



Effective Cooperation on Transboundary Waters: A Practical Perspective

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Building effective cooperation on transboundary waters is always a lengthy and complex journey. Embracing cooperation is no simple task for a nation state, not least because of the perceived costs of the erosion of sovereignty, however small that erosion might be. While there are many examples of where cooperation is non-existent or weak, there are also examples – across countries and across time – of effective cooperation. This essay examines these issues through a practitioner’s lens to draw a few lessons from experience on why countries cooperate and how cooperation can be achieved.

Why do countries cooperate?

Why do countries cooperate on transboundary waters? At first glance, the obvious answer is that cooperation is by definition good and is, therefore, the right course of action. This is asserted time and again as a first principle in countless international meetings and proclamations. Yet the reality is more nuanced. The UN Convention on the Law of the Non-navigational

Uses of International Watercourses was 27 years in preparation prior to its adoption by the UN General Assembly in 1997. Now, 12 years later, only 16 states have ratified the Convention and it has not entered into force. As a consequence, despite the irreplaceable role of water in lives, livelihoods and production, there is no universal treaty in force to regulate the use and protection of shared waters (Salman, 2007). The absence of this kind of universal treaty has not precluded cooperation between sovereign states, nor does it imply that the principles are not broadly accepted, but clearly most states are not ready to commit themselves to a binding legal obligation.

The record to date suggests, quite simply, that countries do not cooperate in the management of transboundary waters because they are compelled by an ethic of cooperation. They cooperate when the net benefits of cooperation are perceived to be greater than the net benefits of non-cooperation, and when the distribution of these net benefits is perceived to be fair. In other words, states work together when doing

¹ The findings, interpretations, and conclusions in this paper are entirely the authors'. They do not necessarily represent the views of the World Bank, its Executive Directors, or the countries they represent.

so offers special economic and political advantages over unilateral development, and when these larger benefits are shared.

Perceptions are pivotal. States must believe that greater economic benefits will be gained and distributed equitably. Indeed, the role of perceptions in a country's cooperation calculus underscores the importance of shared, trusted information. Perceptions are often distorted by inaccurate or mistrusted information, but might be tempered by more credible information. Perceptions can also be influenced by historical tensions and suspicions, which might be lessened through sustained dialogue. We will return later to these central themes of knowledge and dialogue.

Benefits themselves go beyond the obvious, and take different forms (Sadoff and Grey, 2002). This describes four types of benefits: environmental *benefits to the "river"* (e.g. improved water quality, conserved biodiversity); economic *benefits from the "river"* (e.g. increased food and energy production); *reduction of costs because of the "river"* (e.g. reduced geo-political tensions, enhanced flood management); and *benefits beyond the "river"* (catalysing wider cooperation and economic integration). Any one of these four benefit types can promote cooperation. The broader the basket of benefits, the greater is the scope for structuring mutually beneficial cooperation.

If these kinds of enhanced benefits are to be generated, they also must be shared – in a manner that is perceived to be fair. This can mean the separation of the physical location of river development where benefits are derived, from the physical location where benefits are distributed. For example, in the Senegal River Basin, the three countries of Mali, Mauritania and Senegal – through the OMVS (the Senegal River Basin Development Authority) – developed a clear methodology and framework to first quantify and then allocate the benefits and costs of multi-purpose investments across the entire basin. The Manantali Dam, for example, which is located entirely inside western Mali, was constructed through the OMVS in the 1980s for hydropower, irrigation and navigation benefits to be distributed across all three countries.

The scale of benefits derived and the perceived fairness of the benefit sharing arrangement together with the political ideal of solidarity between the three countries have sustained substantive cooperation and a strong river basin organisation on the Senegal River (Yu, 2008).

It is our view that an increasingly important and compelling driver toward effective cooperation is the management of water-related risks (e.g. of floods) common to some or all riparian states within a basin. This is an example of the third type of benefit described above. This can also be seen as a growing focus on managing the destructive impacts of water, relative to capturing the productive potential of water – both of which are key aspects of achieving water security.² In recent years, there have been growing concerns globally regarding the uncertainties of our climate future and, in particular, the impact of a changing climate on water resources. Taken together with other changing "climates" – changes to demographic, financial, economic and political climates – the future challenges in managing the world's water resources look daunting and the risks great.

Co-riparian states can manage these risks that they face by pooling their resources to enhance information and early warning systems on their changing hydrologic variability and by fostering system-wide river basin management. Climate change raises the stakes of non-cooperation, encouraging nation states not only to capture additional economic benefits, but also to manage better their growing common risks. In transboundary river basins, existing risks are likely to be intensified by climate change. Effective cooperation in transboundary basin management could become a singularly effective risk management strategy.

History suggests that a perception of common risks can be particularly compelling motivation to manage and share these risks through cooperation. Cooperation between Canada and the United States on the Columbia River, for example, was catalysed in large part by recurring and sometimes devastating floods. This is true even though – and this is important – the perceived economic benefits of flood control were

² Water security can be defined as the "availability of an acceptable quantity and quality of water for health, livelihoods, ecosystems and production, coupled with an acceptable level of water-related risks to people, environments and economies". See D. Grey and C. W. Sadoff, "Sink or Swim? Water Security for Growth and Development" in *Water Policy* Vol. 9, No. 6. pp 545- 571. 2007.

considerably less than those of other benefits from the Treaty. Energy was the other key driver of the 1961 Columbia River Treaty and the new storage dams, constructed under the Treaty and cooperatively operated, enabled significantly more power generation than could otherwise have been produced by unilateral action (Yu, 2008).

Today, similar processes may play out in the immense Ganges-Brahmaputra-Meghna (GBM) Basin, which is shared by Bangladesh, Bhutan, China, India, and Nepal. The GBM is characterised by the world's highest mountains (including Mount Everest), greatest floodplains, and largest basin population, with over 500 million people, many of whom are very poor. Added to these superlatives are: a unique monsoonal climate, with 50 percent of precipitation in 15 days and 90 percent of runoff in 4 months; very little hydraulic infrastructure, with only 30 days of flow in artificial storage (compared to the 900 days of storage in the Colorado and Murray-Darling basins (Briscoe and Malik, 2006); extreme pollution (with consequent ecosystem damage and biodiversity loss); and very limited existing transboundary cooperation. Climate models suggest that monsoon intensity could increase and glaciers retreat, while populations, cities, industries and economies continue to grow rapidly. The risks faced by the basin's populations today are already high: 70 million people in India and Bangladesh were seriously affected by the 2007 monsoon, 4,500 were killed, and crops across 75,000 km² were destroyed. Although the dynamics are complex and causality is difficult to determine, it is possible that there are already large numbers of "climate migrants" leaving the basin, temporally or even permanently.

Future risks are undoubtedly high and could potentially be mitigated through cooperation. Joint institutions for information sharing could help predict and monitor the basin's changing hydrology and underpin early warning systems, thus enhancing both agricultural productivity and disaster preparedness. Cooperative infrastructure development and/or operation could help regulate river flows, to mitigate floods and droughts, generate power and irrigate fields. Cooperative environmental management could enhance water quality and ensure environmental flows for ecosystem health. And all of this cooperative engagement could improve regional relationships "beyond the river".

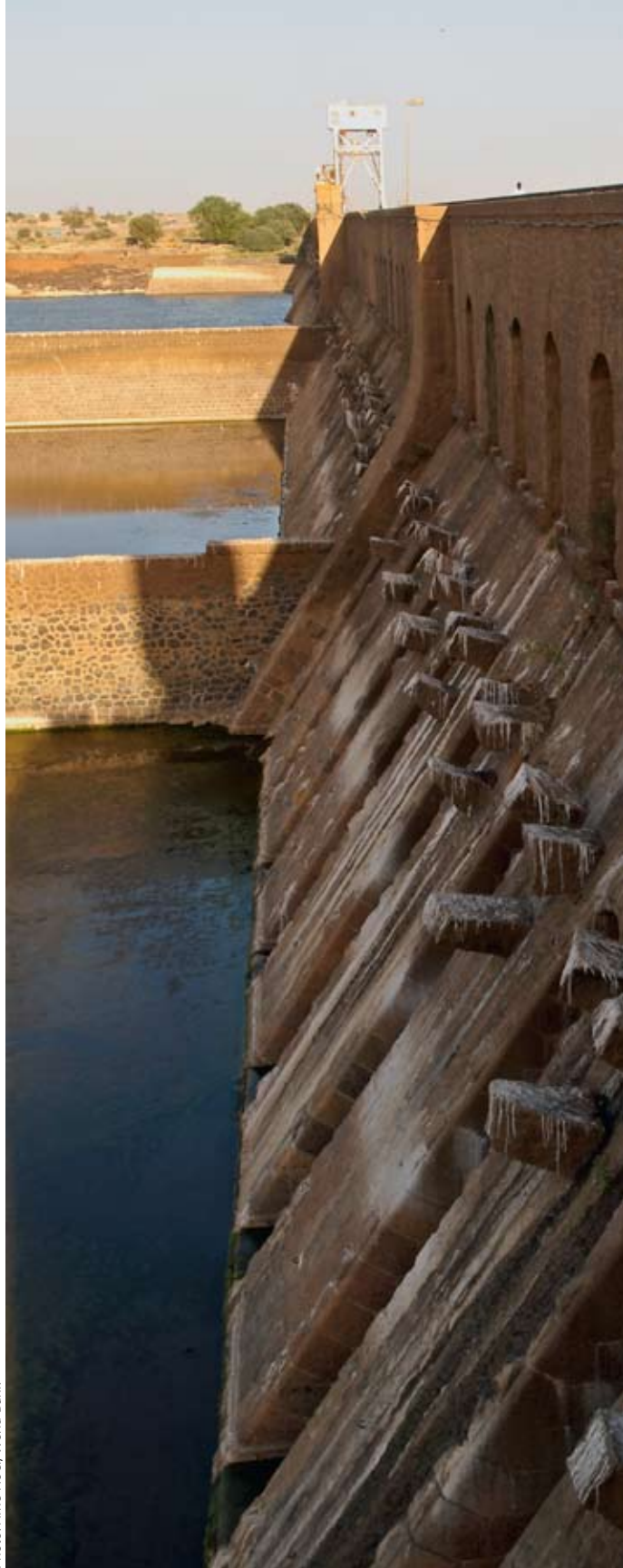


Photo: Arne Hoel/World Bank



How is effective cooperation achieved?

There are no blueprints for achieving cooperation – indeed it is often unclear what is meant by the term cooperation itself. The debate tends to be cast as an all-or-nothing proposition implying that “cooperation” is an absolute, in direct opposition to “water wars”. In reality there are innumerable practical avenues of cooperation that states can undertake to their mutual advantage, each with different potential benefits and different associated costs. Effective cooperation can range from simple information sharing and hazard warning protocols, to a fully integrated approach to developing

(investing in natural and man-made infrastructure) and managing (investing in institutions, information and capacity) basin-wide transboundary river flows. While the latter remains an aspiration probably not yet achieved in any transboundary basin, there are increasing examples of effective transboundary cooperation.

Different modes of cooperation must be considered in response to different circumstances, and will depend on many factors. A continuum can be conceived from unilateral action (independent, non-transparent national planning and management), to coordination (sharing information regarding national planning and



Photo: Xu Jianchu

Effective cooperation on an international watercourse is any action or set of actions by riparian states that leads to enhanced management or development of the watercourse to their mutual satisfaction.

While the reasons and the mechanisms for cooperation may be increasing, and increasingly apparent, getting there remains a difficult journey and typically requires a conscious, multi-year effort by all parties. But practical experience does tell us something about how to get there. Building the enabling environment – and in particular knowledge, trust and confidence among co-riparian states – is usually the first step in building cooperative transboundary institutions. The ownership of the cooperation agenda must be entirely with concerned riparian countries, in order to ensure commitment and endurance. However, experience suggests that invited third-party facilitation can be useful, especially on large international river basins with tense pasts and complex futures. Third party facilitation by trusted brokers and conveners can help generate impartial knowledge and analyses, create a neutral space for dialogue, and ultimately help secure financing for cooperative investment. We have learned that this facilitation must be patient, respectful and reliable over a long period of time, possibly a decade or more, and that it must almost invariably be low-profile. “No-footprint” is a useful rule, unless a footprint has a specific and strategic value.

Process is almost as important as product, at least in the early days, and can be costly. Time spent building effective communications, working relationships and a level playing field of knowledge and skill is an essential investment for reaching sound negotiation outcomes. The process can be as diverse as necessary; shared experience, joint learning, round tables, cooperative assessments can all be part of the process tool box. Starting from a low base might mean negotiating a “shared vision”, which sets a goal of a better future, and then builds shared knowledge to provide the evidence to change the perceptions of benefits and catalyze cooperation.

There are many stories of “how” the path to real cooperation has been or is being explored – a variety of pathways to cooperation. Two evolving examples help illuminate this point, one based on informal dialogue, the other rooted in high level institutional structures.

management), to collaboration (adaptation of national plans for mutual benefits), to joint action (joint planning, management or investment).

For each international basin the optimal mode of cooperation will depend on a mix of factors including: hydrologic characteristics, the economics of cooperative investments, numbers and relationships of riparians, and the costs of parties coming together. It may not necessarily be the case that “more” cooperation reaps “more” benefits in all river basins (Sadoff and Grey, 2005). The art is in identifying “effective cooperation”, a term that deserves clear definition.



Photo: Anne Hoel/World Bank

Among the countries that share the Rivers of the Greater Himalayas and where cooperation today is very limited, the current “Abu Dhabi Dialogue” (ADD) provides a path of informal consultation. Each year it brings together senior political, government, and non-government participants from seven countries. Through non-representative, non-formal, and non-attributable dialogue around the themes of “common problems seeking common solutions”, participants build knowledge, relationships and trust. Together they have defined a *shared vision* of “a knowledge-based partnership of states fairly managing and developing the Rivers of the Greater Himalayas from the summits to the seas”. To materialise this vision, the ADD Knowledge Forum has been launched in parallel to bring together key knowledge institutions and to finance collaborative research.

The Nile Basin Initiative (NBI) illustrates a different path. Since 1999 the NBI has been guided by a Council of Ministers and supported by a dedicated NBI Secretariat in Uganda. More recently, offices were established for two sub-basins in the Nile: the Eastern Nile Technical Regional Office in Ethiopia, and the Nile Equatorial Lakes Coordination Unit in Rwanda. These offices, working in a coordinated manner, are undertaking

cooperative regional assessments and analyses, capacity building and investments in the Nile Basin.

In both examples, shared knowledge and patient dialogue are the common themes – however different the paths to cooperation might otherwise be. Knowledge is essential to identify the common opportunities and risks of transboundary water management, and to structure equitable benefit sharing arrangements. Sustained, information-based dialogue is essential to build a shared understanding, to enable productive negotiations, and to achieve robust cooperative outcomes.

So, states that are cooperating on international rivers will almost invariably have worked long and hard together to build trust, knowledge and institutions – often, but not always, with patient, trusted and committed external support. Their analysis, explicit or implicit, individual or collective, will have demonstrated that the benefits of cooperation are greater than the benefits of non-cooperation. The choices that they have made will therefore have been rational. They may still have much work to do to ensure that planned benefits are actually being derived and being shared fairly. But they have had the courage to change, moving from a past of non-cooperation towards a future of effective cooperation.

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