# ALIGNING CLIMATE FINANCE FOR AN EQUITABLE AND SUSTAINABLE NET ZERO FUTURE

#### **KEY MESSAGES**

- Sustainable, resilient and inclusive climate finance cannot be effectively achieved without clear and consistent policies and regulation.
- Both public and private climate finance must be accelerated to fill the gap between current investment and that required to achieve a swift transition to net zero in line with the Paris Agreement.
- Realigning global capital through a mainstreaming of climate and sustainability into all financing operations is urgently needed. Private sector action, currently driven by transition risk, requires effective policy frameworks for pricing of externalities and reporting on performance.
- A global goal for adaptation is required to drive the mobilisation of greater amounts of capital. Tracking the impact of adaptation interventions and emphasising their multiple benefits are key to upscaling adaptation finance.
- Addressing loss and damage plays a critical role in building trust between parties, but negotiators must better recognise the challenges associated with liability concerns.
- **Increasing the effectiveness of, and access to, funding** requires greater country and local ownership of climate and development finance.
- The Green Climate Fund should be re-engineered to leverage more finance from contributor countries, encourage private sector engagement and provide better direct access to the most vulnerable countries.

#### CONTEXT

Climate finance, broadly understood as the public, private and alternative sources of financing at the local, national or international level in support of climate change mitigation and adaptation, currently falls short of the requirements of a swift global decarbonisation in line with the goals of the Paris Agreement on climate change. This is especially true in the developing countries of the Global South which are often unable to mobilise or access sufficient investment for a range of measures to address the climate emergency.

The IPCC has estimated that limiting the rise in global average surface temperatures to 1.5°C would require between US\$1.6 trillion to US\$3.8 trillion of annual mitigation investment in supply-side energy systems alone until 2050.¹ This amount grows further when investments in other sectors and adaptation are included. However, tracked global climate finance flows only reached US\$632 billion on average over the 2019/20 period, the large majority of which was mobilised in support of mitigation actions.² More than three quarters of this finance, for example investments in solar PV and wind power, does not cross borders and remains concentrated in OECD countries and China.²

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The finance that does flow from developed to developing countries (a key goal of the climate negotiations) has been estimated at US\$78.9 billion in 2018, with mitigation accounting for 70 percent (US\$55 billion) of the total, and adaptation and cross-cutting finance making up the rest.<sup>3</sup> But with adaptation costs in developing countries expected to reach up to US\$300 billion annually by 2030 (UNEP, 2021)<sup>4</sup>, both the overall amount and the focus of the climate finance currently provided present a challenge to vulnerable developing countries threatened by the more extreme impacts of a warming world.

To close gaps, strengthen country ownership and increase trust in the climate finance provided, a number of deficits in the quality and composition of finance flows need to be addressed.

These include the under-funding of adaptation, the lack of finance specifically for least developed countries (LDCs) and small island developing states (SIDS), a declining share of grant finance, and barriers to developing countries accessing climate finance.<sup>5</sup>

This briefing note identifies challenges for climate finance in the convention process. It outlines some of the steps necessary for the private sector to realign capital flow and proposes key actions that governments, financial institutions and other stakeholders should pursue with a view to not only increase the amount of investment provided for mitigation, adaptation and resilience-building interventions, but to also ensure that such investment is deployed effectively and efficiently, addressing the needs of those making decisions on the ground.

# CHALLENGES AND NEEDS FOR CLIMATE FINANCE Mobilise private capital

The commitment to meet the goals of the Paris Agreement and mobilise sustainable, resilient and inclusive climate finance cannot be effectively achieved without clear and consistent policies and regulation. Governments have an opportunity to build an enabling environment and leverage private capital, a so far largely untapped pool of investment, to a far greater extent than is currently the case. Given the scale of the climate challenge at a time of constrained public budgets, the private sector has a critical role to play in financing the low carbon transition.

Realigning the global financial system with commitments to net zero and the Paris Agreement, and getting the necessary capital to flow to developing and emerging markets must therefore be the focus of climate finance within the context of the climate convention. Achieving such alignment

goes well beyond the already delayed delivery of \$100 billion in annual climate finance promised to developing countries and faces challenges arising from four main issues: first, a lack of clear definitions and boundaries; second, contrasting methodological approaches; third, a lack of robust, comparable data on climate investments and their impact on the ground; and, fourth, an underappreciation of climate risks by private financial market actors.

First, the broad definition of climate finance needs to give way to a new functional and consistent definition that works for both the public and private sector and enables climate finance to take advantage of the existing work on climate and sustainability risk and reporting currently transforming the financial system. The lack of a clear definition has made it increasingly difficult to monitor, report and verify climate finance flows and ensure that interventions are effective and equitable. Doing this also requires a clear picture of the different ways in which private capital can be mobilised, be it direct mobilisation, intermediate mobilisation, incentivisation, indirect mobilisation or catalytic effect.

Second, standardisation of climate finance accounting needs to be addressed in such a way as to enable tracking, comparability and accountability by governments, donors and private investors. By integrating climate accounting into private sector approaches (accounting and reporting standards, benchmarks, assessment protocols) it will be easier to work across silos, both in terms of financial mechanism and sector, to affect the realignment of trillions in private and public capital necessary to achieve a low-carbon and sustainable future. Clarity on risk and opportunities arising from a more integrated understanding of climate and nature will enable an economy-wide shift into climate compatible investments and support the development of more resilient economies, while also protecting private sector investors.

Institutional investors with long-horizon investments require recognition in this category for example. Around the world, pension funds have trillions of accumulated assets under management (AUM) and are 'starved' for appropriate returns. Large deficits of defined benefit schemes and poor financial performance of defined contribution schemes call for a significant improvement in investment strategies.<sup>8,9</sup> Investing pension funds' money in projects supporting a net zero transition can both help to finance the green transformation and support the long-term stability of the pension industry.

Third, lack of robust and comparable impact data throughout the financial ecosystem is one of the major challenges facing climate finance. There are challenges in tracking climate finance, exacerbated by limited availability in project data, limited capacity and willingness to provide relevant data (especially important in the Global South), availability of robust data across periods of time as well as data duplication which can arise from double counting.<sup>10</sup> At the same time, further work needs to be done on climate modelling to understand spatial and temporal impacts of climate change, as well as standardisation of scenario data and use.

The lack of integration of impact data into investment decisions over time makes it difficult to assess the effectiveness of climate interventions. There is a need to identify factors that facilitate investment and assess the use of and impact on the environment, natural capital and biodiversity, as well as financial return. This will require the introduction of co-benefits and externalities to overall economic discussions, which includes a range of interventions from the pricing of natural capital, insurance costs and central bank stress testing for the economic impacts of climate risks and loss of biodiversity. Recognising the number of 'units of value' these elements contribute within accounting can transform an understanding of economic operational cost and return.

This leads to the fourth aspect, the need for private sector capital to be realigned in order to factor in climate risk and achieve net zero by 2050. Many current investments by the private sector are not climate compatible and continue to go towards investment areas that will be negatively affected by climate change. For example, more than 90% of a total US\$2.7 billion in energy deals announced at the 2020 UK-Africa Energy Summit went to fossil fuel contracts.<sup>11</sup>

At COP26, more than 450 financial institutions from 45 countries announced the alignment of \$130 trillion of assets under management to net zero.<sup>12</sup> However, this positive signal has raised concerns over greenwashing as the group, formed in April 2021 as the Glasgow Financial Alliance for Net Zero (GFANZ), counts among its signatories many of the world's leading backers of fossil fuel projects.<sup>13</sup>

A credible realignment would have significant implications across the supply chain and impact not only multinational enterprises (MNEs) but also small and medium-sized enterprises (SMEs) which account for the majority of business activity and employment around the world. MEs already face greater difficulties in accessing finance than MNEs and with no current requirement to report on sustainability actions, could face further hurdles in accessing net zero capital flows. The financing of SMEs must therefore be a consideration in the collaborative redesign of financial and operational practices intended to address the climate emergency. The

#### **Key actions**

# Mobilisation Scale-up public sector investments (e.g., through concessional instruments such as lowinterest loans and long grace periods, equity investments and risk mitigators, such as quarantees, first-loss protection, or grants) to leverage the delivery of significantly increased private capital flows. Use blended finance to address size disparity (projects that are too small for private finance to invest in). • Integrate co-benefits and externalities to overall economic discussions on net zero climate action, for example through the effective pricing of carbon, natural capital accounting or central bank stress testing. Enhance synergies between climate and environment funding and its alignment between different UN environmental conventions such as the UN Convention on Biological Diversity, the United Nations Convention to Combat Desertification and the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Increase capacity building overall at a systemic level – education, expertise, knowledge sharing, standardisation of MRV and corporate impact reporting. Transparency Develop a roadmap for aligning climate investment and reporting with private sector net-zero strategies and SDG-aligned approaches. Develop frameworks for assessing co-benefits – natural capital, biodiversity, social – and good practice around impact assessments to integrate into reporting. Access Generate more targeted engagement with domestic private sectors in both developed and developing countries to understand how they can contribute to countries' mitigation and adaptation plans. This should be used to develop context-appropriate frameworks for how domestic institutions can be enhanced to incentivise investments into mitigation, adaptation and resilience.

Successfully realigning the global financial system demands the integration of both physical and transition risk into decision making. Similarly, the relationship between climate, nature and biodiversity is increasingly recognised and must be addressed. Achieving such a shift in financial decision making will require cross-border agreements and standards to drive transparency, performance tracking and comparability.<sup>19</sup>

These issues are exacerbated by existing challenges in investing in developing and emerging markets. These often include: macroeconomic instability; weak banking systems and shallow capital markets; a higher cost of capital, a problem that is worsened by climate vulnerability;<sup>20,21</sup> problems with governance and transparency – over 41% of all climate-related official development assistance (ODA) goes to countries designated at the highest risk for corruption;<sup>22</sup> a lack of capacities and technology for sector 'leapfrogging'; as well as weak property rights and high political risk.

# Shift to adaptation

More money has flowed to adaptation and resilience-building interventions in recent years. For example, the World Bank committed itself to increase direct adaptation finance to US\$50 billion over the 2020-25 period, putting the Bank's adaptation finance in developing countries on par with its mitigation investments. However, the adaptation gap is not closing fast enough. Both a significant further scaling up and a shift in focus to vulnerable countries are required.

The devastating impacts of severe floods and prolonged wildfire seasons on some of the world's largest economies have led to urgent calls for a dramatic increase in adaptation finance to build greater resilience and prepare communities for the consequences of a warming world. However, adaptation finance as understood in the context of the climate convention should primarily flow to the most climate-vulnerable developing countries of the Global South due to their lack of technical capacity and finance. The annual cost of adaptation in developing countries alone is currently estimated to stand at roughly US\$70 billion, although this amount is expected to rise to US\$140–300 billion in 2030 and up to US\$500 billion by the middle of the century.<sup>4</sup>

#### **Key actions**

# Mobilisation • Agree a specific global goal for adaptation, to drive adaptation finance and focus. Countries need to accelerate their progress towards developing national adaptation plans and to scale down these plans to local levels. Address vulnerable developing countries' unsustainable debt burdens by pushing for comprehensive debt relief by public and private creditors and linking this to policies that support a green and inclusive recovery. This will free up investment for climate adaptation and resilience-building interventions.<sup>21,29</sup> Advocate for a deeper and more complete understanding of the benefits and costs of adaptation and resilience-building interventions to unlock greater funding flows, especially from the private sector. The triple dividend of adaptation and resilience building captures not just avoided economic losses but also economic development gains, and additional social and environmental benefits. 31,32 Transparency • Push for greater transparency and accountability as essential for both short-term adaptation projects and long-term climate-resilient development. Granularity in reporting of climate investment and impact will help to track investment and improve understanding of adaptation success. Access • Address the growing need for direct access to climate finance for developing and emerging markets. This will require capacity building and knowledge sharing, building an enabling framework for robust data built on local access, knowledge and implementation. • Involve local communities in decisions in adaptation decision making to improve the effectiveness of climate finance. Doing so needs to include an acknowledgement of local beliefs and customs; the recognition of elders and local champions; the identification and prioritisation of vulnerable stakeholders; and linking local knowledge to climate change science in a two-way dialogue that resonates with local experience and motivates rather than discourages adaptation actions.<sup>33</sup>

The relative investment need is greatest in vulnerable developing countries, but evidence shows that multilateral donors do not prioritise them at the project selection stage and the amount of adaptation finance they have received from bilateral donors has been smaller than that flowing to less vulnerable countries. The lack of finance is further compounded by the inability of recipient countries' domestic institutions to meet specific fiduciary standards and other access requirements, insufficient human resource support and the inflexibility of current approaches which are biased in favour of governments and against non-traditional actors such as local enterprise and grassroots organisations. <sup>26</sup>

Adaptation finance poses particular challenges for private capital. Of the global total adaption finance mobilised in 2019/20, only two percent came from the private sector.<sup>27</sup> Barriers to greater private investment in vulnerable developing countries include: a lack of decision-useful risk and vulnerability data to guide investment, limited information on capital investment gaps, and actual or perceived low returns on investment.<sup>28</sup> In addition, due to their greater exposure to climate risks and the resultant increased cost of capital, vulnerable developing countries are burdened with higher interest payments to service public and private debt.<sup>29</sup> The recession and debt distress resulting from the Covid-19 pandemic has further exacerbated this situation.<sup>28,21,29</sup>

Adaptation, resilience-building and sustainable development measures often overlap. A false dichotomy between adaptation and more traditional development finance to ensure one is not simply repackaged as the other, may hinder funding flows, especially to vulnerable developing countries where climate change threatens all development objectives.<sup>30</sup>

#### Address loss and damage

The issue of compensating for loss and damage from unavoidable impacts of climate change is intertwined with questions over the future direction of investment in adaptation and resilience-building. Developing countries have called for compensation from developed countries, while developed countries have sought instead to treat losses and damages as a sub-component of adaptation within the UNFCCC negotiations. The disconnect between the two positions has significantly eroded trust within the negotiations.

At a basic level, a sense of greater justice in climate finance involves an acknowledgment of losses and damages already incurred by LDCs and SIDS and a firm commitment to reducing them through both financial and non-financial means. At a more complex level, justice requires consideration of long-term challenges not currently addressed by the modalities of financial operation such as slow-onset events, non-economic losses, or displacement related to the adverse impacts of climate change.<sup>34</sup>

Negotiations on loss and damage can only be accelerated once LDCs and SIDS can effectively take stock of and quantify impacts incurred within their respective jurisdictions. The following discussions can then focus on whether and how current flows of finance can be used to address these losses and damages or whether new sources and flows of climate finance are needed.

LDCs and SIDS emphasise the need for financing for loss and damage that is additional to existing flows of climate finance for adaptation. These countries also emphasise the need for technical assistance towards LDCs and SIDS to identify and address climate change related loss and damage. 35,36,37

#### **Key actions**

#### Mobilisation • Operationalise the Santiago Network for Loss and Damage. Achieving its intended purpose of providing technical assistance to LDCs and SIDS is critical to ensure that these countries can systematically map losses and damages related to climate change impacts and quantify them. Design effective and robust methods for integrating loss and damage issues into public investment planning at national and international levels. • Redesign existing climate finance institutions such as the GCF to integrate loss and damage into funding approaches and structures. **Transparency** • Ensure LDCs and SIDs are meaningfully included in the operationalisation of the Santiago Network. • Assess the extent to which existing mechanisms such as the CTCN can be used to further support SIDs and LDCs in addressing loss and damage. • Explore ways to make existing funding more accessible for local groups in developing Access countries.<sup>39</sup> Loss and damage mechanisms will only be successful if they can reach the most vulnerable communities.

The establishment of the Warsaw International Mechanism for Loss and Damage began to address a number of concerns, but concrete actions are desired. Rather than further dividing negotiation parties over issues of accountability and liability, it may be more politically prescient to advance the idea of initially voluntary grant-based funding paid in solidarity rather than as compensation. Establishing the issue of loss and damage as a permanent high level agenda item in the COP process is an important step in anchoring this debate.<sup>38</sup>

# Funding effectiveness and access

While there is more climate funding available today than ever before, its effectiveness remains low and access to it continues to be difficult. Climate-impacted groups are not always reached and intended adaptation and mitigation outcomes are often not met. Between 2003 and 2016, less than 10 percent of climate finance committed to developing countries by international, regional and national funds went to locally focused projects, resulting in a lack of resilience to the impacts of climate change.<sup>40</sup>

Climate finance makes up around one quarter of all global financial aid to developing countries today. However, disbursement focused on climate adaptation is low compared to other development finance. For example, the disbursement ratio for development finance targeting climate adaptation measures including agriculture, forestry, fishing, water supply and sanitation across East Africa – one of the most important regions for UK ODA

- stood at only 52.7% for the 2009-2018 period, compared to 84.4% for development finance more generally. This may point to challenges around the effective implementation of projects on the ground and highlights the importance of a continued commitment to avoid redirection of funds after they have already been approved.

Rather than increasing resilience and adaptive capacity, some projects may further create new or aggravate existing vulnerabilities. Such maladaptation can come as the result of an insufficient understanding of the specific contexts within which vulnerability exists (e.g. gender, ethnicity or class divides), ineffective attempts to simply tack adaptation on to existing development projects, a lack of involvement of local stakeholders in designing and implementing adaptation measures, and poor definitions of what constitutes adaptation 'success'.41 Furnishing local actors with genuine agency, sufficient resources and capabilities can produce the kind of low-risk, equitable adaptation solutions that donors and international implementation entities would like to see but are unable to create themselves.<sup>42</sup>

At the same time, there needs to be a consistency in approaches to such funding. The repurposing of ODA as climate finance, as well as the reduction in ODA which has been in response to strained public finances post-COVID, are raising concerns within the climate finance community that pledges are being made without concrete actions to ensure they are achieved.

# **Key actions**

#### Mobilisation • Enable greater country ownership of development finance targeting climate adaptation. Domestic institutions at national, subnational and local levels are better able to understand how Paris-aligned measures can be made to be inclusive and empower a wide range of stakeholders. This includes central banks and supervisory authorities as critical players in supporting the scaling of sustainable finance.<sup>43</sup> Transparency • Equip developing country national budgeting systems to track and monitor how adaptation finance is spent at the local level. Involving local actors in funding decisions and making budget information publicly available builds better understanding and holds governments and other stakeholders involved in the disbursement of funds to account. Access • Use climate finance instruments that recognise and address developing countries' capacity gaps and adaptation priorities. This will require collaboration between donor countries and recipients.<sup>44</sup> Granular, reliable, decision-useful data needs to be gathered and analysed to ensure climate adaptation and mitigation goals are met and scarce available funds are used to the greatest effect possible. • Support locally-led adaptation by directing finance flows to local actors, enabling capacity development, adaptation planning and development of physical infrastructure for risk management. • Develop durable financing partnerships between international finance institutions and local institutions to source and fund bankable projects on the ground.

# Re-engineer functioning institutions

The architecture of global climate finance does not suffer from a shortage of financial mechanisms and international accredited implementation entities. Although the Green Climate Fund (GCF) is only one amongst many climate finance institutions, its visibility in terms of deployment of the US\$100 billion promised to developing countries annually to help finance climate mitigation and adaptation interventions has made it a frequent target of discussion.

Despite noble intentions and a recent acceleration of funding approvals, the GCF is not working as intended and has fallen short of delivering **outcomes required** to achieve the transformational goals of the Paris Agreement. As of June 2021, the GCF had raised roughly US\$17.8 billion in confirmed pledges<sup>45</sup>, and was supporting 177 projects with US\$8.9 billion committed over a multi-year horizon. This is a very small amount of finance when compared to other international finance institutions such as the World Bank which delivered US\$21 billion in climate finance to low- and middle-income economies in 2020 alone. As of July 2021, the GCF was still unable to balance nominal allocations of finance between adaptation and mitigation, with mitigation finance being 32% higher than adaptation.<sup>46</sup>

Access to GCF finance by developing countries remains a key barrier. 37,47 Developing country institutions are disproportionately disadvantaged when engaging with and attempting to access funding directly from the GCF. Accreditation processes are lengthy and particularly resource intensive for direct access entities, with most approved funding being allocated to international accredited entities. 48,49 GCF support is also not directed to where it is most needed, with some of the most vulnerable countries not receiving any adaptation finance. 50 The Fund requires sufficient transparency and accountability arrangements to generate information that can be used to determine whether financing for adaptation reaches the local level.51

Such problems are embedded within the structural design of the global climate finance landscape, built on historical institutional frameworks that are no longer fit for purpose. As the wider finance landscape is evolving to address externalities beyond GHGs, a more integrated approach is required. New mechanisms are not the answer, considering the rapid need for action, but existing arrangements need reform to be able to deliver on the goals of the Paris Agreement.

#### **Key actions**

#### Mobilisation • Partner more closely with institutional donors and private sector actors to further explore innovative finance options that can be used to achieve the climate goals of recipients. Transparency Strengthen transparency and accountability of the GCF to enable monitoring of their performance against developing country priorities and Paris Agreement goals. The GCF needs to work with its partners to generate consistent and granular information on allocation and spending of climate finance. This information will enable assessments on whether climate finance is achieving the intended outcomes. Improve Fund governance to resolve the mismatch between the vision of the GCF and its operationalisation if there is to be greater private sector participation. A starting point would be the recognition that vulnerable developing countries need genuine agency in determining how GCF finance is allocated and used to support adaptation and mitigation. Access • Enhance direct access to climate finance and increase commitments for locally-led action. This requires climate finance access modalities that are responsive to the capacity gaps experienced by these direct access entities.

#### **REFERENCES**

- IPCC (2018). Global Warming of 1.5° C. An IPCC Special Report on the impacts of global warming of 1.5° C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. Cambridge: Cambridge University Press. (Available online at: www.ipcc.ch/site/assets/uploads/ sites/2/2019/06/SR15\_Full\_Report\_High\_Res.pdf)
- Naran, B. et al. (2021). Preview: Global Landscape of Climate Finance 2021, London: Climate Policy Initiative. (Available online at: www.climatepolicyinitiative.org/wp-content/uploads/2021/10/Global-Landscape-of-Climate-Finance-2021.pdf)
- OECD (2020). Climate Finance Provided and Mobilised by Developed Countries in 2013-2018, Paris: OECD. (Available online at: https://doi.org/10.1787/f0773d55-en)
- 4. UNEP (2021). Adaptation Gap Report 2020. (Available online at: https://backend.orbit.dtu.dk/ws/portalfiles/portal/238807594/AGR2020.pdf)
- Averchenkova, A. et al. (2020). Delivering on the \$100 billion climate finance commitment and transforming climate finance, The Independent Expert Group on Climate Finance. (Available online at: www.un.org/sites/un2.un.org/files/100\_billion\_climate\_finance\_report.pdf)
- Adow, M. (2021), Mobilizing resources urgently for climate action: overcoming longstanding challenges and learning from Covid-19, Brussels: Heinrich-Böll-Stiftung. (Available online at: https://eu.boell.org/en/2021/05/19/mobilizing-resources-urgently-climate-actionovercoming-longstanding-challenges-and)
- 7. OECD (2017). Private Finance for climate action: estimating the effects of public interventions, Policy Perspectives, Paris: OECD. (Available online at: www.oecd.org/env/researchcollaborative/WEB%20 private-finance-for-climate-action-policy-perspectives. pdf)
- 8. Petraki, A. and A. Zalewska (2017). "Jumping over a low hurdle: Personal pension fund performance", Review of Quantitative Finance and Accounting, 48(1), pp. 153-190.
- Zalewska, A. (2021). "Saving with group or individual personal pension schemes: How much difference does it make?", Management Science, In press. (Available online at: https://pubsonline.informs.org/doi/10.1287/ mnsc.2021.4083)
- See, for example, Cassim, A. et al. (2021). South African Climate Finance Landscape 2020, London: Climate Policy Initiative. (Available online at: www.climatepolicyinitiative.org/wp-content/ uploads/2021/01/South-African-Climate-Finance-Landscape-January-2021.pdf)
- 11. Carrington, D. (2021). "'Hypocrisy': 90% of UK-Africa summit's energy deals were in fossil fuels", The Guardian, January 24. (Available online at: www.theguardian. com/environment/2020/jan/24/90-pe-cent-uk-africa-energy-deals-fossil-fuels)

- 12. GFANZ (2021). Amount of finance committed to achieving 1.5°C now at scale needed to deliver the transition, Statement by the Glasgow Financial Alliance for Net Zero, 3 November. (Available online at: www.gfanzero.com/press/amount-of-finance-committed-to-achieving-1-5c-now-at-scale-needed-to-deliver-the-transition/)
- 13. Mazzucato, M. (2021). "Banks are still financing fossil fuels while signing up to net zero pledges", The Guardian, November 4. (Available online at: www.theguardian.com/commentisfree/2021/nov/04/banks-are-still-financing-fossil-fuels-while-signing-up-to-net-zero-pledges)
- Kumar, R. (2017). Targeted SME Financing and Employment Effects: What Do We Know and What Can We Do Differently, Jobs Working Paper No. 3, Washington, DC: World Bank. (Available online at: https://documents1.worldbank.org/curated/ en/577091496733563036/pdf/115696-REVISED-PUBLIC-SMEs-and-Jobs-final.pdf)
- 15. Owen, R. et al. (2020). "Financing Cleantech SME Innovation: Setting an Agenda", IEEE Transactions on Engineering Management, pp. 1-5. (Available online at: https://eprints.mdx.ac.uk/30937/)
- 16. Factor, A. and J. P. Ulhøi (eds.) (2021). Sustainability and Small and Medium-Sized Enterprises: Lessons from Mixed Methods Research, London: Routledge.
- 17. Owen, R. et al. (2018). "Enabling investment for the transition to a low carbon economy: government policy to finance early stage green innovation", Current Opinion in Environmental Sustainability, 31, pp. 137-145. (Available online at: https://eprints.mdx.ac.uk/32924/1/RO%20COES%20Enabling%20investment%20 -march11-18.pdf)
- 18. Runde, D. F. et al. (2021). Supporting Small and Medium Enterprises in Sub-Saharan Africa through Blended Finance, CSIS Briefs, Washington, DC: Centre for Strategic and International Studies. (Available online at: www.csis.org/analysis/supporting-small-and-medium-enterprises-sub-saharan-africa-through-blended-finance)
- 19. EcoAct (2021). The Climate Reporting Performance of the FTSE 100, Euro STOXX 50 and DOW 30. (Available online at: https://info.eco-act.com/en/climate-reporting-performance-research-2021)
- 20. Buhr, B. et al. (2018). Climate Change and the Cost of Capital in Developing Countries. UN Environment, Imperial Business School and SOAS. (Available online at: www.greengrowthknowledge.org/research/climate-change-and-cost-capital-developing-countries)
- Volz, U. et al. (2020). Debt Relief for a Green and Inclusive Recovery: A Proposal, Berlin, London, and Boston, MA: Heinrich-Böll-Stiftung; SOAS, University of London; and Boston University. (Available online at: https://eprints.soas.ac.uk/34346/1/DRGR-report.pdf)
- 22. Nest, M. et al. (2020). Corruption and climate finance: implications for climate change interventions. U4
  Brief 2020:14. CMI. (Available online at: www.u4.no/publications/corruption-and-climate-finance.pdf)

- 23. World Bank (2019). The World Bank Group's Action Plan on Climate Change Adaptation and Resilience, Washington, DC.: World Bank. (Available online at: https://documents1.worldbank.org/curated/en/519821547481031999/The-World-Bank-Groups-Action-Plan-on-Climate-Change-Adaptation-and-Resilience-Managing-Risks-for-a-More-Resilient-Future.
- Saunders, N. (2019). Climate change adaptation finance: are the most vulnerable nations prioritised?, SEI Working Paper, Stockholm: Stockholm Environment Institute. (Available online at: www.sei.org/publications/ climate-adaptation-finance-vulnerable-nations/)
- Shakya, C. et al. (2021). Access to climate finance: Workshop report (theme 2), London: IIED. (Available online at: https://pubs.iied.org/sites/default/files/ pdfs/2021-03/10213IIED.pdf)
- Naran, B. et al. (2021). Preview: Global Landscape of Climate Finance 2021, London: Climate Policy Initiative. (Available online at: www.climatepolicyinitiative.org/ wp-content/uploads/2021/10/Global-Landscape-of-Climate-Finance-2021.pdf)
- Tall, A. et al. (2021). Enabling Private Investment in Climate Adaptation and Resilience: Current Status, Barriers to Investment and Blueprint for Action, Washington, DC.: World Bank. (Available online at: https://openknowledge.worldbank.org/ handle/10986/35203)
- 28. Kose, M. A. et al. (2021). Global Waves of Debt: Causes and Consequences. Washington, DC.: World Bank. (Available online at: https://openknowledge.worldbank.org/handle/10986/32809)
- Volz, U. et al. (2021). Debt Relief for a Green and Inclusive Recovery: Securing Private- Sector Participation and Creating Policy Space for Sustainable Development, Berlin, London, and Boston, MA: Heinrich-Böll-Stiftung; SOAS, University of London; and Boston University. (Available online at: https://eprints.soas.ac.uk/35254/1/ DRGR%20Report%202021.pdf)
- 30. Chan, C. and N. Amerasinghe (2018). Deploying Adaptation Finance for Maximum Impact, WRI Commentary. Washington, DC.: World Resources Institute. (Available online at: https://wriorg.s3.amazonaws.com/s3fs-public/wri-commentary-adaptation-finance.pdf)
- Tanner, T. et al (2015). The triple dividend of resilience: Realising development goals through the multiple benefits of disaster risk management, Washington, DC.: World Bank. (Available online at: www.gfdrr.org/ sites/default/files/publication/The\_Triple\_Dividend\_of\_ Resilience.pdf)
- GCA (2019). Adapt now: A global call for leadership on climate resilience, Global Commission on Adaptation. (Available online at: https://gca.org/wp-content/ uploads/2019/09/GlobalCommission\_Report\_FINAL.pdf)
- 33. Nkoana, E. et al. (2021). "Climate Change Adaptation Tools at the Community Level: An Integrated Literature Review", Sustainability, 10(3), pp. 1-21.

- 34. Schäfer, L. et al. (2021), Slow-onset Processes and Resulting Loss and Damage An introduction, Bonn: Germanwatch. (Available online at: https://germanwatch.org/sites/default/files/FINAL\_Slow-onset%20paper%20Teil%201\_20.01.pdf)
- 35. AOSIS (2018). Submission on 'type and nature of actions to address loss and damage for which finance may be required' by the Republic of the Maldives on behalf of the Alliance of Small Island States. (Available online at: https://cop23.unfccc.int/sites/default/files/resource/AOSIS%20Submission%20on%20type%20and%20 nature%20of%20actions%20to%20address%20loss%20 and%20damage%20for%20which%20finance%20 may%20be%20required.pdf)
- 36. LDC Group (2018). Submission by Ethiopia on behalf of the Least Developed Countries Group on the type and nature of actions to address loss and damage for which finance may be required. (Available online at: https://cop23.unfccc.int/sites/default/files/resource/LDC%20 submission\_March6.pdf)
- UK COP26 Presidency (2021). July Ministerial: Chair's Summary. (Available online at: https://unfccc.int/sites/ default/files/resource/July%20Minsterial\_Chair%27s%20 Summary.pdf)
- 38. Huuq, S. (2021). "The era of loss and damage from climate change is upon us", The Daily Star, August 4. (Available online at: www.thedailystar.net/opinion/politics-climate-change/news/the-era-loss-and-damage-climate-change-upon-us-2144111)
- Holt. M. et al. (2021). What Vulnerable Countries Need from the COP26 Climate Summit, WRI Commentary, September 22. (Available online at: www.wri.org/ insights/what-vulnerable-countries-need-cop26climate-summit)
- Soanes, M. et al. (2017). Delivering real change: Getting international climate finance to the local level, IIED Working Paper, London: IIED. (Available online at: https://pubs.iied.org/sites/default/files/pdfs/ migrate/10178IIED.pdf)
- 41. Eriksen et al. (2021). "Adaptation interventions and their effect on vulnerability in developing countries: Help, hindrance or irrelevance?", World Development, 141, pp. 1-16.
- 42. Soanes, M. et al. (2021). Principles for locally led adaptation: A call to action, London: IIED. (Available online at: https://pubs.iied.org/sites/default/files/pdfs/2021-01/10211IIED.pdf)
- 43. Dikau, S. and Volz, U. (2019). 'Central Banking, Climate Change and Green Finance'. In: Sachs, J. et al. (eds.), Springer Handbook of Green Finance: Energy Security and Sustainable Development. Heidelberg and New York: Springer, pp 81-102.
- 44. Gilder, A., and O. Rumble (2020). Improving sub-Saharan African Access to Climate Change Finance: An Alternative View, Policy Briefing 194, South African Institute of International Affairs. (Available online at: www.africaportal.org/publications/improving-subsaharan-african-access-climate-change-financealternative-view/)

- 45. GCF (2021). Status of Pledges and Contributions (Initial Resource Mobilization). www.greenclimate.fund/sites/default/files/document/status-pledges-irm-gcf1\_6.pdf
- 46. GCF (2021). Project Portfolio. (Available online at: www.greenclimate.fund/projects/dashboard)
- 47. Tanner, T. et al. (2019). Enabling access to the Green Climate Fund: Sharing country lessons from South Asia, ACT Learning Paper. (Available online at: https://eprints.soas.ac.uk/35237/)
- 48. IEU (2020). Independent synthesis of the Green Climate Fund's accreditation function. (Available online at: https://ieu.greenclimate.fund/sites/default/files/evaluation/accreditation-final-report.pdf
- 49. Caldwell, M., and Larsen, G. (2021). Improving Access to the Green Climate Fund: How the Fund Can Better Support Developing Country Institutions, WRI Working Paper, Washington, DC.: World Resources Institute. (Available online at: www.wri.org/research/improving-access-green-climate-fund-how-fund-can-better-support-developing-country)
- IEU (2021). Independent Evaluation of the Adaptation Portfolio and Approach of the Green Climate Fund. (Available online at: www.greenclimate.fund/sites/ default/files/document/gcf-b28-17.pdf)
- 51. Omukuti, et al. (2021). COP26 as an opportunity to further democratise the Green Climate Fund, *The Lancet Planetary Health*, 5(8): e497-e498.

#### **HOW TO CITE THIS PAPER**

Heubaum, H., Jackson, F., Omukuti, J., Seega, N. and Zalewska, A. (2021) Aligning Climate Finance for an Equitable and Sustainable Net Zero Future. *COP26 Universities Network Briefing.* 

#### Sponsored by UK Research and Innovation (UKRI)



#### THE COP26 UNIVERSITIES NETWORK

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