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INNOVATIVE MULTILATERAL DEVELOPMENT BANK FINANCE FOR ADAPTATION

REPORT FROM A WORKSHOP SERIES, CO-HOSTED BY E3G

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There is a pressing need for leadership and innovation on adaptation finance by multilateral development banks (MDBs). As the climate crisis worsens, vulnerable communities across low-income countries (LICs) and middle-income countries (MICs) are increasingly threatened by its impacts. Yet the scale of the adaptation finance gap remains striking.[1] MDBs have the imperative to both maximise the efficacy of their own adaptation commitments, and to contribute to mobilising the transformational levels of private capital that will be required.

E3G, in cooperation with the UK Foreign, Commonwealth and Development Office, convened a workshop series with MDB adaptation experts in the run-up to COP27, 2022. The series explored ways to mainstream adaptation across critical sectors of MDB lending. There was a focus on the relevant innovative financial mechanisms for doing so, and on the sectors of cooling and agriculture. This paper summarises those discussions.

[1] In this paper, the terms adaptation and resilience are used interchangeably. Annual flows of adaptation finance to developing countries of $28.6 billion fall well short of the estimated $202 billion/year needed in this decade. UNEP, 2022, **Adaptation Gap Report 2022**

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Background: MDBs as prospective leaders on adaptation finance

MDBs have already exceeded their collective target of $18 billion annually in adaptation finance by 2025.[2] However, adaptation needs are far greater than total adaptation finance flows, with this gap only set to rise. Up to $340 billion in adaptation finance is predicted to be required annually by 2030.[3] MDBs (and other public banks) must therefore deliver on revised adaptation finance commitments, and ensure available finance is used as efficiently and effectively as possible.[4] Yet, despite contributing over half of annual adaptation flows, MDB adaptation finance will only be able to cover a fraction of total adaptation needs.[5] This, in essence, provides the problem statement which the workshop series set out to address: how can MDBs do more with the resources they are able to dedicate to adaptation?

The role of MDBs extends beyond simply that of concessional financiers. They play a critical part in contributing to the development of effective adaptation strategies at the national and local levels, through technical assistance, sharing expertise and capacity building. This is complemented by a unique ability to influence policy development at the national and sub-national level. Their convening power to bring together public and private partners is indispensable for mobilising the transformational levels of capital needed from both these sources. It is this combination of knowledge, influence and financial strength that reflects the true value-add of MDBs and their potential for leadership in building more adapted and climate-ready societies.

The need for innovative MDB finance for adaptation

Adaptation financing has seen progress. Yet, there remains significant untapped potential for innovative financing with transformative, and in many cases vital, results.[6] Given MDB adaptation finance can only cover a fraction of total

[2] Collective adaptation finance totalled $19 billion in 2021: MDBs, 2022, **Joint Report on Multilateral Development Banks' Climate Finance**

[3] UNEP, 2022, **Adaptation Gap Report 2022**

[4] For an overview of what is counted as "adaptation finance" by MDBs, see the recently updated (2022) **Joint MDB Methodology for Tracking Climate Change Adaptation Finance**

[5] MDBs are responsible for a 56% share of annual adaptation finance flows, calculated using 2020 figures as the latest available in both the Joint MDB Report and the Adaptation Gap Report. UNEP, 2022, **Adaptation Gap Report 2022**; MDBs, 2021, **Joint Report on Multilateral Development Banks's Climate Finance**.

[6] For an overview of what MDBs are doing on climate risk, resilience and adaptation (and other areas), see E3G's **Public Bank Climate Tracker Matrix** (webpage, accessed March 2023)

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adaptation needs, key challenges remain: scaling up adaptation projects, improving their bankability, and mobilising private capital for adaptation. Moreover, adaptation projects typically not only require a strong understanding of sectoral and regional development, but also robust assessments of local climate risks. This poses another challenge for MDBs and their clients, as reliable data on local climate risks is scarce and capacity for risk assessments is limited.

Key takeaways

The workshop series focused on cooling and agriculture as critical sectors that could particularly benefit from innovative financial approaches by MDBs. Even amid broader calls for a scaled-up quantity of adaptation finance, resource constraints in the contemporary global polycrisis mean that high-impact, innovative financial approaches are critical. The following messages emerged as key takeaways for MDB adaptation finance in these sectors:

> **Cooling:** It is essential that sustainable and efficient cooling is mainstreamed across all sectors of MDB lending to ensure that projects and operations are fully resilient to the impacts of global warming. There is significant scope for steps such as more harmonised standards, integration of cooling in multi-component concessional loans, and increased intermediated finance to overcome key challenges for MDB adaptation finance in the sector.

> **Agriculture:** This sector is arguably one of the most exposed to climate change. This reality is compounded by limited data and analysis, preventing full understanding among financial institutions of the climate-related risks faced by farmers, and their adaptation needs. Effective MDB adaptation finance in this sector requires channelling finance through intermediaries with sectoral expertise, increased technical assistance and dedicated insurance mechanisms, and greater consideration of positive spillovers in project design.

This paper summarises the discussions of the workshop series in three parts, reflecting the three technical-level workshops facilitated. It first covers the discussion on innovative financial mechanisms for adaptation finance, before turning to MDB potential in the critical sectors of cooling and agriculture. Each section features recommendations identified during the workshops regarding emerging best practice in this area, and prospective avenues identified for MDBs to improve their offer on adaptation finance.

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Innovative financing for adaptation

To address the rising adaptation finance gap in a way that supports vulnerable communities in LICs and MICs, there is a need to design new and innovative financial mechanisms to scale up MDB adaptation finance and to crowd in private investment. The workshop series identified risk mitigation and private-sector mobilisation as particularly pressing considerations in the adaptation context. Potential innovative solutions to explore for both are set out below.

Risk mitigation

Risk mitigation remains a core function for MDBs, particularly in a financing context typically characterised by a large number of small-scale projects. Small-scale projects and clients often have very limited access to adaptation finance.

The African Development Bank's (AfDB) Adaptation Benefit Mechanism (ABM) seeks to remedy this by determining the financial support necessary to make an activity attractive to a developer, informing registered "Activity Design Documents", which can be used as collateral for loans.[7] This enables otherwise "unbankable" entities to access credit. The ABM functions as a results-based financing programme, where the developer takes on the risk for delivering "Certified Adaptation Benefits" in order to receive payment. Results-based financing approaches of this kind are an effective way to foster behavioural change among producers and overcome any potential moral hazard in project delivery.

Other targeted investment risk mitigation tools could also be explored further, such as guarantees and state-contingent debt, combined with more risk-tolerant capital offsetting. Moreover, dedicated climate risk insurance mechanisms could be valuable in the area of disaster risk finance for clients such as smallholder agricultural businesses and SMEs. As adaptation projects often face uncertain prospects for generating returns, grants will also remain critical for funding specific adaptation needs in many cases.

Private sector mobilisation

Adaptation projects are often thought of as less attractive to the private sector, in view of unfavourable returns profiles. However, accelerator and incubator funds can effectively scale up ventures developing new technologies and services for climate adaptation, and catalyse broader growth in the associated market.

[7] AfDB, **Adaptation Benefit Mechanism (ABM)** (webpage, accessed March 2023)

MDBs are uniquely well positioned to facilitate the crowding-in of supporting private capital by identifying and supporting such initiatives.

Initiatives such as accelerator projects for climate adaptation, like the IDB-backed Adaptation SME Accelerator Project (ASAP), set useful precedents for improving access to funding by SMEs.[8] SMEs are socio-economically important in developing countries, but their lack of capacity to scale and limited access to risk capital constrain their potential. Risk aversion in the form of financial barriers can be meaningfully addressed by accelerator projects of this kind. This ultimately contributes to empowering SMEs to significantly increase the uptake and availability of climate adaptation solutions in developing countries.

The Lightsmith Group (responsible for the ASAP) has also pioneered other innovative adaptation initiatives to address developing country investment and technology risk. For instance, the Climate Resilience and Adaptation Finance & Technology Transfer Facility (CRAFT) is a growth equity fund seeking to invest in companies bringing existing technology and solutions to new sectors and geographies, particularly in developing countries.[9] Here, a "waterfall" blended finance model is used to de-risk projects, with a layer of concessional capital, encouraging private investment. With MDB support, CRAFT finished its resource mobilisation phase with $186 million in commitments, and is now moving toward deployment.[10] Convective Capital is another example of an equity fund focused on providing early-stage financial support for adaptation solutions, in this case specifically in the context of wildfires.[11]

Across efforts, a need for effective coordination between MDBs and other financial institutions is apparent, for example through working groups focused on investment in climate adaptation and resilience such as the Global Adaptation & Resilience Investment Working Group (GARI).[12] Convening private investors with climate experts and wider stakeholders will be vital in effectively guiding investment going forward.

[8] The Lightsmith Group, **The Adaptation SME Accelerator Project** (webpage, accessed March 2023)

[9] The Global Innovation Lab for Climate Finance, **Climate Resilience and Adaptation Finance & Technology Transfer Facility (CRAFT)** (webpage, accessed March 2023)

[10] Business Wire, 31 January, 2022, **Lightsmith Group Closes Inaugural $186 Million Growth Equity Climate Fund, the First to Focus on Climate Resilience and Adaptation**

[11] Convective Capital, **Our Companies** (webpage, accessed March 2023)

[12] GARI, **From Risk to Resilience: Invest** (webpage, accessed March 2023)

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Workshop recommendations

> Results-based financing models, such as the AfDB's ABM, could be adopted (and adapted where necessary) to the operations of other MDBs. It is important that technical assistance is made available where necessary to accompany such initiatives, ensuring that small-scale clients are sufficiently supported through the process of accessing these funds.

> The agricultural sector in particular tends to be highly reliant on grants, subsidies and concessional finance. There is scope for greater use of blended finance mechanisms to crowd in large-scale financial flows and private sector capital to improve both sectoral resilience and livelihoods.

Adaptation finance for cooling and buildings

Cooling buildings, transport and value chains accounts for 17% of global power consumption, with demand expected to triple by 2050.[13] Cooling is important for labour productivity and human welfare, and is integral to critical industries such as healthcare and food in adapting to extreme heat. It is both a contributor to global warming **and** a critical means of adapting to its impacts. Moreover, a lack of cooling can hamper progress towards meeting other Sustainable Development Goals (SDGs).[14] It is therefore essential that sustainable and efficient cooling is mainstreamed across all sectors of MDB lending, to ensure that projects and operations are fully resilient to the impacts of global warming.

However, MDBs face multiple challenges to mainstreaming cooling. Common barriers include: (1) The perception of cooling as being "niche": mainly relevant in limited situations, requiring specialist knowledge to understand, and a consumer good, resulting in limited strategic support; (2) MDBs not having their own energy efficiency standards in cooling technologies, instead relying on highly variable local standards; and (3) The typically small ticket size of cooling projects, with relatively high associated transaction costs and disincentives, resulting in a lack of dedicated support to cater for the micro-, small and medium-sized enterprises (MSMEs) often responsible for implementation.[15]

[13] IEA, 2018, **The Future of Cooling**

[14] World Bank Group, 2021, **The Cold Road to Paris: Mapping Pathways Toward Sustainable Cooling for Resilient People and Economies by 2050**

[15] E3G, 2020, **Cool Development Banks: Rising to the Challenge of Cooling a Warming World**

Progress and potential

MDBs have started to recognise the importance of cooling and integrate it into their adaptation efforts. The Green Climate Fund (GCF) and World Bank Group's Cooling Facility, which provides funding and technical assistance to governments to design cooling standards and regulations, represents a leading initiative in this space.[16] For true mainstreaming, MDBs should also review current investments to ensure that the strategic significance of cooling is recognised, and that relevant sustainability and efficiency standards are effectively incorporated.[17]

As an example, MDBs could look to further support national regulators to develop and harmonise regional standards on sustainable cooling in buildings. The Building Resilience Index is a potentially useful tool for identifying areas of vulnerability.[18] There are several valuable adaptation activities that could be incorporated in future standards. For example: painting surfaces white to reduce cooling need; green spaces to reduce urban heat islands; the use of cool-specific materials; and the use of shading and insulation for both heating and cooling purposes. However, solutions and prioritisation must reflect local contexts. Drawing on the work of dedicated coalitions of experts can ensure best practice in assessing and implementing relevant solutions to adapt to extreme heat.[19]

IFC's TechEmerge programme is an example of funding for early-stage businesses, being directed towards companies with early-stage innovative cooling technologies across sectors.[20] Despite this, there remains scope for better identifying and funding promising technological progress on sustainable cooling. For example, both recipients of the Global Cooling Prize (a one-off initiative to engender fundamental technological change in mechanical cooling) were evaluated on affordability and commercial scalability, on top of delivering cooling with over five times lower climate impact.[21] They are examples of the sort of projects and funding opportunities, with the potential to shift a sector radically, that MDBs should look to promote.

There is also potential for intermediated finance, in particular through national climate funds and green banks. Initiatives such as the "Cooling as a Service"

[16] GCF, **FP177: Cooling Facility** (webpage, accessed March 2023)

[17] E3G, 2019, **A cooling opportunity for Multilateral Development Banks**

[18] Building Resilience Index, **www.resilienceindex.org** (webpage, accessed March 2023)

[19] The "Beating the Heat" Handbook is one such resource: UNEP, 2021, **Beating the Heat: A Sustainable Cooling Handbook for Cities**

[20] Tech Emerge, **www.techemerge.org** (webpage, accessed March 2023)

[21] Global Cooling Prize, 2021, **Two technologies that deliver cooling with over 5X lower climate impact**

(CaaS) pay-as-you-go model indicate this. Under this model, mechanisms such as sale–leaseback contracts (which can also be backed by guarantees) enable financial institutions to recapitalise and scale up the activities of prospective cooling providers. These technology providers then in turn operate and maintain the cooling systems, which building and business owners pay for periodically.[22] In this context, MDBs can play a crucial role particularly by providing technical assistance and support to partner financial institutions.

Workshop recommendations

> A "Joint MDB-DFI Facility on Sustainable and Efficient Cooling" should be set up.[23] Such a facility has the potential to scale up adaptation finance, develop expertise and capacity within partner financial institutions, and in particular scale up sustainable cooling for MSMEs in LICs and MICs.

> MDBs should work together in the Cool Coalition MDB Working Group to determine what innovative types of finance are required to support the rollout of sustainable and efficient cooling, building on existing best practice examples.

> More focus should go toward integrating cooling and adaptation activities in multi-component concessional loans.

> MDBs should look to further develop and harmonise regional standards on cooling in buildings and can play a crucial role towards intermediaries in providing technical assistance and training to adopt these standards.

> Investments should be directed toward technologies specifically tailored to developing country contexts.

> Building-related projects backed by MDBs could consider the feasibility of incorporating valuable adaptation activities as standard design features.

[22] Cooling as a Service Initiative, **www.caas-initiative.org** (webpage, accessed March 2023)

[23] For more information on what such a Joint MDB–DFI Facility could look like, see E3G, 2023, **Innovative multilateral development bank (MDB) adaptation financing for cooling**

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Adaptation finance for agriculture and food security

Agriculture is arguably one of the most exposed sectors to climate change.[24] As such, the agri-food value chain and the stakeholders along it are especially vulnerable. In fact, the IMF suggests that vulnerability to climate change and weather shocks are structurally underestimated.[25] This is compounded by a general lack of data and analysis in the food and agriculture sector, resulting in a lack of understanding among already typically risk-averse financial institutions of the climate related risks faced by farmers and their adaptation needs.

Adaptation initiatives in the agricultural sector need to build system-level resilience, beyond just undertaking project-by-project screening for adaptation needs. This includes improving soil and water management, switching to more resilient crops, investing in climate-resilient infrastructure, and linking small-scale producers to value chains.[26] Moreover, recognising the synergy between mitigation and adaptation needs is essential. Systemic inefficiencies contribute to land-use change and associated emissions. Adaptation initiatives can help to combat these, such as through increasing the resilience of staple crop yields.[27]

Bankability and smallholder farmers

According to the Food and Agriculture Organisation (FAO), five in every six farms in the world consists of less than two hectares.[28] Smallholder farmers often face multiple hurdles to access adaptation finance, typically including lack of collateral (tending to especially affect women), and limited experience with financial institutions, among others. The sector is often considered high-risk, with a low return on investment for commercial financial institutions, and would therefore benefit greatly from innovative concessional finance.

Finance providers frequently cite the lack of credible business proposals as a key reason for not investing in adaptation of the agricultural sector. Support for smallholders to help them pull together concrete business cases, demonstrating not only their productivity, but also their profitability and ability to repay loans could prove especially useful here. However, it is important to recognise that not

[24] IPCC, 2022, **AR6: Climate Change 2022: Impacts, Adaptation and Vulnerability – Summary for Policymakers**

[25] IMF, 2023, **Sectoral Impact and Propagation of Weather Shocks**

[26] E3G, 2022, **Improving the Quality of Investment in African Agricultural Adaptation**

[27] IFAD, 2021, **What can Smallholder Farmers grow in a Warmer World?**

[28] FAO, 23 April 2021, **Small family farmers produce a third of the world's food**

all smallholders will have sufficient prospects for profitability, and therefore require targeted public sector support.

Innovative adaptation finance initiatives are not unprecedented on a national basis. Certain governments, such as Ghana, have had success with blended finance.[29] At the international level, the International Fund for Agricultural Development (IFAD) is an example of best practice on blended finance.[30] Food security readiness programmes are also key for investing in (climate) resilience.

Workshop recommendations

> MDB financial instruments would likely benefit from being specially channelled through intermediaries which are already catering to smallholder segments, such as microfinance institutions, credit cooperatives, and rural banks. If financial institutions have no previous experience with this segment, MDBs should facilitate technical assistance via intermediaries to develop capacities.

> Support for smallholders to help them pull together concrete business cases could be led by MDBs' technical assistance facilities, while catering to existing structures that already constitute large groupings of farmers, such as farmer associations, processing companies and others (thereby reducing transaction costs).

> Financial tools such as weather insurance could be useful measures to address increasingly volatile growing conditions, and should receive attention in all MDB adaptation strategies.

> Agricultural adaptation investment programmes should consider both social and environmental returns, beyond just the intended economic benefits. Investments have considerable potential for a broader beneficial impact, contributing to job creation, improved livelihoods, and effective environmental stewardship.

[29] Global Partnership on Output-based Aid, 2018, **Blended Finance: Building the Market for Urban Sanitation in Ghana**

[30] IFAD, **IFAD provides financing through loans, grants and a debt sustainability mechanism** (webpage, accessed March 2023)

Conclusion

Given the critical adaptation finance gap, the need for accelerated action by MDBs on climate adaptation is clear. The initiatives, approaches and suggestions described in this paper highlight potential first steps identified throughout the workshop series for how MDBs can accelerate action on climate adaptation and begin to make up ground.

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