Climate change poses numerous challenges for international river basins that are likely to intensify in the decades to come. These challenges will have significant socio-economic and political repercussions. Ensuring sustainable development and political stability in these basins, therefore requires effective adaptation to the impacts of climate change. To overcome existing shortcomings and strengthen adaptive capacities, the water (cooperation) and climate communities should engage proactively and seek to create synergies between their instruments. Foreign policymakers should support them in this process.

Climate Change and International River Basins

A growing number of international river basins around the world are under pressure from demographic and economic growth, as well as environmental degradation. Climatic challenges – such as severe droughts and floods – often aggravate these trends, affecting the socio-economic development of basin communities. Inadequate access to freshwater, for example, can jeopardize agricultural production and livelihoods, or endanger drinking water, as well as sanitation services. Such developments can increase security risks at the sub-national level. These risks include stronger competition over access to water and increased rural to urban migration (due to diminishing opportunities for rural income generation). Such changes can, in turn, increase pressure on urban infrastructure and state capacities, undermine governmental legitimacy and increase the risk of instability.

Climate change, and the resulting impacts on water resources, e.g. changes in the quantity and quality of river runoff, can also directly contribute to inter-state disputes. For example, changes in river runoff caused by damming projects in upstream countries [for hydropower or irrigation purposes] can be intensified by changes in rainfall and temperature patterns. In turn, this can lead to disputes between states.

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Newly planned hydropower dams are already a crucial source of conflict between basin countries today. Prominent examples of disputed dams include the Grand Ethiopian Renaissance Dam (GERD) on the Blue Nile and the Rogun Dam which lies on an important tributary to the Amu Darja. Both projects are highly contested between upstream and downstream countries.

Climate change provides reason and justification for the expansion of hydropower and reservoirs (for both clean energy and to buffer against greater variability in precipitation), and its effects may simultaneously increase the stakes in water disputes. Consequently, climate change may contribute to conflict and deteriorating interstate relations in transboundary river basins.

International water disputes have rarely reached the threshold of violence so far. Yet, this should not lead to complacency. Water has never been as scarce as it is today, and the impacts of climate change threaten the stability of existing water institutions. Moreover, even with the absence of interstate violence, the existence of disputes carries significant costs for human security and prosperity.

**Supporting Adaptation in International Rivers**

Riparian countries and international River Basin Organizations (RBOs) have developed a range of mechanisms to manage the manifold challenges of climate change in river basins around the world. Most notably, they have:

- Crafted water agreements, which allow for some degree of flexibility to react to changing climatic conditions, and to avoid disputes arising;
- Engaged in generating and sharing relevant river basin data and information to understand in greater depth the impacts of climate change and ensure that informed adaptation measure are taken;
- Established dispute resolution mechanisms to be able to contain and solve disputes that arise because of changing environmental conditions; and
- Ensured funding for institutional platforms and adaptation projects to mitigate impacts of climate change.

Whilst these water governance approaches harbour considerable potential, they are still weakly developed in many river basins around the world. In a majority of international river basins, no cooperative institutions have been set up at all so far. Even in places where they do exist, they often do not comprise all basin countries and/or lack the flexibility necessary for allowing them to deal with change. Furthermore, data and information management between countries is sometimes obstructed by limited resources, mistrust or politicization of water issues. These shortcomings are particularly worrying in view of the changes that climate change entails.
Climate policy instruments can help strengthen adaptive activities at the basin level. The most important of these instruments include **vulnerability assessments, national adaptation planning and climate finance**.

Hitherto, climate policy instruments have mainly been employed for national adaptation activities. Since many of the most palpable effects of climate change concern water, and the fact that transboundary rivers account for some 60% of global river flows, there is a case for a stronger focus on climate policy instruments on shared waters. Whilst these instruments are geared towards managing the risks of climate change, they can simultaneously enhance broader water governance in transboundary basins and help to build stronger regional trust and cooperation.

**Linking Water and Climate Policy Instruments**

There are three main reasons for a stronger integration of water (cooperation) and climate policy instruments:

**First**, the hydrological effects of climate change are determined by natural geography, not political borders. Effective adaptation needs to correspond to these effects. Moreover, national adaptation activities can create (unintended) negative effects on other riparians. If, for example, an upstream country moved from rain-fed to irrigation agriculture to adjust to a changing climate, increasing abstractions from an international river could affect downstream neighbours. Such a scenario could, for example, develop on the Omo River, especially if Ethiopia faces droughts as severe as the current one. More irrigation agriculture in Ethiopia could affect livelihoods around Lake Turkana in neighbouring Kenya.

**Second**, stronger coordination between riparians of a shared international river basin could provide benefits. Flood protection measures, for instance, are often easier and cheaper to realize in upstream countries. Moreover, joint risk assessment and planning can help to build mutual trust between riparians. Stronger integration of (national) adaptation tools and transboundary water activities could thus benefit socioeconomic development and (human) security.

**Third**, adaptation to a changing climate will in many cases require additional resources. The international community has established different funds for climate change mitigation and adaptation, perhaps most importantly the Green Climate Fund (GCF). To date, the GCF and most other climate funds primarily focus on national-level projects, but they can and should, in the future, provide much-needed funding for transboundary climate change adaptation – and aim for co-benefits in the realm of international peace and security.
Foreign Policy Support: Recommendations

Although the benefits of linking climate and water diplomacy may seem obvious, their realization is not a foregone conclusion. The different communities need support and incentives to combine and integrate their respective approaches and strengthen transboundary climate adaptation. The international community and foreign policy actors in particular can help to foster such an environment. Specifically, they can:

- Advance cooperation and exchange by facilitating the establishment of new basin institutions, by strengthening existing institutions, and by ensuring the integration of governance mechanisms that help deal with change, such as flexibility mechanisms, dispute resolution provisions or standards for transboundary environmental impact assessments;
- Encourage and support the incorporation of basin-wide, transboundary thinking in national adaptation planning and, simultaneously, the integration of climate change adaptation policies into existing and newly established basin institutions;
- Support activities to foster and strengthen linkages between transboundary water and other regional cooperation mechanisms, with a view to facilitating the ‘spill-over’ of cooperation between different sectors;
- Consider using adaptation issues to promote cooperation between regional basin institutions and non-member riparians where basin institutions do not comprise all riparians;
- Promote transboundary and, where possible, basin-wide data and information sharing, including through climate change activities such as vulnerability assessments, and facilitate their simultaneous use for confidence-building and, ideally, the elaboration of joint adaptation responses;
- Facilitate access to climate funding for transboundary activities and bridge the gap between the availability of climate finance and access to it by transboundary actors, e.g. through support to such actors for accreditation and proposal development and/or the creation of dedicated funding windows.

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Authors: Sabine Blumstein, Benjamin Pohl and Dennis Tänzler
Design: Steffen Kalauch, adelphi