

Multilateral adaptation finance for systemic resilience

Addressing transboundary climate risks



SEI brief

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Katherine Browne
Raphaelle Beaussart
Magnus Benzie
Nella Canales
Richard Klein
Katy Harris
Nabil Haque
Frida Lager
Andrea Lindblom
George Marbuah
Sarah McAuley

Key messages

- Climate risks are complex and interconnected, with the knock-on effects of climate impacts affecting not only neighbouring countries but also those thousands of kilometres apart.
- Though multilateral adaptation finance currently frames climate risk locally, funders can and should do more to address transboundary climate risks.
- Investments in systemic resilience that focus on the whole system rather than individual countries can deliver shared benefits for both recipients and contributors.
- Current funding models offer opportunities to scale-up support for projects that address transboundary climate risks, including in non-neighbouring countries.
- Multilateral actors seeking to build systemic resilience face significant obstacles, but recipient and contributor countries each have incentives to invest in management of shared climate risks.

Addressing transboundary climate risks

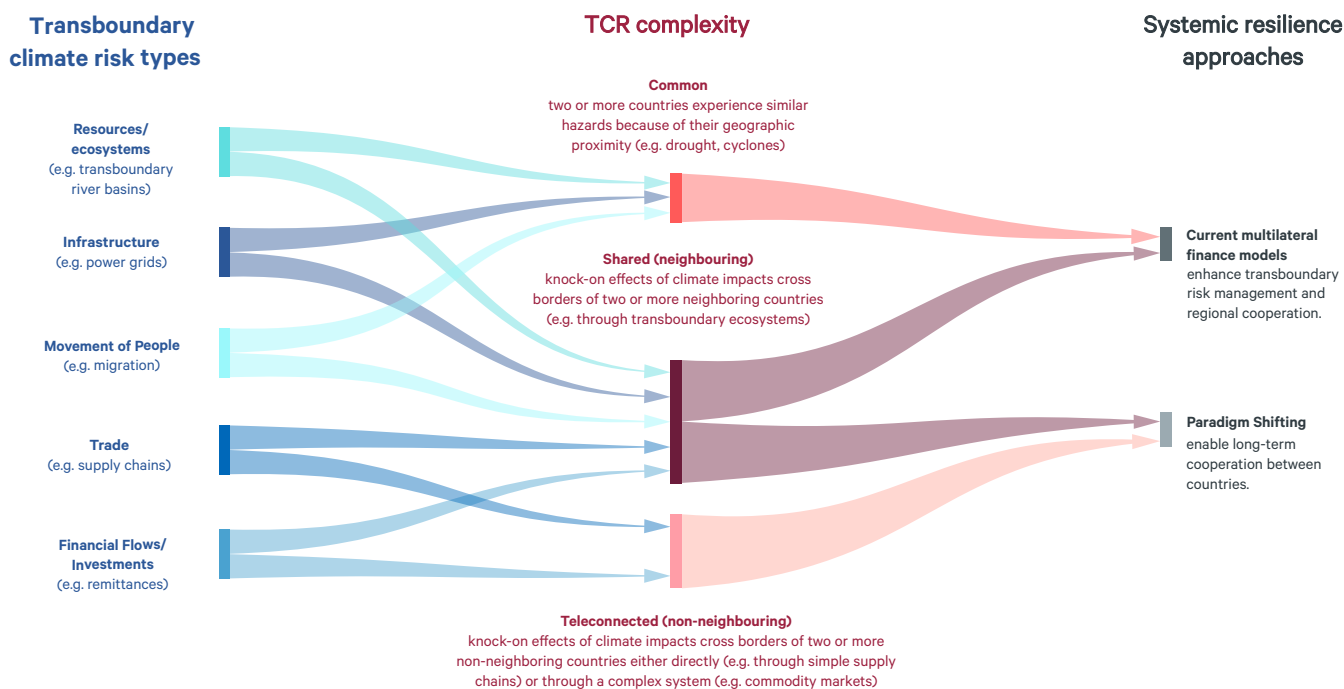
Transboundary climate risks differ in their type and complexity (Figure 1). In terms of type, risks can manifest through shared resources and ecosystems, trade links, the movement of people across borders, financial flows and investments, and shared infrastructure (Hedlund et al. 2018). In terms of complexity, transboundary climate risks can be *common* to two or more neighbouring countries. They can also cross borders and be *shared* between two or more neighbouring countries. Finally, transboundary climate risks can also affect systems such as commodity markets. These risks then impact several countries that do not share common borders through that system. Climate impacts thus “teleconnect” countries. In the case of teleconnections, the number of countries involved and the distance that risk travels between them determine the complexity of the risk.

Current adaptation finance shows limited recognition of transboundary climate risks

Research increasingly highlights transboundary climate risks (Carter et al. 2021; Challinor et al. 2018). Most recently, the IPCC’s Working Group II report warned that climate change impacts and risks were becoming increasingly complex and more difficult to manage, and that climatic and non-climatic risks would interact and result in risks cascading across sectors and regions (IPCC 2022).

IMAGE (ABOVE): Young mangrove tree,
Florida © ZEN RIAL / GETTY

Figure 1. Multilateral funding models can address some types of transboundary climate risks. Other types, especially more complex ones, will require entirely new approaches.



*Some scientific literature on transboundary climate risk recognizes a wider range of risk types (also called "risk pathways"). Studies also differ in how they characterize risk complexity. Our framework simplifies these risk types and complexity levels in order to consider how multilateral finance can better address them.

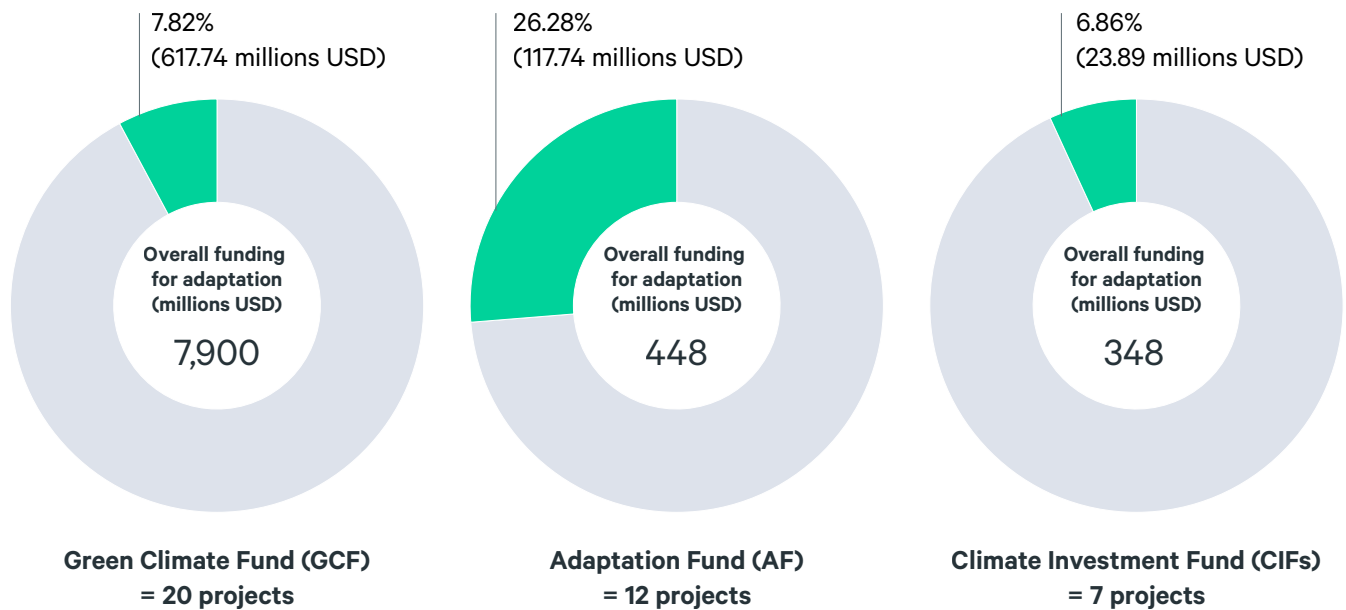
But multilateral adaptation finance continues to treat climate risk largely as a local phenomenon, focusing on enabling adaptation at local scales. We used SEI's Aid Atlas platform to analyze adaptation projects funded by three major multilateral climate funds: the Green Climate Fund (GCF) and the Adaptation Fund (AF) under the UN Climate Convention, and the Climate Investment Funds (CIFs) under the World Bank. We examined the extent to which these funds support projects addressing climate risks in more than one country, identifying regional and multi-country adaptation projects approved between 2010 and 2020. We found that most funding is directed to countries on an individual basis for specific national or local projects (Figure 2). The GCF and CIFs committed only a small percentage of overall funding to regional projects. The AF committed about a quarter of all funding.

Based on the analysis of project objectives and descriptions, we found that most regional projects address common risks – for example drought in the Niger Basin and cyclones in the Caribbean – rather than risks that cross national borders. The regional components of these projects tend to focus on coordination and knowledge exchange between countries to address these common risks. In many cases, multiple countries participated in a joint project for administrative reasons. Smaller countries, or those with perceived lower capacity, were grouped with larger countries or higher capacity countries (often neighbouring) to enable efficient project management. In all projects, the countries involved were clustered by geography (i.e. sharing geographical borders or part of the same geographical region).

The Adaptation Fund is an important exception among the three funds. In addition to directing a higher percentage of its overall funding to regional projects, it has also supported five projects which explicitly frame risk as transboundary (see Table 1). These projects reflect a relatively narrow interpretation of transboundary climate risk. Two focus on integrated responses to common risks, such as integrated flood and drought management in the Volta Basin, and building capacity to cyclones in Western

Figure 2. Percentage of overall funding dedicated to regional and multi-country projects (2010–2020)

● Percentage of funding to regional and multi-country projects



Indian Ocean cities. Three address transboundary climate risks associated with shared resources (e.g. transboundary ecosystems and river basins).

Despite recognizing transboundary climate risks, none of the five projects bring together non-neighbouring countries. Thus, none of the funds analyzed supported projects that address teleconnected climate risks.

Two ideas to operationalize adaptation finance to advance systemic resilience

The way that three major multilateral funds supporting adaptation frame risks in their project portfolios indicates a disconnect from the scientifically established recognition of transboundary climate risks.

Multilateral adaptation finance can and should do more to address these risks. In an interconnected world, investments in systemic resilience would deliver shared benefits for both recipients and contributors. Systemic resilience here refers to interventions that seek to enhance the resilient performance of a whole system, rather than individual countries or nodes in that system. Systemic interventions have the potential to be more efficient and effective than current siloed approaches, generating positive spillover effects across borders.

We foresee two ways to operationalize systemic resilience in adaptation finance (Figure 1). First, current funding models can effectively address certain types of transboundary climate risk, at lower levels of complexity. These include risks common to neighbouring countries, as well as shared risks to resources, ecosystems and infrastructure. Current multilateral funders (e.g. GCF, AF, CIFs) can support transboundary management and regional cooperation and dialogue through the project-based approach. As demonstrated above, the AF is already doing so in a subset of projects. Current funding models can also enhance local resilience to transboundary climate risks, for example by building food security resilience to help

vulnerable communities withstand market shocks (Adams et al. 2021). A case study below examines how current funding models could address shared climate risks along the Blue Nile.

Second, other types of transboundary climate risks, including those that are more complex (i.e. teleconnected risks), will require established actors to adopt paradigm-shifting approaches, and to involve actors new to adaptation finance. Such approaches would shift focus from short-term projects in individual countries to long-term cooperation between countries. Systemic interventions are required to address transboundary climate risks that link non-neighbouring countries, for example through trade and financial flows and investments.

The G20, for example, could limit the risks posed by financial speculation in emerging markets by imposing rules on member countries, potentially through a process like the recently established Task Force on Climate-Related Financial Disclosures (TCFD). The UN's World Food Programme (WFP) could mitigate risks in supply chains of vital foodstuffs by investing in strategic storage capacity. The case study below details how adaptation finance could even support multilateral cooperation to reduce price volatility in commodity markets. That would work through supporting measures that would effectively compensate countries for refraining from imposing export bans during food production shocks. Such paradigm-shifting approaches could be complemented by interventions through current funding models.

Case studies: operationalizing systemic resilience approaches to adaptation finance

1) Shared climate risk along the Blue Nile River

The first example uses a case where shared resources cross the borders of neighbouring states (Lager et al. 2021). The Blue Nile originates in Ethiopia, flows through Sudan, and merges with the White Nile to enter the sea via Egypt. Management of the river – which contributes 70% of the Nile's flow – has historically been a source of conflict among the three countries. With the ongoing construction of the Grand Ethiopian Renaissance Dam, the management of this transboundary resource has significant implications for the resilience of vulnerable communities in each country. Increased electricity generation will open new income opportunities for households in Ethiopia. A more consistent flow may enable development of irrigated agriculture for communities in Sudan, increasing local resilience. Reduced flows, however, would likely affect already established agriculture along the river's fertile shore in Egypt, undermining resilience.

Thus, short-term interventions within one country could have negative, long-term spill-over effects for its neighbours. A systemic resilience approach that accounts for transboundary climate risks, such as water scarcity and disruptions to electricity generation due to drought, could focus on regional collaboration to improve irrigation efficiency and help to defuse tensions between countries. There is scope for current models of intervention to implement such an approach.

2) Teleconnected risks in volatile rice markets

More complex transboundary climate risks, such as those in the volatile commodities market, demand a rethink of modes of intervention. Many highly vulnerable countries depend on imported food. Climate impacts in rice-exporting countries such as India, Thailand, and Vietnam are often felt most acutely in countries that rely on rice imports, such as the Philippines, Bangladesh, and Benin. Low yields in exporting countries resulting from sea-level rise, drought, or severe cyclones can trigger export bans and rapidly raise prices on the world market, and vulnerable communities within importing countries are particularly sensitive to these price rises.

Current approaches to improving resilience focus primarily on increasing agricultural productivity in importing countries. A systemic resilience approach could support investments in strategic grain storage. Multilateral institutions like the WFP or the UN Food and Agriculture Organization (FAO) could spearhead such an approach. Other systemic actors such as the World Trade Organization (WTO) might also play a role in coordinating and enforcing trade rules on export restrictions. Stored grain can be released when climate impacts cause costs to spike. The WTO could also develop compensation funds to discourage countries from implementing export bans. Such an approach should be complemented by interventions through current models to strengthen the resilience of production in key rice-exporting countries. Criteria designed to reduce volatility in the world market could serve as a basis for allocating funding.

Tackling transboundary climate risks: opportunities and limitations

Current funding models have significant limitations. The project-based approach, in which funds support specific interventions on five to seven-year timeframes, inhibits many long-term, systemic investments. The country-level approach – in which funds designate a single national government as primary project administrator – limits shared ownership of multi-country projects. Some eligibility requirements – such as the AF's mandate to direct funding only to “developing countries” – prevent investments in wealthier countries that could benefit lower-income counterparts, for example where middle-income countries produce and export critical agricultural commodities to lower-income countries, as is the case with India for wheat. Finally, projects that address transboundary climate risks would continue to face the broader challenges of climate finance in general: centralization of funding and failure to benefit those most in need; difficulty developing projects that meet rigorous application criteria; and inherent financial risks, such as fluctuating exchange rates.

Funding guidelines, however, offer some opportunities to rethink approaches and scale-up support for projects that address transboundary climate risks, including those that link non-neighbouring countries. The AF's guidelines stand out, because they explicitly allow for projects at the “regional and transboundary level,” providing the clearest avenue to focus on transboundary climate risks among the three funds. The GCF's Investment Criteria and Indicative Assessment Factors broadly frame a project's “Impact Potential,” as “strengthened adaptive capacity and reduced exposure to risk.” The GCF's “Sustainable Development Potential” also accounts for a project's positive externalities. Together these criteria leave room for projects that increase systemic resilience and generate positive spillover effects across borders. The opportunity appears most limited under the CIFs, because countries seeking adaptation funding must join the Strategic Climate Fund, under which the primary source of funding, the Pilot Program for Climate Resilience, focuses on mainstreaming adaptation at a national level. Importantly, none of the funds' criteria explicitly constrain regional and multi-country projects to neighbouring countries. The barrier therefore lies more with the political (dis)incentives for recipients to frame and implement projects with a transboundary scope, rather than with the funding model itself.

Efforts to build systemic resilience face even more significant barriers. Such a fundamental alteration of multilateral climate finance would challenge vested interests motivated to uphold the status quo. Such interests include wealthy countries that exercise outsized influence in the distribution of funds under the UN Climate Convention and World Bank, as well as contributors that value the project-based approach for the ability to evaluate effectiveness and return on investment. As always, there are actors

in both the public and private sphere that benefit from vulnerability and instability. Further, some countries and multilateral actors would hesitate to recognize systems-level investments in trade, financial networks, or migration as climate adaptation at all.

Yet there are incentives for contributors, recipients, and new multilateral actors to develop systemic resilience approaches. Both contributing and recipient countries recognize that the current climate finance system, especially public finance channeled through the UN, is too fragmented and small-scale to address growing risks. As discussions under the UNFCCC around the Global Goal on Adaptation unfold, countries and civil society observers alike have called for a more comprehensive approach to enable adaptation. For recipient countries, more systemic interventions have the potential to reduce barriers to access, more effectively build adaptive capacity, and generate an increase in overall support. For contributors, a more resilient system would yield benefits within their own borders, for example through decreased exposure to climate impacts on trade. Finally, a proactive approach to building resilience would appeal to new actors, such as the WFP (see case 2 above on grain storage), who find their mandates increasingly affected by climate impacts and who need greater opportunities to reduce vulnerability before crises are triggered.

Table 1. Adaptation Fund projects with transboundary risk framing (emphasis added)

Project title	Countries	Years	Funding (millions USD)	Objectives (emphasis added)
Integrating flood and drought management and early warning for climate change adaptation in the Volta Basin	Benin, Burkina Faso, Cote d'Ivoire, Ghana, Mali, Togo	2019–2023 (ongoing)	7.92	“The Volta Flood and Drought Management (VFDM) project has the ambition to provide the first large scale and transboundary implementation of Integrated Flood and Drought Management strategies through the complete chain of End-to-End Early Warning System for Flood Forecasting and Drought Prediction.”
Building urban climate resilience in South-eastern Africa	Madagascar, Malawi, Mozambique, Comoros	2019–2023 (ongoing)	13.99	“To promote inter-country experience sharing and cross-fertilisation regarding the adaptation to transboundary climate-related natural hazards and disseminate lessons learned for progressively building urban climate resilience in south-eastern Africa.”
Integration of climate change adaptation measures in the concerted management of the WAP (W-Arly-Pendjari) transboundary complex	Benin, Burkina Faso, Niger	2020–2024 (ongoing)	11.54	“The WAP Complex is one of Africa’s most important compositions of terrestrial transboundary ecosystems ... [aims to] improve the resilience of ecosystems (fauna and flora) and populations’ livelihoods through the development of infrastructure, (transhumance corridors, drinking troughs, and anti-flood structures...)”
Integrated climate-resilient transboundary flood risk management in the Drin River basin in the Western Balkans	Kosovo, Macedonia, Montenegro, Greece	2019–2024 (ongoing)	9.93	“The objective of the project is to assist the riparian countries in the implementation of an integrated climate-resilient river basin flood risk management approach in order to improve their existing capacity to manage flood risk at regional, national and local levels and to enhance resilience of vulnerable communities in the DRB to climate-induced floods. The countries will benefit from a basin-wide transboundary flood risk management (FRM) framework based on: improved climate risk knowledge and information; improved transboundary cooperation arrangements and policy framework for FRM and; concrete FRM interventions.”
Adapting to climate change in Lake Victoria Basin	Burundi, Kenya, Rwanda, Tanzania, Uganda	2018–2021 (completed)	5.00	“Strengthened institutional and technical capacity to integrate climate resilience into transboundary water catchment management . Regional resilience to climate change promoted through innovative, community-based projects. Improved knowledge management frameworks for the collection and maintenance of regional knowledge in transboundary water catchment management and climate change adaptation practices.”

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Linnégatan 87D, Box 24218
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Tel: +46 8 30 80 44

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Author contact

katherine.browne@sei.org

Media contact

katherine.browne@sei.org

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