. This inaction is proving incredibly costly: in 2009, the UNFCCC estimated that annual worldwide costs of adapting to 2°C of warming would cost developing countries USD 34 to 57 billion. A decade later, the delay means current annual adaptation costs in developing countries is estimated at USD 70 billion.¹

The financing shortfall has become one of the largest obstacles for developing countries to scale up their adaptation efforts. However, there are also challenges in ensuring adaptation approaches are sufficient to prepare developing countries for a climate-constrained future. Conventional risk-management approaches may provide partial resilience now, but by using scarce resources for adaptation to current climate hazards, these interventions preclude other future-oriented interventions and lock in path-dependent dynamics which reproduces current vulnerabilities.²

¹ UNEP, 2021. Adaptation Gap Report 2021. <https://www.unep.org/resources/adaptation-gap-report-2021>

² UNCTAD, 2021. Trade and Development Report 2021. <https://unctad.org/webflyer/trade-and-development-report-2021>

At COP26, member states established the Glasgow-Sharm el Sheikh Work Programme to determine a common understanding of the Paris Agreement commitment to a Global Goal on Adaptation (GGA), but with fiscal and policy space in developing countries being squeezed by multiplying crises, the outlook for transformative adaptation is bleak. A radical enhancement is needed in the scale, scope and nature of financing for adaptation including support for the developmental adaptation strategies required to truly build resilience.

Adaptation: deprioritized in climate negotiations

On current policies, the world is heading towards a 2.7°C increase in the average global temperature by the end of this century, and even if countries delivered on existing pledges, this would still mean an increase of 2.4°C.³ Global heating on this scale will trigger tipping points in the earth's natural systems, leading to irreversible changes that will reshape society in our lifetimes. Intense heatwaves, increasingly powerful tropical cyclones, prolonged droughts, rising sea levels, spreading diseases are just some of the threats that will only worsen with the unrelenting rise in global temperatures, bringing with them ever greater economic damage and human suffering.

Action to respond to climate change is divided into two broad categories: mitigation and adaptation. While mitigation is focused on tackling the root cause of global warming by decreasing greenhouse gas emissions, climate adaptation centers on building resilience to these oncoming climate shocks: adjusting to the irreversible impacts of a changing climate in order to minimize negative impacts whether on communities, livelihoods or ecosystems.

Climate adaptation has long been deprioritized in comparison to climate mitigation in global climate diplomacy, whether measured in negotiated items or in allocated resources. This is proving short-sighted and increasingly costly, particularly for developing countries where the adaptation challenge is both widespread and connected to a broader set of deep-seated social and economic vulnerabilities that have emerged in recent decades.

For many developing countries rising global temperatures are compounding a vicious development cycle that has been constraining resource mobilization, widening income gaps and weakening state capacities for decades.⁴ Economies with underfunded health care systems, mal-developed infrastructure, undiversified production base and limited state institutions are more exposed not only to potentially large-scale environmental shocks but also a more permanent state of economic stress as a result of climate impacts. These impacts are not just constrained within borders but can have significant spillover effects: for example, climate change impacts on seaports can result in damage, operational disruption and delay across global supply chains, with important implications for international trade and sustainable development prospects.⁵

The consequences of rising global temperatures reflect, and are amplified by, existing structural inequalities within and across countries. In terms of both historic and current per capita emissions, advanced economies far outstrip developing countries' greenhouse gas emission, yet the impacts of climate change are felt most severely in lower income countries, whether in terms of relative economic impacts or lives lost.⁶

According to the recently published report from Working Group II of the Intergovernmental Panel on Climate Change (IPCC), Gross Domestic Product (GDP) per capita in Africa was, on average, 13.6 per cent lower in 2010 than it would have been without global warming since 1991.⁷ Extreme weather events have already caused large economic damage in developing countries, reducing economic growth not only in the year of the event or the next one, but also in the next 10 to 15 years. For example, Hurricane Maria caused losses and damages equivalent to 224 per cent of Dominica's GDP in 2016.⁸

³ See <https://climateactiontracker.org/global/temperatures/>

⁴ UNCTAD, 2021. Trade and Development Report 2021. <https://unctad.org/webflyer/trade-and-development-report-2021>

⁵ See <https://unctad.org/webflyer/climate-resilience-seaports-adequate-finance-critical-developing-countries-remains-major>

⁶ See <https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions>

⁷ IPCC, 2022. Climate Change 2022: Impacts, Adaptation and Vulnerability. <https://www.ipcc.ch/report/sixth-assessment-report-working-group-ii/>

⁸ Ibid.

The Covid-19 pandemic renewed attention to the needs of building resilience in the face of global shocks, signaling the danger of neglecting climate adaptation. The urgency of the adaptation challenge in developing countries stands in stark contrast to the highly procedural politics surrounding climate adaptation negotiations. Ambition is constrained to focus on technocratic risk management processes and undue faith in de-risking and the efficiency of markets to price the way to a sustainable future. That approach is no longer commensurate with the scale of environmental shocks and the economic damage they are causing.

The challenges of climate adaptation are also demonstrated in financing terms. While the Paris Agreement in article 9.4 states the aim of providing scaled-up financing balanced between mitigation and adaptation, of total global climate finance in 2020, only around 8 per cent went to adaptation.⁹ Of the USD 100 billion that developed countries pledged to provide annually to developing countries, only USD 83.3 billion was provided in 2020, of which about a third went to adaptation, and around 70 per cent was in the form of loans.¹⁰ Annual adaptation costs in developing countries are now estimated at USD 70 billion USD, reaching as high as USD 300 billion in 2030 and USD 500 billion in 2050.¹¹ While advanced economies agreed at COP26 to double their collective provision of adaptation finance by 2025, pledges so far have not been encouraging.

The financing shortfall has become one of the largest obstacles for developing countries to scale up their climate adaptation efforts. COP26 also established the Glasgow-Sharm el-Sheikh Work Programme to determine a common understanding of the Paris Agreement commitment to a Global Goal on Adaptation (GGA), but with fiscal and policy space in developing countries being squeezed by multiplying crises, the outlook for transformative adaptation is bleak. A radical enhancement is needed in the scale, scope and nature of financing for adaptation including support for adaptation strategies required to make the GGA fit for purpose.

The Scale of an Unknown Quantity

Measuring the true economic impact of climate change is extremely difficult and complex. Arguably, the most straightforward measurement is the impact of extreme weather events such as hurricanes, droughts, floods, and wildfires, which have visible and often devastating consequences. More difficult to measure is the impact of a steady but gradual deterioration in the environmental conditions for everyday life and work. Deterioration of access to water, air quality, working temperature, and of the regularity precipitations is having adverse impacts on populations around the world, but can be imperceptible until significant damage has accumulated.

Both extreme and gradual climate impacts have unequivocally been increasing in both number and cost. Between 2000-2019 relative to 1980-1999, the number of reported disasters went from 4212 to 7348; the number of people affected from 3.25 billion to 4.03 billion; and economic losses from USD 1.63 trillion to USD 2.97 trillion.¹² More gradual impacts are also increasing, with labor productivity in parts of Europe, for example, falling up to 9 per cent during severe heatwaves.¹³

The economic impact of disasters does not have a uniform pattern on all countries and populations. While in high-income countries economic costs are much higher as the value of impacted infrastructure and building is much higher, the number of deaths is lower because of better preparedness for disasters. In low-income countries, in turn, total financial losses are much lower, but the number of deaths is higher than in high-income countries.¹⁴ Another metric worth mentioning to understand the burden of climate change on developing countries is economic losses as a percentage of GDP. Even though high-income countries have the largest financial losses, they are much smaller as a proportion of GDP than is the case in low-income countries, where it is on average three times higher.¹⁵

Inaction could cause global GDP losses worse than those seen during the world's worst historical recessions.

⁹ See <https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2021/>

¹⁰ See <https://www.oecd.org/environment/statement-by-the-oecd-secretary-general-on-climate-finance-trends-to-2020.htm>

¹¹ UNEP, 2021. Adaptation Gap Report 2021. <https://www.unep.org/resources/adaptation-gap-report-2021>

¹² UNCTAD, 2021. Trade and Development Report 2021. <https://unctad.org/webflyer/trade-and-development-report-2021>

¹³ IPCC, 2022. Climate Change 2022: Impacts, Adaptation and Vulnerability. <https://www.ipcc.ch/report/sixth-assessment-report-working-group-ii/>

¹⁴ UNCTAD, 2021. Trade and Development Report 2021. <https://unctad.org/webflyer/trade-and-development-report-2021>

¹⁵ Ibid

Global GDP is predicted to decline at higher levels of global warming by as much as 10 per cent to 23 per cent of GDP by 2100.¹⁶ Economic damages will be highest in the poorest countries. With no improvements to vulnerability or adaptation, sub-Saharan Africa could lose 12 per cent of GDP by 2050 and 80 per cent by 2100 with high emissions.¹⁷ Unchecked biodiversity loss, climate change and pollution would undermine efforts on 80 per cent of assessed Sustainable Development Goal targets, increasing inequality within and between countries.¹⁸ Failure to meet commitments could push 35-132 million more people into extreme poverty by 2030.¹⁹ As the world is allowed to continue to heat above 1.5°C, sufficient adaptation will become much harder or even impossible.

At the other end of the equation, the cost of adapting to climate change is also suffering from a lack of data. Only 39 developing countries have so far presented National Adaptation Plans.²⁰ Of these, only around a quarter of proposed adaptation actions have been costed, totaling USD 135 billion.²¹ While this data gap presents a major challenge in assessing more precise financing targets, it highlights the vast gap between existing flows and demonstrated need. Exact estimates of climate impacts and sufficient adaptation are elusive for many reasons, but allowing this to delay action is an act of collective sabotage.

From Risk Management to Resilient Diversification

Conventional approaches to adaptation tend to focus on improving data collection and adopting risk assessment techniques to better protect existing assets and by providing temporary financial support when shocks occur. Such an approach implies that no new methodologies and frameworks are needed. Adopting already existing approaches can, in that view, provide a rapid response in cases of exceptional shocks. However, this approach is problematic for several reasons when applied to climate adaptation.

First, it assumes that alternative outcomes can be calculated with some degree of precision, so costs and benefits can be compared, and best responses adopted. These methodologies are good when applied to idiosyncratic risks but tend to ignore systemic risk. Systemic risk frequently arises from endogenous structural weaknesses in complex and interconnected systems, and thus is overlooked by risk-assessment approaches. They also tend to have a short-term bias, ignoring long-term structural trends and thus underestimating the scale and complexity of the climate challenge.

A second problem is the reliance on pricing and other market-based mechanisms. These tend to capture well what is predictable and incremental in nature but underestimate what is uncertain and unknown. As the main characteristic of climate change is its unknown magnitude, the adaptation problem is a moving target. The extent of adaptation needed is a function of progress on climate mitigation. With less successful mitigation, adaptation will necessarily imply a much larger and more comprehensive effort.

A final problem is the emphasis on coping rather than transforming. Estimating risks to existing assets is a system designed for stasis. This approach privileges normality and stability over a dynamic vision of change and development. Maintaining normality in developing countries would mean maintaining underdevelopment, poverty and inequality. The measures may provide partial resilience now, but by using scarce resources for adaptation to current climate hazards, it precludes other future-oriented interventions and locks in path-dependent dynamics which reproduces current vulnerabilities. As such, it is especially detrimental to the developmental mission of developing countries, not just because of their heightened exposure to climate impacts, but because of their higher dependence on a few climate-sensitive economic sectors.

In the case of climate crisis, it is not simply insufficient, but counterproductive, leading to maladaptation. Application of conventional risk-resilience approaches are especially problematic in the current political context, where new social contracts are needed to regain citizens' trust in public policies and multilateral efforts. Tackling

¹⁶ IPCC, 2022. Climate Change 2022: Impacts, Adaptation and Vulnerability. <https://www.ipcc.ch/report/sixth-assessment-report-working-group-ii/>

¹⁷ Ibid

¹⁸ IPBES, 2019. Global Assessment Report on Biodiversity and Ecosystem Services. <https://ipbes.net/global-assessment>

¹⁹ World Bank Group, 2020. Revised Estimates of the Impact of Climate Change on Extreme Poverty by 2030. Policy Research Working Paper 9417.

²⁰ See <https://napcentral.org/submitted-naps>

²¹ UNFCCC, 2021. First report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement.

current global challenges like climate adaptation requires a new vision of common goals rather than emphasizing the avoidance of risks and worst-case scenarios that emerge from current circumstances.

A more promising approach to climate adaptation would build a stronger link to structural transformation as the only lasting solution to reduce exposure to climate impacts. As vulnerability to economic and climate shocks compound, many developing countries are locked into an eco-development trap of permanent disruption, economic precarity and slow productivity growth. In all successful development experiences, structural transformation resulted in a more diversified pattern of economic activities, more resilient economies, higher levels of productivity, and broad improvement across social indicators, primarily in poverty reduction.²²

However, not all past experiences can or should be adapted to contemporary realities. Today, many developing countries, in particular Least Developed Countries (LDCs), confront the dilemma of having to pursue economic development while keeping emissions and resource consumption within ecological limits. This challenge necessitates system-wide changes that cannot occur without an integrated and developmental policy approach.

Such an approach will include building a diversified, low-carbon economic system, powered by renewable energy sources and green technologies, where economic activities within and across sectors are interconnected through resource-efficient linkages and infrastructure is adapted to climate realities. It will also necessitate establishing more equal and sustainable social relations, including by strengthening state capacity in social infrastructure such as social protection, education, health, poverty alleviation and other goals towards achieving the 2030 Sustainable Development Agenda.

Aligning these global and national challenges is neither straightforward nor automatic. It requires strategic planning and policy intervention from a purposeful and active green developmental state that can direct large-scale public investment towards green structural transformation and engage across social groups to ensure legitimacy and inclusion.

How to Finance Climate Adaptation

Major disadvantages exist for many developing countries in being able to realize a more developmental approach, including an inability to mobilize sufficient domestic resources and challenges in accessing affordable financing. However, assistance from the international community for climate adaptation continues to rely on a combination of short-term aid, longer-term conditionalities of fiscal consolidation and self-insurance schemes against catastrophic risk.²³ As explained above, this is largely insufficient to address the systemic impact of recurrent and increasingly frequent climate change-related shocks.

The imperative of scaling up climate finance, directing it to where it is needed, and ensuring favorable conditions for developing countries to achieve green structural transformation needs to be approached through a number of specific policy reforms. Steps should be taken to support climate conscious, green developmental states to mobilise financial resources for mitigation and adaptation investments on a large scale, which will require a deeper reform agenda to climate and economic governance internationally.

1. Boost Assistance Commitments

Official Development Assistance commitments need to be met and have to go further to increase the proportion of additional finance designated for climate change adaptation and resilience building. Had all G7 members met the 0.7 per cent commitment, that total would have been \$273 billion – a shortfall of \$151 billion.²⁴ Grants and extremely concessional loans are essential for adaptation. These could be financed by a green bond tax à la Tobin, or through the repurposing of fossil fuel subsidies. This should take account of specific country requirements in low-income and fossil-fuel exporting countries that need a gradual removal of these carbon-intensive mechanisms and an appropriate safety net system.

²² UNCTAD, 2021. Trade and Development Report 2021. <https://unctad.org/webflyer/trade-and-development-report-2021>

²³ Ibid.

²⁴ Calculation by UNCTAD.

2. Debt Relief and Cancellation

Debt relief and debt cancellations for developing countries should be put on the climate agenda. The delivery of the 2030 Sustainable Development Agenda was already off track before the Covid-19 crisis given the burden of debt being carried by many developing countries. Today, as interest rates are rising and the global economy is slowing down, these countries face even greater challenges than usual in addressing their climate resilience needs. An obvious starting point would be the debt of the most climate vulnerable countries but linking the climate and debt crises highlights the need for systemic reforms to the international debt architecture.²⁵

3. Green Development Banks

Well-financed green public and development banks, staffed by experts in climate change issues, at local, national and regional levels, are needed. Mandates and performance indicators should be aligned with that purpose. The multilateral development banks need to be properly capitalized to support more green investments and less fossil-fuel or polluting activities. Policy conditionalities will need to be pruned back and their AAA straitjacket should be relaxed to support experimental or new green technologies and enterprises.²⁶ G7 countries should use their shareholder power to guide MDBs in this direction. Regional development banks and multilateral development banks could also buy developing countries' green bonds, guaranteeing a more stable demand for such bonds and easier access to long-term capital for developing countries. This could also have a favourable impact on their yields and, consequently, help to mitigate the external-debt service burden.

4. Regulate Bond Markets

Affordable access to long-term funding is essential for developing countries in meeting simultaneously developmental and climate needs, and the green bond market could play an important role to help raise such long-term financing. Yet regulatory standards are lagging: many disclosure commitments are voluntary, mechanisms to protect issuer and bondholder rights are under-developed; greenwashing is rampant. These deficiencies need to be addressed by the private sector, as well as national and international regulators. With this scale of the challenge, the regulatory framework for the green bond market needs to be supported by correspondent levels of financing and staffing, at national and international levels.

5. Align Central banks

In addition to properly regulating the financial sector, Central Banks should use a fuller range of tools to create and guide finance to green activities. More specifically, they need to stop implicitly supporting high carbon emitters and penalising low-carbon activities through so-called market neutral but *de facto* market reinforcements. Collateral policy is one of the main tools towards greener central banking: central banks should also adjust their collateral regulations and accept financial institutions' green bonds as collateral.

6. Establish an Intergovernmental Tax Forum

Mobilizing domestic resources is crucial to facing the current development challenge. Increasing tax revenues and stemming illicit financial flows are key to scaling up these resources. The main multilateral response in this direction has been the OECD and G20-led Base Erosion and Profit Shifting (BEPS) project launched in 2013. However, the reform will affect only 78 of the world's 500 largest Multinational Enterprises (MNEs) and only 40 per cent of the additional tax revenue from the global minimum tax proposed (of 15 per cent) is likely to go to developing countries. The complexity of the proposed measures will also create a significant burden for tax administration in developing countries. The multilateral efforts need to go beyond this initiative and establish an

²⁵ UNCTAD, 2022. Staying Afloat: A Policy Agenda for Climate and Debt Challenges. https://unctad.org/system/files/non-official-document/UNCTAD_Debt_and_Climate_Background_Note_COP27.pdf

²⁶ An Independent Review of Multilateral Development Banks' Capital Adequacy Frameworks, 2022. Boosting MDBs' investing capacity. <https://g20.org/wp-content/uploads/2022/07/CAF-Review-Report.pdf>

intergovernmental tax forum²⁷ or a global tax body²⁸ at the United Nations - for which one proposal has recently been presented by civil society organizations.²⁹

7. Unlock the Potential of Special Drawing Rights (SDRs)

SDRs have the potential to become a key mechanism for development finance, a proposal supported by UNCTAD since their creation in the late 1960s. This could be done through three simultaneous approaches. First, the voluntary re-channelling of unused SDRs from developed to developing countries should be facilitated, including by designing wider rules for their transparent and accountable use. However, questions remain about the precise modalities of re-channelling, since through the International Monetary Fund (IMF) trusts – the Poverty Reduction and Growth Trust and the recently created Resilience and Sustainability Trust - SDRs reach developing countries in the form of new and policy-conditional lending, rather than as policy-unconditional reserve assets. The IMF need to reconsider these limitations, discarding the role of upper credit tranche conditionalities in favour of country ownership through NAPs. Options to engage multilateral development banks (MDBs) with preserved holder status for SDRs should also be explored. Second, a new SDR allocation to respond to ongoing global crises – such as the war in Ukraine and ongoing climate disasters – should be initiated. If initiated, however, the poorest countries would benefit the least; Low Income Countries received only USD 9.89 billion, or 1.52 per cent, of the 2021 allocation. Thus, a third and more far-reaching option to increase the developmental impact of SDRs – requiring substantial but necessary governance reform in the IMF – would be delinking the issuance of SDRs from the IMF quota system for new SDR asset classes with specific purposes, such as achieving the Sustainable Development Goals and climate adaptation.

8. Establish a Global Green Structural Fund

Considering the scale of inaction, the adaptation challenge should be declared an urgent global missions and appropriate mechanisms to govern what is effectively a global public good should be established. This would reflect the reality already experienced by the developing economies struggling to fund climate adaptation needs, helping establish a framework to access adaptation finance on appropriate terms and adapt green technologies necessary for their national growth trajectories.

Seventy-five years ago, the Marshall Plan helped deliver shared prosperity among the war-torn economies in Western Europe. Today, climate change is a challenge to humanity that requires a similar integrated, anticipatory and strategic approach. A global, green-oriented structural fund would support realignment of developing countries and deliver funding for integrated adaptation and mitigation initiatives as an urgent priority.

CONTACT

Mr. Richard Kozul-Wright

Director, Division on Globalization and Development Strategies, UNCTAD

41 22 917 5615

richard.kozul-wright@unctad.org

UNCTAD/GDS/INF/2022/3

This document has not been formally edited.

²⁷ As called for by the G77; see *AC.2/76/L.28*

²⁸ As recommended by the High Level Panel on International Financial Accountability, Transparency and Integrity for Achieving the 2030 Agenda; see <https://factipanel.org/docpdfs/Implementation%20Note%20-%20Intergovernmental%20tax%20body%20-%2014B.pdf>

²⁹ Eurodad, 2022. Proposal for a United Nations Convention on Tax. https://www.eurodad.org/un_tax_convention