

Ombuya, Sherri; Shishlov, Igor; Michaelowa, Axel

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International climate finance from a global perspective

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76 WORKING PAPER



International Climate Finance from a Global Perspective

Vienna, November 2023

Sherri Ombuya
Igor Shishlov
Axel Michaelowa

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Austrian Foundation for Development Research – ÖFSE
A Austria, 1090 Vienna, Sensengasse 3, T +43 1 3174010
E office@oefse.at, I www.oefse.at, www.centrum3.at

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List of Abbreviations

| | |
|--------|--|
| AF | Adaptation Fund |
| CBDR | Common but Differentiated Responsibilities |
| CDM | Clean Development Mechanism |
| COP | Conference of the Parties |
| CPI | Climate Policy Initiative |
| DAC | Development Assistance Committee |
| DRM | Disaster Risk Management |
| DRR | Disaster Risk Reduction |
| GCF | Green Climate Fund |
| GEF | Global Environment Facility |
| GST | Global Stocktake |
| LDCF | Least Developed Countries Fund |
| L&D | Loss and Damage |
| MDBs | Multilateral Development Banks |
| MVI | Multidimensional Vulnerability Index |
| NCQG | New Collective Quantified Goal |
| NDCs | Nationally Determined Contributions |
| ODA | Official Development Assistance |
| OECD | Organisation for Economic Co-Operation and Development |
| SCCF | Special Climate Change Fund |
| SCF | Standing Committee on Finance |
| SDGs | Sustainable Development Goals |
| SIDS | Small Island Developing States |
| PA | Paris Agreement |
| UN | United Nations |
| UNEP | United Nations Environment Programme |
| UNFCCC | United Nations Framework Convention on Climate Change |
| USD | US Dollar |

Abstract

The Paris Agreement reaffirmed the commitment to provide USD 100 billion in international climate finance to developing countries by 2020. This Working Paper delves into the history and challenges of international climate finance. We emphasize the complexities tied to diverse definitions and accounting practices, leading to disputes over climate finance figures, as well as the struggle of developed countries to meet the USD 100 billion annual target. With the need to mobilize finance for addressing loss and damage (L&D) gaining traction in UN climate negotiations, we examine how similar challenges may hinder progress on the L&D agenda. Furthermore, we stress the importance of fostering trust between donor and recipient countries in the context of financial support pledges under the Paris Agreement. We identify how key negotiation processes, like the New Collective Quantified Goal on Climate Finance (NCGG), have the potential to change the status quo.

Keywords: International Climate Finance, Loss and Damage, Climate Finance Accounting, Adaptation Finance, Conference of the Parties (COP)

1. Introduction

The generic idea of international public climate finance (see Michaelowa/Sacherer 2022a for an exhaustive collection of contributions on this topic) first emerged in the international climate policy context in 1990 at the second World Climate Conference in Geneva where world leaders in a Ministerial Declaration recognized climate change as a unique global challenge requiring a global response and emphasized the need for financial support to help developing countries address climate change impacts (UNFCCC 1990; Michaelowa/Sacherer 2022b). The 1992 United Nations Framework Convention on Climate Change (UNFCCC) reinforced this, in line with the principle of common but differentiated responsibilities (CBDR), mandating developed countries to provide 'new and additional' financial resources to assist developing countries to meet its objectives (UNFCCC 1992). The CBDR principle has often been used to underpin that only developed countries in the original configuration of Annex II shall provide climate finance. Several observers (e.g., Castro 2016) have criticized this ossification of the UNFCCC regime, as countries do not shift their positioning according to their economic development. Yet while the Paris Agreement overcame the divide with regard to mitigation contribution, it remains firm for international climate finance to this day.

The UNFCCC also established a financial mechanism for grant and concessional funding. The Global Environment Facility (GEF) and the Green Climate Fund (GCF) – established in 1994 and 2011 respectively – have operated as key vehicles of this financial mechanism (UNFCCC n.d.). The Kyoto Protocol (adopted in 1997) also recognized, under its Article 11, the need for the provision of climate finance to developing country Parties but did not operationalize it. Various other climate change funds were established, most importantly, the Special Climate Change Fund (SCCF), the Least Developed Countries Fund (LDCF), both managed by the GEF, and the Adaptation Fund (AF) under the Kyoto Protocol (Michaelowa et al. 2020). These vehicles have been instrumental in testing and refining concepts and strategies related to international climate finance including funding allocation strategies (Watson et al. 2022). Steps have also been taken to offer developing country governments greater voice and representation in decision-making as is the case under the AF, to increase accountability mechanisms, and to use innovative sources of funding – e.g., the AF was partially financed through a 2 % levy on carbon credits from the Clean Development Mechanism (CDM) of the Kyoto Protocol (ibid.).

Notably, observers highlight that part of international climate finance reported by developed countries is just 'old wine in new bottles' whereby developed countries have merely rebranded existing development aid as climate finance (Michaelowa/Michaelowa 2011).

Despite its failure to adopt the successor agreement to the Kyoto Protocol, the 2009 15th Conference of the Parties to the UNFCCC (COP 15) in Copenhagen was a key inflection point for climate finance. For the first time, developed countries collectively pledged to jointly mobilize a specific amount of USD 100 billion in international climate finance annually by 2020 from a wide variety of sources (UNFCCC 2011; Michaelowa/Sacherer 2022b). The actual term had been coined in the run-up to that conference. The Paris Agreement (PA), adopted at COP 21 in 2015, confirmed their commitment to this collective goal through 2025 and to establish a new collective quantified goal (NCQG) from a floor of USD 100 billion per year before 2025 based on developing country needs (UNFCCC 2015). Although developed countries have failed to reach the USD 100 billion goal, in 2022, negotiations on the NCQG began with a view to having a new target agreed by 2024. In the same year, loss and damage (L&D) received solid political legitimacy in the UNFCCC when countries agreed to establish new funding arrangements including a dedicated fund to address L&D.

Against this backdrop, this paper presents an overview of the state of play of international climate finance, highlights the challenges in defining and delivering climate finance, and discusses the implications for moving the L&D finance agenda forward inside and outside the international climate finance architecture.

2. International Climate Finance: An Essential Contested Concept?

The UNFCCC provides a broad definition of climate finance as the “local, national or transnational financing – drawn from public, private and alternative sources of financing – that seeks to support mitigation and adaptation actions that will address climate change” (UNFCCC n.d.). However, there is no consensus on this definition, partly due to the complexity of the climate finance architecture. Several other definitions have been put forward by key governments and international institutions including the Standing Committee on Finance (SCF), Organisation for Economic Co-operation and Development, Development Assistance Committee (OECD DAC) and multilateral development banks (MDBs). According to Shishlov/Censkowsky (2022), common across these definitions is that climate finance should be oriented towards financing climate change mitigation and adaptation activities. Moreover, international climate finance is considered to take on a narrower view of the flow of climate finance from developed countries included in Annex II to developing countries, as referenced in the official UNFCCC climate finance commitments.

Due to the lack of a common definition, multiple accounting practices exist that lead to contestations of the estimation of climate finance figures (Weikmans/Roberts 2019). Furthermore, Shishlov/Censkowsky (2022) suggest that not only do the total accounting approaches of climate finance differ, but also what counts or is earmarked as climate finance. Two broad approaches to counting climate finance are identified. The OECD DAC Rio markers where DAC members self-report climate-related development finance along themes including mitigation and adaptation, which has led to the overestimation due to the lack of a verification system (Weikmans/Roberts 2019). MDBs have similarly adopted a joint approach to report climate finance flows through their operations differentiating between climate change adaptation and mitigation finance (Shishlov/Censkowsky 2022).

Additionally, two key frameworks are used for climate finance accounting. First, the OECD DAC tracks reports on international climate finance (OECD 2021). Second, the SCF and the Climate Policy Initiative (CPI) have developed accounting approaches for global, including domestic, climate finance flows, which aim to capture the global climate finance landscape including private finance, and of course, are much larger than the OECD numbers. An in-depth overview of both approaches is provided by Shishlov/Censkowsky (2022). Both methods largely rely on self-reporting, which has raised concerns about the precision and relevance of the data. The first OECD report published in 2015 was publicly disputed by the Government of India that claimed the OECD had grossly overestimated the climate finance flows by up to 26 times based on its own calculations (Government of India 2015; Michaelowa et al. 2020; Michaelowa/Sacherer 2022b). Other observers have also questioned the legitimacy of the OECD – a club of rich countries – in tracking the progress of the international climate finance pledges (e.g., Donner et al. 2016; Weikmans/Roberts 2019).

Pauw et al. (2022) note three other issues that give rise to these large differences across the accounting frameworks. First, developing countries and civil society demand that only grant equivalents should be used for accounting of international climate finance, while many developed countries still count and report all financial instruments (loans, grants, equity, insurance) at face value (Oxfam 2018). Secondly, there has been no agreement as to what

qualifies as 'new and additional' finance which raises difficulties in identifying climate finance, especially if also labeled as ODA (Michaelowa/Namhata 2022). Third, developing countries criticize ways of including private finance mobilization in the methodologies. The Government of India report mentioned above stated that climate finance consists of only cross-border flows that have been "actually disbursed", "new and additional", "climate specific" and in the form of grant/grant equivalent (Government of India 2015).

This underscores the need for and importance of a common definition of climate finance from which common and consistent accounting frameworks and underlying methods of counting climate finance can be derived. The SCF, which is enshrined in the UNFCCC, would be the most legitimate body to undertake such an effort, but lacks the institutional status required to move such a process forward, and would need sufficient political will to be empowered for such an undertaking.

3. The Elephant in the room: meeting the USD 100 billion goal

Despite the divergent definitions and accounting approaches, there is no dispute that developed countries failed to meet the USD 100 billion goal in 2020 as well as the additional criteria agreed in the Cancun Agreement in 2010 that indicate that climate finance should be 'new and additional', 'balanced' between mitigation and adaptation, and include private sources of funding (UNFCCC 2011; COP 26 Presidency 2021). The most recent OECD report on progress towards the goal states that climate finance amounted to USD 80.4 billion in 2019 and around USD 83.3 billion in 2020 (OECD 2022). However, according to Oxfam (2023), only USD 21–24.5 billion of this could be considered real support. According to Oxfam, developed countries overstated their climate finance contributions, based on their accounting practices for loans, noting insufficient grants and inadequate funding for adaptation. Without adequate international climate finance, developing country governments are likely to take on more sovereign debt. Indeed, governments that had massively borrowed when interest rates were low are now struggling with the increasing burden of their debt as inflation and interest rates are surging (Michaelowa et al. 2023).

Given that obvious failure, the COP 26 Presidency published a Climate Finance Delivery Plan outlining a path to achieving an average of USD 100 billion per year for the period 2021-2025 (COP 26 Presidency 2021).

Deliberations on the NCQG focus on the scope and substance of what the new goal should be including the quantum, quality, sources of funding and transparency arrangements to track progress (UNFCCC 2022). At the time of writing, six Technical Expert Dialogues of the Ad Hoc work program on the NCQG have been completed. The quantum of the goal is expected to be one of the contentious issues to resolve in 2024. The SCF concluded in the first needs determination report that developing countries would need an estimated USD 5.9 trillion up to 2030 to finance their nationally determined contributions (NDCs) (UNFCCC Standing Committee on Finance 2021). This of course is almost two orders of magnitude above the current values. Various developing countries have demanded about USD 1 trillion per year, which would be a tenfold multiplication.

Given that only 23.9 % of the total climate finance reported by the OECD for the period 2016 to 2020 was adaptation finance (OECD 2021), the NCQG should work towards ensuring that 50 % of climate finance is directed towards adaptation. Furthermore, the NCQG should address loss & damage (L&D) which has no reliable funding source (Chhetri et al. 2021).

4. Coming to terms with loss & damage

There is no official definition of L&D under the UNFCCC, but there is consensus that L&D can be categorized as either economic – for those a monetary value is easily given, e.g., loss of income and damage to assets – or non-economic – for which a monetary value is not easily, or meaningfully given, for example, loss of lives and health or damage to cultural identity. L&D arises from both slow onset events – for example, sea-level rise or glaciers melting – and extreme weather events – for example, flooding or drought. It is considered the third emerging pillar of international climate policy, to be taken up when mitigation (averting L&D) is insufficient, and adaptation (minimizing L&D) action is inadequate or not possible (Broberg/Romera 2020).

Originally conceptualized by the Alliance of Small Island States (AOSIS) in 1991, the development of the policy agenda regarding L&D has been highly controversial. On one side of the spectrum, L&D is associated with historical liability and compensation, i.e., developed countries should be held liable for L&D and compensate developing countries (Calliari et al. 2019). Developed countries have eschewed legalistic framings and strongly opposed any notion of liability, leading to an explicit exclusion of such liability in the Paris Agreement due to the insistence of the US. Instead, they have sought to keep L&D firmly within the adaptation realm and emphasized overlaps with disaster risk reduction (DRR) and humanitarian assistance (Vanhala/Hestbaek 2016; Calliari 2018). A political compromise was achieved in Article 8 of the Paris Agreement, followed by the decision of COP 27 that an L&D fund is to be set up.

4.1. Distinctions and linkages between L&D finance and other types of finance

The lack of a universal definition for L&D also makes it difficult to distinguish it from other policy areas including official development assistance (ODA), humanitarian assistance, disaster risk management (DRM), and adaptation. The institutional frameworks that address these areas approach elements of L&D incrementally often applying narrow views of L&D including limited considerations climate risk and potential future impacts (Franczak 2023).

ODA supports measures that avert and minimize L&D before it occurs partly through the climate compatibility of the sustainable development goals (SDGs). But as discussed above, both climate finance and L&D finance need to be ‘additional’ to ODA, which is currently not the case. Also, ODA eligibility criteria are based on the income categorization of countries which excludes many Small Island Developing States (SIDS) which are particularly vulnerable to L&D. Thus, since 2022, SIDS have been advocating for the use of a Multidimensional Vulnerability Index (MVI) to gain access to concessional financing and reduce their debts (UNDP 2021).

Humanitarian assistance currently constitutes the lion’s share of L&D-related funding and primarily focuses on relief to provide for basic needs in the aftermath of extreme events. Over the last decade, there has been an increase in financial volume disbursed, but needs have been growing in parallel including an increase in the magnitude and frequency of extreme weather events, civil and military conflicts, and recovery after the COVID-19 pandemic (Development Initiatives 2023). Some even see a “disaster fatigue” whereby there is less willingness to respond to disasters (Development Initiatives 2020). This makes humanitarian support unpredictable in responding to L&D in the long term.

DRM minimizes climate-related L&D through both risk reduction efforts, such as early warning systems, contingency planning and insurance, and ex-post measures including recovery financing, rehabilitation, and reconstruction. At present the costs of most DRM measures are borne by national governments with little external support.

Adaptation is critical to minimizing L&D, in the policy realm and is firmly anchored under the UNFCCC's international climate finance (unlike the voluntary “donor” approach in the policy areas described above). However, the UN Environment Program (UNEP) 2022 Adaptation Gap Report shows that international adaptation finance flows to developing countries are five to ten times below estimated needs estimated at USD 160–340 billion by 2030 and USD 315–565 billion by 2050, with the gap widening (UNEP 2022). Given the ‘blurred lines’ between adaptation activities and L&D activities especially at the implementation level, there is a risk that carving out L&D financing by financing less adaptation effectively means more L&D will accrue in the future, highlighting the need for separate funds to address L&D.

5. How does L&D finance stand in comparison with other types of climate finance?

5.1. Roles of different sources of finance in averting, minimizing and addressing L&D

Recent estimates of residual climate change damages reach USD 290–580 billion per year by 2030 (Markandya/González-Eguino 2019). Given that huge amount, L&D finance will need to come from multiple sources.

Once the L&D Fund has been established (whether within or outside the UNFCCC financial mechanism) and has the right technical capacity, it can support L&D programming and L&D response plans in developing countries through sustained funding. Grant-based or highly concessional funding will be necessary to ensure vulnerable countries can have the fiscal space to achieve critical development goals and reduce their vulnerability to climate impacts. National governments can put in place fiscal policies and comprehensive risk management frameworks such as contingency finance¹ to ensure liquidity in the aftermath of an extreme event (Chhetri et al. 2021).

Insurance and financial risk transfer schemes e.g., the Global Shield Against Climate Risks (see: InsuResilience Global Partnership n.d.) favored by developed countries to finance L&D may also be useful in certain contexts such as addressing economic losses from extreme weather. However, to ensure equity, it would be necessary that they are well-designed and sufficiently subsidized to increase affordability for vulnerable and poor populations.

5.2. The need for ‘new and innovative’ financial instruments

New or ‘innovative’ sources of finance have to fill the L&D finance gap, building on principles enshrined in the UNFCCC, including historical responsibility for climate change and the ‘polluter pays’ principle (Richards et al. 2023; Schmidt et al. 2023). Private sources would be mobilized through levies on aviation and shipping, financial transaction taxes and a global wealth tax (ibid). These proposals are nonetheless fraught with different political challenges that hinder their adoption and implementation including whether the finance can be under the remit of one international scheme e.g., the UNFCCC (Roberts et al. 2017).

5.3. L&D finance in competition with other types of climate finance

The discussions on L&D finance do not occur in a historical vacuum. Similar to L&D, for a long time, there was resistance against recognizing adaptation in the UNFCCC for fear it would be an admittance of liability to climate change that would pave the way for financial compensation

¹ Contingency finance is a risk retention approach, where governments “self-insure” themselves against L&D risks as they opt to retain the risks instead of transferring the risks to others such as insurers and is used for early response and early recovery in the aftermath of an extreme weather event.

claims Schipper (2006). Similarly, those who view addressing L&D as part of adaptation, are concerned that L&D finance may create perverse incentives that can lead to reduced levels of adaptation efforts. Indeed, most of the proposed innovative instruments have not been accepted in adaptation settings (Müller 2008) and are already facing rejection in the L&D context (see UNFCCC 2023). Lastly, given adaptation programs/projects (as well as L&D) typically provide public goods which do not generate revenue (Kempa et al. 2021) they require grants which are not attractive to the funders. This has partly contributed to the adaptation finance gap described above. Hence, a key question is whether L&D can escape this 'adaptation curse' and attract adequate funding.

Mitigation, adaptation, and L&D financing are inherently connected and could benefit from integrated funding strategies (Hagemann et al. 2023). Increasingly, policy approaches that emphasize the relationship between mitigation trajectories and adaptation and L&D finance needs for example, in the context of discussions on cost optimization, are gaining momentum and could increase support for financing and implementing L&D activities (Estrada/Botzen 2021; Hagemann et al. 2023). However, it is not always possible to draw a linear relationship between the three pillars, while an approach to 'optimize' could also hide trade-offs that can result in neither the mitigation, adaptation nor the component addressing L&D being effective.

OUTLOOK

This paper has briefly taken stock of the status of climate finance so far, especially in the context of the international climate finance target set in 2009 within the framework of the UNFCCC. It has summarized the current discussions on a new L&D fund, and how they fit in the wider climate finance context. We stress that a promise of financial support in the absence of consistent definitions for what counts as climate finance and clear guidelines for reporting on climate finance leads to conceptually acrimonious debates between donor and recipient countries. Clarity and transparency in the monitoring and reporting frameworks are required for countries to build trust, which will be crucial in the negotiations on the NCQG and in moving the L&D agenda forward.

We provide three suggestions for moving forward. First, the first Global Stocktake (GST) of the Paris Agreement at COP 28 in 2023 will present a key opportunity for countries to discuss and address the historical failures in quantum and type of international public climate finance, so they are avoided in the future. For instance, in the discussions on how to finance L&D and funding adaptation. The GST also provides a chance for countries to showcase success stories, as part of a forward-looking, learning-by-doing approach that can mobilize both public and private sector actors to support and replicate effective climate finance initiatives including on the use of innovative finance instruments to address shortfalls in climate finance.

Second, it is clear the current provision of finance and financial arrangements that could be used for addressing L&D are quantitatively and qualitatively insufficient given the size and scope of the problem. At COP 28, details on the scope of the L&D Fund and funding arrangements including sources of funding will be negotiated. While it is evident that addressing L&D demands a 'mosaic of solutions' as experience from the last decade of climate finance has shown, it will also demand definitional clarity, complementarity, coordination, and coherence.

Third, countries will have to iron out ways to ensure the balancing adaptation, L&D, and mitigation finance in the context of the NCQG. This is particularly important given that adaptation finance remains inadequate.

References

- Broberg, Morten/Romera, Beatriz Martinez (2020): Loss and damage after Paris: more bark than bite? In: *Climate Policy* 20 (6), 661–668.
- Calliari, Elisa (2018): Loss and damage: a critical discourse analysis of Parties' positions in climate change negotiations. In: *Journal of Risk Research* 21 (6), 725–747.
- Calliari, Elisa/Surminski, Swenja/Mysiak, Jaroslav (2019): The Politics of (and Behind) the UNFCCC's Loss and Damage Mechanism. In: *Loss and Damage from Climate Change*. Springer, Cham, 155–178.
- Castro, Paula (2016): Common But Differentiated Responsibilities Beyond the Nation State: How Is Differential Treatment Addressed in Transnational Climate Governance Initiatives? In: *Transnational Environmental Law* 5 (2), 379–400.
- Chhetri, Raju Pandit/Schäfer, Laura/Watson, Charlene (2021): Exploring loss and damage finance and its place in the Global Stocktake. <https://www.climateworks.org/wp-content/uploads/2022/04/Loss-and-Damage-Finance-iGST.pdf> (05.09.2023).
- COP 26 Presidency (2021): Climate Finance Delivery Plan. Meeting the US\$100 Billion Goal. <https://ukcop26.org/wp-content/uploads/2021/10/Climate-Finance-Delivery-Plan-1.pdf> (07.09.2023).
- Development Initiatives (2023): Global Humanitarian Assistance Report 2023. <https://devinit.org/resources/global-humanitarian-assistance-report-2023/#exec-summary> (06.09.2023).
- Development Initiatives (2020): Global Humanitarian Assistance Report 2020. <https://devinit-prod-static.ams3.cdn.digitaloceanspaces.com/media/documents/Global-Humanitarian-Assistance-Report-2020.pdf> (05.09.2023).
- Donner, Simon D./Kandlikar, Milind/Webber, Sophie (2016): Measuring and tracking the flow of climate change adaptation aid to the developing world. In: *Environmental Research Letters* 11 (5), 54006.
- Estrada, Francisco/Botzen, W. J. Wouter (2021): Economic impacts and risks of climate change under failure and success of the Paris Agreement. In: *Annals of the New York Academy of Sciences* 1504 (1), 95–115.
- Franczak, Michael (2023): Financing Loss and Damage at Scale: Toward a Mosaic Approach. <https://www.ipinst.org/wp-content/uploads/2023/05/Financing-Loss-and-Damage.pdf> (10.09.2023).
- Government of India (2015): Climate change finance, analysis of a recent OECD report. Some credible facts needed. https://dea.gov.in/sites/default/files/ClimateChangeOEFDRReport_0.pdf (04.09.2023).
- Hagemann, Markus/Outlaw, Imogen/Röser, Frauke (2023): The role of international climate finance for bridging the low carbon investment gap. Principles of international climate finance. https://newclimate.org/sites/default/files/2023-06/NewClimate_SNAPFI_SynthesisReport_PrinciplesOfInternationalFinance_June23.pdf (18.09.2023).
- InsuResilience Global Partnership (n.d.): Global Shield. <https://www.insuresilience.org/knowledge/global-shield/> (05.09.2023).
- Kempa, Laura/Zamarioli, Luis/Pauw, W. Pieter/Çevik, Ceren (2021): Financing measures to avert, minimise and address Loss and Damage. Options for the Green Climate Fund (GCF). <https://www.fs-unep-centre.org/wp-content/uploads/2021/01/Financing-measures-to-avert-minimise-and-address-LD.pdf> (11.09.2023).

- Markandya, Anil/González-Eguino, Mikel (2019): Integrated Assessment for Identifying Climate Finance Needs for Loss and Damage: A Critical Review. In: Loss and Damage from Climate Change. Springer, Cham, 343–362.
- Michaelowa, Axel/Michaelowa, Katharina (2011): Old Wine in New Bottles? Does Climate Policy Determine Bilateral Development Aid for Renewable Energy and Energy Efficiency? In: Revue internationale de politique de développement 2 (2).
- Michaelowa, Axel/Sacherer, Anne-Kathrin (Hg.) (2022a): Handbook of International Climate Finance: Cheltenham.
- Michaelowa, Axel/Sacherer, Anne-Kathrin (2022b): International climate finance – meteoric fashion or stable pillar of the global response to anthropogenic climate change? In: Axel Michaelowa/Anne-Kathrin Sacherer (eds.): Handbook of International Climate Finance. Cheltenham, 1–14.
- Michaelowa, Axel/Shishlov, Igor/Wallis, Olivia/King, Beatrice (2023): The Impact of High Interest Rates on Sustainable Investments. <https://www.abhafoundation.org/media-uploads/reports/Sustainability-01-2023-January-Print.pdf> (05.09.2023).
- Michaelowa, Katharina/Michaelowa, Axel/Reinsberg, Bernhard/Shishlov, Igor (2020): Do Multilateral Development Bank Trust Funds Allocate Climate Finance Efficiently? In: Sustainability 12 (14), 5529.
- Michaelowa, Katharina/Namhata, Chandreyee (2022): Climate finance as development aid. In: Axel Michaelowa/Anne-Kathrin Sacherer (eds.): Handbook of International Climate Finance. Edward Cheltenham, 62–82.
- Müller, Benito (2008): International Air Passenger Adaptation Levy (IAPAL). A proposal by the Group of Least Developed Countries (LDCs) within the framework of the Bali Action Plan. <https://oxfordclimatepolicy.org/sites/default/files/ecbiBrief-IAPAL13Q%26As.pdf> (09.09.2023).
- OECD (2022): Aggregate Trends of Climate Finance Provided and Mobilised by Developed Countries in 2013-2020. <https://www.oecd.org/environment/aggregate-trends-of-climate-finance-provided-and-mobilised-by-developed-countries-in-2013-2020-d28f963c-en.htm> (12.09.2023).
- OECD (2021): Climate Finance Provided and Mobilised by Developed Countries. Aggregate Trends Updated with 2019 Data. <https://www.oecd.org/env/climate-finance-provided-and-mobilised-by-developed-countries-aggregate-trends-updated-with-2019-data-03590fb7-en.htm> (08.09.2023).
- Oxfam (2023): Climate Finance Shadow Report 2023. Assessing the delivery of the \$100 billion commitment. <https://policy-practice.oxfam.org/resources/climate-finance-shadow-report-2023-621500/> (28.08.2023).
- Oxfam (2018): Climate Finance Shadow Report 2018: Assessing progress towards the \$100 billion commitment. <https://policy-practice.oxfam.org/resources/climate-finance-shadow-report-2018-assessing-progress-towards-the-100-billion-c-620467/> (11.09.2023).
- Pauw, W. P./Moslener, U./Zamarioli, L. H./Amerasinghe, N./Atela, J./Affana, J. P. B./Buchner, B./Klein, R. J. T./Mbeva, K. L./Puri, J./Roberts, J. T./Shawoo, Z./Watson, C./Weikmans, R. (2022): Post-2025 climate finance target: how much more and how much better? In: Climate Policy 22 (9-10), 1241–1251.
- Richards, Julie-Anne/Schalatek, Liane/Achampong, Leia/White, Heidi (2023): The Loss and Damage Finance Landscape. https://us.boell.org/sites/default/files/2023-05/the_loss_and_damage_finance_landscape_hbf_ldc_15052023.pdf (12.09.2023).
- Roberts, J. Timmons/Natson, Sujay/Hoffmeister, Victoria/Durand, Alexis/Weikmans, Romain/Gewirtzman, Jonathan/Huq, Saleemul (2017): How Will We Pay for Loss and Damage? In: Ethics, Policy & Environment 20 (2), 208–226.

Schipper, E. Lisa F. (2006): Conceptual History of Adaptation in the UNFCCC Process. In: Review of European Community and International Environmental Law 15 (1), 82–92.

Schmidt, Max/Ombuya, Sherri/Shishlov, Igor/Michaelowa, Axel/Passaro, Pedro (2023): Loss and Damage Finance. An assessment of the most promising instruments. Freiburg.

Shishlov, Igor/Censkowsky, Philipp (2022): Definitions and accounting of climate finance: between divergence and constructive ambiguity. In: Climate Policy 22 (6), 798–816.

UNEP (2022): Adaptation Gap Report 2022. <https://www.unep.org/resources/adaptation-gap-report-2022><https://www.unep.org/resources/adaptation-gap-report-2022> (04.09.2023).

UNDP (2021): Towards a Multidimensional Vulnerability Index. <https://www.undp.org/publications/towards-multidimensional-vulnerability-index> (08.09.2023).

UNFCCC (2023): Submission by the Asia-Pacific Constituency Member. <https://unfccc.int/sites/default/files/resource/Submission%20by%20the%20Asia-Pacific%20Constituency%20member%20to%20the%20G77%28final%29.pdf> (05.09.2023).

UNFCCC (2022): First Technical Expert Dialogue under the Ad hoc Work Programme on the New Collective Quantified Goal on Climate Finance. https://unfccc.int/sites/default/files/resource/FirstTechnicalExpertDialogue_CCNote.pdf (12.09.2023).

UNFCCC (2015): Paris Agreement. https://unfccc.int/sites/default/files/english_paris_agreement.pdf (05.09.2023).

UNFCCC (2011): Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010. Cancun, FCCC/CP/2010/7/Add.1. <https://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf> (06.09.2023).

UNFCCC (1992): United Nations Framework Convention on Climate Change. <https://unfccc.int/resource/docs/convkp/conveng.pdf> (11.09.2023).

UNFCCC (1990): Progress achieved in the implementation of resolutions 44/207 on protection of global climate for present and future generations of mankind. Report of the Secretary-General. Geneva, A/45/696/Add.1. <https://digitallibrary.un.org/record/102980?ln=en> (14.09.2023).

UNFCCC (n.d.): Introduction to Climate Finance. <https://unfccc.int/topics/introduction-to-climate-finance> (08.09.2023).

UNFCCC Standing Committee on Finance (2021): First report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement. https://unfccc.int/sites/default/files/resource/54307_2%20-%20UNFCCC%20First%20NDR%20technical%20report%20-%20web%20%28004%29.pdf (07.09.2023).

Vanhala, Lisa/Hestbaek, Cecilie (2016): Framing Climate Change Loss and Damage in UNFCCC Negotiations. In: Global Environmental Politics 16(4), 111–129.

Watson, Charlene/Schalatek, Liane/Evéquoz, Aurélien (2022): The Global Climate Finance Architecture. https://climatefundsupdate.org/wp-content/uploads/2022/03/CFF2-Global-CF-Architecture_ENG-2021.pdf (05.09.2023).

Weikmans, Romain/Roberts, J. Timmons (2019): The international climate finance accounting muddle: is there hope on the horizon? In: Climate and Development 11 (2), 97–111.

About the authors

Sherri Ombuya is a researcher at Perspectives. Her work focuses on identifying and developing options that would enable the scaling of climate finance. Since 2023, she has been conducting research on loss and damage including innovative response tools to respond to non-economic losses and damage. She is also involved in the development of metrics and evaluating the effectiveness of climate adaptation measures. In 2021-2022, Sherri was part of a team that supported the Green Climate Fund (GCF) to develop a robust methodology for the future estimation of the total number of direct and indirect adaptation beneficiaries of GCF projects. Sherri also engages in the Climate Finance Innovators which establishes innovative linkages between UNFCCC market mechanisms and international climate financing institutions such as the GCF in three partner countries (Ethiopia, Senegal and Uganda). Prior to joining Perspectives, Sherri was involved in research and capacity building projects on climate adaptation in Eastern Africa. In 2018, Sherri supported the reshaping efforts of the World Adaptation Science Programme at UNEP which seeks to ensure evidence-based policies, solutions, and actions for successful adaptation. Sherri holds a Master of Environmental Governance from the University of Freiburg, Germany, and a Bachelor of Environmental Science from Kenyatta University.

Dr Igor Shishlov is the Head of Climate Finance at Perspectives. His work mainly focuses on aligning public and private finance flows with climate objectives under the Paris Agreement. In 2021-2023, Igor led a team of researchers that developed a methodology to assess the Paris alignment of Export Credit Agencies and conducted nine country studies, feeding into the policy reform processes on the national and international levels. In 2019-2020, he advised the German Federal Ministry of Economic Cooperation and Development (BMZ) on the reform of climate change trust funds in Multilateral Development Banks. In 2018, Igor advised the European Bank for Reconstruction and Development (EBRD) on how to boost the contribution of green bonds to financing the energy transition. In 2017-2018, he was part of the team that conducted the comprehensive evaluation of the World Bank Group's carbon finance activities. Other examples of Igor's work include advising governments of Morocco, Peru, Senegal and Tunisia on carbon pricing, carbon accounting and climate finance topics. Before joining Perspectives, Igor worked for I4CE – Institute for Climate Economics, a Paris-based think-tank, where he conducted original research on international climate policies and carbon accounting. Igor is also the Executive Director of the Climate and Business Certificate at HEC Paris business school, where he has been teaching courses on Climate Economics and Policy since 2016. He holds a PhD in Environmental Economics from Paris-Saclay University and an MSc in Sustainable Development from HEC Paris.

Dr Axel Michaelowa is research director at the research institute Perspectives Climate Research, senior founding partner of Perspectives, and part-time researcher at the Institute of Political Science of the University of Zurich. Axel has worked on international climate policy instruments and the UNFCCC process since 1994. Axel was the lead author for the chapter on mitigation policies in the 4th and 5th Assessment Report of the IPCC. He consults private, governmental, and public institutions and has written more than 400 research articles and studies on international market mechanisms for mitigation and climate policy on various levels. Axel is a member of the Executive Committee of the Adaptation Benefits Mechanism (ABM). Between 2006 and 2013, he served on the Clean Development Mechanism (CDM) Registration and Issuance Team of the CDM Executive Board; he was member of the board of the Climate Cent Foundation between 2005 and 2009. Axel has worked on 10 approved baseline methodologies and three approved SBs under the CDM and done capacity building in over 40 developing countries, ranging from Algeria to Yemen. Axel has supported the COP presidencies of Qatar and Mexico and various country delegations in UNFCCC negotiations. He has been involved in NDC work and NAMA development in Algeria, India, Morocco, Peru, Rwanda, Tanzania, Saudi Arabia, Tunisia, Uzbekistan, and Vietnam. Currently, Axel supports Article 6 pilot work for the Swiss KLiK Foundation, Sweden and ADB. Axel has a PhD in Economics