

Financing Climate Change Adaptation in Transboundary Basins

JANUARY 2019

Preparing Bankable Projects



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Executive Summary

Climate change multiplies the complexities and intensity of water-related development challenges that countries have been addressing for decades through national efforts and transboundary cooperation. As pressure on water resources increases with climate change, current systems to manage these resources will no longer suffice. Populations have to rely more on water infrastructure and water management to meet their needs and provide security against the increasing occurrence of extreme and variable hydrological events, such as droughts and floods. Given hydrological interlinkages that connect territories, transboundary river and lake basins offer a logical geographic scope for countries to advance common development goals and address water-related challenges.

As countries scale up resource mobilization to access the financing needed to address the impacts of climate change, their capacity to prepare well-designed, bankable projects that will attract the limited public and private resources available is critical. The rapidly evolving landscape of climate finance can be difficult to navigate for individual countries and river basin organizations. Cooperative basin approaches can leverage human and financial resources and provide numerous co-benefits.

Transboundary cooperation is an effective way to manage shared resources to promote resilience to climate change and sustainable development. By ensuring basinwide stakeholder participation, interinstitutional and intergovernmental coordination, and efficient use of limited financial resources, transboundary basin approaches can advance economic, environmental, and social goals while avoiding maladaptation that may otherwise occur due to unilateral adaptation measures. Cooperation to develop, finance, and implement projects in transboundary river basins that mainstreams climate considerations into sustainable development planning goes beyond “adaptation” toward achieving more holistic and sustainable solutions.

Yet countries and river basin organizations (RBOs) pursuing basin-level adaptation approaches often face difficulties in accessing financial resources for the implementation of cross-border and multinational development strategies.

Basin countries can complement their national capacity and financial resources with experience and resources drawn from the global climate regime, private finance, and overseas development assistance. The United Nations Framework Convention on Climate Change (UNFCCC), its associated implementation network, and the vast array of development agencies and international financial institutions supporting sustainable development offer technical and financial resources to support developed countries and developing countries in their efforts to reduce poverty, achieve sustainable socioeconomic development, and address the oncoming impacts of climate change. Additionally, private sector attention to climate implications and private finance for climate-related projects is increasing, especially for larger infrastructure projects. While the availability of financing for both mitigation and adaptation is growing globally, access to funds and effective implementation poses challenges, particularly for regional approaches.

Understanding and managing the special risks and complexities of transboundary river basin projects are critical to preparing bankable project proposals that will attract public and private financing partners. Transboundary approaches bring additional risks to a project, such as the involvement of multiple countries, legal responsibility and mandate for implementation, and the challenges of sharing up-stream or down-stream benefits and commitments. The transboundary context at the same time offers some risk-mitigation tools not available in single-country projects, especially when RBOs are in place; including existing cooperation agreements, risk sharing, and additional resource leveraging potential.

Financing mechanisms available to address climate change have distinct procedures and project cycles, and not all are designed to support regional or transboundary development approaches. Many of the existing funds and financing streams—those that have been historically used for development finance, as well as newer instruments and funds created solely for climate finance—are predominantly structured for single country financing. Options for funding for RBOs and basin projects are limited when compared with those available to individual states. For example, climate funds such as the Green Climate Fund (GCF) are available only to those projects approved by national designated authorities (NDAs) within a basin. To access these resources, countries sharing transboundary basins and RBOs should strategically employ a variety of tools, mechanisms, and development partnerships.

To access climate resources, project proponents—whether individual countries or RBOs—should consider the following recommendations for preparing bankable adaptation project proposals for transboundary basins:

- **Identify the root of the climate change challenge.** Identify vulnerabilities and the reasons for the climate change-induced problem.
- **Ensure climate adaptation-specific design and scope.** Identify and describe the climate change impacts directly responded to by the adaptation project, demonstrating the benefits of a transboundary approach (such as sharing data, or locating measures in which they have an optimum effect).
- **Understand the financing landscape and establish relationships with financing partners.** Resource mobilization for adaptation and resilience building in a transboundary context requires a strong knowledge of the full array of public and private financing sources and the many funds and options offered in each category. Matching needs to funding sources is a critical part of pre-project planning.

- **Understand and follow funding processes carefully and precisely to ensure eligibility and maximize chances of success.** Although many funds serve similar target groups and issues, eligibility criteria and procedures for accessing financing vary significantly and are often complex.
- **Identify, communicate, and address potential risks.** To strengthen bankability, identify risks, describe how they will be addressed, and demonstrate ability to manage.
- **Support regional planning and mainstreaming.** Align climate financing with existing river basin planning because this is critical to ensure the efficiency of resource use and the long-term sustainability of a project.
- **Align projects with existing climate and development strategies and policies.** Virtually all financiers require that project proponents demonstrate alignment with existing policies.
- **Capture co-benefits.** Project proposals that have multiple co-benefits are attractive to financiers.
- **Cluster projects within the basin to coordinate project proposals.** A cluster of projects that share geographic or thematic characteristics can be simpler to manage from a financier's perspective than many smaller projects.
- **Innovate, advocate, and be flexible.** Climate finance is a relatively new field of global financing, and as such many of the current rules and instruments are still evolving, lack concrete experiences, and therefore offer opportunities for the beneficiaries to shape the rules and procedures.

This report highlights the challenges and opportunities that countries face when seeking to access financial resources for climate adaptation in a transboundary river basin context. The paper explains how resilience building and taking a basin-level approach may allow countries and RBOs to use resources effectively for the

greatest possible benefit. By outlining the basic characteristics and criteria for the preparation of bankable project proposals, the paper endeavors to serve as a guide for those interested in accessing grant and concessional financing for adaptation in transboundary river basins.

The paper allows countries sharing transboundary river basins and RBOs to better understand the climate financing landscape and how to prepare bankable projects. It explains the importance of taking a transboundary approach to address climate change and discusses the challenges and opportunities for RBOs confronted with the task of carrying out their

mandate in the increasing complexities of a changing climate (chapter 1). Chapter 2 describes financing opportunities available to countries sharing transboundary river basins to address climate adaptation, including global funds, private sector finance, and national and concessional finance with attention to how these sources can work together. Chapter 3 explores the requirements for developing bankable project proposals that are thus more likely to receive the required financing. The paper focuses on bankability of transboundary river basin projects, with detailed options and recommendations that countries and RBOs may consider as they advance on their adaptation planning and implementation.

Abbreviations

ACCF	Africa Climate Change Fund
ADB	Asian Development Bank
AF	Adaptation Fund
AfDB	African Development Bank
ASAP	Adaptation for Smallholder Agriculture Programme
ASEAN	Association of Southeast Asian Nations
CCF	Climate Change Fund
CEFPF	Clean Energy Financing Partnership Facility
CIF	Climate Investment Funds
CILSS	Permanent Inter-State Committee for Drought Control in the Sahel (Comité permanent inter-Etats de lutte contre la sécheresse dans le Sahel)
CIWA	Cooperation in International Waters in Africa
COP	Conference of the Parties
CRAFT	Climate Resilience and Adaptation Finance and Technology Transfer Facility
CTF	Clean Technology Fund
DMC	developing member country
EAC	East African Community
ECOWAS	Economic Community of West Africa States
ESIA	environmental and social impact assessment
ESMS	Environmental and Social Risk Management System
EU	European Union
EURECCA	Enhancing Resilience of Communities to Climate Change through Catchment Based Integrated Management of Water and Related Resources in Uganda Project
FAO	Food and Agriculture Organization
FCPC	Forest Carbon Partnership Facility
FIP	Forest Investment Program
GCF	Green Climate Fund
GEF	Global Environment Facility

GEF-IW	Global Environment Facility International Waters
GFDRR	Global Fund for Disaster Risk Reduction
IADB	Inter-American Development Bank
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
INBO	International Network of Basin Organizations
IWRM	Integrated Water Resources Management
LDC	least developed country
LDCF	Least Developed Countries Fund
LVB	Lake Victoria Basin
LVBC	Lake Victoria Basin Commission
MC	member country
MDB	multilateral development bank
MEA	multilateral environmental agreement
MIE	multilateral implementing entity
MIGA	Multilateral Investment Guarantee Agency
NAP	national adaptation plan
NAPA	National Adaptation Programme of Action
NBA	Niger Basin Authority
NCCSAP	National Climate Change Strategy and Action Plan
NDA	national designated authority
NDC	nationally determined contribution
NEPAD-IPPF	NEPAD Infrastructure Project Preparation Facility
NGO	nongovernmental organization
NIE	national implementing entity
ODA	overseas development assistance
ODI	Overseas Development Institute
OMVS	L'Organisation pour la Mise en Valeur du Fleuve Sénégal

OSCE	Organization for Security and Co-operation in Europe
OSS	Sahara and Sahel Observatory
PPCR	Pilot Program for Climate Resilience
PPF	project preparation facility
PPP	public-private partnership
RBO	river basin organization
REDD	Reducing Emissions from Deforestation and Forest Degradation
RIE	regional implementing entity
RMC	regional member country
SASS	Sahara Aquifer System
SCCF	Special Climate Change Fund
SCF	Strategic Climate Fund
SDG	Sustainable Development Goal
SECCI	Sustainable Energy and Climate Change Initiative
SIDS	small island developing states
SOGEM	Société de Gestion de l’Energie de Manantali
SREP	Scaling Up Renewable Energy Program for Low Income Countries
TDA	Transboundary Diagnostic Analysis
UEMOA	West African Economic and Monetary Union
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	United National Reduced Emissions from Deforestation and Forest Degradation Program
WFD	Water Framework Directive

Chapter 1

Water, Climate Change, and Resilience

Water plays a fundamental role in economic development, poverty reduction, maintaining human health, and ensuring ecosystem vitality. Its availability is dependent on the climate because it influences the hydrological cycle. As such, the onset of climate change is already having significant impacts on water resources and all that they sustain (see table 1.1). Vulnerability to climate change increases with poverty, inequity, weak governance, and other development challenges, in which countries or communities are unable to prepare adequately to limit damages and subsequently unable to recover from the impacts. Vulnerability also has to do with heightened exposure to climatic changes; for example, communities on low-lying lands easily affected by sea level rise, coastal settlements exposed to extreme weather events, or arid regions already suffering from water stress in which increased temperatures can aggravate drought. Vulnerability to climate change is related to exposure to water stress, extreme hydrological events, and the capacity to respond to variability. All sectors reliant upon water resources are impacted by climate change, including agriculture, biodiversity, fisheries, forestry, energy, industry, tourism, and navigation. Therefore, reducing vulnerability through adaptation and resilience building has important linkages with safeguarding economic systems and socioeconomic development, strengthening rural livelihood systems, and reducing poverty (World Bank 2018). In response to the challenge, countries are mainstreaming climate change considerations into national, regional, and transboundary water resources management strategies, disaster risk management, and development projects.

Building resilience of communities and ecosystems dependent on water resources is among the most effective ways to adapt to climate change. Building resilience is about strengthening existing development practices

and systems to account for climate impacts and information. This includes strengthening water management systems by increasing access to information, building the capacity of institutions, and further developing infrastructure. One category addresses the ability to skillfully collect and assess information relating to climate forecasts and impacts on water, such as hydrological trends, changes in water quality, and meteorological information. Many countries and river basins emphasize the critical need for increased access to monitoring technology paired with capacity building to generate and use relevant data. Another category relates to improved institutional capacity within governments and river basin organizations (RBOs), such as increasing capacity of human resources to identify adaptation needs; prepare and implement projects; and strengthen technical expertise on critical water-related issues including climate services, economic analysis, planning, and policy development. The third category relates to improving infrastructure to address adaptation needs, which can include investing in green infrastructure, rehabilitating and strengthening existing structures, building resilient irrigation and water supply systems, or managing complex, multipurpose reservoirs.

Transboundary river basins provide life-sustaining water resources and livelihoods to vast populations around the world. An estimated 60 percent of global freshwater flows across national boundaries, and more than 40 percent of the global population lives in transboundary basins and aquifer systems (UNEP 2016). There are 286 major transboundary river basins around the world (UNEP 2016), and nearly 600 identified groundwater aquifers that cross international political borders (IGRAC/UNESCO IHP, 2015). One hundred and fifty-four states have territory in these basins, including 30 countries that lie entirely within

TABLE 1.1. Observed Climate Change Impacts

Physical systems	Biological systems	Human and managed systems
Glaciers, snow, ice, permafrost	Terrestrial ecosystems (e.g., forests, grasslands, lakes, river basins)	Food production
Rivers, lakes, floods, or drought	Marine ecosystems	Livelihoods
Coastal erosion or sea level variation effects		Health
		Economies
Specific climate change impacts		
Water resource impacts ^a : increased variability; changes in water availability; decline in water quality; unpredictability; flooding; drought	Coastal impacts: erosion of beaches, inundated coastlines; forced migration; coastal ecosystem productivity and viability; marine ecosystem deterioration	Agriculture and land impacts ^a : crop yield decrease from increased temperatures, droughts, and floods; increased irrigation demands; insufficient grazing lands or water for animals; food insecurity
Weather irregularity (storage and infrastructure needs)	Biodiversity impacts ^a : loss of land and water habitats and species; shifts in ecological zones; forest ecosystem composition disruption such as wildfires; geographic range change	Health impacts: sickness and mortality from increased infectious diseases; weather-related sickness and mortality; air quality respiratory disease Socio-political impacts ^a : transboundary migration due to water and food stress; increased conflict over land and water resources; economic vulnerability

a. Issues of particular relevance in transboundary river basins, with upstream and downstream consequences.

them (Paisley and Henshaw 2013). Considering the number of people who will be affected and the extent of the impacts on life, food security, homes, and biodiversity, a focus on building resilience in transboundary basins to the imminent negative impacts of climate change is increasingly urgent—especially as pressure and competition over water resources increase with continued global population growth.

Climate change is only one of many challenges facing transboundary basins. Political borders that transect a basin make addressing issues that transcend those boundaries—such as water scarcity, flooding, migration, health epidemics, and other environmental or social issues—more difficult to address in a coherent, integrated manner. As a result, there is often a correlation between complex hydrological conditions and poverty, as is evidenced in Sub-Saharan Africa, which also has the highest proportion of shared fresh water globally, challenging climate conditions, and the world’s highest levels of poverty.

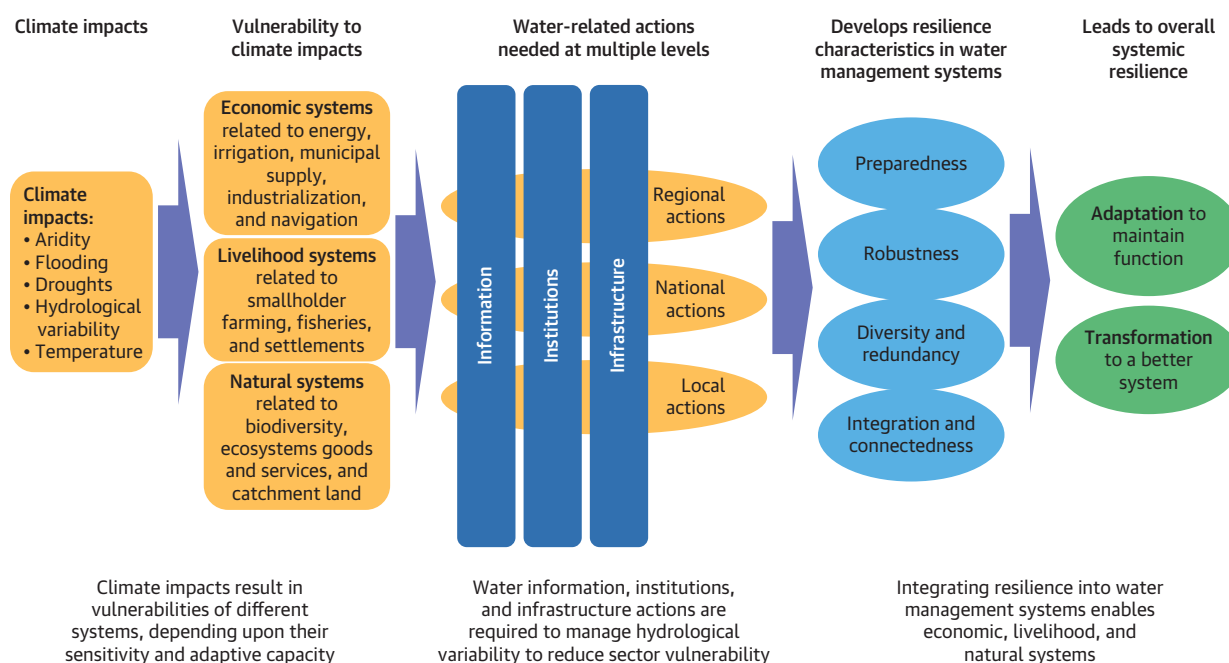
Building resilience to climate change in a transboundary context needs to be viewed within the broader

framework of addressing water resource management (World Bank 2017a). With climate change as an added challenge, cooperative solutions are imperative to ensure the water needs of people and the environment can be satisfied in the long run. (See figure 1.1.)

1.1 Challenges and Opportunities in Transboundary River Basins

Climate change poses complex challenges for transboundary river basins due to the water impacts and response measures that can have consequences across national borders. At the same time, the transboundary river basin context poses both challenges and opportunities when developing and implementing climate adaptation and resilience projects. The significance of climate change in the transboundary context extends beyond direct and immediate impacts on communities, ecosystems, infrastructure, and local economies to a broader and more complex landscape. In the transboundary context, climate change affects multiple countries, stakeholders, economies, and political systems. Measures to

FIGURE 1.1. Building Resilience to Climate Change in Transboundary Waters



Source: World Bank 2017a.

respond to climate impacts in one country can have multiple and substantial ramifications for neighboring countries, not the least of which is national and regional security. Acting solely at the national level limits the scope of resilience that countries can build compared to transboundary approaches. Adaptation and resilience building strategies must necessarily understand and account for transboundary considerations if they are to be effective, sustainable, and avoid maladaptation. In the absence of increased resilience, climate impacts are likely to reduce food security, reverse poverty alleviation gains, and slow economic growth nationally and regionally.

Failure to address the negative impacts of climate change in a river basin in a coordinated manner can threaten socioeconomic development and create new or reinforce existing competition and conflict over water resources between riparian states. For example, irrigation management upriver can impact water availability for

agriculture downstream, ecosystem management in one area can lead to species migrations with consequent economic impacts, or lack of flood preparation in one area can obviate investments and planning in an adjoining area. Furthermore, such actions can result in maladaptation compounding difficulties and damages to basin countries.

Building integrated resilience throughout a basin promotes efficiency of resource use, while avoiding potential negative consequences of actions that are fragmented, lack broad consultation, or do not consider the basin's interrelated nature. Transboundary approaches are based on a geographically complete picture of the impacts and provide a broader geographic scope of contribution to the solutions. For example, in basins where upstream storms lead to flooding downstream, monitoring and management of increased water load upstream can help to reduce and even prevent damage to downstream areas.

In basins where droughts throughout can affect the navigability of rivers and eventually prevent access of goods (e.g., food or fuel) to upstream communities in a different country, measures to ensure navigability or provide alternative routes can be essential to many countries' economic stability.

Actions to protect the upstream basin not only prevent impacts downstream but can also have positive resource and cost implications for downstream responses—and vice versa. Projects to protect or recuperate forest cover upstream can serve as a natural reservoir for water throughout the basin. These projects can help prevent rapid runoff and loss of topsoil, as well as avoid the need for more expensive infrastructure investments for flood protection. Coordination among countries that share transboundary river basins (e.g., through payment for ecosystem services) can lead to significant cost savings and benefit optimization by taking advantage of positive cross-border impacts and pooling of resources (Blumstein, 2016). Because of the additional benefits of transboundary approaches, there can be greater return on investments in transboundary projects than in single country ones. Acting within a basin unit, countries can collectively direct the savings from larger scale investments to preventative adaptation and resilience building.

Building resilience at the transboundary level hedges against financial risks because it spreads risks over a greater financing landscape, and because risks can be managed by multiple actors. Market failure or financial weakness in one country can potentially be covered by neighboring markets or through international partnerships.

Given the transboundary nature of both climate change and water resources, river basin approaches are critical to effectively and sustainably addressing climate change while maintaining sustainable development. As climate change impacts increase, transboundary cooperation offers an effective process to use established political, economic, and technical resources, institutions, and

capacity to address a wide array of cross-border development challenges and provide increased benefits to the greatest number of people (World Bank 2017a). In basins where transboundary agreements and basin organizations exist, these can provide robust institutional frameworks from which to develop and implement effective climate adaptation and resilience building projects. Global framework agreements—such as the United Nations Framework Convention on Climate Change (UNFCCC), the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes serviced by the United Nations Economic Commission for Europe (UNECE), and the 1997 United Nations Convention on the Non-Navigational Uses of International Watercourses—provide useful intergovernmental frameworks and guidelines for climate change adaptation in transboundary basins. For example, the Secretariat for the 1992 Water Convention housed by the UNECE¹ supports countries and basins in developing transboundary adaptation vulnerability assessments, adaptation strategies, and implementation through guidance, projects on the ground, and annual global workshops. In addition, UNECE and the International Network of Basin Organizations (INBO) have created a global network of basins working on climate change adaptation that supports transboundary basins in jointly addressing climate change.

1.2 Role of Transboundary RBOs

RBOs can support countries' adaptation and resilience building beyond what each individual country could achieve on its own. RBOs can help coordinate policies and planning, support effective implementation, and avoid the pitfalls of maladaptation, in which good intentions result in unwanted or unpredicted results. For example, engaging RBOs in the process of developing regional or national investment plans can provide a broader regional perspective and thereby help to mitigate risks and capitalize on broader opportunities. In this vein, numerous countries are currently in the process of developing sector plans (SPs) and national or

regional investment plans (NIPs; RIPs) to support implementation of countries' nationally determined contributions (NDCs) in line with the Paris Agreement with support from international organizations and climate finance donors. The appropriate articulation of a risk management narrative concerning transboundary river basins in those plans can ensure that subsequent investments are informed and aligned.

Regional institutions are uniquely positioned to carry out needs assessments, capacity building, project identification, and preparation, as well as coordinate or carry out implementation, particularly for information and institutional strengthening actions (see figure 1.1). Infrastructure assets are typically (although not always) developed and managed at the national level, even when the benefits of the infrastructure—such as a flow management structure—are shared by more than one country. That said, some projects can be implemented through national and regional actions, such as the installation and management of monitoring stations for weather information and analysis. In such a project the physical investments may be made on a national level, while a regional institution can provide capacity building for data collection and management, the institutional home for a database, analytical services, and information dissemination.

Transboundary RBOs are uniquely positioned to ensure long-term planning and implementation of resilience building projects. RBOs are permanent bodies with governance structures supported by intergovernmental—and often international—partnerships. They traditionally support the basin countries in the long-term planning and implementation of basin development, and their decision-making bodies function in close alignment with national and regional strategies. Working and aligning with these development strategies capitalizes on existing resources, relationships, and management structures.² As permanent institutions with separate legal personalities, RBOs provide a secondary level of sustainability that can buffer the effect of any country's government changes. They can ensure that

responses to climate change have a long-term outlook (beyond the duration of a legislative period or election cycle). These characteristics support resilience-building initiatives that are necessary to address climate change impacts now and in the future.

Institutional involvement of a transboundary basin organization, however, can add complexity, bureaucracy, and risk. Political dynamics in a shared river basin can impact the RBOs' ability to function smoothly. Risk management requires careful attention to these factors so that having a joint agency remains an advantage and not an added challenge. RBOs and their institutional capacity must be strengthened so they can be effective in pursuing basin benefits. Through knowledge sharing, strategic planning, advancing complementary development strategies, and promoting cooperative decision making, RBOs become critical support structures for addressing climate change.

The role of RBOs in transboundary resilience building and adaptation is variable and versatile. RBOs' roles can range from developing a shared understanding of future climate impacts, to supporting countries in developing bankable projects, to submitting and implementing adaptation projects. In their coordinating capacity, RBOs help plan, gather information, and communicate critical information about climate change issues. As such, institutional strengthening projects for RBOs can support climate resilience throughout the basin. (See table 1.2.)

National governments play an essential, complementary role in support of RBOs as they collectively work to ensure transboundary climate adaptation. Critical action and support from RBO member governments include, among others, active participation in the RBO governance; political will and guidance; development of national and regional policy; advocacy for RBO issues among external countries and development partners; empowerment of RBOs to assume necessary responsibility; protection of RBOs from national transitions or instability; development and enforcement

TABLE 1.2. Roles of RBOS and Regional Institutions

Project preparation	Project implementation	Project follow-up
Stakeholder consultation	Stakeholder engagement; capacity building	Communication; stakeholder polling
Regional needs assessments	Reporting	Monitoring and evaluation
Financial resource identification and mobilization	Finance partner coordination; funding recipient ^a ; funds disbursement ^b	
Information gathering	Information management	Historical record
Project proposal evaluation		Communication
Country coordination	Country coordination	Country coordination
Project document prep	Implementation, when mandated	Reporting

Note: RBO = river basin organization.

a. When the RBO is the recipient or target of project benefits.

b. If the RBO has financial or fiduciary powers.

of national regulatory frameworks to support project viability and success; and budget and resource support.

RBOs can build evidence for strategic regional climate action through basin assessments and investment readiness work. Basin-level analyses support the articulation of a more robust case for investments in sector, national, and regional plans, as well as facilitate constructive dialogue with potential donors.

Several transboundary basins, especially those with established basin organizations, are taking cooperative approaches to addressing climate change. Basin organizations are taking action by collecting climate-related data, developing adaptation strategies, and implementing activities on the ground. Even in basins without RBOs, cooperation on climate change adaptation is possible; see, for instance, transboundary adaptation strategies in the Dniester and Neman river basins in Eastern Europe, as well as in the Mekong river basin (see box 1.1). Sometimes the need for cooperation on climate change adaptation can even facilitate transboundary cooperation more broadly.

BOX 1.1. Case Study: Mekong Climate Change Adaptation Strategy and Action Plan for the Lower Mekong Basin

- **Lower Mekong Basin shared by Cambodia, Lao People's Democratic Republic, Thailand, and Vietnam**
- **Implementing agencies: Mekong River Commission**

The Mekong Climate Change Adaptation Strategy and Action Plan (MASAP) 2018–2022 supports the member countries of the Mekong River Commission (MRC) in planning for addressing transboundary impacts of climate change and needs for transboundary adaptation in the Lower Mekong Basin (LMB). Approved in 2017, the MASAP sets out the MRC's strategic priorities and actions at the basin level. Member countries have agreed to implement the following seven strategic priorities:

- Mainstream climate change into regional and national policies, programs, and plans
- Enhance regional and international cooperation and partnership on adaptation
- Prepare transboundary and gender-sensitive adaptation options
- Support access to adaptation finance

box continues next page

BOX 1.1. continued

- Enhance monitoring, data collection, and sharing
- Strengthen capacity on development of climate change adaptation strategies and plans
- Improve outreach of MRC products on climate change and adaptation

Financing Mechanisms

Although the MRC Basket Fund will implement the MASAP, the MRC will further identify and prepare joint projects on transboundary and gender-sensitive adaptation to address climate change issues in sensitive hotspots that need urgent actions between two or more member countries. The joint projects will then be further submitted for funding and implementation support among development partners as well as climate change finance institutions.

Source: Timmerman, et al. 2014.

TABLE 1.3. RBO Challenges and Opportunities in Raising Climate Financing

Challenges	Opportunities
<ul style="list-style-type: none"> • Uncertainty about the transboundary scope and nature of climate impacts. • Coordination, integration, and alignment of basin planning and implementation with national, regional, and local planning and priorities. This can be particularly acute in large basins with many countries and delicate diplomatic relationships. • Limited resources and difficulties in allocating funds to and through a multicountry institution. • While the economic returns of large, multipurpose projects may be significant, indirect benefits and public good benefits do not necessarily translate into direct revenue streams that can sustain these investments.^a • Options for funding to RBOs and basins are limited when compared with sovereign states by criteria and rules of funding institutions. • RBOs may lack revenue streams or the required legal personality to qualify as a borrower for loans. • Legal status may affect RBOs' ability to receive funds on behalf of the countries, especially accessing concessional finance. • Given limited availability of climate finance, there is a risk that RBO-generated projects may be seen as "competition" by national institutions. 	<ul style="list-style-type: none"> • Climate information systems increase as countries share resources and capacity through basin initiatives. • Transboundary cooperation can improve coordination of measures at the river, lake basin, or aquifer levels, thereby enhancing impacts. • Strategic use of funding over related geographic and thematic areas creates greater efficiency and effectiveness when resources are limited. • Negative impacts on other riparian countries and maladaptation from unilateral measures can be avoided or mitigated. • Cooperative management of transboundary basins addresses challenges that can provide widespread and exponential benefits to the region and beyond, providing an important public good. This is particularly true in the case of adaptation and resilience building, in which addressing the cause is a shared responsibility and the harms avoided become benefits to all.^a • The public good benefits position transboundary initiatives and projects for concessional public finance, because they demonstrate characteristics that concessional financiers consider most bankable.^a • Transboundary basin projects and resources can be used to complement national efforts and limited RBO budgets. • The geographic scope of basin-level planning, implementation, and monitoring aligns logically with the geographic scope of climate impacts, and is therefore well suited to understanding the risks and finding potential solutions.

Note: RBO = river basin organization.

a. SIWI 2007.

Some RBOs have elaborated strategies and project proposals to access climate financing. The RBOs responsible for the Danube, Dniester, Mekong, Neman, Nile, and Rhine river basins respectively have finalized their transboundary adaptation strategies; while others, such as those responsible for the Sava and Chu Talas river basins, have strategies under development.³ In addition to these basinwide adaptation strategies, the Niger and Lake Chad basin organizations have developed climate resilience investment plans to enable strategic resource mobilization and implementation support. Still, many RBOs have not begun adaptation planning and seek financing. In these efforts, RBOs face challenges and opportunities as summarized in table 1.3.

Notes

1. See the UNECE “Water Convention” website, <https://www.unece.org/env/water/>.
2. Options for building resilience to climate change will be considerably smaller if limited to actions undertaken by individual countries only—and run the risk of counterproductive investments when viewed at the regional scale (World Bank 2018).
3. Numerous transboundary river basin adaptation strategies exist or are under development, including the Mekong Adaptation Strategy and Action Plan: Objectives and Roadmap, <http://www.mrcmekong.org/assets/Publications/Events/2nd-CCAI-Forum/5-5-Mekong-Adaptation-Strategy-and-Action-Plan.pdf>; Strategic Framework for Adaptation to Climate Change in the Dniester River Basin, https://www.unece.org/fileadmin/DAM/env/documents/2016/wat/04Apr_6-7_Workshop/Strategic_Framework_Dniester_draft_translation_Engl.pdf; Strategic Framework for Adaptation to Climate Change in the Neman River Basin, https://www.unece.org/fileadmin/DAM/env/documents/2016/wat/04Apr_6-7_Workshop/Strategy_of_Adaptation_to_Climate_Change_ENG_for_print.pdf; Danube River Basin Climate Adaptation Strategy (2012), https://www.icpdr.org/main/sites/default/files/nodes/documents/icpdr_climate-adaptation-strategy.pdf; Climate Change Strategy for the Nile Basin, <http://nileis.nilebasin.org/system/files/23.10.13%20climate%20change%20strategy.pdf>; Climate Change Adaptation Strategy for the Rhine River Basin, <https://www.riob.org/fr/file/290577/download?token=jY1aoNAN>; Water and Climate Adaptation Plan for the Sava River Basin, <https://openknowledge.worldbank.org/handle/10986/22944>.

Chapter 2

Accessing Finance for Transboundary Adaptation and Climate Resilience Initiatives

The costs of adapting to climate change and building resilience increase annually with the onset of climate change. According to *The Adaptation Gap Report* (UNEP 2017), the cost of adapting to climate change in developing countries is estimated to reach between \$280 billion and \$500 billion per year by 2050, a figure that is four to five times greater than previous estimates.

Availability of financing for climate change is increasing globally, yet access to funds and implementation is not simple, even for individual countries, and demand exceeds both current and projected availability.

Resources for climate change responses are available through climate funds, multilateral development banks, and development cooperation partners. While developed countries have mobilized significant levels of financing to support climate action in accordance with their obligations under the United Nations Framework Convention on Climate Change (UNFCCC), current financing falls far short of what is needed to protect populations and adequately support adaptation efforts. Developing countries will need to be more resourceful in accessing existing funds, leveraging new finance, and working strategically with national and regional development plans, budgets, and resources to meet increasing needs.

While climate finance is available to countries for both mitigation and adaptation activities, the transboundary river basin context often requires tailored approaches that do not necessarily fit the most common approaches to accessing finance. Existing financing sources have distinct procedures and project cycles, and many do not envisage financing projects that cross international borders. Nevertheless, the benefits of transboundary river basin adaptation projects are numerous and require persistence from both donors and project proponents to find solutions and ensure these projects

receive support. First, it is critical to understand what can make a transboundary adaptation project “bankable.” What will ensure that the project receives financing and is successful in its implementation? Developing bankable projects for the transboundary context requires understanding the available sources. Policy makers and other stakeholders must also address project requirements, articulation and attention of basin-specific risks, political awareness, and consideration of ownership and implementation responsibilities throughout the project cycle.

Examples of both practical and innovative approaches to access and deliver financing within a transboundary context are available. RBOs should remain optimistic in the changing financing landscape that despite inherent challenges, they offer an efficient and effective way of delivering climate adaptation results. An institution’s administrative rules and procedures may preclude or disfavor multicountry projects, or additional administrative burdens of such projects may discourage institutions from considering such projects. However, given the broader public good benefits, RBOs or riparian countries acting jointly should be able to advocate convincingly about the benefits of transboundary approaches to overcome these hurdles. When financing directly to the RBO is not possible, or when financing sources fund only single country projects, creative solutions are possible. For instance, the RBO can provide administrative support, implementation coordination, or fulfill similar roles, while the financing is channeled through individual riparian countries as implementers.

2.1 Global Cooperation and Climate Finance

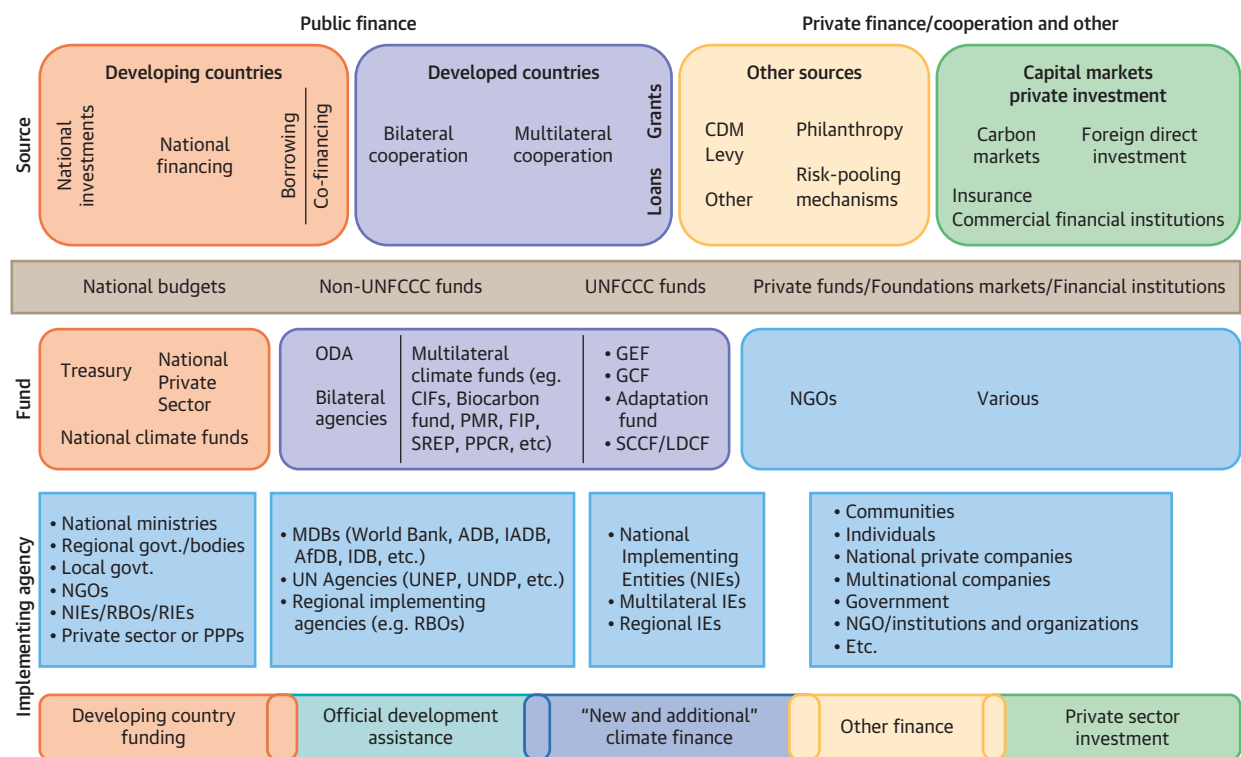
A growing architecture of global cooperation for climate change ensures that financial support is available to

developing countries. (See figure 2.1.) Accessing and effectively using these funds pose challenges, however, due to the multiplicity of funds and procedures as well as the readiness and absorption capacity of those in need. Due to needs and demands far exceeding available finance, decision makers must find efficient, cost-effective approaches that increase the impact and sustainability of funding. International cooperation for climate change covers only a portion of the financing requirements for building resilience. Countries will therefore need to access additional concessional and private financing that may expand

beyond the strict bounds of climate funding to cover their development needs.

Climate finance is intended to support either activities that reduce greenhouse gas emissions (mitigation) or strategies and actions that help prevent and respond to the impact of climate change (adaptation). Climate finance covers studies, project preparation grants, activities that enable implementation, small- to large-scale investments, technology development and transfer, capacity building, procurement, mitigation or adaptation efforts and their means of implementation,

FIGURE 2.1. Global Climate Finance Architecture



Sources: Adapted and simplified based on ODI/HBS 2016, Buchner et al. 2017, and WRI, <https://www.wri.org/resources/charts-graphs/global-architecture-climate-finance>.

Note: ADB = Asian Development Bank; AfDB = African Development Bank; FIP = Forest Investment Program; GCF = Green Climate Fund; GEF = Global Environment Facility; IADB = Inter-American Development Bank; IDB = Islamic Development Bank; IE = implementing entity; LDCF = Least Developed Countries Fund; MDB = multilateral development bank; NGO = nongovernmental organization; NIE = national implementing entity; ODA = overseas development assistance; PPCR = Pilot Program for Climate Resilience; PMR = Partnership for Market Readiness; PPP = public-private partnership; RBO = river basin organization; RIE = regional implementing entity; SCCF = Special Climate Change Fund; SREP = Scaling Up Renewable Energy Program for Low Income Countries; UNDP = United Nations Development Programme; UNEP = United Nations Environment Programme; UNFCC = United Nations Framework Convention on Climate Change.

among others. In addition to financing adaptation to impacts, since 2016, climate finance also addresses loss and damage associated with impacts of climate change that some developing countries are already experiencing. The Warsaw Mechanism on Loss and Damage¹ is a UNFCCC initiative to enhance knowledge, action, and support to the most vulnerable developing countries, including finance issues. Financing for loss and damage is yet to be seen in practice (Durand et al. 2016).

Each fund, financier, or donor has differing rules and procedures that need to be followed when applying for financing and for project implementation. The levels of autonomy for the implementing party differ accordingly. Adaptation and resilience financing can take many forms and come from a variety of sources. The greatest autonomy for a country occurs when using national budgets to fund adaptation. A high margin of autonomy is also maintained through “direct access,” which is available only under a limited number of funds, as explained in the following sections. In contrast, substantive donor involvement takes place at all stages of the project cycle in bilateral and multilateral financing. Private and nongovernmental finance also typically involves a high level of involvement in decision making and implementation by the financiers, as will blended finance, in which multiple funding sources are involved. Both autonomy and involvement have benefits and limitations.

A beneficiary should carefully consider its needs and circumstances on a project-by-project basis when identifying the appropriate funding source. Transboundary institutions’ level of autonomy and access to various funding sources will depend on the mandate and resources granted to the RBO by its member states. As such, an evaluation of the existing RBO mandate, resources, and legal status, and how these may affect financing eligibility, is a useful first step to inform discussion among member countries on how to source adaptation financing.

Bankable projects in the context of global “climate finance” require the following:

- Clearly articulated link to climate change impacts
- Familiarity and strict compliance with funding procedures
- Complementary financing (sometimes), for example, through co-financing or bundled or blended financing from other sources

The national adoption plan (NAP) and nationally determined contribution (NDC) development processes allow countries to assess project costs, evaluate current budgeting needs, and begin developing project proposals for priority issues. NAPs and NDCs, which have emerged from the UNFCCC process, guide countries in their planning and implementation of climate action. Most countries have national adaptation strategies and plans in place or under development. While funding for the preparation of NAPs and NDCs is readily available to most developing countries, funding for implementation of adaptation and mitigation projects happens on a project-by-project basis by application to one or more of the existing funds.

Most countries are also mainstreaming climate considerations throughout their broader national planning and development strategies; however, this does not always account for transboundary aspects of adaptation. The mainstreaming process is critical because it allows ministries of finance to incorporate climate costs into immediate and long-term budgetary planning. It also incorporates climate vulnerability considerations throughout the sectoral ministries and in discussions with development partners. The predominantly national focus of these approaches and processes, however, tends not to recognize the transboundary nature of climate impacts, when relevant, nor the opportunities of working through RBOs to achieve greater impacts more efficiently. Therefore, it is often incumbent on the RBOs, or the ministries of water that

are customarily represented therein, to advocate for a transboundary approach to project development.

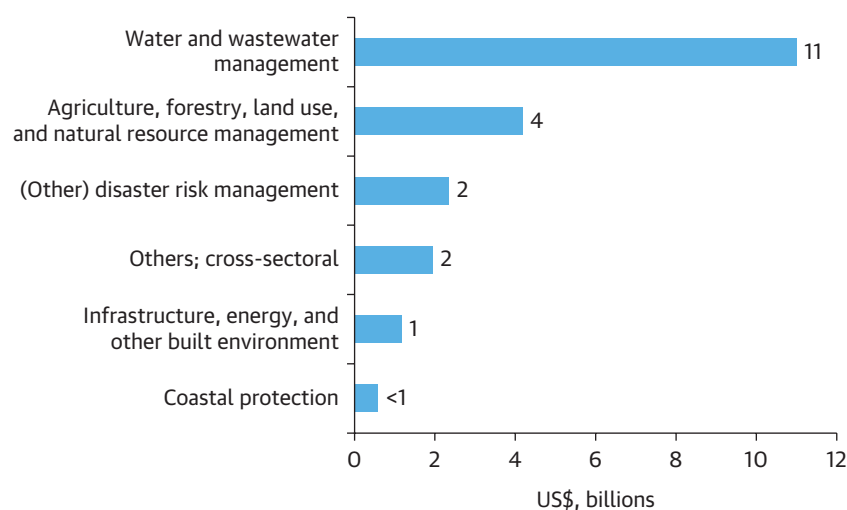
2.2 Available Finance and Investment for Adaptation and Resilience Building

A clear picture of available climate finance can better inform decision makers and investors at the national, regional, and basin levels. Familiarity with the full array of financial institutions, including their priorities and procedures, is key to formulating a balanced finance portfolio, especially for large-scale adaptation projects such as dams, irrigation, or weather systems. Most climate financing for adaptation in developing countries is channeled through bilateral, regional, or multilateral mechanisms. These mechanisms are similar to the traditional development assistance mechanisms, but the difference appears in the funding approach of each fund and each agency's respective project cycle. Mitigation, in contrast, is predominantly funded by private finance with smaller amounts of public and concessional finance serving to anchor and leverage the larger private investments. Investments for climate change reached US\$437 billion in 2015, 66 percent of which was private

financing, and lowered to US\$383 billion in 2016. Over 2015-16, 79 percent of finance in developing countries was raised in the same country in which it was spent, and there is a steady upward trend of domestically raised investment (Buchner et al. 2017). In anticipation of the Paris Agreement, multilateral development finance institutions committed to scale up climate finance, with targets ranging from 25 percent to 40 percent of their total business by 2020. As of early 2017, these institutions, collectively, are more than three-quarters of the way toward those goals (World Bank 2017c).

Public and private finance for adaptation projects is a lesser percentage of overall climate finance; however, global negotiations promise greater attention, especially in light of increasing climate impacts and scientific warnings. Studies indicate that adaptation financing dropped slightly to 16 percent of overall climate finance in 2016 with US\$26 billion in investments. Notably, of all adaptation sectors, water and wastewater management received 51 percent of global public finance during 2015/16, and national investments in the sector have far exceeded all other sectors (Buchner et al. 2017). (See figure 2.2.) Recent climate-related disasters

FIGURE 2.2. Average Annual Public Investments in Adaptation, 2015-16



Source: Buchner et al. 2017.

around the globe (such as hurricanes Harvey, Maria, and Irma—with costs exceeding US\$300 billion) are pressing governments to invest in preventive measures and resilience building.

Financing for adaptation and resilience in the transboundary river basin context is available as grants or loans through such financing sources as multilateral development banks, global climate funds, international financing institutions, bilateral donors, and private partners. Each funding source has different financing procedures and project cycles, which can make accessing financing more challenging for countries and RBOs. To facilitate resource mobilization in a transboundary context, RBOs should, if possible, have dedicated experts on climate finance who know the spectrum of financing sources, understand procedures, and develop relationships with donors and financing partners. These finance experts require the support of technical teams comprising national government experts, scientists, nongovernmental organizations (NGOs) (such as universities or research institutions), and other regional or international partners. These teams can constructively support relevant steps in the project cycle (such as needs assessments, evaluations, and monitoring) and the success of the project from start to finish. Table A.1 in appendix A compiles the most common funding sources for climate adaptation of relevance to transboundary basins.

Multilateral institutions, such as the World Bank, the Global Environment Facility (GEF), and regional development banks, have specific climate funds, some of which are accessible to transboundary institutions. Some multilateral climate funds are purely grant-based, while others provide both grants and concessional loans. Some financing institutions, such as the African Development Bank (AfDB), give special priority to climate projects aligned with NAPs or a country's NDC. In addition, most bilateral donors have specific funds for climate change with dedicated levels of financing, specific financing modalities and procedures, and, often, particular requirements for each project type.

Project cycles vary by institution, especially regarding implementation, monitoring, and evaluation.

Accreditation permitting countries or institutions to receive, manage, or implement climate financing is sometimes required and can be complex, requiring careful consideration as to the costs and benefits. In most cases, accreditation enables direct access by a country or organization, increasing ownership and financial benefit.

2.3 Climate Finance and Funds Arising from the UN Climate Convention

Financing climate mitigation and adaptation is one of the specific commitments of developed countries to developing countries under Article 4 of the UNFCCC. This section describes the key funding mechanisms established by agreements under the United Nations Framework Convention on Climate Change (UNFCCC). Unlike overseas development assistance (ODA), this category of climate finance emerges from a treaty obligation and, as such, has rules and modalities agreed to by all member states. Principally, climate finance under the UNFCCC is based on the commitment of developed countries to support mitigation and adaptation in developing countries. Not all financing for climate change originates from or is accounted for as part of these obligations. A significant amount of public, private, and concessional finance for climate change projects is not related to or governed by the international climate agreements. It is useful to understand the legal basis and means of accessing financing under the global agreements related to climate finance as distinguished from other sources of financing to mobilize all potential resources, strategically combining as needed in a transboundary context.

The UNFCCC specifies when resources will cover full cost (in the case of reporting requirements under the Convention) and when they will cover “incremental costs.” Based on the UNFCCC methodology, incremental costs cover the difference between a less costly,

more atmosphere-polluting option and an alternative, which is more climate friendly or resilient (and often more expensive).² “Agreed full cost,” on the other hand, covers the entire cost of a climate project. Article 4.3 of the UNFCCC delineates what projects under the Financial Mechanism have incremental or full cost coverage.

The UNFCCC created a Financial Mechanism to provide agreed financial resources to developing countries. All decisions on policies, rules, priorities, and eligibility criteria related to the Mechanism are made by the Conference of the Parties (COP), which meets annually and makes decisions on how the Mechanism functions. In 1994, the GEF became the operating entity of this Mechanism. Countries initially established three special funds: the Special Climate Change Fund (SCCF), the Least Developed Countries Fund (LDCF), and the Adaptation Fund (AF)—all managed by the GEF—to support climate projects. In 2010, the Green Climate Fund (GCF) became an additional operating entity. In 2015 it received its mandate to serve the Paris Agreement.³

2.3.1 Global Environment Facility

The GEF is one of the primary institutions currently funding transboundary river basins. It is the Financial Mechanism for the UNFCCC, as well as other major multilateral environmental agreements (MEAs), and manages designated financing for climate mitigation and adaptation, including the SCCF and LDCF. Priority sectors include agriculture, water resources management, infrastructure, and health.

To be eligible for climate finance from the GEF, potential projects or programs have to fulfill various criteria. Proponent countries must have ratified the UNFCCC, be members of the World Bank, or be eligible for United Nations Development Programme (UNDP) technical assistance. The project must address one or more of the GEF focal area strategies: biodiversity, international waters, land degradation, chemicals and waste,

and climate change mitigation, or cross-cutting issues such as sustainable forest management. GEF financing can cover only *new and additional* grant and concessional funding for *agreed incremental costs* to achieve “global environmental benefits” in these GEF focal areas. Proponents must demonstrate qualitatively, not quantitatively, that a project is likely to generate global environmental benefits (GEF 2007).⁴ Transboundary river basins arguably have a strategic advantage because of the layered co-benefits to water supply, water quality, ecosystems, and food security, among others. Additional requirements for GEF projects are that a project should demonstrate country ownership; it should align with national sustainable development priorities, involve wide national stakeholder participation, and be country driven in both the proposal and implementation stages.

The GEF project cycle has four phases: project concept development; project preparation; project appraisal; and project approval and implementation supervision, including completion and evaluation. Accredited GEF agencies prepare and implement most projects, except for special funds eligible for direct financing.⁵ There are four types of projects:

- Full-sized projects over US\$2 million go through every phase of the GEF project cycle and are approved by the council.
- Medium-sized projects under US\$2 million can go through expedited processing, in which approval is delegated to the CEO.
- Enabling activities under US\$450,000 in GEF funds go through an expedited processing in which approval has been delegated by the council to the CEO, while those over US\$450,000 follow the regular project cycle.
- Programmatic approaches strive to secure larger-scale, sustained impact on the global environment through medium- to long-term strategies that are consistent with national and regional plans.

Any stakeholder group, including countries, GEF agencies, or civil society organizations, can seek programmatic financing, as long as they provide “enhanced accountability and oversight.” While strengthening country ownership, these projects aim to leverage resources from other financing partners.

According to GEF (2010): “Programmatic frameworks have greater flexibility in program design. They feature a Project Framework Document (PFD) commitment deadline rather than the current fixed country plan. Because of this latitude, they enable proponents to develop project concepts *during* program implementation rather than all in advance. There are specific guidelines that provide procedures to submit and resubmit programs including ‘Integrated Approaches’ [stress added]. This approach provides a potential opportunity for transboundary river-basin organizations.”

In addition to its mandate to serve as the financing mechanism for large MEAs, GEF finances projects that achieve other global environmental benefits, including improving management of transboundary waters. GEF is the largest grant funding mechanism for multicountry collaboration on water and oceans. Projects often bring together governments, private sector, NGOs, and multilateral institutions. GEF implementing agencies—which include UN agencies (such as the Food and Agriculture Organization [FAO], the United Nations Development Programme [UNDP]; and the United Nations Environment Programme [UNEP]), international and regional development banks, and accredited NGOs—assist countries or basins in the development and implementation of projects. GEF requires co-financing from project proponents or other sources, which may include additional lending, bilateral agency grants, private sector finance, or in-kind contributions. GEF, like most multilateral institutions, has a robust

environmental and social safeguards policy as part of GEF agency accreditation. The unique experience of GEF across its focal areas, including climate change and international waters, makes it an attractive partner for financing transboundary river basin projects for adaptation. (See box 2.1 for an example)

GEF has funded approximately US\$1.6 billion in grants for adaptation activities that reduce vulnerability to the adverse effects of climate change. In mitigation projects it estimates to have generated US\$38.3 billion in investments, with US\$4.2 billion of its own investment, while the LDCF and SCCF have leveraged US\$5 billion and US\$2.6 billion, respectively.

2.3.2 Special Climate Change and Least Developed Country Funds

The SCCF supports adaptation and funds technology transfer and mitigation projects in selected sectors.

Projects must be (i) country-driven, cost-effective, and integrated into national sustainable development and poverty reduction strategies; and (ii) consider national communications or National Adaptation Programmes of Action (NAPAs) and other relevant studies and information. The SCCF supports adaptation projects in developing countries on (i) water resources management; (ii) land management; (iii) agriculture; (iv) health; (v) infrastructure development; (vi) fragile ecosystems (including mountain ecosystems); (vii) integrated coastal zone management; and (viii) climatic disaster risk management, including supporting existing or new national and regional centers and information networks for rapid response to extreme weather events.⁶

SCCF finances full-sized and medium-sized projects (greater than US\$2 million grants and less than US\$2 million grants, respectively). (See box 2.2) As of 2017, the SCCF has financed 79 adaptation projects in 77 countries, with US\$348 million in grant financing.⁷ It complements the LDCF, as all developing-country parties to the UNFCCC are eligible to receive SCCF support. Highly vulnerable small island developing states

BOX 2.1. Case Study: Fostering Multi-Country Cooperation over Conjunctive Surface and Groundwater Management in the Bug and Neman Transboundary River Basins and the Underlying Aquifer Systems

GEF-IW project ID 9767; GEF grant funding: approx. US\$3 million

The proposed project assists Belarus and Ukraine to (i) join Poland and Lithuania in reaching a common understanding of the water resources of the shared basins, the existing pressures and drivers of change impacting the sustainability of the resources, and the dependent ecosystems, in particular increasing climatic variability and change and to move toward joint planning and management of the basins; (ii) agree on policy, legal, and institutional reforms, and investments to improve water security and resilience to the impacts of climatic variability and change, and enhance the sustainability of the transboundary freshwater resources and dependent ecosystems in the Bug and Neman basins; and (iii) accelerate the transformative processes by pilot testing conjunctive management solutions, and consolidating transboundary coordination and cooperation. The project will also support countries in implementing the European Union Water Framework Directive (EU WFD) and the 1992 Water Convention serviced by the United Nations Economic Commission for Europe (UNECE).

The Transboundary Diagnostic Analysis (TDA) will embrace a comprehensive cross-sectoral approach analyzing freshwater resources in their entirety (surface and groundwater), and under many usage perspectives and interactions and under future climatic scenarios. This approach is a response to the priorities set forth by the GEF-6 IW Strategy on conjunctive surface and groundwater management, and on the water nexus conflicts. Another aspect of innovation is the broad geographic scope of the project, encompassing two adjacent and similar basins, artificially connected and characterized by the largely unregulated flows and by strong surface-groundwater interactions. Cooperation among the countries, both GEF beneficiaries and nonbeneficiaries, within this vast periglacial region, will maximize opportunities for broader adoption, and sharing of experiences.

(SIDS) that are not least developed countries (LDCs) and therefore ineligible for LDCF support have received SCCF adaptation support. At the behest of the UNFCCC COP, the SCCF provided grant financing toward a global support program for NAPs in non-LDCs.

The LDCF was created by UNFCCC parties to support the preparation and implementation of NAPAs in the 51 LDCs⁸ and is operated by GEF. The LDCF helps to identify priority activities, design, and implement adaptation projects. As mandated by the UNFCCC COP, the LDCF supports the NAPs process. As of 2017, the Fund has supported 252 projects and programs in 51 LDCs, the largest portfolio of adaptation projects of its kind. As of 2017, the Fund has approved around US\$1.2 billion in grant funding for projects and

programs, leveraging almost US\$5 billion in financing from partners, and is expected to deliver climate resilience benefits to more than 20 million people through the current portfolio of active projects (UN CDP 2016).

2.3.3 Adaptation Fund

In 2007, the Kyoto Protocol established the Adaptation Fund (AF) to bolster support for adaptation by generating financing through the Protocol's Clean Development Mechanism. The AF supports developing countries that are parties to the Kyoto Protocol that are particularly vulnerable to the adverse effects of climate change, including low-lying and other small island countries; countries with low-lying coastal, arid, and semi-arid areas or areas liable to floods, drought and desertification; and those with fragile mountainous ecosystems.⁹

BOX 2.2. Case Study: Drina River Basin Management Project

GEF-IW project ID 5556 and SCCF project ID 5723; GEF grant funding: approx. US\$10 million

In 2016 the GEF International Waters (GEF-IW) and the SCCF approved a combined grant of US\$10 million for the support of the West Balkans Drina River Basin. The project offers support to Bosnia-Herzegovina, Serbia, and Montenegro for capacity building and studies and investments to strengthen in-country capacity to plan and implement integrated, cooperative management of the Drina River Basin and to address climate change adaptation. Contributions from the SCCF and GEF-IW enable (i) investments in river management simulation models that would guide the preparation and implementation of regional, multisectoral basin plans and prepare for climate variability adaptation—as well as to strengthen hydrological and meteorological facilities; (ii) local pilot investments for enhanced emergency responses to floods and drought, and to reduce climate change risks; and (iii) institutional capacity development in the three countries for more effective, structural, and regulatory arrangements for river basin management and development, and to inform strategic investments of regional significance.

The project offers a strategy for ensuring sustainability and enabling the scaling up of successful Integrated Water Resources Management (IWRM) strategies and measures at the regional and national levels. The project is designed to align closely with national investment priorities and the Drina River Basin program and contribute toward a basinwide investment plan. Although the basin offers many investment opportunities, the externalities and trade-offs at the local and regional levels remain unquantified. Limited availability of data and analytical tools have kept individual countries from effectively prioritizing investments or evaluating the transboundary sharing of benefits and risks. In addition, the three countries have struggled with the operationalization of an IWRM approach in an environment of severe financial constraints.

The AF funds transboundary projects include two projects in West Africa and the Lake Victoria Basin, described in boxes 2.3 and 2.4. The regional pilot program was launched in May 2015 by the AF and covers four themes, including transboundary water management. Two or more countries in the same UN region, or adjacent regions—particularly countries that share a common border or similar adaptation challenges—can apply through multilateral or regional implementing entities, partnering with national implementing entities. Proposals need to highlight the added value of the regional approach.

An innovative feature of the AF is the option for countries to have “direct access” to funds. A developing country, having established an accredited national implementing entity (NIE), can receive funds directly

without the involvement of an external implementing agency, such as UNEP, UNDP, or a regional development bank. Parties to the UNFCCC have agreed to establish direct access for climate funds and have carried the practice over to the Green Climate Fund.

2.3.4 Green Climate Fund

The GCF, fully operational in 2015, is the newest actor in the multilateral climate finance architecture. The GCF Secretariat is based in the Republic of Korea. Like the GEF, it functions under the guidance of the UNFCCC COP. The 24 GCF board members have equal representation of developed and developing countries. They have developed policies and frameworks to receive, manage, approve, and program GCF projects. The Fund finances incremental costs of climate change for

BOX 2.3. Case Study: Integration of Climate Change Mitigation and Adaptation Measures in the Concerted Management of the W Transboundary Parc: Adapt-W Project

Thematic focal area: disaster risk reduction and early warning systems

Shared by Benin, Burkina Faso, and Niger, the W Transboundary Biosphere Reserve extends over 31,000 square kilometers to 50,000 square kilometers, including riparian areas (43 percent in Benin, 36 percent in Burkina Faso, and 21 percent in Niger). The project will strengthen the resilience of ecosystems and improve livelihoods through establishment of a multi-risk early warning system and the implementation of concrete adaptation measures.

- Component 1. Design and implementation of multi-risk early warning system (drought, floods, locust invasions, fires and land use change). Cost: US\$1.5 million.
- Component 2. Integrate climate change aspects and emergency plan into the park management plans at regional and national levels. Cost: US\$300,000.
- Component 3. Improve the resilience of ecosystems and livelihoods of neighboring and user populations through the implementation of concrete adaptation actions. Cost: US\$2.2 million.
- Component 4. Sensitize, strengthen and build capacity on previous experiences for a concerted, integrated and sustainable management of the W-Arly-Pendjari Transboundary Biosphere Complex. Cost: US\$300,000.

The project will involve regional, national, and local stakeholders. At the local level, the project's development and implementation will require the mobilization of populations and other local authorities, as well as associations, NGOs, villages, and women's cooperatives, among others. National executing entities in consultation with environment ministries in the three beneficiary countries will implement the project. The Sahara and Sahel Observatory (OSS) will serve as the project's regional implementing entity (RIE) and will be in charge of all financial, monitoring, and reporting aspects to AF. The project will be executed by a project management unit hosted by OSS. Other regional organizations will be involved, such as participating in the steering committee (Permanent Inter-State Committee for Drought Control in the Sahel [CILSS], Economic Community of West Africa States [ECOWAS], and West African Economic and Monetary Union [UEMOA]).

Source: Adaptation Fund 2015.

activities to enable enhanced action on adaptation, mitigation (including Reducing Emissions from Deforestation and Forest Degradation [REDD+]), and supporting developing countries' efforts to deliver on their NDCs. The GCF finances low emission and climate resilient projects and programs in the public and the private sectors that contribute to achieving at least one of its eight strategic impact areas. (See table 2.1.)

GCF requires three key steps for engagement. First, each country appoints a national designated authority (NDA),

or focal point. The NDA oversees the relationship between a developing country and the GCF. The NDA provides broad strategic oversight of the GCF's activities within the country and is the point of communication with the Fund. The NDA seeks to ensure consistency of funding proposals with national objectives and priorities. To date, more than 120 countries have established an NDA.

The second step is to identify and seek accreditation of entities to directly access GCF funds. The GCF channels

BOX 2.4. Case Study: Lake Victoria Basin Commission Climate Change Strategy and Action

Lake Victoria is the largest inland water body in Africa and the world's second largest freshwater, with surface area of 68,800 square kilometers. The Lake Victoria Basin (LVB), covering about 184,000 square kilometers, is shared with five East African Community (EAC) partner states (Burundi, Kenya, Rwanda, Tanzania, and Uganda). In recognition of the effects of Climate Change in EAC Partner States, the EAC approved the EAC Climate Change Master Plan, Policy and Strategy. EAC conducted a study on Climate Change Vulnerability Assessments, which demonstrated that climate change affects agriculture, transportation, wildlife, fisheries, power, health, and water resources in the LVB. To address climate change challenges in the LVB, the Lake Victoria Basin Commission (LVBC) approved the LVB Climate Change Strategy and Action plan. EAC and UNEP, through the LVBC, developed a LVB project proposal to implement LVB-CCSA and submitted the proposal to the Climate Change AF for funding.

Project preparation by UNEP and the LVBC included (i) review of the EAC Climate Change Strategy and LVB Climate Change Strategy and Action plan to understand priority areas for the proposed project; (ii) review of the Climate Change vulnerability assessment report to develop relevant recommendations and action areas; (iii) involvement of EAC partner states (Burundi, Kenya, Rwanda, Tanzania and Uganda) in the development and endorsement of the project proposal under the supervision of the LVBC and UNEP; (iv) LVB Sectoral Council of Ministers' approval of the draft project proposal; (v) submission of the approved final project proposal by UNEP to the Climate Change Adaptation Fund Secretariat in 2016 and approved in November 2017; (vi) establishment of the regional project steering committee comprising permanent secretaries from all the partner states to guide the project implementation; and (vii) development of a detailed action plan and budget to start implementation.

The proposal process benefited greatly from the partnership between the LVBC and UNEP, an international implementing entity with extensive experience in climate change financing proposal development and implementation. Project development and application procedures are complex and therefore require guidance from a Multilateral Implementing Entity (MIE) or Regional Implementing Entity (RIE) with knowledge of preparing and executing climate change policies, strategies, studies, and planning. The development of the project proposal should carefully follow AF guidelines. National Implementing Entity (NIE) endorsement letters from all designated signatories in the basin were needed throughout the proposal development stages, requiring full knowledge and engagement from all countries involved. Finally, the AF board was ready to provide support when requested.

Source: Case study provided by Dr. Ally Said Matano, Fredrick Mhina Mngube, and Eng Omari Mwinjaka (LVBC Secretariat).

TABLE 2.1. Green Climate Fund Strategic Impact Areas

Adaptation	Mitigation
Health, food, and water security	Energy generation and access
Livelihoods of people and communities	Transport
Infrastructure and built environment	Forests and land use
Ecosystems and ecosystem services	Buildings, cities, industries, and appliances

its resources through a network of NIEs and RIEs—not only through international finance institutions. Entities may be public, private, or NGOs operating at subnational, national, regional, and international levels. These institutions must align with the Fund's objectives and meet its fiduciary standards and environmental and social safeguards through an accreditation process. NDAs provide letters of nomination to direct access. As of April 16, 2018, 59 national, regional,

and international institutions have achieved accreditation under the GCF.

The final step is to develop projects and program proposals for funding through NIEs and RIEs. Proposals may be submitted from accredited entities and NDA at any time using the funding proposal template on the GCF website.¹⁰ Proposals are considered against the Fund's investment framework. To ensure country ownership, the board considers only funding proposals supported by a "letter of no-objection" from the NDA, indicating alignment between the project and other national strategies. The GCF can accept regional projects, supported by the NDAs, of all the countries involved (see example in box 2.5).

2.4 Private Sector Financing

Private sector finance is a substantial, important, but still relatively minor source of funding for adaptation. Currently, most private sector investments in adaptation finance—both domestic and international—focus on insurance schemes, such as micro-insurance schemes to provide support to individual households or small-scale farmers in cases of drought and flooding.

The primary objective of the private sector is financial return, driven by fiduciary responsibility to shareholders and investors. Social and environmental responsibility in the private sector—while gaining more importance in decision making and along supply and demand chains—remains a secondary goal. Nonetheless, in many instances the goals of financial profit and positive impact can align, especially with increasing consumer demand for equitable and sustainable products and services. Moreover, many climate change-related projects offer return on investment when associated with products or services that can produce gains. To date, more mitigation-related projects attract private investment, but increasingly adaptation project proponents are successfully forging partnerships with

private sector actors, especially in the water sector. Still, in the private sector context a project's "bankability" is directly contingent on the ability to recoup and secure a return on investment. In a transboundary river basin context, a private sector investor may look to the resource flows throughout the basin, even across borders, because if they do not, investing in production facilities, human resources, and correlated product or service chains may not be financial viable in the long term.

While private sources of finance make up the bulk of current funding for mitigation projects, even the larger infrastructure projects for climate adaptation are not yet optimizing the resources and capacity of the private sector. This may be because the private sector is unaware of the investment opportunities that climate change adaptation offers in their country or region, or because project proponents have yet to develop their own understanding and relationships with private sector partners. Recalling that most financing is sourced in the region in which it is spent, efforts to inform and connect with private investors could benefit transboundary RBOs and riparian countries considering transboundary infrastructure investments. RBOs, governments, and other project proponents need to increase their efforts or package adaptation efforts in ways that attract private sector investment. Alternatively, private sector can be considered for national-level financing of projects that contribute to a broader basin adaptation program.

The World Bank, regional banks, and other development agencies will often work with private finance institutions—including, for example, by engaging with the World Bank Group's International Finance Corporation (IFC) or private banks in countries and regions—to seek arrangements appropriate for local needs and attractive to private investors. Ultimately, blended finance provides a viable option for engaging the private sector.

BOX 2.5. GCF Accreditation Case Study: The OSS and Consultation Mechanism of the North Sahara Aquifer System (SASS)

30 member states

- **23 African countries:** Algeria, Arab Republic of Egypt, Burkina Faso, Cabo Verde, Chad, Côte d'Ivoire, Djibouti, Eritrea, Ethiopia, The Gambia, Guinea-Bissau, Kenya, Libya, Mali, Mauritania, Morocco, Niger, Nigeria, Senegal, Somalia, Sudan, Tunisia, and Uganda
- **7 non-African countries:** Belgium, Canada, France, Germany, Italy, Luxembourg, and Switzerland

13 member organizations

OSS programs and projects are financed by voluntary contributions, grants, and donations from its members and partners

Description

OSS is an international, intergovernmental organization with an African focus based in Tunisia. OSS initiates and facilitates partnerships around common challenges related to shared water resources management, implementation of international agreements on desertification, biodiversity, and climate change in the Sahara and Sahel region.

At the 18th GCF Board Session in 2017, the OSS was accredited as a GCF regional implementing agency. OSS is the fourth African entity to comply with GCF requirements, which makes it one of the key stakeholders in accessing climate finance in Africa. This accreditation will allow OSS to mobilize financing from the biggest climate fund endorsed by the international community.

OSS is also accredited as a regional implementing entity by the AF since 2013 and by the GCF since October 2017. It accordingly provides its member countries and partners with technical and institutional support for the development of project proposals in relation with climate change adaptation and mitigation. Funded by the AF and implemented by OSS for the benefit of Uganda, the Enhancing Resilience of Communities to Climate Change through Catchment Based Integrated Management of Water and Related Resources in Uganda Project (EURECCA) project is a perfect outcome of this process.

OSS has a set of policies that demonstrate the principles and procedures to assess the environmental, social and gender impacts that form an integral part of the Environmental and Social Risk Management System (ESMS) and is intended to build on the existing policies, operating procedures, and project cycle of OSS. In this context, the policy pursues the following objectives (among others):

- Define a common, all-encompassing framework to incorporate environmental, social, and gender standards into the planning, appraisal, implementation, and monitoring of measures financed by OSS.
- Promote transparency, predictability and accountability in the decision-making processes of environmental and social impact assessments (ESIAs) and screenings.
- Encourage project proponents and executing entities of projects directly funded or supported through OSS to have appropriate consideration for environmental and social impacts.
- The due diligence conducted includes the level of social and environmental risks commensurate to the scale and nature of the project being financed.

Source: OSS website, <http://www.oss-online.org/en/who-we-are>.

2.5 Concessional Loan Financing

Concessional loans are provided to borrowers on terms substantially more generous than loans based on market rates. Concessional loans may be achieved through interest rates below those available on the market or by grace periods, or a combination. Concessional finance is available through international and regional development banks and partners, as well as through some national banks with loans having long grace periods. In the transboundary river basin context, access to concessional financing can provide much needed finance to complement limited budgets and available resources for climate finance. Many developing countries access mainly nonconcessional financing for their development. Even LICs that have previously been largely dependent on concessional finance have recently been diversifying resource mobilization to less concessional and nonconcessional sources, including multilateral, bilateral, and commercial creditors as well as international bond markets.

2.6 Climate Bonds and Other Bond Options

Climate bonds, or “green bonds,” can help mobilize resources from domestic and international capital markets for adaptation, renewable energy, and other climate-friendly projects. They resemble conventional bonds, except that the proceeds are invested in

projects that generate climate benefits. A bond issuer raises a fixed amount of capital, repaying the capital (principal) and accrued interest (coupon) over a set period of time. The issuer must generate sufficient cash flows to repay interest and capital.

Climate bonds are innovative financial instruments wherein proceeds are invested exclusively in climate projects that generate climate or other environmental benefits for hydropower, energy efficiency, sustainable waste management, sustainable land use (forestry and agriculture), biodiversity, and clean water. Their structure, risks, and returns are otherwise identical to those of traditional bonds. For an example of how these could be used by an RBO see box 2.6. Globally, climate-aligned bonds stand at US\$895 billion, of which labeled green bonds stand at US\$221 billion outstanding issuances and unlabeled climate-aligned bonds at US\$674 billion in 2017 (Climate Bonds Initiative 2018). (See table 2.2.)

The use of climate bonds is growing globally for a wide array of sectors, including water. While only a small percentage of climate bond issuances has been related to adaptation projects, the water sector is perhaps the most attractive and viable (see figure 2.3). This financial tool could offer an opportunity for leveraging private finance for water supply and treatment projects, as well as other blended projects such as energy or agriculture, thus providing a source of co-financing that could make a project more bankable.

BOX 2.6. Climate Bonds for Adaptation in the Water Sector

Water scarcity is a threat to many regions of the world, which is increasing steadily with climate change. In most poor regions, water use is highly inefficient due to the high cost of efficiency technology. An RBO could create a basin water facility financed by water bonds, which would generate a guaranteed feed-in tariff for water supplies. The fund would guarantee a minimum price for water provided by a company proportionate to the region's water availability. As regional economies grow, so will the beneficiaries' ability to pay, enabling them to eventually pay the fees, at which point the tariff would become redundant. Such an arrangement could attract private investment to provide sustainable water, because there would be a guarantee of payment, and could furthermore enhance food security if designed with agricultural objectives.

Because public finance for climate adaptation has fallen short of estimated need, innovative financing solutions are indispensable. Promising options emerging in the global bond market for investors looking to diversify their investment portfolios with climate change adaptation solutions include (i) *catastrophe bonds*, linked to insurance that support financial resilience in the face of increasing climate impacts; (ii) *environmental impact bonds*, incentivize investors by paying a higher

rate of return to investors when a certain predetermined objective (e.g., avoiding damage from sea level rise) is met; and (iii) *resilience bonds*. The latter approach, in the pilot phase, seeks to incentivize long-term decision making by offering a premium discount for the issuer, contingent on a completed infrastructure improvement.

2.7 Interaction and Cooperation between Public and Private Finance

Public finance, while significantly smaller in scale and reach to private finance, drives private investment and grows annually. In 2014, of the US\$392 billion dollars of climate finance, 61 percent was private, and 39 percent was public (CPI 2016). In the context of constrained public budgets, significant additional private sector finance into adaptation will be required to put developing countries on low carbon, climate resilient development pathways. Generally, investing in developing countries is an attractive source of returns for private sector capital providers. In the water sector and transboundary basin contexts, there is significant potential

TABLE 2.2. Water-Themed Bonds, by Region

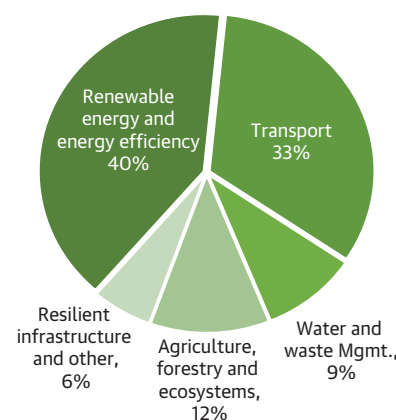
Region	Amount (US\$, billions)	Issuers	Deals	IG rated (%)	Hard CCY (%)
Europe	63.4	23	231	94	99
Asia Pacific	19.7	21	190	80	15
North America	15	30	87	99	99
Latin America	2.3	10	54	<1	15
Africa	0.1	1	2	—	100
Total	100.5	85	564	—	—

Source: Climate Bonds Initiative 2018.

Note: CCY = currency; IG = investment grade; — = not available.

FIGURE 2.3. Green Bond Commitments, by Sector

Equity, US\$ (billions) ^a	Committed			Allocated and outstanding
	Mitigation	Adaptation	Total	
Renewable energy and energy efficiency	6.2	0.0	6.2	3.8
Transport	5.1	0.0	5.1	2.0
Water, wastewater, and solid waste management	0.1	1.3	1.4	0.9
Agriculture, land use, and forestry	0.5	1.3	1.8	0.8
Resilient infrastructure, built environment, and other	0.3	0.7	0.9	0.7
Total	12.1	3.3	15.4	8.3
	79	21	100	



Source: World Bank 2017b, p. 7.

a. May not add up due to rounding.

for large public and private investments in irrigation, water storage, and water supply, among others, to be adaptation related.

There is an emerging market for private finance in adaptation. Recent signals from large institutional investors suggest that further capital could be raised specifically for adaptation activities, provided the right investment products are available (ABD 2016). There are various ways in which private finance can support adaptation. Debt, in particular, can be used as an enabling instrument for both publicly and privately initiated adaptation, including direct project lending and credit lines to local finance institutions. However, to reach poor populations, finance may need to be delivered in new ways, including through microfinance products. Private finance will likely not be equitably distributed among countries, but instead will focus on large emerging economies and resource rich countries. Public finance will therefore continue to play a crucial role in ensuring adequate finance is available to those countries not benefiting from private flows, and in helping to leverage private finance. In this regard, blended finance is an important option to consider when seeking funding.

2.8 Bundled, Blended, Multidonor, and Other Financial Sources

At the transboundary level, project scale and other complexities—including those related to the involvement of multiple countries—are sometimes best served by combining financing sources to meet project requirements. This might entail combining co-financing from national budgets with an international contribution, establishing finance consortia involving multiple institutional partners and financiers, blending public and private sources, or a combination.

Blended finance mixes forms of capital to support development. It can bring together public and private finance. Blended climate finance uses development finance to leverage additional resources in support of climate

compatible development projects, making them financially more viable and as such more bankable.

Incremental costs are generally funded by public climate finance resources; these contributions can motivate investment decisions of private entities and investors.

Capital investments in climate projects, in contrast, are investments that need to be paid back and are often funded by private sources. Large-scale, complex climate projects often require both incremental and capital costs, and as such project proponents frequently need to combine, or “blend,” private and public funding in their proposals.

Blending offers the opportunity to scale up commercial financing for developing countries and to channel this financing toward investments with climate impacts.

Blended finance incorporates different types of financing into a single project or fund (e.g., grants; concessional and market rate debt; equity investment; and risk mitigation instruments, such as insurance or guarantees) to cover full costs and best allocate individual risks. Blended finance allows project proponents to manage project risks more effectively and use the more limited public finance to catalyze private investment. The IFC and the GCF have been trying blended finance approaches for climate projects. Implementing entities, such as the World Bank or regional development banks, can advise on the viability of a blended approach, depending on the project. In 2017, a collection of international, bilateral, nongovernmental, and private sector partners created an innovative climate resilience investment fund to support adaptation efforts in the most vulnerable countries. The fund was co-created by a U.S.-based investment firm called the Lightsmith Group, in collaboration with the GEF’s SCCF project the Climate Resilience and Adaptation Finance and Technology Transfer Facility (CRAFT),¹¹ Conservation International, and the Nordic Development Fund. The fund will invest in companies that provide “resilience intelligence,” such as data analytics, modeling, and forecasting, or “resilience solutions,” including products and services that address climate risks in areas such as water, agriculture,

and energy. Other potential investments include “climate smart” supply chain analytics software, drought-tolerant tree crops, coastal protection, and disaster recovery. The fund will provide private investors the opportunity to invest in a climate change fund that exclusively focuses on resilience-related companies.

Transboundary RBOs can facilitate resource mobilization from a variety of international financing institutions by providing a coordination and compilation service. For some international financiers and multilateral development banks (MDBs), small projects are less attractive

because of high administrative costs. At the same time, a series of smaller projects is often necessary to address critical resilience building or adaptation needs. RBOs can compile multiple smaller projects within a larger project proposal or programmatic approach that are then more attractive to international financiers because of the larger financing amount. In addition, the coordination and management role played by the RBO in implementation and the reduced administrative burden for the financier makes such an approach attractive. (See box 2.7.) Investor roundtables can be organized to present such proposals to a group of financiers.

BOX 2.7. Case Study: Climate Resilience Investment Project for the Niger River Basin

Implementing partners: World Bank, AfDB, bilateral agencies, Niger Basin Authority, national governments

Description

The Niger Basin is home to more than 112 million people throughout the nine countries of Benin, Burkina Faso, Cameroon, Chad, Côte d’Ivoire, Guinea, Mali, Niger, and Nigeria. The Niger River and its tributaries are a vital lifeline providing drinking water, irrigation, aquaculture, energy, and transport to these nine riparian countries. Heavy reliance on natural resources, combined with ongoing conflicts and political instability, make it one of the most fragile river basins in Africa. Over 70 percent of the population lives in areas where food security depends on unreliable rainfall and highly variable interannual and intra-annual river flows. Climate variability has long been a challenge and an obstacle for development in the basin.

The Niger Basin countries recognize that the shared nature of their water resources presents an opportunity for a collaboration and coordination that will derive greater resilience building outcomes. The Investment Plan for the Strengthening of Resilience to Climate Change was prepared and will be implemented by the Niger riparian countries and the Niger Basin Authority (NBA), one of the oldest African intergovernmental agencies, created in 1964 in Niamey, Niger.

The Plan includes 246 actions divided in two packages that focus knowledge management and sectoral investments, including measures targeting vulnerability to water stress, variability, soil, land, and ecosystem degradation, and strengthening resilience. Actions were culled from the NBA’s Operational Plan, member countries’ NAPAs and NAPs, as well as country proposals. This comprehensive basin approach to address development and resilience is widely considered a good practice, but rarely implemented in developing countries due to the urgency of many competing development needs as well as resource and capacity constraints.

Full implementation of the Plan is estimated to cost US\$3.11 billion. The Plan will mobilize funding from a wide array of sources, including regional and multilateral partners, such as the NBA member countries, the AfDB, and the World Bank, as well as private financing. All financing for the investment plan is aligned and consistent with existing plans at the regional and national levels.

Notes

1. See the UNFCCC website: <https://unfccc.int/topics/adaptation-and-resilience/workstreams/loss-and-damage-ld/warsaw-international-mechanism-for-loss-and-damage>.
2. The multilateral development bank (MDB) methodologies on climate finance tracking slightly differ. For example, “[t]he concept of additional cost, in the context of LDCF and SCCF, is the amount of funding necessary to implement adaptation measures that would not be necessary in absence of climate change”, https://www.thegef.org/sites/default/files/council-meeting-documents/Clarification_on_Additional_Cost_8_May_4.pdf.
3. See the UNFCCC website, <https://unfccc.int/>.
4. For further information on GEF financing criteria, see the GEF’s funding page, <https://www.thegef.org/about/funding>.
5. See the GEF website, <https://www.thegef.org/partners/gef-agencies>.
6. Further information on accessing resources under the SCCF is available in the report “Accessing Resources under the Special Climate Change Fund”, https://www.thegef.org/sites/default/files/publications/23470_SCCF_1.pdf.
7. “...The concept of additional cost, in the context of LDCF and SCCF, is the amount of funding necessary to implement adaptation measures that would not be necessary in absence of climate change” and that “As the LDCF and SCCF fund the full cost of adaptation, they can also fund standalone projects, provided that what is being financed are shown to be exclusively adaptation interventions, which are not linked to BAU development.”, https://www.thegef.org/sites/default/files/council-meeting-documents/Clarification_on_Additional_Cost_8_May_4.pdf.
8. Currently 48 because some LDCs graduated after the establishment of the LDCF.
9. Operational policies and guidelines for parties to access resources from the AF are available at UNFCCC’s website, http://unfccc.int/files/adaptation/implementing_adaptation/adaptation_funding_interface/application/pdf/afbguide.pdf.
10. See the GCF website, <https://www.greenclimate.fund/who-we-are/about-the-fund>.
11. See the GEF website, <https://www.thegef.org/project/structuring-and-launching-craft-first-private-sector-climate-resilience-adaptation-fund>.

Chapter 3

Preparing “Bankable” Projects in the Transboundary Context

In the context of climate finance, the term *bankability* describes projects that demonstrate a high likelihood of receiving public or private financing on the basis of their objectives, design, enabling environments, risk management, and other factors that indicate that the project is likely to be viable, successful, and sustainable. The use of *bankability* in climate financing context should not be confused with the more traditional use of the term *bankable* in the investment financing context, which refers to project proposals that have sufficient collateral, future cash flow, and a high probability of success to be acceptable to commercial lenders.

Considering limited climate financing resources, the long-term perspective of climate change, and the elevated costs anticipated for addressing climate change, bankability of a project is key. Climate finance institutions have rigorous criteria, and the demand for available funding is highly competitive. Studies indicate that current financial flows for adaptation fall far short of what is needed to fund adaptation needs in developing countries (UNEP 2017). Thus, the ability of project proponents to attract private financing, especially for adaptation activities—which have been underrepresented in overall climate financing—is equally important. Studies demonstrate that, when applicable, private sector financing can far surpass public funding. At the same time, the availability of public finance for a project can be a strong tool to leverage additional private investment. A project’s bankability is important to both types of financiers. As such, a good understanding of the concept of bankability and its requirements for both public and private financiers will improve the possibility of accessing critically needed funds.

Several fundamental concepts are critical to identifying, developing, and implementing bankable adaptation projects for transboundary river basins. A project proponent

must demonstrate a clear understanding of the adaptation needs and priorities of the basin, as well as put forward compelling arguments for financing the particular projects presented. There must be a clear and comprehensive understanding of the different sources of finance, their requirements, and procedures. Projects must align with related national, regional, and international policies. Additionally, there must be a reliable and capable project proponent that can effectively manage project implementation and its risks. Investments in more programmatic activities—such as basin planning, institutional support to basin coordination, or preparatory programmatic studies—typically involve less risks and are therefore easier to prepare for bankability; characteristically, riparian countries’ agreement and a sound project proposal will suffice.

A bankable transboundary climate adaptation project does the following:

- States anticipated climate impacts, including at basin level and supported by scientific findings, that are directly addressed by the project
- Includes compelling arguments for a transboundary approach, rather than national action
- Aligns with and supports relevant national, regional, global climate, and development policies
- Addresses project risks
- Matches the financing institution or partners’ objectives

At the transboundary level, both challenges and opportunities related to bankability exist. Beyond the pros and cons of adaptation and resilience projects in the transboundary basin context, regional institutions can play a fundamental role in strategically placing

projects within broader regional initiatives, provide valuable information, and help coordinate aspects of project preparation, implementation, and follow-up. This is a risk mitigating factor for financiers of transboundary projects and improves bankability compared to a series of individual national projects.

3.1 Stage 1: Identifying Potentially Bankable Projects

A clear and well-grounded understanding of the projected climate impacts is a critical foundation for identifying and developing bankable projects. Although basin organizations, designated information gathering systems, or adaptation plans are not available in all transboundary river basins, where they exist, river basin organizations (RBOs) can compile critical information for identifying bankable projects from countries in the basin. They can compile national communications (prepared in each country for United Nations Framework Convention on Climate Change [UNFCCC] reporting); identify information gaps; carry out stakeholder consultation; research, assess, and report; evaluate related national and regional development policies; and help countries with prioritization. All bankable projects are based on good climate change research, data, and analysis.

Transboundary RBOs can support or provide regional and basinwide the following:

- Climate information systems
- Stakeholder engagement
- Research, evaluation, reporting
- Alignment with policies
- Prioritization processes
- Resilience planning
- Resource identification and mobilization

In transboundary river basins, adaptation will always take place within a backdrop of multiple coexisting national, regional, and global climate change and development policies. Project proponents must identify all potentially related policies and ensure that (i) the proposed project aligns with existing priorities and when possible; and (ii) supports the achievement of additional other priorities. Increasingly, RBOs have or are developing climate adaptation strategies based on available information on climate change impacts predicted throughout the respective basins. This work will support availability of information for all countries within the basin and improve bankability of projects at the transboundary level. Articulating the policy alignment of proposed projects significantly strengthens bankability.

Check alignment with related policies and plans, such as the following:

- National Adaptation Programme of Action (NAPA)
- National Adaptation Plan (NAP)
- National Climate Change Strategy and Action Plan (NCCSAP)
- Sustainable Development Goals (SDGs)
- National development strategy plans (e.g., 20-year and five-year plans)
- Relevant sectoral strategies and plans
- Relevant subnational and regional plans
- Gender strategies, policies, frameworks, and action plans

Whether a project is bankable depends on criteria and procedures required by each financial institution or funding source. As RBOs or other basin- or country-level project proponents identify needs, they can assess which source might be best suited for which area of action. Each financing source varies in its objective,

focus, and procedures. As such, resource mobilization begins with identifying the correct financing partners and exploring compatibility. Some institutions provide direct access (e.g., Adaptation Fund [AF]; Green Climate Fund [GCF]; nongovernmental organizations [NGOs]; and private investors), while others require a national or international implementing agency, such as a national implementing entity (NIE) (e.g., GCF) or an international agency such as the United Nations Development Programme (UNDP), the United Nations Environment Program (UNEP), or the World Bank. Each type of access has its special characteristics. Further, financing institutions each have criteria for climate adaptation projects, such as (i) providing the most benefits to the greatest number of people; (ii) providing for effective implementation; and (iii) ensuring sustainability over time. Sustainability can be affected by such factors as a national government's willingness and ability to carry projects beyond the period of initial investment or finance. When institutions already finance related (or nonclimate change-related) projects in the basin, they might be eager to complement ongoing work with an additional climate adaptation project.

European Investment Bank criteria for bankable projects:

- Project meets at least one of the EIB's objectives
- Is technically sound
- Is financially viable
- Shows an acceptable economic return
- Complies with environmental protection, social standards and procurement regulations

3.2 Stage 2: Project Preparation

Climate change impacts on water resources are numerous, and actions required to avoid or address these impacts are often similar to traditional water resources

management interventions. Climate adaptation financing is typically designed to cover only those projects or project elements that address climate change impacts. Establishing an irrefutable link to climate change is essential in any climate finance proposal. While this may seem obvious, it is one of the most common errors or weaknesses in project proposals. These links should also be carefully considered when developing an adaptation financing strategy.

Climate finance, and especially financing for adaptation, is similar to yet distinct from development finance.

Recognizing and being able to articulate the difference between climate and development finance are crucial to securing funds for climate-related activities. Climate change finance is any national, regional, or international financing provided for activities or projects that address the causes or impacts of climate change.

Clearly articulating the "climate rationale" in a transboundary basin is critical to any bankable project. Test your climate rationale by asking the following questions for each project component:

- What is the problem I am trying to solve?
- How is the problem caused by the onset of climate change (chain of causation)?
- What is the proof (scientific data or climate information) for question 2?
- Will project implementation prevent impacts, build resilience, or otherwise help the target group to adapt? And if so, how?

To be eligible for climate finance, a project must clearly establish how it will respond to climate change impacts by stating the expected impacts, as supported by scientific findings, and by demonstrating how the project activities and elements directly address those impacts. Developing bankable project proposals for transboundary river basins arguably requires a third

requirement beyond identifying and adequately addressing climate impacts: the proposal needs to demonstrate that it is necessary to address those impacts with a transboundary approach, rather than simply a national one.

Project proposals must delineate the benefits of a transboundary basin approach and demonstrate how potential challenges are being addressed. Climate impacts for transboundary river basins can be found in numerous sources. The first source, if available, is a river basin's climate impact assessment. Another source is compiling the national climate impact studies of every basin country. Every developing country has a National Communication produced for the UNFCCC¹ that details climate impacts, greenhouse gas inventories, and mitigation and adaptation options, among other information. The Intergovernmental Panel on Climate Change (IPCC)² also produces comprehensive reports every four to five years that contain topical, regional, and subregional information on climate impacts. Many research institutions, universities, local and international NGOs also investigate and report on climate impacts.

Preparing a bankable project requires following the project eligibility criteria, application rules, and procedures: a simple yet fundamental step. Not every project is appropriate for every financing source; this is especially true for transboundary basin projects and projects proposed by RBOs that face distinctive challenges. All climate finance institutions provide detailed information on eligibility, application process, and other funding relevant instructions on their websites.

Support for project preparation and to identify the right financing source is frequently provided by development partners and financing institutions. The inherent complexities of transboundary adaptation and resilience projects make technical assistance from development agencies and the availability of a project preparation facility especially attractive. If this kind of support is not readily available, an RBO or co-riparian countries could consider hiring an external consultant who specializes in adaptation project preparation to optimize

resource mobilization and avoid unwanted missteps. In addition to project preparation funds available through the GCF and the Global Environment Facility (GEF), institutions such as the African Water Facility or regional UNDP offices support the preparation of detailed feasibility studies that will enable lending institutions to make a funding decision for the respective project.

3.3 Using the Project Cycle as Guide

Understanding the project cycle of the financing sources targeted with the proposal is an important first step to developing a bankable project. Every public or private institution that invests in project development has a project cycle that marks every step through which a project passes from conception to post-implementation assessment. Although they contain many similar components or steps, project cycles vary between institutions, and no single approach applies to all potential financing sources. General elements in most project cycles are delineated in table 3.1. The project cycle typically begins with project identification based on needs assessments, research, or other processes that identify needs and articulate a proposed response. For climate adaptation projects, the potential impact must be clearly and demonstrably linked to climate change and is not simply a development issue involving weather variability or customary climate causes. The project appraisal and design stage follow, during which proponents typically work with potential funders to assess viability and carefully design the detailed content of the project and its budget. After design and approval, the project moves to implementation, funds are disbursed, and the project is carried out. During and after implementation, the project undergoes monitoring and evaluation that allows for adjustments, if needed, to improve effectiveness or provide lessons for future projects. Each stage includes numerous elements and varying degrees of involvement from the project proponents, funders, and other relevant partners or groups.

It is critical to conduct climate-lens analysis at all design stages of the project cycle, as each stage has a distinct role to play. Table 3.1 summarizes main elements and subcomponents of a project cycles (based on project cycle criteria from various institutions) and illustrates how climate change adaptation can be integrated at each level.

Some aspects of the project cycle are prepared exclusively by the recipient, some are carried out by the financier, and other stages are cooperative or co-generated. An institution with its own discretionary funding,

such as an RBO, could have its own project cycle to identify and implement projects funded internally. Typically, however, an RBO will be a project proponent for support from a financing institution, for which the latter's project cycle will therefore apply.

3.4 Managing Risk

Managing risk is a key measure to improve the bankability of a transboundary river basin project. Helping with removal of obstacles to investment by the private

TABLE 3.1. Elements of the Project Cycle

Preparatory phase
<ul style="list-style-type: none"> • National and basinwide climate impact studies • Stakeholder consultations • Transboundary climate change study (mitigation and adaptation) • Development of transboundary adaptation strategy • Identification of relevant national policies, regional development strategies, and so on • Review of national and transboundary development plans, policies, and projects to identify alignments and synergies • Information gathering on existing adaptation practices and tools • Identification of potential funds, private sector partners, institutional partners, other financing sources
Project identification
<ul style="list-style-type: none"> • Priority setting • Cross-governmental and stakeholder consultation: RBO or other transboundary body carries out stakeholder consultation, including with relevant national authorities • Aligning or complementing existing projects • Risk assessment with climate lens • Climate impact and needs assessment (based on impact studies)
Project preparation and review
<ul style="list-style-type: none"> • Acquisition of information on project proposal rules and instructions • Design of project components in cooperation with transboundary stakeholders and according to donor requirements • Development of budget • Development of compelling arguments for transboundary project • Approval of NDAs in all concerned countries, as applicable depending on funding source • Design of monitoring and evaluation component • Preparation or revision of proposal with the financing institution or adviser
Financing negotiation (loan, grant, or other sources, if applicable)
<ul style="list-style-type: none"> • Definition of financing terms • Setting of loan repayment period (as applicable) • Conditions for reporting or repayment • Procurement and decision-making rules

table continues next page

TABLE 3.1. Continued

Project loan approval
<ul style="list-style-type: none"> • Final approval by financing body • Preparation for disbursement
Implementation and project oversight
<ul style="list-style-type: none"> • Disbursement of all or part of payment • Procurement and hiring • Implementation activities • Involvement of all concerned countries and stakeholders to create ownership • Establishment of data and information collection system for reporting • Sharing of experiences at basin and global level
Monitoring and evaluation (part of implementation as well as postimplementation review)
<ul style="list-style-type: none"> • Data collection and measurement of outcomes • Evaluation process of outputs and outcomes • Reporting on outcomes, including required adjustments, if applicable

Note: NDAs = national designated authorities; RBO = river basin organization.

sector is one example of what transboundary institutions can achieve. RBOs can assess risks of investments in specific sectors and geographic areas throughout their basin. This “big picture” perspective allows them to balance risks with benefits, coordinate with countries and stakeholders on risk management, and provide a central point of communication and information on risks for interested private sector entities and potential investors. One of the challenges RBOs and riparian states face is the limited availability of risk management tools for the transboundary context, such as funding for demonstration projects, setting up revolving funds, initiating transboundary public-private partnerships (PPPs), and risk financing. When available, RBOs can explore these and other financial and institutional modalities to improve private sector involvement.

Strengthening river basin agreements to address risks posed by climate change is critical to long-term viability and cooperation as well as attracting investment and financing. Global experience and research demonstrate a positive relationship between the existence of formalized river basin agreements and subsequent cooperation in individual basins. Moreover, basin

agreements that include a combination of institutional mechanisms—such as a joint basin commission—and mechanisms for enforcement, monitoring, conflict resolution, and flexibility, among others, tend to notably enhance cooperation above and beyond basin agreements lacking this combination of features (Dinar and Dinar 2016). This is one reason why investors are more likely to provide financial resources to basin development and adaptation projects in basins with established joint institutional mechanisms that are underpinned by legal agreements.

Differences among national legal frameworks, compliance, enforcement, and regulatory environments in riparian countries in a transboundary basin can create complex challenges and increase investment and implementation risks for climate adaptation projects, especially when transboundary RBOs have limited substantive mandates, powers, or enforcement capacity. When resilience or adaptation projects entail activities by national or subnational agencies, projects necessarily unfold within the context of legal and institutional mandates. Incoherent, weak, or conflicting legal mandates within a basin create risks and can impair bankability.

Projects are more precarious when they intend to foster behavioral change among water users if the national legal or policy framework are not supportive. An additional complexity to this is in federal or decentralized systems for water management. Conversely, legal and regulatory coordination by an RBO, as well as involvement of the RBO in regionally relevant compliance systems, can help manage these risks.

Designing a sound risk-sharing protocol during the project development phase is crucial to ensuring bankability.

For example, an infrastructure investment project could require a feasibility study including options assessment and financial and economic assessment for higher transboundary risks. If multiple countries design and agree to the project proposal, the risk of nonagreement is covered. The risk of slower implementation resulting from higher transaction costs will always be there. In contrast, if a transboundary project has not secured agreement among affected co-riparian partners, the risk management strategy would include an explanation on why nonagreement does not affect the project or a strategy on how the project will otherwise address transboundary risk. If the risks are not allocated to the right parties during a project's conceptualization phase, the likely consequence is an inability to find investors and lenders.

Insurance is an additional way to manage risk. Many private investments in adaptation for the water sector focus on small-scale insurance schemes to farmers or households to ensure against drought and flooding. Other types of insurance are focused on covering, for example, loss of investments resulting from restrictions on repatriating profits out of the country, expropriation and nationalization, breach of contract, and war and civil disturbance. Insurers can be brought together to spread and share exposure. International institutions and private insurance companies such as the Multilateral Investment Guarantee Agency (MIGA), part of the World Bank Group; Overseas Private Investment Corporation (meant to facilitate U.S. private investment abroad); or the Lloyd's syndicates

provide political risk insurance and investment guarantees that can be used to mitigate against payment risks. MIGA provides guarantees in the form of political risk insurance for cross-border direct investments for private sector clients. New cross-border sovereign guarantee mechanisms are being explored that could be employed in transboundary settings, such as for hydropower cascade development (Leb et al. 2018).

Although political risk insurance is unusual for investments in transboundary river projects, there is no reason why it could not be tailored to this context.

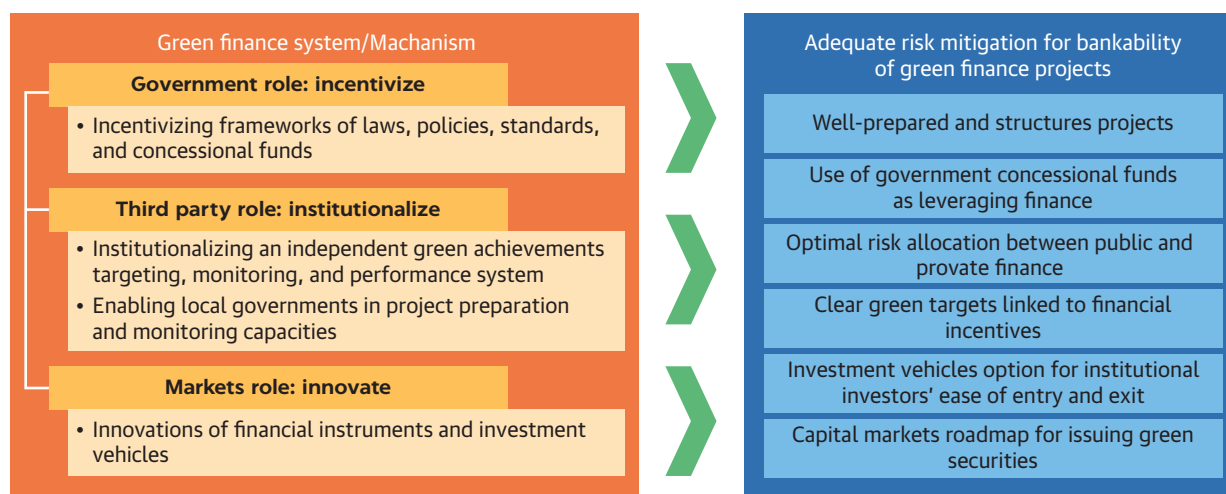
The Overseas Development Institute (ODI) proposes the establishment of a "risk guarantee fund" by the transboundary institution to facilitate economically viable projects that face political exposure and might be considered too high risk due to the uncertainty of transboundary contracts, such as when water stored in one country is used by another, (Nicol, van Steenberg, and te Velde 2002). Alternatively, financiers or riparian countries can provide targeted guarantees to secure investments or establish a special purpose vehicle to limit political risk. An overview of levers for risk mitigation more generally is provided in figure 3.1 below.

3.5 Additional Tools and Resources that Strengthen Bankability

Project preparation facilities (PPFs) support the development of bankable, investment-ready projects. PPFs provide technical and financial support to project proponents. They can cover such activities as undertaking project feasibility studies, including value-for-money analysis; developing procurement documents and project concessional agreements; undertaking social and environmental studies; and creating awareness among the stakeholders. Having these preparatory elements in place strengthens a project's bankability and improves future implementation options.

Another tool for strengthening bankability suitable for large-scale transboundary projects or other private sector projects is a market sounding exercise. Such exercises communicate with and inform an array of investors and

FIGURE 3.1. Levers for Adequate Risk Mitigation of Green Finance Projects



Source: ADB 2018.

BOX 3.1. Case Study: Climate Change and Security in the Dniester Basin

Implementing partners: UNECE and Organization for Security and Co-operation in Europe (OSCE)

Climate Change and Security in the Dniester River Basin is an integral part of a larger project: Climate Change and Security in Eastern Europe, Central Asia and the Southern Caucasus. The strategic framework for Climate Change Adaptation in the Dniester Basin was developed and launched at a high-level event by the deputy ministers of environment of Moldova and Ukraine. An implementation plan and resource mobilization plan are being developed in consultation with the basin stakeholders to ensure mainstreaming adaptation to climate change in the national and local policy instruments. Several adaptation measures have been implemented in the basin.

Climate impacts include flooding in the Dniester River Basin (as happened in 2008 and 2010), which causes significant damage and presents a consequence of climate change. According to long-term observations, such flooding used to happen once in 10 to 15 years. The number of low water years has also increased. During the last decades the periodicity of dry years (with unfavorable conditions for agriculture) has increased to every three years from a four-year cycle and harms the agriculture sector. The basin has elaborated a Plan for Implementation of the Strategic Framework and a Funds Mobilization Strategy that describe funding opportunities from international to local levels for financing adaptation measures.

Source: (OSCE, 2017).

partners, assessing their interest and concerns regarding a particular sector or project prior to an official announcement or request. Market sounding provides valuable feedback from the lender community to the project proponents that helps shape the project and its risk

allocation matrix (see box 3.1). It can also provide insight to the lending market and gauge the interest of lenders, which for many reasons can vary over time. Getting lenders input early in the project preparation can help manage risk and improve bankability (Rana 2017).

3.6 Recommendations for Developing Bankable Projects

Identify the root of the climate change challenge.

Identify vulnerabilities and the reasons for climate change-induced problems. What are the broad challenges, and what are the root causes for vulnerability? Why are they not already addressed? Is there a transboundary component to why the problem has not already been addressed? Nonclimate-related factors are also at the heart of the matter. Understanding the causes of the problem in their causal relationship to climate change is critical for formulating an appropriate adaptation response.

Ensure design and scope specific to climate adaptation.

Define the problem. Describe the climate change impacts directly responded to by the adaptation project, including possible transboundary impacts. Make reference to existing assessments and studies as well as documents such as NAPS and NDCs, and demonstrate the benefits of a transboundary approach (such as sharing data and locating measures that may have an optimum effect).

Understand the financing landscape and establish relationships with financing partners. Resource mobilization for adaptation and resilience building in a transboundary context requires a strong knowledge of the full array of public and private financing sources and the many funds and options offered in each category. Not all funds and donors accept transboundary projects, or they may have restrictions about the types of institutions with which they will partner. Beyond understanding which funds exist, policy makers should develop direct relationships with people in each fund who are responsible for project selection in the respective region or for working in transboundary river basin contexts. Advocating for the benefits and opportunities inherent in transboundary approaches to resilience building and adaptation to climate change is a crucial step to capturing the interest of financing institutions.

Understand and follow funding processes carefully and precisely to ensure eligibility and to maximize chances of success. Although many funds serve similar target groups and issues, eligibility criteria and procedures for accessing financing vary significantly and are often complex.

Identify, communicate, and address potential risks. To strengthen bankability of a project, proponents of transboundary river basin projects should be able to identify risks and demonstrate their ability to manage these. Risk management can be quite technical and may require involving additional experts and advisers during project development and design.

Support regional planning and mainstreaming. Aligning climate financing with existing river basin planning is critical to ensure the efficiency of resource use and the long-term sustainability of a project. Bankable climate adaptation projects will strive to complement and support ongoing implementation of river basin development strategies and planning. As such, projects should reference the strategies or tools and how they either support or could be supported by climate financing. In turn, river basin management plans and climate investment plans can consider and make reference to climate finance opportunities.

Align projects with existing climate and development strategy and policy. Virtually all financiers require project proponents demonstrate alignment with existing policies.

Capture co-benefits. It is possible, and often attractive to donors, for project proposals to identify multiple co-benefits. Without forcing the interlinkages, a mitigation project that reduces carbon dioxide might also build the resilience of a community to the impacts of climate change. In other instances, mitigation or adaptation projects can also protect human health, restore biodiversity, or advance economic development. These types of projects are attractive because of the exponential benefits. They open opportunities for alternative sources of support and financing. Common examples of such projects are reforestation or forest protection

projects in which the benefits include both carbon absorption and resilience building through land management, watershed protection, and improved livelihoods; or dam installation for energy generation when paired with improved irrigation and flow regulation to prevent floods and droughts. Highlighting multiple benefits can give greater access to funds and increase budget availability. Other attractive combinations for financiers are projects that have both adaptation benefits and achieve other sustainable development goals as co-benefits to the project. For example, reinforcing water distribution facility resilience toward climate change has both adaptation benefits and achieves SDG 6. At the same time, such projects may be more complex at implementation, monitoring, and reporting stages and can pose additional risks.

Cluster projects within the basin, coordinating project proposals. Clustering two or more smaller geographically related or thematic projects under one larger project proposal have numerous advantages and benefits. A cluster that shares geographic or thematic characteristics can be simpler to manage from a financier's perspective than many smaller projects. Some investors have stated or unstated project budget minimums that preclude smaller projects from receiving funding. A group will surpass such as threshold and become more attractive. Clustered projects may be more efficient to implement, because they can share project management, technical resources, and other resources that allow for wider implementation with more limited funding. However, clustering can add complexity and challenges at all stages of the funding process. Whether or not to cluster projects is a decision to make early in the project cycle or in consultation with potential financiers. River basin management plans or investment strategies can determine the potential for clustering. It is usually the responsibility of the national representative appointed to liaise with the RBO to review, understand, and coordinate national policies and strategies with those of the basin.

Innovate, advocate, and be flexible. Climate finance is a relatively new field of global financing, and as such

many current rules and instruments are still evolving, lack concrete experiences, and, therefore, offer opportunities for the beneficiaries to shape the rules and procedures. Knowing the strengths and weaknesses of working within a transboundary context will allow project proponents to lobby effectively for added benefits, while managing risks. New funding sources may have flexibility if they can be convinced that funds will have a greater impact in a transboundary project than a single country one. Multicountry projects theoretically have more advocates because each government and the RBO can lobby in support of them. It is important to be flexible and strategic, however, when the rules may not allow for a transboundary project and see how funds might be accessed for a single country that can then support the overall basin adaptation program, decreasing its financing needs so others in the basin might access limited national or regional finance.

Share experiences and learn from others. Transboundary climate change finance is still a very new field. It is therefore crucial to share experience and learn from other basins. Events such as the UNFCCC Conference of the Parties (COP), World Water Week, and the World Water Forum—as well as those taking place within the context of the UNECE/International Network of Basin Organizations (UNECE/INBO) global network of basins working on climate change adaptation—provide useful forums in which to meet and share experience. Additionally, the GEF knowledge management and lessons sharing mechanism for international waters, GEF IW: LEARN,³ which is more than 18 years old, offers considerable experience and knowledge on climate finance, including in the transboundary context.

Notes

1. See the UNFCCC website, <https://unfccc.int/process/transparency-and-reporting/reporting-and-review-under-the-convention/national-communications-non-annex-i-parties/submitted-national-communications-from-non-annex-i-parties>.
2. See the IPCC website, https://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml.
3. See the GEF website, <https://iwllearn.net/>.

Chapter 4

Conclusions

In transboundary contexts, working cooperatively and with basin organizations is critical to supporting successful adaptation and resilience strategies, accessing much-needed financial resources for climate action, and making the best use of limited national resources available for the most critical issues. Basins' abilities to respond effectively to the onset of climate change depend on a broad range of factors including access to information on potential impacts, institutional capacity to prepare and deploy adaptation strategies, monitoring and information gathering to respond appropriately and rapidly to climate impacts, and access to financing and absorption capacity, among others. The issues covered in this paper aim to provide a better understanding of available climate financing for adaptation and resilience building in transboundary contexts, and recommendations on how to prepare bankable projects to successfully accessing these resources.

The challenges of climate change impacts for countries in transboundary river basins are compounded further by the complexity of multinational decision making, legal and political challenges, and additional risks unique to a geographical context in which water resources are shared yet crossed by national borders. Transboundary cooperation improves the eventual quality of adaptation measures thanks to stakeholder involvement and multicountry support.

Cooperation can furthermore improve the bankability of projects because of the enhanced ability to manage certain investment risks (e.g., maladaptation) and optimize benefits. Conversely, transboundary projects often

have higher transaction costs and tend to take more time because endorsement from all riparian countries is usually needed by the climate funds and multilateral development banks (MDBs). Implementation can be more complex because river basin organizations (RBOs) often cannot receive direct funding and may lack the required legal and financial status and capacity to manage complex projects, therefore requiring the involvement of individual riparian countries and further parties for implementation.

Each basin is different, and basin organizations need to identify the most suitable role in supporting climate financing for their region. Their role may include establishing the basis for successful financing strategies by developing transboundary adaptation plans (through cooperative decision making), prioritizing measures to support countries in fundraising efforts by sharing knowledge, and, in some cases, receiving and implementing funds for investment directly, such as done by L'Organisation pour la Mise en Valeur du Fleuve Sénégal (OMVS). Some RBOs become very active in this field, such as the Lake Victoria Basin Commission (LVBC) and the Sahara and Sahel Observatory (OSS). They can participate in different stages of the project cycle for needs assessment, implementation, coordination, and monitoring and evaluation.

RBOs consistently underline their need for capacity building and technical assistance to develop bankable projects. Training, advisory support, and further opportunities to exchange experiences among basins can make a major contribution to supporting transboundary adaptation and resilience building.

A clearly presented summary document, or investment project profile, is a fundamental preparation tool for resource mobilization and developing investment partnerships. Understanding the funds available, their eligibility criteria, and processes is the next important

step to develop a bankable project. The information in appendix A, table A.1, provides a starting point from which to collect critical information to develop adaptation project proposals that fit the respective fund's specific requirements.

Appendix A: Overview of Funding Sources

Table A.1 focuses on funds that finance adaptation-related activities and are relevant for transboundary basin adaptation projects and programs.

TABLE A.1. Multilateral and Regional Climate and Climate Related Funds

Name	Funding type	Eligible sectors and activities	Eligible countries and actors	Host entity or fund trustee	Further information
Adaptation Fund (AF)	Grant	Adaptation, all sectors, including trans-boundary waters	Developing member countries (DMCs)	World Bank	https://www.adaptation-fund.org/
Adaptation for Smallholder Agriculture Programme (ASAP)	Grant, loans	Agriculture (small-holder farmers)	Least developed countries (LDCs)	International Fund for Agricultural Development (IFAD)	https://www.ifad.org/web/guest/asap
Asian Development Bank (ADB) Carbon Market Program; incl. Asia Pacific Carbon Fund and Future Carbon Fund	Co-financing for CDM projects	Greenhouse gas emission mitigation; energy; methane capture	DMCs	ADB	https://www.adb.org/publications/carbon-market-program-brochure
Africa Climate Change Fund (ACCF)	Grant	Climate readiness, access to climate finance all sectors, including trans-boundary waters	Regional member countries (RMCs), nongovernmental organizations (NGOs), research institutions, regional institutions	African Development Bank (AfDB)	https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/africa-climate-change-fund/
Africa Water Facility	Grant	Water, including transboundary waters	RMCs	AfDB	https://www.africanwaterfacility.org/en/
Association of Southeast Asian Nations (ASEAN) Infrastructure Fund	Loans	Transport, energy, water and sanitation, environment, rural development, social infrastructure	Member countries (MCs)	ADB	https://www.adb.org/site/funds/funds/asean-infrastructure-fund
BioCarbon Fund	Upfront and results-based finance	Landscape restoration	MCs, private actors, NGOs	World Bank	https://wbcarbonfinance.org/Router.cfm?Page=BioCF&ItemID=9708&FID=9708

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TABLE A.1. continued

Name	Funding type	Eligible sectors and activities	Eligible countries and actors	Host entity or fund trustee	Further information
Carbon Initiative for Development	Performance-based finance	Energy access	LDCs	World Bank	https://www.ci-dev.org/
Clean Technology Fund (CTF)	Loans	Energy (renewable, energy efficiency), Transport	MCs	World Bank	https://www.climateinvestmentfunds.org/topics/clean-technologies
Clean Energy Financing Partnership Facility (CEFPF)	Grant and nongrant	Energy	DMCs	ADB	https://www.adb.org/site/funds/funds/clean-energy-financing-partnership-facility
Climate Change Fund (CCF)	Grant, technical assistance, and direct charge	Adaptation, clean energy development, REDD+ and land use, climate finance readiness	DMCs	ADB	https://www.adb.org/site/funds/funds/climate-change-fund
Climate Investment Funds (CIF)	Grant, loans	Clean technologies, climate resilience, energy access and sustainable forests	MCs	World Bank	https://www.climateinvestmentfunds.org/ . See also CTF, FIP, PPCR, and SREP
ClimDev-Africa and ClimDev Special Fund	Technical assistance	Early warning, forecasting, mitigation, adaptation	RMCs	United Nations Economic Commission for Africa (UNECA), African Development Bank (AfDB)	http://www.climdev-africa.org/
Congo Basin Forest Fund	Grant	Forest management, livelihoods	RMCs, NGOs, CSOs, research institutions, private sector	AfDB	https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/congo-basin-forest-fund/
Cooperation in International Waters in Africa (CIWA)	Grant	Transboundary waters	DMCs	World Bank	http://www.worldbank.org/en/programs/cooperation-in-international-waters-in-africa
Forest Carbon Partnership Facility (FCPC); Readiness Fund and Carbon Fund	Grant, technical assistance, result-based payment	Forest management	REDD+ countries	World Bank	https://www.forestcarbonpartnership.org/
Forest Investment Program (FIP)	Grant, loan, concessional finance	Forest management	DMCs, private sector, communities, indigenous peoples	World Bank	https://www.climateinvestmentfunds.org/topics/sustainable-forests

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TABLE A.1. continued

Name	Funding type	Eligible sectors and activities	Eligible countries and actors	Host entity or fund trustee	Further information
Global Environment Facility (GEF)	Grant	Climate change, international waters, water resources, biodiversity, forests, chemicals and waste, land management	MCs	World Bank	https://www.thegef.org/
Global Climate Change Alliance	Grant, technical assistance	Adaptation and mitigation all sectors, REDD	LDCs, SIDS	EU (European Union)	http://www.gcca.eu/
Global Fund for Disaster Risk Reduction (GFDRR)	Technical assistance	Resilience building	MCs	World Bank	https://www.gfdr.org
Green Climate Fund (GCF)	Grant, loan, equity, guarantee	Mitigation and adaptation all sectors; including regional programs and trans-boundary waters	DMCs		https://www.greenclimate.fund/home
Least Developed Countries Fund (LDCF)	Grant	Adaptation, all sectors including trans-boundary waters	LDCs	GEF	https://www.thegef.org/topics/least-developed-countries-fund-ldcf
NEPAD Infrastructure Project Preparation Facility (NEPAD-IPPF)	Grant	Energy, transport, energy, ICT, water; including trans-boundary waters	DMCs	AfDB	https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/nepad-infrastructure-project-preparation-facility-nepad-ippf/
Pilot Program for Climate Resilience (PPCR)	Grant, concessional finance	Adaptation, all sectors	DMCs	World Bank	https://www.climateinvestmentfunds.org/topics/climate-resilience
Scaling Up Renewable Energy Program for Low Income Countries (SREP)	Grant, concessional finance	Renewable energy	DMCs	World Bank	https://www.climateinvestmentfunds.org/topics/energy-access
Special Climate Change Fund (SCCF)	Grant	Adaptation, all sectors, including trans-boundary waters	DMCs	GEF	https://www.thegef.org/topics/special-climate-change-fund-sccf
Strategic Climate Fund (SCF)	Grant, loan, concessional finance	Adaptation all sectors, energy, forest management	DMCs	World Bank	The SCF is the umbrella trust fund for FIP, PPCR, and SREP.
Sustainable Energy and Climate Change Initiative (SECCI)	Grant, loan, concessional finance	Energy, agriculture, transportation, water, environment, climate resilience	RMCs	IADB	https://www.iadb.org/en/topics/climate-change/secci%2C1449.html

table continues next page

TABLE A.1. continued

Name	Funding type	Eligible sectors and activities	Eligible countries and actors	Host entity or fund trustee	Further information
Sustainable Energy Fund for Africa	Grant, technical assistance, equity	Small and medium scale renewable energy and energy efficiency	RMCs	AfDB	https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/sustainable-energy-fund-for-africa/
United Nations Reduced Emissions from Deforestation and Forest Degradation Program (UN-REDD)	Grant	Forest Management	MCs	FAO, UNDP, UNEP	http://www.un-redd.org/

Glossary

Adaptation. While definitions vary widely among institutions, *adaptation* generally refers to measures taken to support and build the ability to *withstand* the impacts of climate change. This includes changes in processes, practices, and structures to respond to climate impacts. Adaptation can also encompass actions that exploit beneficial opportunities that may arise from climate change (e.g., increased crop yields in certain areas). Adaptation covers a wide range of activities. It might include large infrastructure changes, such as preparing coastal villages to withstand sea level rise; socioeconomic changes, such as transitioning to crops that can withstand increased temperatures; or behavioral changes, such as encouraging individuals to use less water or businesses to buy flood insurance. It may be planned or spontaneous, small or large scale.

Adaptive capacity. The ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages; take advantage of opportunities; or cope with the consequences.

Bankable. The state of preparedness of a particular adaptation project such that funders find the project sufficiently attractive and secure in terms of investment value. A project is bankable if it illustrates characteristics and is sufficiently elaborated such that financing institutions or organizations will cover the requested costs.

Blended finance. Combining of two or more types of financing instruments to cover costs and diversify sources, thereby ensuring that all costs are covered; this reduces risk, and creates greater attractiveness for a wide variety of financiers.

Co-benefits. Secondary benefits to the primary objective of a project that will often strengthen a project's

attractiveness for proponents, national or international partners, and financiers. For climate adaptation projects, these often include mitigation, health, water resources management, and economic development, among others.

Climate finance. Any funding allocated to projects that address climate change, whether in the mitigation of greenhouse gases, adaptation to climate impacts, building of resilience to changes in the global climate, or the losses and damages incurred from the onset of climate change.

Climate impacts. The effects of climate change on natural and human systems. Potential impacts include all impacts that may occur given a projected change in climate, without considering adaptation.

Agreed incremental costs. These cover the difference between a less costly, more polluting option and an alternative, which is more climate friendly or resilient (and usually more expensive). Agreed full cost, in contrast, covers the entire cost of the climate project. Article 4.3 of the UNFCCC delineates what projects under the Financial Mechanism have incremental or full cost coverage.

Oversees Development Assistance (ODA) is financing provided from developed to developing countries to assist the latter in attending to diverse development challenges or supporting in crisis situations.

Resilience to climate change. The ability to sustain shocks imposed by climate impacts while maintaining integrity. The definition is often expanded to include the capacity to *renew* and *develop*, as well as to use certain climate impacts as opportunities for innovation and evolution of new pathways that improve one's ability to adapt to those changes. Climate resilience encompasses a dual function: to absorb shock as well

as to self-renew. This is perhaps the main way to distinguish it from the concept of adaptation. For example, increasing water access points throughout a river basin improves the resilience of the community to drought induced by climate change. Climate resilience both enables an actor to *absorb* climate shocks and *advance* its development or growth.

River basin organization (RBO). An institution created to support cooperation in a river basin. RBOs help with decision making, resource mobilization, and project implementation, among other activities. Designated powers impact on the type of projects that an RBO can carry out or the appetite for supporting bankable projects. *Basin committees* often have limited legal strength legally. Activities are mainly coordination or advisory function. *Commissions* have some legal powers in given sectors and are more effective in developing and implementing projects. Powers are transferred

for restricted specified task. *Authorities* are assigned a wider mandate for action including the potential hosting of investment projects.

Risk. The probability or threat of quantifiable damage, loss, or any other negative impact caused by external or internal vulnerabilities, and that could be avoided by preemptive measures.

Transboundary river basin. Includes in its geographical area two or more countries. It may also be defined as a basin that contains at least one political border: either a border within a nation or an international boundary.

Vulnerability. The degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate change and variation to which a system is exposed, its sensitivity, and its adaptive capacity.

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