Adaptation Without Borders

A roadmap for African resilience: addressing transboundary and cascading climate risks

This roadmap proposes key actions towards realizing an ambition of the African Union Climate Change and Resilient Development Strategy and Action Plan (2022–2032) to "Enhance coordination between the Regional Economic Communities and Member States in addressing and managing transboundary and cascading climate risks".

Contents

Acronyms

AAI	The Africa Adaptation Initiative
AfCFTA	African Continental Free Trade Area
AGN	African Group of Negotiators
AGNES	The African Group of Negotiators Expert Support
AMCEN	African Ministerial Conference on the Environment
AU	African Union
AUC	African Union Commission
AUDA-NEPAD	African Union Development Agency – New Partnership for Africa's Development
CAHOSCC	Committee of African Heads of State and Government on Climate Change
CAN	Climate Action Network
COMESA	Common Market for Eastern and Southern Africa
COP	Conference of the Parties
ECOWAS	Economic Community of West African States
GGW	Great Green Wall
IGAD	Intergovernmental Authority on Development
IPCC	Intergovernmental Panel on Climate Change
LTS	Long-term strategies
NAP	National Adaptation Plan
NAPA	National Adaptation Programme of Action
NDC	Nationally Determined Contribution
RECs	Regional Economic Communities
UNECA	United Nations Economic Commission for Africa
UNFCCC	United Nations Framework Convention on Climate Change

The process

This roadmap is the result of a collaboration between many institutions and individuals:

- The Stockholm Environment Institute (SEI): Katy Harris, Sara Talebian, Frida Lager, Magnus Benzie, Katherine Browne, Cynthia Nitsch and Philip Osano.
- The African Group of Negotiators Expert Support (AGNES): George Wamukoya, Cromwel Lukorito and Ishaku Huzi.
- The Overseas Development Institute (ODI): Ariadna Anisimov, Courtney Lindsay and Sarah Opitz-Stapleton.
- The African Union Commission (AUC): Sam Ogallah.
- The African Union Development Agency – New Partnership for Africa's Development (AUDA-NEPAD): Kwame Ababio.
- The International Livestock Research Institute (ILRI): Laura Cramer and Todd Crane.
- ENDA Energie: Fatimata Kaba and Emmanuel Seck.

The roadmap has also benefited from reviews and inputs from Chatham House (Ruth Townend), the Centre for Africa-Europe Relations (ECDPM) (Bruce Byiers and Hanne Knapean), the Lake Victoria Basin Commission (Coletha Ruhamya) and the Mohammed VI Foundation for Environmental Protection (Ayman Cherkaoui).

The actions proposed in the roadmap were generated at a multi-stakeholder policy dialogue held in July 2023 in Nairobi, Kenya. This brought together 30 representatives from organizations at the forefront of dealing with transboundary climate risks in Africa, including Regional Economic Communities (RECs): the Economic Community of West African States (ECOWAS), the Intergovernmental Authority on Development (IGAD), the East African Community (EAC) and the Common Market for Eastern and Southern Africa (COMESA). They are also informed by world-leading experts on transboundary climate risk management, and an in-depth political economy analysis of the cooperation and integration mechanisms, policies and financing instruments of the African Union (AU) and the RECs (Opitz-Stapleton et al., 2023, forthcoming).

The actions proposed are neither exhaustive nor representative of the views of all relevant stakeholders. The process of producing the roadmap was necessarily limited in scope, and it should be considered an indicative guide that should be strengthened and improved over time.

The authors of the roadmap recommend that the African Union Commission (AUC) and key partners develop an implementation plan to realize the commitment to "Enhance coordination between the regional economic communities and Member States in addressing and managing transboundary and cascading climate risks", as established in the African Union Climate Change and Resilient Development Strategy and Action Plan (2022-2032) (African Union, 2022).

Such an implementation plan would provide continuity with the Resumed Eighteenth Session of the African Ministerial Conference on the Environment (AMCEN) in September 2022 (Dakar, Senegal) where the Statement of the African Major Groups and Stakeholders recognized: "the importance of enabling African Member States to identify, manage and adapt to transboundary and cascading climate risks in line with Africa's Climate Change and Resilient Development Strategy and Action Plan (2022-2032). We call for capacity-building measures on transboundary climate risk, support enhanced coordination between the regional economic communities and Member States in addressing such risks, and recommend stronger regional and global cooperation on adaptation to build resilience to the impacts of climate change." (UNEP, 2022).

The announcement of such a plan would also increase visibility for this critical issue at an opportune moment during the September 2023 Africa Climate Summit and ahead of the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) in Dubai in December. It is imperative that transboundary and cascading climate risks are considered in the outcome text of COP28, and in the framework that will be negotiated in Dubai for the Global Goal on Adaptation. In short, 2023 is a key moment to signal African leadership on this topic, demonstrating how African RECs and governments are taking steps to manage and address transboundary and cascading climate risks, and to identify the financial and technical resources that are required.

This roadmap is envisioned as a potential guide for such an implementation plan: a first step in the development of longer-term partnerships to strengthen Africa's resilience to transboundary and cascading climate risks.

The context

Transboundary and cascading climate risks manifest when the impacts of climate change in one place generate adverse effects in another – cascading across both national borders and administrative boundaries to generate risks to people, ecosystems, economies, infrastructure, trade and finance. They also occur when responses to climate change (both mitigation and adaptation actions) have consequences beyond the jurisdictions where they are implemented. In our increasingly globalized world, no country or locality can insulate itself from transboundary and cascading climate risks, or aim to be resilient to the climate crisis by advancing adaptation on their own: "global resilience to climate change entails more than the sum of national adaptation efforts" (Harris et al., 2023).

African policymakers, experts and practitioners at the frontline of adaptation have begun to consider the implications of transboundary and cascading climate risk. A recent survey gathered their perceptions of the biggest challenges, which include livestock and crop disease, disruption to food security, drought and regional conflict and insecurity as the most likely and most severe transboundary climate risks to Africa over the next 10 years (Opitz-Stapleton et al., 2021). Examples of such risks are already rippling out across multiple sectors and sub-regions (Harris et al., 2023), threatening to undermine progress towards the vision of Agenda 2063: an integrated, peaceful and prosperous Africa based on inclusive growth and sustainable development (African Union, 2013). There are both opportunities and challenges for building resilience to these risks in Africa.

Opportunities

In the global context, we are witnessing rising interest in resilience-building – particularly in the wake of the COVID-19 pandemic – and a deeper appreciation of our global interdependence. The task of building resilience to transboundary and cascading climate risks is, slowly but surely, capturing the attention of global institutions. The Paris Agreement (Article 7, paragraph 1) establishes the Global Goal on Adaptation (UNFCCC, 2015). This opportunity, together with policy vehicles within other international frameworks and conventions, offers a concrete space to drive the global management of transboundary and cascading climate risks and sow the seeds for a more enabling policy environment. The national adaptation plans (NAPs), nationally determined contributions (NDCs) and long-term strategies (LTS) established under the UNFCCC could be harnessed to identify, manage and communicate both the transboundary climate risks that a country faces and those that it could generate for others, as well as how adaptation responses to such risks build resilience locally, nationally, regionally and globally. Organizations such as the African Group of Negotiators Expert Support (AGNES) and the NAP Global Network offer scope for enhanced cooperation and collaboration in adaptation planning, both within and across countries.

Within Africa, the existence of the AU (celebrating its 60th anniversary in 2023) and its RECs means that institutional arrangements are in place to accelerate coordination and cooperation on transboundary climate risks. Continent-wide resilience-building strategies can also be leveraged. Chief among these are the African Union Climate Change and Resilient Development Strategy and Action Plan (2022-2032) (African Union, 2022) and the Green Recovery Action Plan (2021-2027) (African Union, 2021). Transboundary climate risks are already recognized in high levels of policy and decision-making, and many existing governance mechanisms and instruments could be leveraged to strengthen their management.

Many of the RECs have regional climate policies and strategies in place. While these differ in levels of ratification and implementation, they represent opportunities to leverage regional action to manage transboundary and cascading climate risks. Some RECs have established specialized institutions to coordinate transboundary efforts, such as the Great Green Wall (GGW) initiative or IGAD's platform to combat desertification and mitigate drought. In addition, cultural and Indigenous practices across Africa present opportunities to adapt to cascading climate risks: populations that span and cross borders (such as pastoralist communities) could be well placed to develop strategies to adapt to transboundary climate impacts, for example.

Given Africa's global geopolitical and economic importance, it is also in the interests of others to strengthen the continent's resilience to transboundary climate risks. Its climate champions are driving the international climate agenda and

are well placed to raise the shared nature of the risks we face, and the potential shared benefits of adopting collective responsibility for their management. Such efforts could reap large rewards: incentivizing larger climate finance investments and strengthening the business case for ambitious, systemic and transformative adaptation at scale.

There is a clear opportunity for African leadership in shaping the international discourse and agenda for adaptation. In addition to their technical and pragmatic relevance, transboundary climate risks offer a new narrative on adaptation that emphasizes our interdependence and connectivity. Given the inadequate level of ambition behind global adaptation efforts to date, the importance of this opportunity to reframe and revitalize negotiations and investments in climate resilient development should not be underestimated. African leaders are at the forefront of efforts to bring this new story to the global stage, signalling their understanding of and commitment to this agenda and demonstrating to the world the solutions their continent can provide.

> “ Climate change impacts and risks are becoming increasingly complex and more difficult to manage. Multiple climate hazards will occur simultaneously, and multiple climatic and non-climatic risks will interact, resulting in compounding overall risk and risks cascading across sectors and regions. Some responses to climate change result in new impacts and risks.
>
> (IPCC, 2023).

Challenges

The global context is marked by low levels of cooperation and coordination on the management of transboundary and cascading climate risks across sectors, countries and regions. Few climate risk assessments account for these risks or the possible adverse effects of policy responses and adaptation actions taken in other countries. Adaptation is coordinated primarily at national and local levels, contributing to fragmented interpretations and implementation approaches, and hindering the recognition of risks that originate in other countries.

Adaptation plans tend to be led by a specific ministry rather than central government bodies that can mobilize multiple departments and sectors to assess and assign responsibility for managing the effects of transboundary climate risks across a range of policies and plans. Furthermore, we do not yet fully understand the political economy of regional cooperation and integration to address climate risks. Despite a rise in regional and continental strategies to coordinate responses to climate change, most adaptation projects take place within a single country and focus on domestic climate risks. This is arguably the result of weak financial incentives for transboundary adaptation initiatives and the potential for political tensions created or exacerbated by transboundary and cascading climate risks. Adaptation plans and projects, created in relative isolation, also lack methods and standardized practices to account for the risks of ‘transboundary maladaptation’ they could generate for others. In addition, building resilience to transboundary and cascading climate risks means overcoming more familiar adaptation challenges, including low political prioritization and limited financial support, misalignment between adaptation strategies and national economic plans and priorities, and insufficient climate data and modelling capabilities (Adenle et al., 2017).

The African context is marked by high exposure and vulnerability to direct climate impacts. This makes it difficult for decision-makers to prioritize or distribute scarce resources between adaptation to direct climate risks and adaptation to transboundary climate risks. It is not yet clear how adaptation planners can achieve a strategic balance between these agendas. Adaptation to direct climate impacts still dominates national plans and, beyond the efforts of some regional organizations, transboundary risks remain largely unrecognized, unmanaged and unaccounted for in adaptation processes.

Some communities within the continent have low levels of capacity to cope with the climate crisis, given limited resources (financial, technical and other) and weak governance arrangements. This is aggravated in some countries with large informal sectors, low levels of social welfare and protection, and high fragility (with recurrent crises of conflict and instability), and exacerbated by the elite capture of resources. Intersecting inequalities fuel the drivers of vulnerability to transboundary climate impacts (political, economic, social, environmental and legal), while the prospects for significant transboundary climate risks are high and growing as a result of Africa’s:

- Large, shared ecosystems – such as the Nile, Niger, Senegal and Congo river basins and Lake Chad – and the high proportion of national economies and livelihoods that depend on natural-resource sectors and raw materials that are vulnerable to climate hazards (giving rise to biophysical transboundary risks).

> “ Adaptation is a global challenge faced by all with local, subnational, national, regional and international dimensions.
>
> (UNFCCC, 2015)

- High dependence on imports for critical food commodities and trade revenues, and the exposure and vulnerability of large-scale infrastructure to climate extremes, such as the Suez Canal, the port of Durban and other important hubs for Africa's economic resilience and international trade (giving rise to trade-related transboundary risks).
- High mobility levels, given increasing urbanization and economic diversification, pastoralist livelihoods, and migration and displacement as a result of protracted crises or shocks (giving rise to human mobility transboundary risks).
- High reliance on remittances and foreign direct investment for national GDP (giving rise to financial transboundary risks, particularly for some countries).

More broadly, transboundary climate impacts present risks to some of the most important sectors for African economies, livelihoods and household incomes – including water, agriculture, tourism, natural resources (e.g. forestry and wildlife) and mining. They can be propagated and exacerbated by trends that increasingly shape the continent today, such as accelerating urbanization, increasing reliance on cross-border trade and enhanced cross-border connectivity via cyber, financial, transport and energy infrastructure. The colonial legacy of African borders, and difficulties in overcoming intra-African trade barriers, inhibit potential resilience-building measures, despite the efforts of regional organizations and policies, such as the African Continental Free Trade Area (AfCFTA), to address such issues.

> "Africa is even more exposed to the impacts of climate change than has so far been recognized when transboundary and cascading climate risks are considered... left unchecked, these risks could have serious consequences: eroding gains made and further impeding progress towards almost all the Sustainable Development Goals – increasing food and water insecurity, threatening trade and energy supplies, imposing forced migration, human displacement and conflicts, risking jobs and livelihoods, heightening geopolitical instability, worsening inequality, and endangering wellbeing.
>
> (Harris et al., 2023).

While some types of transboundary climate risks are acknowledged in the NAPs and NDCs of many African countries, they are rarely addressed explicitly in national or regional policies. The mismatch between the policy architectures and priorities of RECs and Member States, coupled with resource limitations, creates challenges for adaptation to transboundary climate risks. In addition, there is a lack of consideration for these risks in policy domains beyond climate, such as trade, agriculture and migration. Their inadequate consideration in local, national, and regional 'non-climate policies' contributes to policy incoherence and hinders multi-level and cross-sectoral adaptation efforts. Policy fragmentation makes it difficult to assess the role of existing mechanisms and strategies in creating, exacerbating or managing risks across borders.

Overall, the complexity that is revealed when looking at climate risk through a transboundary lens highlights the strategic importance of what we might call 'policy coherence for resilience': the idea that it is necessary to align objectives and means of implementation – and to manage trade-offs – across a range of policy domains (such as trade, finance, security and foreign policy) in order to build resilience to future climate risks that originate both at home and abroad. Depending on the scale and nature of specific transboundary risks, this implies the need to enhance policy coherence locally (i.e. horizontally across domestic policy domains like trade and agriculture), regionally (i.e. between Member States in a REC) or internationally (e.g. vertical coherence between national policy and World Trade Organization rules or UNFCCC goals). Addressing incoherence might best be achieved by focusing on specific problems where policies clash with or undermine each other, rather than pursuing an unrealistic level of total and perfect cohesion across all domains.

> "Long-term planning, all-of-government approaches, transboundary cooperation and benefit-sharing, development pathways that increase adaptation and mitigation and reduce inequality and implementation of NDCs are all needed for building governance for climate resilient development.
>
> (IPCC, 2022).

The roadmap

This roadmap has been designed through a participatory process to enhance coordination in addressing and managing transboundary climate risks in Africa. It does so by setting out a series of four interdependent 'mini roadmaps'.

Four interdependent mini roadmaps:

- Mini roadmap 1: Recognizing the risks. This describes a pathway to generate the necessary knowledge, data and monitoring.
- Mini roadmap 2: Governing together. This outlines measures to support African policymakers' leadership, communication and coordination.
- Mini roadmap 3: Implementing Africa-wide adaptation. This illustrates approaches and priorities to upscale adaptation action.
- Mini roadmap 4: Mobilizing resources for resilience. This maps avenues for the generation and harnessing of finance and capacity.

Each mini roadmap identifies priority actions for the near, mid and long term. In alignment with the timeline of the African Union Climate Change and Resilient Development Strategy and Action Plan, and key milestones in the UNFCCC calendar, we interpret near-term as 2023 to 2025, mid-term as 2026 to 2030, and long-term as 2031 to 2032 and beyond. A total of 25 actions are proposed across the four mini roadmaps for the attention of the AU, RECs, Member States, development partners, non-governmental organizations and others.

Roadmap to addressing and managing transboundary and cascading climate risks (2023 to 2032 and beyond)

A Recognizing the risks

- Host a research symposium
- Facilitate a pan-African transboundary climate risk assessment
- Develop transboundary climate risk indicators
- Produce and pilot guidance
- Convene a knowledge exchange programme
- Propose an IPCC Special Report
- Design a data management plan

B Governing together

- Identify national priorities for transboundary climate risk management
- Drive regional action
- Catalyse international action
- Enhance high-level political commitment and leadership
- Support the inclusion of transboundary climate risks in sectoral policy portfolios beyond adaptation
- Enhance continental coherence
- Prioritize work, strengthen scrutiny and assure accountability

C Implementing Africa-wide adaptation

- Develop a review framework
- Map and evaluate best practices
- Embed just resilience principles
- Pioneer a work programme on building resilience to transboundary climate risks
- Establish demonstration projects

D Mobilizing resources for resilience

- Expand multilateral climate finance
- Raise bilateral and regional climate finance
- Mobilize, tag and track domestic finance
- Align private finance with public goals
- Innovate finance for shared risks
- Build capacity to invest together

Mini roadmap I

Recognizing the risks

Transboundary climate risks are a new topic in climate risk and adaptation research. Despite increasing awareness about the transboundary climate risks faced by African countries – as raised in NAPs, national adaptation programmes of action (NAPAs) and NDCs – critical gaps in evidence hold back the design of effective governance arrangements for their management. Planners often lack a clear evidence base on the drivers of these risks and robust assessment methods to quantify their significance are missing. While the risks created by shared river basins have been the subject of significant analytical attention, and are often well accounted for in cross-country agreements and policies, more abstract and complex transboundary climate risks (to trade and financial systems, for example) are frequently overlooked by researchers.

The lack of evidence on specific transboundary and cascading climate risks, including the means to assess their significance, renders decisive political action to manage such risks both less likely and less sustainable (i.e. open to challenge). It also makes it difficult for policymakers to translate long lists of adaptation needs into well prioritized and resourced plans based on the most technically and politically feasible courses of action. Understanding transboundary climate risks and exploring their ownership (who should be accountable and responsible for them) require a collaborative approach across different fields of expertise, incorporating perspectives from diverse constituencies. This is not only a technocratic exercise: given the political consequences of many transboundary climate risks, options to manage them must also be politically salient, and account for the political economy of regional cooperation and integration. There is a need to "think and work politically" (ECDPM, 2016).

Multi-stakeholder dialogues and knowledge brokering across scientific and policy domains, as well as within and between countries, are needed to address these knowledge gaps. Meeting the challenge of adapting to transboundary climate risk requires in-depth research to understand risk dynamics in specific sectors and geographies, across the African continent and globally. Estimates of transboundary climate impacts need to be mainstreamed and integrated into risk and vulnerability assessments, and this requires climate researchers to be experimental and innovative. Smarter use of existing data is also necessary to capture the complexity of risks that cross borders, and to monitor changes in these risks over time.

Transboundary climate risks begin outside a country's borders and are, therefore, outside the gaze or purview of most policymakers. Though real and tangible, they can propagate through virtual and abstract systems that are hard to grasp. Cascades of impacts may be layered with uncertainty and have unequal impacts on different societal groups, with varying political consequences. Tackling them successfully might reduce the risk, but without creating an obvious reward that policymakers can stake their claim to: for example, when they involve cooperation with partner countries to manage climate risks at their source, beyond the sight of local voters.

The task for the research community is to cut through this complexity to deliver robust and yet practical recommendations for policymakers on how to build resilience to transboundary climate risks. This will require a 'learning by doing' approach, based on participatory multi-stakeholder engagement and peer-to-peer exchange within and beyond the continent.

This mini roadmap calls for action across 7 key areas:

2023

2032 and beyond

1

Requests the Africa team of the Intergovernmental Panel on Climate Change (IPCC), the United Nations Economic Commission for Africa (UNECA), the science and technology commissions of African regions, Pan-African Universities and other scientific and research communities to **host a research symposium** to share knowledge and design a research agenda on transboundary and cascading climate risks in Africa (near-term). The outcomes of the symposium could include the following:

- Identification of research priorities on transboundary and cascading climate risks in Africa: a needs-based assessment of what conceptual or methodological research is required, what empirical case studies would be most useful, what assessments could be instrumental in evaluating the costs and benefits of adaptation to transboundary and cascading climate risks, and what the barriers and opportunities are for tackling transboundary maladaptation;
- Exchange between researchers on methods to assess risk governance and institutional arrangements for adaptation to transboundary and cascading climate risks, including risk perception and ownership exercises, political economy analyses (e.g. of existing regional approaches, risks and opportunities) and mapping of relevant financing mechanisms;
- Designing a scope of work for national, regional and pan-African transboundary and cascading climate risk assessments and resulting profiles.

2

Requests the AUC, AUDA-NEPAD and partners to **facilitate a pan-African transboundary climate risk assessment** and publish a flagship report to profile its findings and recommendations, including on the roles of AU institutions, RECs, Member States and partners in building resilience to these risks (near-term). This flagship report, updated and released at regular intervals, could build on regional efforts and be incorporated into the Mid-Year Coordination Meeting discussions. An initial step would be to identify African knowledge partners who could form a consortium to conduct this assessment.

3

Urges the AU Institutions and RECs, working with research and development partners, to **develop transboundary climate risk indicators** (of their severity and likelihood), and levels of progress in building resilience to such risks, with the explicit intention of incorporating these in the AU monitoring, reporting and learning dashboard (MRLD) currently under development (near-term).

4

Requests AGNES, in collaboration with AUDA-NEPAD and partners, to **produce and pilot guidance** on how to integrate transboundary and cascading climate risks into risk and vulnerability assessments and adaptation plans at local, national, regional and continental scales (near-term). The guidance should also account for the possible consequences of such plans in generating transboundary maladaptation. Piloting of the guidance should be led by the RECs in collaboration with their Member States as well as grassroots organizations that can engage with local actors and communities to ensure a bottom-up feedback loop (mid-term).

5

Requests the AU Institutions and RECs, with support from development partners, to **convene a knowledge exchange programme** on transboundary and cascading climate risks in Africa, running to 2032, to stocktake transboundary climate risks and responses to them in different national and regional contexts (mid-term). Such a programme could share the findings of relevant research (instigated by **the research symposium**), foster the development of communities of practice within and across the RECs, and support inclusive and context-responsive learning and capacity-building. This would also strengthen the state of knowledge on the efficacy of regional and global cooperation to manage climate risk (and other types of risk), which has received insufficient analytical attention to date (ECDPM, 2016).

The programme could consist of a series of workshops to share best practices, and an annual gathering of focal points from across all RECs to enhance coordination between regions. These could include:

- regional dialogues to discuss transboundary climate risks affecting particular geographies;
- policy dialogues to distil transboundary climate risks to key sectors;
- public-private dialogues to harness lessons from the private sector on strengthening resilience through supply chain management, and to discuss maladaptive or unjust consequences for communities.

6

Requests the IPCC National Focal Points, the African Group of Negotiators (AGN), AGNES and other stakeholders to identify Africa's priority knowledge gaps on transboundary and cascading climate risks to facilitate engagement in UNFCCC climate negotiations and IPCC processes, and **propose an IPCC Special Report** on the topic (mid-term).

7

Urges the AU institutions, the African Ministerial Conference on Meteorology (AMCOMET), UNECA and other partner organizations to **design a data management plan** to strengthen the capacity of researchers to assess progress towards the indicators developed and the research needs identified (mid-term). This could include a gap analysis of data on transboundary climate risk (i.e. coverage, quality and comparability) and proposals for a mechanism to strengthen data accessibility to identify, track and monitor transboundary climate risks at all scales. It could also support efforts to improve data sharing where there are concerns about national security (drawing, for example, on submissions to international meteorological organizations, which are publicly available). Such an initiative would support wider efforts to strengthen the uptake of African Climate Information Services in decision making, as articulated in the African Union Climate Change and Resilient Development Strategy and Action Plan (African Union, 2022).

Mini roadmap 2

Governing together

With the aim in the African Union Climate Change and Resilient Development Strategy and Action Plan to "Enhance coordination between the regional economic communities and Member States in addressing and managing transboundary and cascading climate risks" (African Union, 2022), African leaders have taken a decisive step towards creating an enabling policy environment for the management of transboundary and cascading climate risks. Attention to these risks, and the development of actions to manage them, now need to filter down to policymakers at regional, national and sub-national levels of governance and across diverse policy domains, from trade and finance to security and foreign policy.

The effective governance of transboundary climate risk will require bold institutional reforms. This will include the revision of existing structures, processes and mandates. African governments and RECs will have to identify seats of authority for the ownership and management of the transboundary climate risks they face. They will also need to be adept in their management of competing political interests and power dynamics between ministries or departments, so that resilience-building in one sector does not exacerbate the vulnerability of another. The RECs can play a pivotal role, as institutions that oversee continental and regional connectivity and as effective vehicles for policies and programmes related to specific types of transboundary risk. However, each REC has its own form of governance, while a series of other institutions govern other relevant transboundary systems (such as river basins and other natural resources). This diversity needs to be harnessed as a strength.

Stronger vertical and horizontal coordination and communication is encouraged for the implementation of the actions outlined in this mini roadmap:

- Enhanced communication between AU institutions, and between the AU, RECs and their Member States, to strengthen awareness of and complementarities between their strategies and actions. The Mid-Year Coordination Meeting should be a key avenue to strengthen alignment and coordination mechanisms in this regard. Enhanced policy coherence across ministries within national governments, and across sectoral departments within regional organizations, is also critical to avoid the amplification of transboundary climate risks and ensure the effective navigation of policy trade-offs;
- Dialogue between governments or regional organizations and sub-national and non-state actors to understand how local and sectoral vulnerabilities affect the distribution of risk, as well as problem-driven, inclusive and participatory consultation processes for regional policies that manage transboundary and cascading climate risks effectively (e.g. to distil impacts for their different members and sectoral constituencies);
- Better coordination across civil society organizations (particularly between international non-governmental organizations that are working on long-term development and those leading humanitarian response) so that their efforts to strengthen resilience are complementary, combined with investment in strong and effective state governance and public administration to better harness local and regional adaptive capacity.

Political leadership and the prioritization of 'precautionary' risk management are also imperative. Adaptation should be placed on a par with mitigation in climate diplomacy. Given the propensity for transboundary climate risks to threaten investments and derail the objectives of flagship continental policies (such as Agenda 2063), national economic development plans and other political priorities, Africa-wide adaptation must become recognized as a prerequisite for sustainable, resilient development – as protecting national interests – and championed from the highest political levels accordingly.

This mini roadmap calls for action across 7 key areas:

2023

2032 and beyond

1

Urges African governments, where they have not already done so, to convene inter-ministerial dialogues to **identify national priorities for transboundary climate risk management** for incorporation into national economic development plans (near-term). Such inter-ministerial dialogues should account for experiences and perspectives from localities (through an intercommunal approach) and non-state actors. The outcomes of these national dialogues could feed into regional dialogues, hosted by each REC (or other well-placed regional organizations), to distil shared and common priorities at the regional level (long-term).

2

Requests RECs to use their constituting treaties and the instruments established by these treaties, such as Protocols, to **drive regional action** and resilience-building to transboundary climate risks, and to identify the types of risks they may be best placed to manage and the actions that are most likely to gain political traction among their Member States (near-term). This could include:

- the piloting of regional adaptation programmes and leading of response efforts to risks that materialize;
- the provision of cross-sectoral support to governments by engaging regularly with the relevant interdepartmental committees and focal points of their Member States, and the facilitation of bilateral Memoranda of Understanding or sub-regional coalitions among their members to manage specific risks;
- proposing specific steps that could be taken by their members to support policy alignment on transboundary climate risk management, through the profiling of such risks in their policy instruments (including NDCs and LTS), while also facilitating oversight and monitoring functions of the RECs as relevant;
- ensuring that relevant legislative frameworks facilitate the implementation of transboundary adaptation measures across counties in their respective regions, by putting the legislative recommendations of the African Union Climate Change and Resilience Development Strategy (African Union, 2022) into effect;
- learning from relevant experiences in building regional resilience to other hazards, such as the Regional Coordination Centres under the Africa Centre for Disease Control and Prevention.

Research organizations can work with the RECs to close the gap between planning and implementation by identifying the drivers and constraints of regional action and cooperation, including the political interests of Member States that may otherwise block action and reform (ECDPM, 2016).

3

Requests the AGN to develop a common position on transboundary climate risk management to **catalyse international action** and inform negotiations in various UNFCCC workstreams such as the Global Goal on Adaptation (GGA) Framework, the Global Stocktake (GST) and Article 2.1c of the Paris Agreement to make international financial flows consistent with climate resilient development (near-term).

4

Requests climate champions within governments and civil society to **enhance high-level political commitment and leadership** by seeking the adoption of decision text that drives adaptation to transboundary climate risk through the various organs of the AU. These include AMCEN, the Committee of African Heads of State and Government on Climate Change (CAHOSCC), the African Ministers Council on Water (AMCOW), AMCOMET, and the African Ministerial Council on Science and Technology (AMCOST) (near-term). This would engage Specialized Technical Committees of the AU and relevant chairpersons and departments, driving implementation and assuring progress reporting at annual ministerial meetings. Such actors could also identify political and civic ambassadors to drive leadership on transboundary climate risks, reframe the narrative on adaptation and host high-profile sessions at pan-African Summits (such as the Africa Climate Summit) and convenings (such as Africa Climate Week and the Africa Pavilion at the annual COPs).

A wide array of existing continental and regional policies, strategies and agreements could strengthen the management of transboundary and cascading climate risks. These include, for example, the AfCFTA, the Comprehensive African Agricultural Development Programme, Boosting Intra-African Trade and the Programme for Infrastructure Development in Africa to manage trade and financial risks; and the Migration Policy Framework for Africa and Action Plan to manage human mobility risks. For a full analysis of the relevant policy landscape at continental and regional levels, see Opitz-Stapleton et al. (2023, forthcoming).

5

Urges Heads of State to **support the inclusion of transboundary climate risks in sectoral policy portfolios beyond adaptation** at Member State, REC and AU level (mid-term). Entry points for coherent and coordinated responses to transboundary climate risks could be revealed through:

- *auditing*: conducting a gap analysis of policies to assess needs and opportunities for transboundary climate risk integration;
- *proofing*: assessing how the desired outcomes of policies may be impacted by transboundary climate risks, and/or may inadvertently undermine resilience to them;
- *mainstreaming*: suggesting how such policies could be updated to strengthen the management of transboundary climate risks;
- *forecasting*: considering possible impacts of proposed policy revisions on equitable outcomes, including any maladaptive effects beyond their jurisdictions;
- *structuring*: proposing governance and institutional arrangements to assure policy coherence on adaptation and encourage its political prioritization.

Such steps should also be taken to safe-guard and climate-proof large-scale investments.

6

Emphasizes the need to **enhance continental coherence**, including through regular dialogue between the AU Commissions: in particular, the Commission on Agriculture, Rural Development, Blue Economy and Sustainable Environment (ARBE) and Political Affairs, Peace and Security (PAPS) to integrate transboundary risks within the new 'climate and security risk assessment' for Africa (mid-term). The annual AU Assembly of Heads of State and Government and the AU-REC midyear coordination meeting should be harnessed as opportunities to advance discussions on the relationship between transboundary climate risk and other continental priorities, such as trade, peace and security. The AUC could consider establishing a framework to track progress on the implementation of transboundary and cascading climate risk management.

7

Encourages the Pan-African Parliament, regional parliaments and national parliaments to **prioritize work, strengthen scrutiny and assure accountability** on transboundary climate risk management. They could raise awareness of the effects of transboundary climate risks in their constituencies at national, regional and continental levels (long-term). They could also call for downscaled and contextualized data and information on transboundary and cascading climate risks to support local actors in their resilience-building efforts.

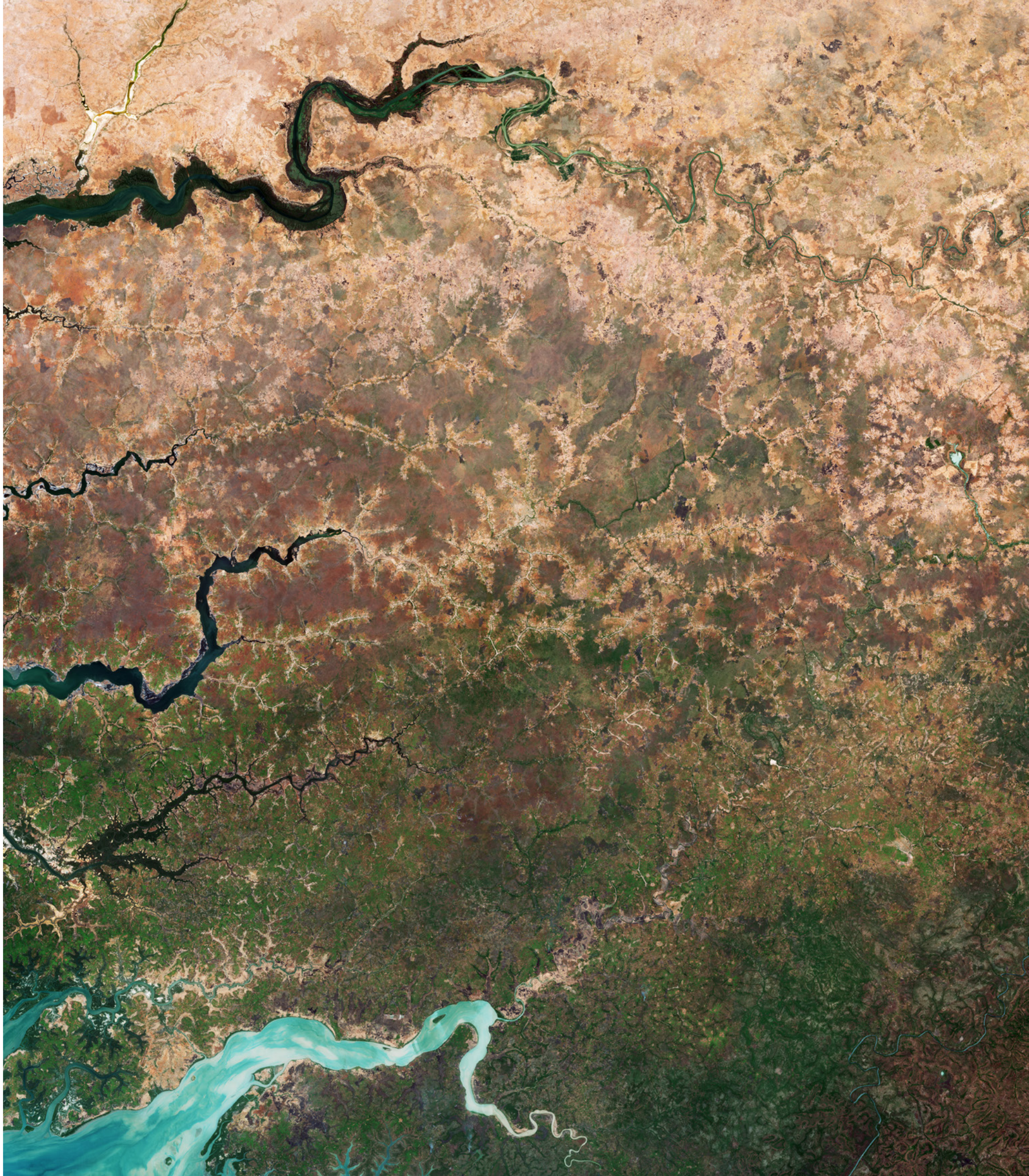
Mini roadmap 3

Implementing Africa-wide adaptation

The urgent need to implement adaptation in Africa cannot be overstated as the direct and transboundary consequences of climate change increase in magnitude and severity. While Africa's vulnerability to direct climate risks is gaining increasing attention, and national and local adaptation plans are emerging to govern them, understanding of transboundary climate risks and appropriate adaptation solutions is at a much earlier stage (as it is elsewhere in the world). Implementing adaptation action to transboundary climate risks without the full knowledge and data required to inform risk reduction and management is a significant challenge. However, waiting for perfect information and comprehensive data on transboundary climate risks is not an option, given the complexity involved in such a task and the mounting costs of inaction.

Even with limited information, decisive action to address transboundary climate risks is possible: a proactive and precautionary approach to climate adaptation is needed. The AUC and RECs, together with national governments, should explore 'no-regret' adaptation solutions that enhance the resilience of African economies, societies and ecosystems to a range of shocks and crises. Close collaboration with climate and development organizations, such as AUDA-NEPAD and the Africa Adaptation Initiative (AAI) can ensure that equity and just resilience principles are adopted in adaptation programmes to address transboundary climate risks at national and regional levels, leaving no one behind.

Organizations managing adaptation projects and programmes across the continent require support to assess the exposure of their portfolios to transboundary climate risks and to pilot experimental projects dedicated to their management. It is possible to adapt successfully to some transboundary climate risks through local or national adaptation programmes; others will require 'transnational adaptation' at a scale not yet realized. Regional and international ties are both a source and solution for the management of transboundary climate risks.



This mini roadmap calls for action across 5 key areas:

2023

2032 and beyond

1

Requests the RECs, in collaboration with research organizations and adaptation implementation agencies, to **develop a review framework** to evaluate national adaptation projects, programmes and networks in Africa to understand both the vulnerability of their actions and outcomes to transboundary climate risks, and how they could help to manage these risks through existing design and implementation plans (near-term). As immediate actions, the RECs could: initiate discussions on the feasibility and desirability of such a review at the Africa Climate Week 2023 and Africa Pavilion at COP28, and pilot such assessments ahead of the mid-term review of the African Union Climate Change and Resilient Development Strategy and Action Plan in 2027.

2

Urges the leaders of existing transboundary and regional adaptation programmes to **map and evaluate best practices** and synthesize lessons for future transboundary adaptation projects. Building on the findings, transboundary climate risk projects and programmes should take steps to embed ownership across governance levels (from community to country level), ensure the harmonization and integration of outcomes with local, sub-national, and national development plans, and proactively manage competing political interests to strengthen trust-building between all actors involved (near-term).

The implementation of the GGW for the Sahara and Sahel Initiative generates a number of important lessons for a potential upscaling of transboundary adaptation projects, including the risks of insufficient resourcing, uneven implementation in different national contexts, and the struggle for attribution of impacts among multiple funders. Other relevant examples of transboundary adaptation initiatives that could be assessed include the 14 country programme on water inequity of the Green Climate Fund (GCF) and the regional programmes of the African Development Bank (AfDB) on Lake Chad, the Niger River Basin and the Zambezi River Basin.

While not explicitly an adaptation programme, the Regional Food Security Reserve, created by ECOWAS in 2013, demonstrates the potential for regional programmes to strengthen responses to transboundary climate risks that materialise (in this case, to the trade in agricultural commodities). The Reserve provides a cooperation mechanism for Member States to improve their response to food and nutrition crises at local, national and regional levels. The Kavango Zambezi Transfrontier Conservation Area (KAZA) is another example that could support the management of transboundary climate risks, this time to shared ecosystems and biodiversity in southern Africa.

3

Encourages civil society organizations such as the Pan-African Climate Justice Alliance (PACJA) and the regional nodes of the Climate Action Network (CAN) to raise awareness of the need to develop adaptation programmes that **embed just resilience principles** and account for the effects of transboundary and cascading climate risks on the most vulnerable communities and groups (near-term). These projects should take inclusive approaches to adaptation: engaging with marginalized groups to understand differentiated vulnerability to transboundary climate risks, and embedding gender equality and social equity principles in their design and implementation. Lessons from these programmes can inform and support the mainstreaming of climate change considerations relevant to gender, youth, and indigenous practices into the implementation of climate and non-climate transboundary projects, which is a recommendation of the African Union Climate Change and Resilience Development Strategy (African Union, 2022).

4

Requests AUDA-NEPAD to **pioneer a work programme on building resilience to transboundary climate risks**, focused on the most pressing risks identified through research and political prioritization, in collaboration with the RECs and national governments (mid-term).

5

Requests each REC to **establish demonstration projects** (one or more) that address transboundary climate risks specific to its region (long-term). The design and focus of these programmes should be informed by the AUDA-NEPAD work programme, considering lessons learnt from existing transboundary programmes.

Mini roadmap 4

Mobilizing resources for resilience

Building long-term resilience to transboundary climate risks in Africa means overcoming both the ongoing challenges to mobilizing and accessing international finance for adaptation, and the new constraints imposed by the cascading nature of climate risks. The project-based, time-bound and country-driven nature of most current funding models limits opportunities for countries to share ownership of adaptation programmes and this impedes their potential to achieve transformative and systemic resilience to transboundary climate risks. "Current adaptation finance shows limited recognition of transboundary climate risks... multilateral adaptation finance continues to treat climate risk largely as a local phenomenon, focusing on enabling adaptation at local scales" (Browne et al., 2022).

Where transboundary adaptation projects have been financed (via the Adaptation Fund, for example), their focus to date has centred on a single type of transboundary climate risk, within a geographic region, with limited ambition to achieve more than knowledge exchange between neighbours. Political disincentives deter the recipients of climate finance from initiating transboundary projects. Institutional barriers for contributors, given difficulties in articulating the return on investment of 'systemic' interventions (for example in complex supply chains) also constrain the development and implementation of transboundary projects. Indeed, many funders may "hesitate to recognize systems-level investments in trade, financial networks, or migration as climate adaptation at all" (Browne et al., 2022).

Yet there are both incentives and opportunities to dramatically scale up climate finance to manage transboundary climate risks to Africa and enhance regional cooperation on adaptation. As the African Union Climate Change and Resilience Development Strategy and Action Plan states, effective transboundary cooperation is necessary to ensure that investments occur at appropriate timeframes to respond to the speed of changes in our warming world (African Union, 2022). Multilateral funders, bilateral partners, the AU, RECs and African governments all need to play their part in harnessing these opportunities and mobilizing requisite resources. Both contributors and recipients stand to benefit from building systemic resilience in an interdependent world.

Many opportunities exist to tap non-climate funds for the management of specific transboundary climate risks – including development finance and investment from the private sector and philanthropy – particularly as donors take steps to 'proof' their own investments from transboundary climate risks. As sources of funding for transboundary climate risk management increase, so will the need for coherence and coordination. The African Union Climate Change and Resilience Development Strategy and Action Plan sets out actions to strengthen Africa's readiness and capacity to access and absorb finance in this regard (African Union, 2022).

The challenges of capacity building and the mobilization of requisite technologies to manage transboundary climate risks across all sectors and scales requires concerted effort and financial support. Effective risk management demands the development of competencies, leadership skills, and peer-to-peer learning and these, in turn, require continuous application. There is great potential for knowledge exchange, capacity building and technology development and transfer between regions and continents.

This mini roadmap calls for action across 6 key areas:

2023

2032 and beyond

1

Encourages AU institutions, alongside initiatives such as the AAI, to raise the need for investment in adaptation to transboundary and cascading climate risks when engaging with multilateral funders, and call on them to **expand multilateral climate finance** by:

- opening accreditation processes to new implementation agencies such as the RECs, to mobilize the resources required to implement their climate strategies and run regional adaptation programmes (near-term);
- allowing more flexibility in climate attribution (given that many transboundary climate risks lie at the intersection of climate and other risks), while recognizing the importance of 'additionality' in climate finance (near-term);
- clarifying their guidelines to encourage the use of current, project-based funding models to implement adaptation to transboundary climate risks – particularly risks common to neighbouring countries, as well as shared risks to resources, ecosystems and infrastructure – and enhancing local resilience to their effects by, for example, strengthening food security to help vulnerable communities withstand transboundary climate risks to trade (Adams et al., 2021) (near-term);
- updating their guidelines and funding models to implement systemic adaptation to more complex risks between non-neighbouring countries in the future, for example those connected by trade and financial flows (long-term).

Given that some multilateral financial instruments already exist to support regional adaptation initiatives, civil society organizations should support governments to identify and harness these opportunities. Funders should tackle disinformation and strengthen the incentives for governments to support such applications.

2

Urges African governments to **raise bilateral and regional climate finance** dedicated to the management of transboundary climate risks, by encouraging their bilateral funders to invest in adaptation programmes that address such risks (both those that flow into and originate within African countries) and create pooled funds for regional approaches to risk reduction (near-term). The AU could also seek to mobilize resources via their next investment roundtable on the African Union Climate Change and Resilient Development Strategy and Action Plan (African Union, 2022). RECs can raise the need for direct access to climate finance for regional programmes that build resilience to transboundary and cascading climate risks with their development partners, and the capacities they require to manage such funds together with the AU.

3

Urges African governments to explore the financing of adaptation to transboundary and cascading climate risks from within their national budgets: to **mobilize, tag and track domestic finance** (near-term). This includes making use of non-climate funds where relevant: utilizing financial instruments for specific sectors exposed to transboundary climate risk or unlocking finance from development programmes with complementary objectives, e.g. under Agenda 2063. Development partners, who "find their mandates increasingly affected by climate impacts and who need greater opportunities to reduce vulnerability before crises are triggered" (such as the World Food Programme), may have complementary incentives in this regard (Browne et al., 2022). African governments are also urged to increase and tag a portion of their contributions to their affiliated RECs specifically to climate and adaptation, to fund regional programmes on managing transboundary climate risk (long-term).

4

Encourages the World Economic Forum, the World Business Council for Sustainable Development and UN Global Compact to work with African businesses to engage the private sector in managing transboundary climate risk in Africa and **align private finance with public goals** (near-term). This could include exploring the potential for public-private partnerships (particularly with regional private-sector firms, such as SafariCom and Telecoms) to manage trade-related transboundary climate risks in particular. Investing in the resilience of supply chains offers co-benefits to businesses and the local communities and livelihoods of people upon whom such supply chains depend.

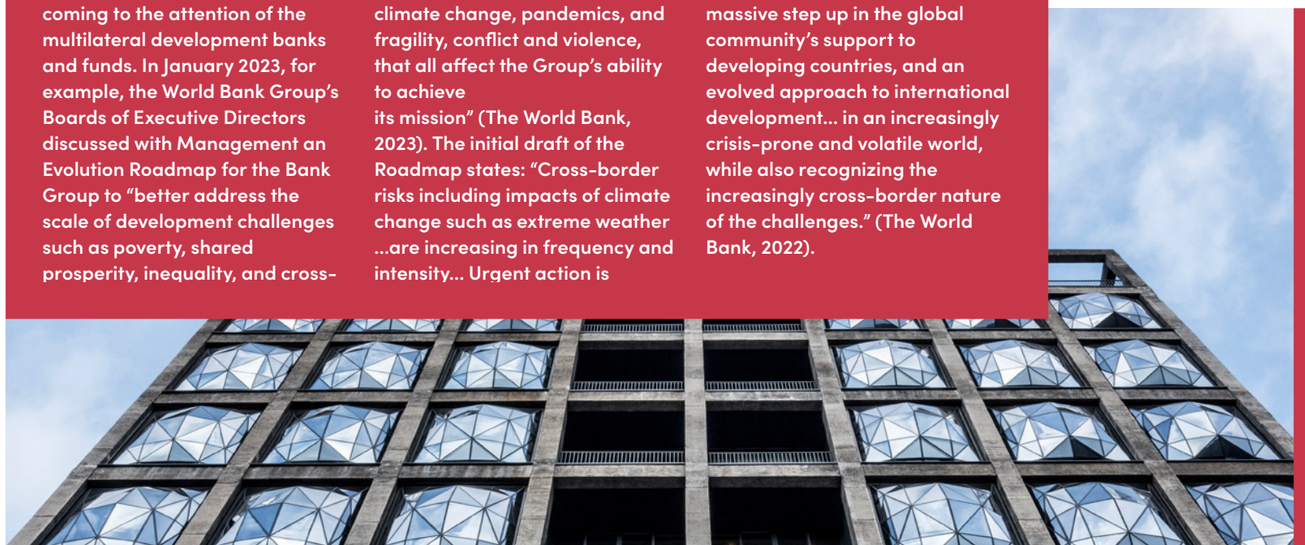
5

Invites the AAI, alongside research organizations, to explore the potential to **innovate finance for shared risks**, including the applicability of innovative sources of non-climate finance to manage transboundary climate risks in the future (mid-term). This may include additional funding released by the International Monetary Fund (IMF) under reforms driven by the Bridgetown Initiative, mitigation initiatives (including revenues from carbon markets and green bonds), and biodiversity initiatives (from conservation, ecotourism and payments for ecosystem services and nature-based solutions). The African Risk Capacity Group, alongside research partners, could also explore the potential for regional insurance risk pooling mechanisms to reduce and manage transboundary climate risks to Africa.

6

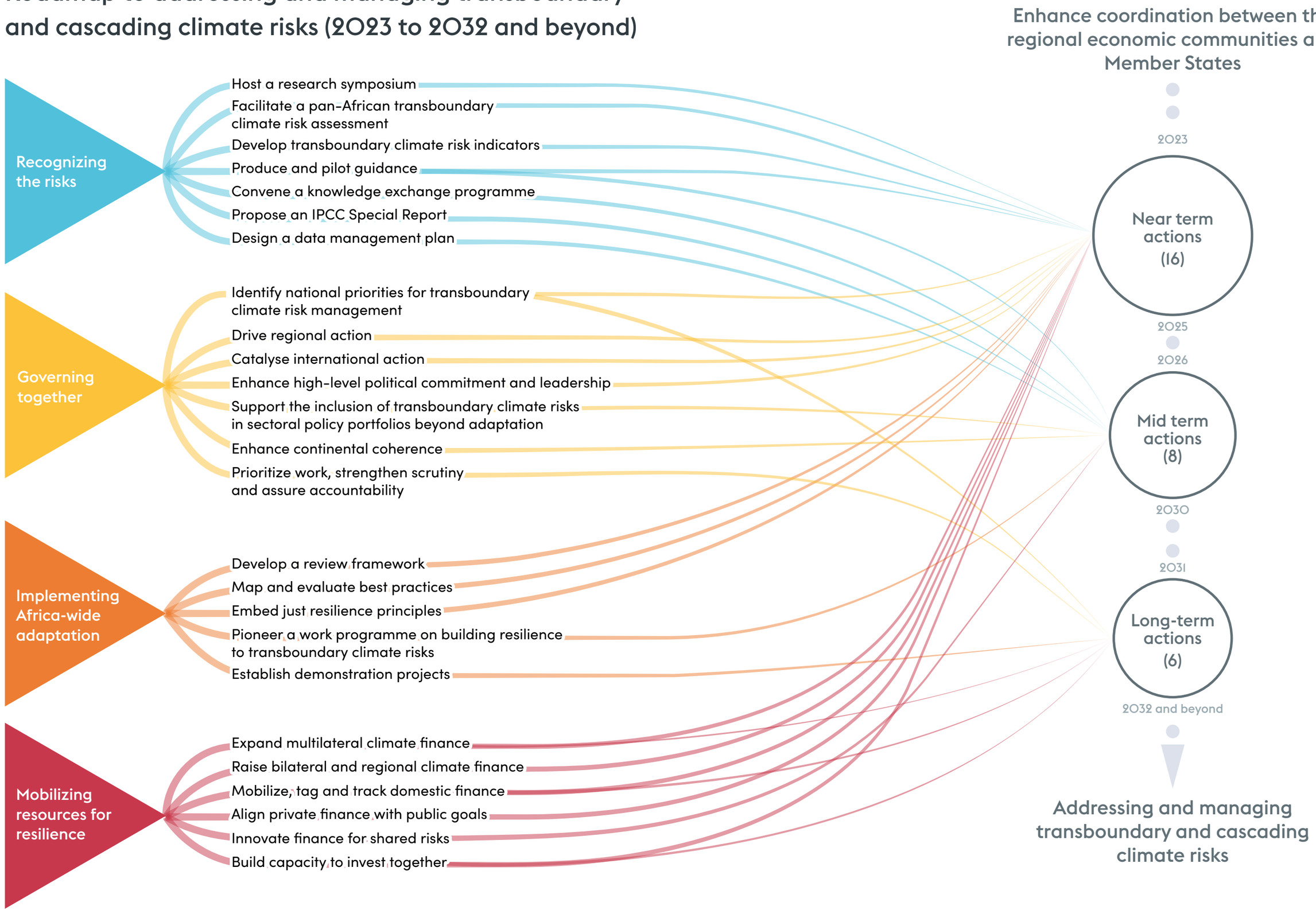
Encourages the RECs to **build capacity to invest together**, by working with their members to develop bankable proposals for the mobilization of resources to manage transboundary and cascading climate risks at the national level (near-term). The RECs are also encouraged to broker relationships between accredited entities and both funders and research organizations (who can strengthen attribution to the climate triggers of transboundary risks). RECs also have a strong role to play in mobilizing capacity and implementing training programmes for national adaptation planners and climate focal points on transboundary and cascading climate risks more broadly (near-term), and for regional policy officers in wider domains (e.g. trade, finance, agriculture, foreign affairs, environment, health, migration and displacement) – co-designing training materials, enabling peer-to-peer exchange and/or providing other forms of technical support (long-term).

Transboundary climate risks are coming to the attention of the multilateral development banks and funds. In January 2023, for example, the World Bank Group's Boards of Executive Directors discussed with Management an Evolution Roadmap for the Bank Group to "better address the scale of development challenges such as poverty, shared prosperity, inequality, and cross-border challenges including climate change, pandemics, and fragility, conflict and violence, that all affect the Group's ability to achieve its mission" (The World Bank, 2023). The initial draft of the Roadmap states: "Cross-border risks including impacts of climate change such as extreme weather ...are increasing in frequency and intensity... Urgent action is needed... Doing so requires a massive step up in the global community's support to developing countries, and an evolved approach to international development... in an increasingly crisis-prone and volatile world, while also recognizing the increasingly cross-border nature of the challenges." (The World Bank, 2022).



National financial mechanisms were identified in many countries, including Benin, Ethiopia, Kenya, Mali, Nigeria and Rwanda, that could support the integration of funding streams to adapt to transboundary climate risks. One such example is the Rwanda Green Fund that facilitates direct access to international climate finance and streamlines and rationalises external aid and domestic finance. Non-climate funds at the continental and regional level could also be harnessed: the Africa Water Investment Programme (AIP) could build resilience to transboundary climate risks to shared water resources, while delivering the co-benefits of clean water and sanitation (African Union, 2022). The potential for the East African Development Fund, Africa Trade Fund, and Partnership for Investment and Growth in Africa (PIGA) to build resilience to transboundary climate risks to trade could also be explored.

Roadmap to addressing and managing transboundary and cascading climate risks (2023 to 2032 and beyond)



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Additional key resources

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For further information, please contact: Katy Harris, Director of Adaptation Without Borders, katy.harris@sei.org.

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Adaptation Without Borders is a global partnership working to strengthen systemic resilience to the cross-border impacts of climate change. We identify and assess transboundary climate risks, appraise the options to better manage those risks and support policymakers, planners and the private sector to develop climate-resilient and inclusive solutions. We catalyse new alliances and forms of cooperation on adaptation that pave the way towards a more sustainable and resilient world.

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