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Strengthening regional governance of transboundary climate risks

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Climate risks do not stop at borders. However, their transboundary nature continues to be insufficiently accounted for in the planning and implementation of climate change adaptation, which generally focuses on national and sub-national levels. Coordinated management of these risks throughout the transmission chain, at the regional level for example, is both essential and urgent. A better understanding of the conditions for the coordinated governance of cascading risks is required, to enable transboundary climate solutions to be achieved.

Numerous studies have highlighted the importance of transboundary climate risks (TCRs), which arise when climate change impacts in one country and/or the responses made by that country (adaptation) have negative repercussions on one or more neighbouring or more distant countries (Anisimov *et al.*, 2023). For this reason, regardless of the nature of the TCR or its mode of transmission (biophysical, human or economic; Harris *et al.*, 2022), adaptation must be considered both systemically and between countries.

This is the challenge of shared TCR governance, as the sixth assessment cycle of the Intergovernmental Panel on Climate Change (IPCC, 2023, p. 112) reminds us: "*the transboundary nature of many climate risks increases the need for climate-informed transboundary management, cooperation, responses and solutions through multi-national or regional governance processes*". However, research shows that current adaptation policies and measures are not up to this challenge as they focus on the direct impacts of climate change at local and national levels (Benzie and Persson, 2019). Nevertheless, TCRs imply that adaptation must also be considered as a common good and therefore that enhanced cooperation at international and regional levels is required (Persson, 2019), based on new shared standards and governance frameworks that take the entire transmission chain into account beyond national jurisdictions (Magnan et al., 2022).

The importance of the regional level

TCRs can occur at a global level, such as a climatic event in one country that has consequences in other countries via international value chains. The Thailand floods in 2011, for example, affected the production of electronic components, which had a cascading effect on exports to Japan, Europe and the United States, and then on the automotive and electronics industries (IPCC, 2022). Many transboundary risks also materialise at the regional level, facilitated both by the presence of shared ecosystems and resources, and by the generally strong socio-economic and political integration between countries in the same region, which leads to cascading risks from one sector to another. The regional scale is therefore particularly relevant for defining TCR adaptation policies and strategies.

This level provides a framework for institutionalised dialogue, with existing mechanisms of varying types and mandates, ranging from multilateral agreements or treaties to supranational institutions and regional offices of intergovernmental organisations (OECD, 2013). Such cooperation can be economic, cross-sectoral or sectoral, covering issues such as health, trade, agriculture and natural resources. Although their objectives are not directly linked to climate risk management, this type of cooperation can constitute a network and a pre-existing framework that theoretically represent a genuine opportunity to establish TCR governance. In fact, some organisations are already addressing climate issues and, to a lesser extent, the issue of TCRs. This is the case for the European Union in its adaptation strategy announced in 2021, for South-East Asia in the ASEAN climate change 2021 report, and for the African Union in its strategy and action plan on climate change and resilient development for 2022-2032. From a more specific angle, organisations such as the Mekong River Commission and the Senegal River Basin Development Authority (*Organisation pour la mise en valeur du fleuve Sénéga*l) are operational platforms for cooperation on risks related to water, food and energy security. However, the extent to which these issues are taken into account remains patchy, and the climate risks that impact on economic exchanges and population movements are still insufficiently regarded. Moreover, in practice, regional planning for adaptation continues to focus on the national angle (Benzie and Persson, 2019), and stakeholders still lack the necessary tools to implement operational arrangements for TCR cooperation.

More broadly, divergent power relations, geopolitical interests and domestic motivations can obstruct coordinated TCR management. A typical example is water management in the Nile catchment area, where Ethiopia's hydroelectric interests, via the Renaissance dam, are at odds with the challenges of agricultural adaptation in Egypt. Adaptation in a transboundary context implies helping these regional transboundary resource management organisations to increase their technical and political skills: negotiating overall water use reductions in the event of a crisis or in the longer term is an extremely complex political exercise that requires analytical and diplomatic skills and an appropriate political mandate. Furthermore, regional governance actors often remain anchored in pre-existing cooperation criteria, rules and objectives that are ill-suited to TCR management (for example, focusing more on coordinating water resource mobilisation than on managing water demand). The underlying question is whether it is preferable to create new institutions specialising in these issues, or to strengthen the skills of existing actors by broadening and reforming their mandates and structures and, if so, to determine which of the existing range of organisations are best placed to take forward the TCR agenda.

Analysing existing TCR governance mechanisms

Public policies therefore need to be guided, while regional and sectoral actors, as well as development banks and financial institutions through their regional-level support programmes, need to be equipped to manage risks and their repercussions more effectively, in a way that is equitable between societies and sustainable over the long term. However, there remains a lack of knowledge about the mechanisms for TCR governance, which is crucial if we are to establish a common experience sharing framework, from one region to another and/or from one type of TCR to another. Substantial literature on cross-border cooperation already exists and there is a general understanding of regional governance mechanisms and instruments (OECD, 2013). However, the relevance of these mechanisms must be questioned in terms of their ability to deal with the relatively new issues raised by TCRs. This means analysing, on the basis of specific cases of existing regional cooperation, how TCRs pose new questions and challenges for existing actors and mechanisms, and then examining the possible solutions and their relevance in different contexts. In this context, there are three main research questions:

1. **How does adaptation to TCRs challenge existing transboundary governance systems and mechanisms?** These mechanisms are often specific to a given subject (such as a type of pollution) and focus on reacting to shocks rather than their anticipation. However, the new challenge raised by climate change adaptation, including TCRs, is that we now have to manage the consequences of more frequent and/or more intense extreme events, against a backdrop of changing environmental conditions. This means anticipating chain reactions that are amplified in terms of intensity, and more complex in terms of the ramifications of impacts/risks (for several sectors, sections of society, etc.).
2. In this context, **what are the strengths of existing transboundary governance mechanisms for meeting adaptation challenges, and what are their weaknesses?** What does this imply in terms of necessary innovations, organisation of the sharing of responsibilities, restructuring and the reform of mandates? The experience of other governance mechanisms in areas unrelated to environmental issues could prove useful in identifying relevant levers for initiating or strengthening regional TCR governance.
3. **What lessons can be learned from regional case studies that can be transposed to other regional or climatic contexts, and therefore implemented on a larger scale?** This scaling up is necessary to enable experience sharing from one region to another, and thus to encourage more ambitious deployment of regional TCR governance systems. In turn, this will help to inform theory on regional cooperation frameworks by introducing expertise that is more firmly rooted in the reality of TCR governance on the ground. These frameworks are essential for improving international support for regional cooperation on transboundary adaptation.

CLIMATE ADAPTATION RISKS