

## Cross-border, cascading climate risks and the Least Developed Countries Group

Catalysing management options within the UNFCCC

### 1. Introduction

‘Transboundary risks’ is a collective term for the potential for negative impacts that can cross borders, whether between neighbouring countries or across distant regions. On first thought, such risks seem unlikely to occur. But the COVID-19 pandemic highlighted just how globally interconnected our trade, food, financial and healthcare systems are. COVID-19 revealed that the global and regional impacts of negative events, and our responses to them, cascade downwards to impact the lives, livelihoods and well-being of individuals – and it also exposed just how woefully unprepared most countries are for assessing, managing and learning from them.

Similarly, climate change is exposing the interconnectivity of systems, and the inadequacies of management responses (mitigation and adaptation) that are focused predominantly on the local to national scales.

The Sixth IPCC Assessment Report (AR6) noted that ‘weather and climate extremes are causing economic and societal impacts across boundaries through supply-chains, markets, and natural resource flows, with increasing transboundary risks projected across water, energy and food sectors’.<sup>1</sup> The evidence also indicates that ‘multiple climate hazards will occur simultaneously, and multiple climate and non-climatic risks will interact, resulting in compounding overall risk and risk cascading across sectors and regions’. Cascading, multi-country climate impacts and risks have also been identified in supply chains of key commodities, in foreign direct investment and development finance, in health and in livelihoods.<sup>2</sup>

There is also growing evidence that national adaptation and mitigation responses can themselves create transboundary risks. AR6 highlighted that ‘risks arise from some responses that are intended to reduce the risks of climate change, including risks from maladaptation and adverse side effects of some emissions reduction and carbon dioxide removal measures.’

Collectively, these sets of risks are called transboundary climate, adaptation and mitigation risks (TCARs); they are the potential negative impacts or consequences that can cross national boundaries. These risks may arise due to:

- the transboundary impacts of climate change
- the transboundary consequences of one country’s adaptation responses that impact the adaptation and/or mitigation options of other countries and/or exacerbate climate change impacts
- the transboundary consequences of mitigation responses that impact the adaptation and/or mitigation options of countries and/or exacerbate climate change impacts.

Historically, adaptation has been treated primarily as a local to national concern in international climate negotiations.<sup>3</sup> However, several countries and negotiating blocs have called and continue to call attention to the regional and international dimensions of adaptation. It was the African Group of Negotiators, including those African nations designated as least developed countries (LDCs), that recognised adaptation as having dimensions across many scales and as requiring strengthened regional to international approaches in TCAR management.

1 IPCC (2022) pp. 18–19

2 Anisimov and Magnan (2023)

3 Opitz-Stapleton et al. (2021)

Fishing boat at sea, Thailand.  
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### Box 1. Adaptation Without Borders and the LDC Group

This policy brief is an outcome of ongoing dialogue between Adaptation Without Borders (AWB) and the LDC Group. In 2023, the two began discussions around strengthening the LDC Group’s awareness of TCARs and its capacities to assess and manage them within national adaptation planning processes, and opportunities for regional collaborative management.

The brief draws from a review of LDC Group and UNFCCC documents; from discussions with select LDC negotiators and the LDC Chair’s office; from the outcomes of a 1.5-day session on TCARs at the African Group of Negotiators Expert Support’s (AGNES) Pre-COP29 meeting in Nairobi, Kenya in September 2024; and from an online workshop with LDC participants in January 2025. (AGNES is a member of AWB and provides scientific evidence and technical expertise relating to the international climate negotiations to African governments and the African Group of Negotiators (AGN).

At the Pre-COP29 meeting, AWB partners – ODI Global, the Stockholm Environment Institute (SEI), Enda Energie, the International Livestock Research Institute (ILRI) and AGNES – engaged with a diverse set of policymakers, from subnational-level government to national negotiators, in briefings on the state of play of agenda items at COP29. Also discussed were the potential implications, for local, national, regional and international adaptation efforts, of the COP negotiations around transboundary adaptation.

Through funding from Agence Française de Développement (AFD) and Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC), AWB extended invitations to multiple negotiators

from the LDC Group to further discussions on TCARs. The TCAR segment of the meeting had the following objectives:

- to explore the latest evidence on TCARs and distil its implications for the LDC Group and the African Group of Negotiators
- to explore framings of transboundary risks and regional cooperation on adaptation within the Global Goal on Adaptation (GGA)
- to reflect on inclusion of TCARs in the first Global Stocktake (GST) and strategise toward their greater inclusion in the second GST
- to assess how far TCARs are being, or can be, incorporated into LDC National Adaptation Plans (NAPs) and other climate policies
- to strengthen networks among negotiators engaged in different UNFCCC negotiation tracks which have relevance to TCARs
- to reflect on Africa’s and LDCs’ positions on TCARs with an aim of finding a common ground to ensure that indicators relating to TCARs are incorporated under the UAE–Belém Work Programme.

Some key outcomes of the segment included the development of an initial set of indicators for further refinement and eventual submission to the Work Programme, as well as contribution to a statement by the AGN Chair to the Roadmap to Mission 1.5 Troika Majlis in October 2024. Further sections of this brief describe the evolution of the indicators developed at the Pre-COP29 meeting.

The LDC Group, many of whose members are African nations, are another negotiating bloc under the United Nations Framework Convention on Climate Change (UNFCCC). This bloc represents the interests and specialised needs of 44 countries – 32 from Africa, 8 from Asia, 1 from the Caribbean and 3 from the Pacific Islands – that are the most vulnerable to climate change and among those least responsible for causing it.

This brief synthesises the LDC Group’s prioritisation of TCARs and strategies for elevating them within global climate negotiations. As with local to national climate risks, some countries are already experiencing disproportionate impacts from TCARs and facing disproportionate challenges in mitigating and adapting to climate change while transitioning to low-carbon, climate-resilient and poverty-reducing development.

The brief highlights LDC Group interest and momentum on bringing TCARs more prominently into international climate negotiation efforts, and identifies near-term opportunities for supporting LDC Group efforts to begin addressing such risks.

## 2. TCARs in the Paris Agreement and progress towards implementation

Article 7.2 of the Paris Agreement underscores the importance of ‘adaptation as a global challenge faced by all with local, subnational, national, regional and international dimensions’. As well as recognising adaptation as a global challenge, the Paris Agreement established the Global Goal on Adaptation (GGA) comprising three long-term goals – enhancing adaptive capacity; strengthening resilience; and reducing vulnerability to climate change – with a view to contributing to sustainable development and ensuring an adequate adaptation response in the context of the temperature goal referred to in the Agreement’s Article 2. However, it has been difficult to translate the imprecisely worded GGA into operational practice, or to agree on how to assess progress towards its achievement.

At COP26 (Glasgow, November 2021), the two-year Glasgow–Sharm el-Sheikh (GlaSS) Work Programme was established to consider adaptation processes and initiate the development of a framework to guide the achievement of the GGA. The GlaSS concluded at COP28 (Dubai, December 2023) with the establishment of the UAE Framework for Global Climate Resilience as part of the first GST under Decision 2/CMA.5.

The two-year UAE–Belém Work Programme was also established at COP28, with the purpose of developing indicators for measuring progress towards seven thematic and four dimensional adaptation targets (Table 1). The seven thematic targets are meant to be covered in all stages of the dimensional targets. At SB60 in June 2024, the UNFCCC Subsidiary Body for Implementation (SBI) and Subsidiary Body for Scientific and Technological Advice (SBSTA) agreed on a process for mapping indicator submissions and on metrics for selection. These metrics include: the ability to reflect regional, national and local circumstances; data availability for measuring the indicator; the indicator’s relevance and applicability across different contexts; the clarity of methodologies associated with the indicators and their aggregability; and ease of interpretation.

This Framework marks an important step in operationalising the GGA and increasing adaptation ambition and implementation. It does this by enshrining four dimensional targets of an iterative adaptation process for delivering on adaptation as a process, not an end goal:

1. impact, vulnerability and risk assessment (including multi-hazard early warning systems, climate information services and systemic observation to support such services)
2. planning
3. implementation
4. monitoring, evaluation and learning (MEL)

Importantly, the Framework (paragraphs 18–19) also ‘recognizes that climate change impacts are often transboundary in nature and may involve complex, cascading risks that can benefit from collective consideration and knowledge-sharing, climate-informed transboundary management and cooperation on global adaptation solutions...’ through the catalysing and strengthening ‘of regional and international cooperation on the scaling of adaptation action and support among Parties, international organizations and non-governmental organizations’. This mention implies that the management of transboundary climate and adaptation risks should be considered within the adaptation process (dimensional targets) and under the seven thematic areas.

It also calls for Parties ‘to accelerate swift action at scale and at all levels, from local to global, in alignment with other global frameworks, towards the achievement of, inter alia, the following targets by 2030 and progressively beyond’ (Decision 2/CMA.5 paragraph 9).

**Table 1.** Adaptation thematic and dimensional targets under the Framework

Thematic targets	Dimensional targets of iterative adaptation planning processes
Climate-resilient water supply, sanitation and safe and affordable potable water for all	Impact, vulnerability and risk assessment
Climate-resilient food and agricultural production, supply and distribution	Planning
Reduce climate impacts on ecosystems and biodiversity, shift to ecosystem-based adaptation	Implementation
Attain resilience against climate-related health impacts, reducing climate morbidity and mortality and promoting climate-resilient health services	Monitoring, evaluation and learning
Increase climate resilience of infrastructure and human settlements	
Reduce climate impacts on livelihoods and poverty reduction measures	
Protect cultural heritage against climate impacts	

Source: Decision 2/CMA.5: paragraphs 9–10.

However, of the over 10,000 indicators submitted by various Parties and non-Parties through November 2024, only 64 explicitly mention ‘transboundary’.<sup>4</sup> These are predominantly related to transboundary water systems. Within indicators submitted around transboundary water cooperation under the climate-resilient water supply target, most focus on the development of multi-country plans, the installation of streamflow gauges and weather stations, and multi-country data sharing and early-warning flood systems. Two submissions mention ‘cross-border’, two mention ‘transhumance’, four mention ‘migrants and refugees’ and a few dozen mention ‘regional’. Indicators relating to regional collaboration were put forth by the European Union, Japan and Pakistan. There is also no mention of ‘transboundary’ in submissions on critical adaptation gaps. This points to a critical gap on transboundary indicators that the LDC Group can address through a submission.

The final set of adaptation indicators developed under the Work Programme will become the metrics against which countries report progress towards adaptation in their NAPs from 2030 onward. Some of the indicators might be mandatory, against which all countries are to report, while others may be voluntary and facilitate flexibility in reflecting national adaptation contexts.

This modality also suggests that climate finance organisations might increasingly benchmark which adaptation projects they choose to fund against the indicators. For instance, the Multilateral Development Banks (MDB) agreed at COP28 to use a ‘Common Approach to Measuring Climate Results’, in which a unified MBD framework is proposed for scaling up climate adaptation finance in alignment with the targets of the UAE Framework.<sup>5</sup>

Without indicators capturing multi-country, cascading risks under each of the seven thematic and four dimensional targets, local to regional to international cooperation on the management of such risks – and climate finance for managing them – is likely to continue to be deficient. Thus, the window between COP29 and the conclusion of the UAE–Belém Work Programme in late 2025 is critical for ensuring that concrete, measurable and actionable indicators related to TCARs and regional collaboration are included in the submissions and accepted by Parties. The development and acceptance of these indicators will contribute to shaping adaptation ambition, implementation and finance for years to come.

4 UNFCCC (2024)

5 World Bank (2024)



### 3. The state of TCARs in LDC adaptation planning

A review of indicators by the LDC Group in May 2024 assessed African LDCs' use of indicators in nationally determined contributions (NDCs) and NAPs.<sup>6</sup> The analysis found that while African LDCs are seeking to quantitatively measure adaptation progress within their climate policies and programmes, most of the indicators they currently use are focused on tracking implementation (842 out of a total of 944 indicators). Many of the NAPs and NDCs lack indicators for impact, vulnerability and risk assessment; planning; and the monitoring and evaluation phase of an iterative adaptation process. The LDC Group also acknowledges that the majority of (implementation) indicators are focused on agriculture and food systems. Water, health, ecosystems and other thematic targets are underrepresented.

Even though detailed assessment of TCARs is missing in the existing LDC NAPs, many are explicitly concerned with select TCARs (Table 2). Out of the 23 LDCs that had submitted NAPs as of 2023, 15 (10 from African countries) are explicitly concerned with transboundary risks related to shared waterways, forest or other cross-border ecosystems. Coastal countries are also concerned with the migration of fish stocks outside their waters, and multiple African LDCs note the challenges posed by climate change to cross-border pastoralism. In addition, several LDCs mention the need for regional knowledge and data sharing, and cooperative adaptation programming.

Only one NAP (that of Sierra Leone), however, mentions transboundary risks to commodity markets (rice) and impacts on food security. The accounting for transboundary impacts on the imports of staple foods and agricultural/livestock inputs is less recognised. As a result, interconnected vulnerabilities, impacts and risks between sectors, as well as dependencies on neighbouring countries and international food commodities, disease, finance and supply chains, are not being assessed. Because of this, multi-country connections are chronically ignored within the assessment, planning, implementation and MEL stages of NAP formulation, thereby increasing the LDC's overall climate change risk.

Also missing in all the LDC NAPs reviewed are concrete response mechanisms for managing TCARs (planning and implementation) and monitoring the effectiveness of such mechanisms in reducing social and economic impacts. Some LDC NAPs mention transboundary water basin institutions as ways of managing shared water

resources, but few other cooperative regional adaptation mechanisms, such as regional early warning systems, are proposed.

Despite facing challenges in planning and implementation around TCARs, African LDCs may be better equipped to manage them than some of the Asian-Pacific or Caribbean members. This is because the African Union and many of the Regional Economic Communities have climate plans and strategies that aim to enhance regional cooperation. The African Union's Climate Change and Resilient Development Strategy and Action Plan (2022–2032) specifically calls for 'enhanced coordination between the regional economic communities and Member States in addressing and managing transboundary and cascading climate risks'.<sup>7</sup> Specific thematic targets where such cooperation is highlighted are in strengthening transboundary water management and cooperation and multi-country nature-based solutions such as the Great Green Wall for the Sahara and Sahel Initiative.

There has been funding of discrete multi-country projects – such as the AIP Transboundary PIDA Water Investment Programme in the African Union<sup>8</sup> or the Integration of Climate Change Adaptation Measures in the Concerted Management of the W-Arly Pendjari Transboundary Complex: ADAPT-WAP<sup>9</sup> – but such projects and associated funding are often limited in duration and lack clear mechanisms for further data sharing; monitoring, evaluation and learning; continued vulnerability, impact and risk assessment; or sustained implementation. While the need to further assess these risks and manage them is acknowledged, many of the LDCs have limited financial and institutional capacities to do so in the context of implementing their current NAPs. Greater assistance is required to help them assess and plan for multi-country, cascading risks for NAPs developed from 2030 onward, and in financing regional cooperative adaptation action, regardless of whether concrete TCAR indicators are in the final set developed through the UAE–Belém Work Programme.

6 LDC Group (2024). The LDC review acknowledges that, due to time constraints, it was only able to review African LDC climate policies; data from Caribbean and Asia-Pacific LDCs was not reviewed.

7 African Union (2022) p. 32

8 AIP (2021)

9 Adaptation Fund (2019)

**Table 2.** TCAR concerns in LDCs' NAPs

Target area	Transboundary concerns in LDC NAPs	Countries
Climate-resilient water supply	<ul style="list-style-type: none"> <li>• Greater transboundary river basin management and cooperation</li> <li>• Regional sharing of knowledge, and adaptation cooperation around water quality and quantity and infrastructure protection (against flooding in transboundary basins)</li> <li>• Joint cooperation on transboundary groundwater systems</li> <li>• Sufficient water supply for cross-border pastoralism</li> </ul>	Bangladesh, Burkina Faso, Cambodia, Central African Republic, Chad, Mozambique, Niger, Sierra Leone, South Sudan, Sudan, Timor-Leste
Climate-resilient food production	<ul style="list-style-type: none"> <li>• Multi-country cooperation on integrated coastal zone management for shared fisheries, acknowledging migration of fish outside country maritime waters</li> <li>• Calls for international consultative process on fisheries management, given fisheries' importance to food production and livelihoods</li> <li>• Climate impacts on international rice commodity prices and cascading impacts on national food security</li> </ul>	Benin, Liberia, Madagascar, Sierra Leone, Togo
Climate-resilient livelihoods	<ul style="list-style-type: none"> <li>• Strengthening water and rangeland management for transhumant pastoralists</li> <li>• Addressing the livelihood needs of refugees and subsequent pressures on natural resources when people are displaced by conflict in neighbouring countries</li> <li>• Addressing climate change risks to international tourism</li> </ul>	Burkina Faso, Central African Republic, Nepal, Mozambique, South Sudan, Sudan
Reducing climate impacts on ecosystems and biodiversity	<ul style="list-style-type: none"> <li>• Enhancing support and funding for transboundary forestry projects to reduce deforestation</li> <li>• Support for transboundary ecosystem management</li> <li>• Coordination on adaptation planning around shared natural resources, including data sharing</li> </ul>	Bhutan, Chad, Democratic Republic of Congo, Niger, South Sudan, Timor-Leste
Attaining resilience against climate-related health impacts	<ul style="list-style-type: none"> <li>• Transboundary animal disease reporting and management cooperation</li> <li>• Greater support for regional health initiatives</li> <li>• Greater health surveillance of communicable diseases like tuberculosis and support for refugee populations</li> </ul>	Bhutan, Cambodia, Sudan
Impact, vulnerability and risk assessment	<ul style="list-style-type: none"> <li>• Regional and international coordination in disaster management</li> <li>• Calls for assessing how transboundary factors will influence national vulnerabilities (e.g. shared rivers, remittances and commodity markets)</li> <li>• Engaging regional bodies for coordinating on assessment</li> </ul>	Cambodia, Kiribati, Mozambique, Sierra Leone
Planning	<ul style="list-style-type: none"> <li>• Calls for the NAP to coordinate with neighbours on adaptation planning and data sharing</li> <li>• Alignment with regional initiatives – e.g. the African Union, Regional Economic Communities, ASEAN and the LDC Group</li> </ul>	Burundi, Cambodia, Kiribati, Mozambique, Nepal, Timor-Leste

Source: Review of current LDC NAPs.



Aerial view of a hydropower station  
Credit: Hru/shutterstock





#### 4. LDC opportunities for enhancing action on TCARs: ways forward in the UAE–Belém Work Programme

The UAE–Belém Work Programme is expected to produce a final set of indicators, numbering no more than 100, which are ‘globally applicable; constitute a menu that captures various contexts of adaptation action, enabling Parties to choose which indicators they will report on in the light of their national circumstances; and are designed to enable assessment of progress towards the indicators’ (Decision CMA.6). Negotiators from LDCs have expressed a desire to ensure that ‘several’ indicators covering multi-country, cascading climate, adaptation and mitigation risks be ratified in the final set of UNFCCC–approved indicators. Realistically, the inclusion of three or four TCAR indicators would be considered a success.

This project employed a two-round co-development and ranking process for the refining, prioritising for submission and formatting of indicators. Round 1 occurred in person at the AGNES Pre–COP29 meeting from 24 to 27 September 2024. Round 2 occurred as an online workshop on 22 January 2025.

During the first round, an initial set of 93 indicators were put forth by participants at the TCAR segment of the Pre–COP29 meeting. By the end of the meeting, the 93 were combined and reduced to 19, with at least one indicator per thematic and dimensional target. The second, online round of indicator ranking reduced the 19 indicators to a smaller subset deemed most likely to succeed during submission.

The second round was informed by discussions and developments around the transboundary and regional adaptation outcomes of COP29. Participants in Round 2 highlighted that a couple of countries had raised opposition to, and blocked significant discussion of, the term ‘transboundary’ in the GGA at COP29.

Therefore, key priorities for selecting indicators became:

- ensuring that transboundary climate risks are embedded more significantly in the dimensional targets of iterative adaptation planning to ensure that they crosscut the thematic targets
- finding more neutral wording to replace ‘transboundary’, using descriptors such as ‘multi-country’, ‘regional’ and ‘cascading’ to navigate resistance against transboundary climate and adaptation risk inclusion in the GGA
- promoting those that are grounded in other international conventions and frameworks to which many countries are already signatories – countries have therefore committed to upholding the convention/framework and are already collecting data and monitoring progress toward commitment attainment. Key international conventions include the Agenda 2030 Sustainable Development and its related 17 goals (SDGs), the Sendai Framework for Disaster Risk Reduction (Sendai Framework) and the United Nations Convention to Combat Desertification (UNCCD).

Through two rounds of votes considering key priorities, participants selected the final six indicators (Table 3). The international conventions, frameworks and agreements that bolster the selection of the indicators are also listed in the table. As next steps before submitting the indicators to the Work Programme, participants have agreed to provide suggestions for alternative, neutral wording to increase their likelihood of acceptance by negotiating parties at COP30 in Brazil. The suggestions will be finalised in February 2025 and submitted in coordination with the LDC Chair’s Office and AGNES.



**Table 3.** Round 2 indicators prioritised for submission

Target	Proposed TCAR indicator	Underpinning international convention or framework
<p><b>Water scarcity, sanitation, water supply</b></p>	<p>Transboundary Water Cooperation Agreements: development, ratification and implementation of transboundary river and aquifer agreements that include assessments of multi-country climate risk to transboundary waters and ecosystems, and multi-country early warning systems</p>	<ul style="list-style-type: none"> <li>• SDG 6.5: 6.5.1 – Degree of integrated water resources management; 6.5.2 – Proportion of transboundary area with an operational agreement for water cooperation</li> <li>• SDG 11.5 – Significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses (relative to global gross domestic product) caused by disasters, including those that are water-related, with a focus on protecting the poor and vulnerable</li> <li>• SDG 13: all targets</li> <li>• Convention on the Protection and Use of Transboundary Watercourses and International Lakes ('Water Convention'), all Articles, particularly Articles 9 and 11</li> <li>• Sendai Framework for Disaster Risk Reduction, particularly paragraphs 8, 17, 19, 24, 25, 28</li> <li>• UN Convention on the Law of the Non-navigational Uses of International Water Courses: Articles 11, 27 and 28</li> <li>• UN Ramsar Convention</li> <li>• UN Convention to Combat Desertification (UNCCD)</li> <li>• UN Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention)</li> </ul>
<p><b>Ecosystems and biodiversity</b></p>	<p>Habitat degradation in transboundary, shared ecosystems: proportion [annual acres] of habitat loss or degradation in transboundary ecosystems (e.g. wetlands, savannas, mountain) related to climate events and/or lack of cooperative adaptation within multi-country ecosystem management plans</p>	<ul style="list-style-type: none"> <li>• UNCCD</li> <li>• Ramsar Convention</li> <li>• Kunming–Montreal Biological Diversity Framework, particularly Target 8 and Target 14</li> <li>• Espoo Convention</li> <li>• Water Convention</li> <li>• SDG 15: all targets, particularly 15.1 and 15.3</li> <li>• UN Convention on Biological Diversity</li> <li>• UNESCO World Heritage Convention</li> </ul>
<p><b>Impact, vulnerability and risk assessment</b></p>	<p>Countries cooperatively develop early warning systems with neighbours in a region; such systems need to consider multi-country climate hazards and have mechanisms to reach migrants, displaced persons and refugees that have crossed borders</p>	<ul style="list-style-type: none"> <li>• Paris Agreement: Delivering Early Warnings for All</li> <li>• Sendai Framework for Disaster Risk Reduction</li> <li>• IPCC Sixth Assessment and upcoming Seventh Assessment</li> </ul>

Target	Proposed TCAR indicator	Underpinning international convention or framework
<b>Health, health services, morbidity and mortality</b>	Incidence of climate-driven cross-border disease outbreaks: number of cross-border human disease outbreaks linked to climate events and (human and animal) mobility in response to climate events annually (mortality and morbidity rates disaggregated by gender, age and disability)	<ul style="list-style-type: none"> <li>• SDG 3.3 – By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, waterborne diseases and other communicable diseases</li> <li>• International Health Regulation 5.2 – Mandates countries to ‘collaborate actively with each other and WHO in accordance with the relevant provisions of the International Health Regulations, so as to ensure their effective implementation’</li> <li>• International Convention on the Elimination of All Forms of Racial Discrimination: 5 (iv) – The right to public health, medical care, social security and social services</li> <li>• International Covenant on Economic, Social and Cultural Rights (ICESCR): 12 (c) – The prevention, treatment and control of epidemic, endemic, occupational and other diseases</li> </ul>
<b>Cultural heritage</b>	Number of regional and national adaptation plans that recognise and seek to protect cross-border cultural knowledge and practices that benefit adaptation. These can include non-tangible cultural heritage such as local knowledge and traditions, particularly relationships with nature and natural resources and cultural knowledge around disaster risk reduction and tangible cultural heritage	<ul style="list-style-type: none"> <li>• SDG 11.4 – Strengthen efforts to protect and safeguard the world’s cultural and natural heritage</li> <li>• Paris Agreement: Global Goal on Adaptation</li> <li>• UNESCO World Heritage Convention</li> <li>• World Heritage Convention</li> <li>• Sendai Framework</li> <li>• Ramsar Convention: Budapest Declaration</li> <li>• UN Declaration on the Rights of Indigenous Peoples</li> <li>• Kunming-Montreal Biological Diversity Framework</li> <li>• UN Convention on Biological Diversity</li> </ul>
<b>Planning</b>	Incorporation of transboundary climate and adaptation risks in national plans: number of countries whose NAPs, adaptation ambitions reported within NDCs, national communications and biennial reports actively report on assessment of transboundary climate and adaptation risks, implementation activities to manage these and MEL regarding their management	<ul style="list-style-type: none"> <li>• Paris Agreement: Global Goal on Adaptation (UAE Framework for Global Climate Resilience)</li> <li>• Sendai Framework for Disaster Risk Reduction</li> <li>• SDG 13: all targets</li> <li>• SDG 2.c.1 – Indicator of food price anomalies. Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility</li> <li>• SDG 9.1 – Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all</li> <li>• SDG 17.9 – Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the Sustainable Development Goals, including through North-South, South-South and triangular cooperation</li> </ul>



Rice Markets, Thailand  
Credit: CGN089/shutterstock



## 5. Recommendations

**Recommendation 1: elevate and champion the voices of the LDC Group and the AGN with respect to TCARs within the UNFCCC processes to further international ambitions on transboundary risk management within the GGA.** There is clear momentum within the LDC Group and among several members of the AGN to elevate regional and international adaptation ambitions for assessing and cooperatively managing multi-country, cascading climate risks. The coming months of 2025 in the run-up to SB62 in Bonn (June 2025) and COP30 in Brazil represent an opportunity for the LDC Group, possibly joined by the AGN, to champion TCAR indicators to the UAE–Belém Work Programme. Their inclusion in the Work Programme provides impetus for countries to begin accounting for such risks when updating their NAPs from 2030 onward.

**Recommendation 2: more countries and regional institutions to actively propose regional and multi-country adaptation projects.** As indicated in Table 2, multiple LDCs are actively concerned with climate risks related to transboundary waters (rivers, aquifers and coastal) and ecosystems, and implications for food security and livelihoods – four of the thematic targets of the GGA. Other LDCs are concerned with regional cooperation around assessment, planning, implementation and monitoring and evaluation. However, there are still comparatively few bankable regional and multi-country adaptation projects being proposed by countries and regional institutions. If LDCs are serious about identifying further TCARs in subsequent NAPs and managing these, they also need to work with neighbours, regional and international Accredited Entities to develop multi-country adaptation project proposals for submission to climate funds.

**Recommendation 3: climate finance for regional and multi-country adaptation projects.** Countries wanting to develop multi-country, regional or international cooperative adaptation projects require climate financing from the Green Climate Fund, the Adaptation Fund, other climate funds and non-traditional climate finance sources. Regional institutions such as the African Development Bank, the Asian Development Bank and the Pacific Community are Accredited Entities partnering with climate funds; they can work with countries to develop multi-country project proposals, but will only do so if TCARs are expressed as an adaptation priority by countries.

**Recommendation 4: leverage the support and existing policy mechanisms of regional bodies for the cooperative management of transboundary climate and adaptation risks.** Political sensitivities between neighbouring countries, and within the UNFCCC negotiations, around certain multi-country climate risks (such as transboundary waters) are currently barriers to stronger adaptation cooperation. Regional bodies such as the African Union, ASEAN or CARICOM might be able to diplomatically navigate the assessment and management of regional risks with members, particularly if climate finance is made available for regional and multi-country projects. Determining which regional bodies to approach first is a decision that must be guided by their mandates, interest and capacities to deliver on multi-country adaptation projects. The African Union, and regional economic communities such as the Common Market for Eastern and Southern Africa (COMESA) and the East African Community (EAC), already have regional climate policies that call upon members to cooperate further on transboundary climate risks, and might be considered as bodies to approach first.<sup>10</sup>

**Recommendation 5: fund the LDC Expert Group (LEG) and others to develop technical guidelines specifically for assessing TCARs in the NAPs.** The LEG is in the process of updating technical guidance – the original technical guidance was released in 2012 – to countries for preparing their NAPs. The LEG approached AWB in 2024 about the possibility of contributing methodologies for assessing TCARs and regional adaptation actions. A methodology addendum for assessing TCARs would take a year to eighteen months to complete and would need several rounds of engagement with the LEG and LDC members to test methodologies and data availability against the final indicator set. Such guidance could also feed into the IPCC's revision of the 1994 Technical Guidelines for Assessing Climate Change Impacts and Adaptations.

<sup>10</sup> Opitz–Stapleton et al. (2023)

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