Executive Summary

Environmental Flows In the Context of Transboundary Rivers 2017

Exploring Existing International Best Practices and How They Could Be Applied in South Asia

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About International Rivers

International Rivers protects rivers and defends the rights of communities that depend on them.

We seek a world where healthy rivers and the rights of local river communities are valued and protected. We envision a world where water and energy needs are met without degrading nature or increasing poverty, and where people have the right to participate in decisions that affect their lives.

We are a global organization with regional offices in Asia, Africa and Latin America. We work with river-dependent and dam-affected communities to ensure their voices are heard and their rights are respected. We help to build well-resourced, active networks of civil society groups to demonstrate our collective power and create the change we seek. We undertake independent, investigative research, generating robust data and evidence to inform policies and campaigns. We remain independent and fearless in campaigning to expose and resist destructive projects, while also engaging with all relevant stakeholders to develop a vision that protects rivers and the communities that depend upon them.

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Author – Shripad Dharmadhikary
Layout - Cathy Chen
Cover photo - The Transboundary River Teesta by Samir Mehta
International Rivers

International Rivers
2054 University Ave. #300
Berkeley, CA 94704

Phone: +1-510.848.1155
internationalrivers.org

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Introduction

Environmental flows as an approach offers a unique scientific as well as political process to arrive at a balance between extraction, use and conservation of rivers. If properly implemented, environmental flows can help sustain and generate livelihoods, create economic value, preserve rivers and contribute to the sustainable management of rivers in general.

An environmental flow assessment process will deliver optimal results when it considers a river basin in a holistic manner, and its flows are inextricably linked across its length and with its basin.

Political boundaries, especially international political boundaries, often hamper such a holistic consideration of the basin by dividing the basin into compartments, presenting unique challenges for environmental flow assessments.

This paper attempts to bring out ways in which the assessment, allocation and implementation of environmental flows in shared rivers can be made more effective in South Asia, based on an understanding of the international legal regime, international practices and the South Asian situation.

Environmental Flows in Transboundary Contexts: Challenges

Several issues are likely to arise that can constrain the scope and effectiveness of environmental flows assessments and allocations in international rivers. In international rivers, negotiations mainly occur between governments and can completely eliminate the role of local communities in environmental flows assessments. Deliberations have to contend with a diversity of cultures, languages and governance systems across boundaries, and need to reconcile differences in national priorities and national situations. Considerations of sovereign control can lead to difficulties of managing the river basin as a unit. Lack of sufficient trust, apprehensions that geo-political objectives will be embedded in river management, and differences in the political and economic power of basin states can aggravate these difficulties. Sharing and verifying data is more difficult, especially for riparian communities. Often, the required multilateral legal and institutional frameworks are absent, and are not easy to create and sustain. Implementation, monitoring and verification are more difficult than in a purely domestic situation.

In spite of all these challenges, the successful implementation of environmental flows programs in international rivers can offer significant economic and non-economic benefits.

Policy and Legal Frameworks

Policy and legal frameworks for environmental flows in a transboundary context are essentially frameworks dealing with the broader issues of sharing and managing international rivers. These include international treaties, international customary law, international case laws, and bilateral, regional and basin level agreements. Domestic policy and law can also have important bearing on environmental flows in transboundary rivers.

The UN Watercourses Convention

The most important global legal agreement is the United Nations' Convention on the Law of the Non-Navigational Uses of International Watercourses adopted by the UN General Assembly on 21 May 1997. The Convention has codified some of the most important principles relevant to transboundary rivers, namely, "equitable and reasonable utilization and participation", "obligation not to cause significant harm", "general obligation to cooperate" and "regular exchange of data and information". Environmental flows are not directly mentioned, but their necessity and value is implied by the above principles.

Other than this Convention or other binding agreements, and especially in their absence, it is the customary laws – like the Helsinki Rules – that determine the contours of any negotiations and agreements.

Helsinki Rules and Berlin Rules

"The Helsinki Rules on the Uses of the Waters of International Rivers" were adopted by the International Law Association (ILA) at Helsinki in August 1966. Though not legally binding, they have been the most regarded framework dealing with international watercourses. They assert directly the principle of "reasonable and equitable share" in the waters of an international river and the principle of "no significant harm" indirectly.

In 2004, the ILA adopted the Berlin Rules. They capture the progressive developments in the relevant international law like stronger provisions for ecological sustainability, right of access to water, and participation. They explicitly provide for "Ecological Flows" to "protect the ecological integrity of the waters of a drainage basin, including estuarine waters".

Case Laws

Case law and judicial interpretations are an important part of the legal regime governing transboundary rivers.

The International Court of Justice (ICJ), in its judgement of September 1997, in a dispute between Hungary and Slovakia regarding the Gabcikovo-Nagymaros Project, has held that when disputes relating to international rivers are being resolved, even if any bilateral or multilateral treaty exists between the party states, customary law be read into it, as well as the provisions of the Watercourses Convention, even if the parties are not signatories to it or bound by it.

In the Kishenganga dispute between Pakistan and India, the Permanent Court of Arbitration (PCA) ordered, in 2013, that India was under obligation to release environmental flows downstream of its project into Pakistan. The order establishes two crucial elements in the legal regime around environmental flows in the context of transboundary rivers. One, that even if there are existing treaties governing transboundary river disputes, and regardless of the provisions of any such agreement, customary international law would also necessarily apply, even if they extend the provisions of the treaties or agreements. Second, even if treaties had been in place before the provisions of customary laws had evolved, the customary law provisions would still be applicable.

Lessons from International Practises

Several important international initiatives offer insights about what contributes to effective environmental flows assessments and allocations in transboundary basins.

Mekong River Commission

On 5 April 1995, Cambodia, Lao PDR, Thailand and Vietnam signed the Mekong Agreement and created the Mekong River Commission for the sustainable development of the river. The two remaining basin states, China and Myanmar, are Dialogue Partners in the Commission. The Mekong Agreement has a specific provision for the maintenance of flows, in recognition of the critical role played by these flows in maintaining livelihoods and protecting communities against floods and droughts. This includes "the acceptable natural reverse flow of the Tonle Sap", a vast lake and hydrological system that supports rich fisheries and other livelihoods.

The strengths of this arrangement include a legally-binding agreement between the basin states, an appropriate institutional structure in the form of a multilateral river basin organisation, and the provision of environmental flows in the agreement itself.

However, the actual implementation of environmental flows has seen limited success. The reasons for this vary: Maintaining environmental flows is seen as restricting development and keeping people in the traditional subsistence way of living. The absence of a key basin state, China, which is upstream and powerful, is also an important reason.

The Senegal Basin

The Senegal River is 1800 kilometres long and its basin is spread over four countries, namely, Guinea, Mali, Mauritania and Senegal. The river's natural flow has large fluctuations and these flows have sustained traditional livelihoods of flood recession agriculture on around 150,000 ha and grazing on much larger areas. The four basin states are party to an agreement that established the Organization for the Development of the Senegal River (OMVS). The biggest intervention has been the construction of the Manantali Dam in Mali, and the Diama Dam in the Senegal Delta. Since Manantali Dam was likely to devastate the flood recession agriculture and grazing livelihoods, it was decided to incorporate a managed flood for 20 years to partly simulate the actual flood.

The implementation has been mixed. When properly released, the environmental flow (flood), even though small, provided significant economic and livelihood benefits. But often, the flow was not released properly and hence, over the years, distress in the affected areas has been increasing.

Key good practises in this case have been the legally-binding agreement between the basin states, appropriate institutional structure in the form of a multilateral river basin organisation, and the provision of the environmental flows in the agreement itself. Community groups and NGOs were given a formal role, which helped the partial realisation of the benefits of environmental flows. Studies highlighting the economic benefits of traditional livelihoods as well as the ecological functions of floods helped get support for environmental flows. International financial and other agencies also played a useful role.

On the negative side, with hydropower being valued very highly in financial terms, and environmental flows seen as reducing the hydropower generation, environmental flows began to get a lesser priority. Often, the OMVS was not willing to release floods due to its own priorities, such as maintaining reservoir levels.

Colorado River

One of the most spectacular rivers in the world, the Colorado flows through the USA and Mexico, emptying into the Gulf of California. The river is heavily overused and the Colorado Delta has become mostly dry, with the river rarely reaching the Gulf. To address these impacts, the US Department of Interior has been engaged in conducting a series of High Flow Experiments (HFE) where “artificial or controlled floods” were released from the Glen Canyon Dam “…designed to mimic pre-dam seasonal flooding on the Colorado River.”

In 2014, the HFE also included Mexico, making it an international experiment. The agreements for 2014 HFE were reached in the meeting of the International Boundary and Water Commission, United States and Mexico in 2012, documented in the Minute 319. The results of this experiment were to help design future actions in the basin. The pulse flood was released on 23 March 2014.

Some of the important aspects of this initiative include a formal agreement under a Treaty regarding the environmental flows, which is not a one-time effort but is a part of an ongoing larger effort, and the official involvement of non-governmental organisations from both countries. Mexico, the downstream state, was required to ensure that the floods were used only for the purpose of maintaining environmental flows.

The European Water Framework Directive

A "directive" is a legislative act that sets out a goal that all European Union countries must achieve. The "Directive 2000/60/EC” of the European Parliament, also known as the EU Water Framework Directive (WFD), entered into force in December 2000.

The WFD does not explicitly call for assessing and maintaining environmental flows in the EU rivers. However, the WFD does require all surface water bodies to achieve “good surface water status” in a time-bound manner. The definition of good surface water status makes it clear that environmental flows are implicit in it. The WFD asserts that the “best model for a single system of water management is management by river basin”, and has developed a Common Implementation Strategy for this, “a common understanding and approach”. To address common technical and other challenges, the EU has also created a series of technical guidance documents and resource documents. All these important strengths of the WFD help implement a good environmental flow regime – a legally-binding framework, clear objectives (good status), the river basin as a unit of management, and the development of a common understanding, which is codified in technical guidance documents.

The South Asian Context

Shared Rivers, Legal, Policy and Institutional Regime

South Asian countries (excepting the island nations, if the sea and ocean are discounted) are intimately and inextricably linked to each other through shared water resources, including rivers.

None of the South Asian countries, or other countries with shared basins like China or Myanmar, have signed or otherwise agreed to the UN *Convention on the Law of the Non-Navigational Uses of International Watercourses.*

There are a number of bilateral treaties or agreements around transboundary rivers in the region, like the Indus Waters Treaty 1960 (India-Pakistan), the Ganga water-sharing treaty 1996 (India-Bangladesh), and the Mahakali Treaty 1996 (Nepal-India).

There are many limitations to these treaties and agreements. First of all, not all of the shared rivers are covered in these. Second, these agreements are bilateral, and often leave out a third country that is also part of the basin. Further, these agreements are often very limited in their scope, focusing on either just sharing the water or even on specific projects. The protection of the ecology and integrity of the river basin and an understanding of the link between river ecology, river flows and livelihoods does not exist in most of these agreements.

Given this, it is not surprising that the institutional framework to look at rivers in a holistic manner, and in particular to implement environmental flows, is weak or absent. There are no multilateral, basin-wide organisations devoted to river basin management in the region.

Some of the multilateral organisations and arrangements in the region include the South Asian Association for Regional Cooperation, or SAARC, consisting of the eight South Asian countries; the BIMSTEC or the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation, a regional organization comprising seven member states lying in the littoral and adjacent areas of the Bay of Bengal; the BBIN or the Bangladesh-Bhutan-India-Nepal (BBIN) Initiative; and the Bangladesh, China, India and Myanmar Economic Corridor (BCIM Forum). Given their structures and objectives, it is unlikely that any of these forums will provide the right institutional structure for operationalising effective environmental flows allocation and implementation programs. For this, multilateral organisations structured along major rivers basins would be the preferred institutions, and there is an urgent need to create such institutions in South Asia.

However, there are signs of increasing sensitivities towards the protection of river ecology and maintaining environmental flows, like the 2010 draft of the Teesta Agreement between Bangladesh and India that leaves 20% of the water for the river.

Domestic Policies Support Environmental Flows

Domestic policies of all the South Asian states indicate a rising concern for the state of its rivers, and intentions to implement environmental flows. For example, India's Water Policy of 2012 states that "A portion of river flows should be kept aside to meet ecological needs ensuring that the low and high flow releases are proportional to the natural flow regime". In spite of the varying degrees of policy articulation and understanding of environmental flows, the common theme suggests there is increasing recognition in all South Asian countries of the need and importance of environmental flows in managing domestic rivers. This can create facilitating conditions and receptive mindsets for the implementation of environmental flows in transboundary basins.

This understanding leads to several suggestions for more effective implementation of environmental flows in shared rivers in South Asia.

Recommendations

1. States, or multilateral organisations like SAARC, BBIN or BCIM Forum, should initiate processes to create dedicated river basin-based international agencies with the membership of all basin states, to manage rivers on a river basin basis, with environmental flows as a key element. Such agencies must also have the meaningful involvement of community representatives and non-governmental organisations.
2. The processes to create such international river basin organisations (RBO) should also include extensive dialogue and discussions across boundaries to arrive at:
   a. common principles and approaches to managing rivers;
   b. in particular a common understanding of what is meant by environmental flows, and their assessment methods;
   c. the reconciliation and convergence of the objectives for environmental flows of various basin states and communities.
   Such understanding should be translated into technical guidance documents.
3. Discussions around managing transboundary rivers should move away from being only a government-to-government process and should be broadened to have the participation of riparian and basin communities and non-governmental organisations, talking across political boundaries.
4. Environmental flows assessments must include detailed and comprehensive studies of the role and importance of traditional livelihoods and occupations, bring out the benefits of maintaining environmental flows, and highlight that environmental flows can be maintained along with "development" of the basin.
5. Development plans for river basins, apart from conventional elements like hydropower and irrigation dams, should include options that look at the non-consumptive and in-stream benefits of water, options that provide developmental benefits through maintaining environmental flows.
6. Often, a distribution of the benefits generated from basin development can offer a better road to reaching agreements than just sharing waters.
7. Studies of the benefits of environmental flows, and of various options for the development of river basins, also need to highlight the equity aspect and distribution of benefits.
8. Environmental flows assessments should be part and parcel of the comprehensive planning of a river basin and not an ad hoc means to address in a limited way some adverse impacts of a hydropower or irrigation project.
9. All these studies, as with the entire process of environmental flows assessments, should be carried out in a rigourous and scientific manner, but also bringing in the knowledge and understanding of local communities.

10. The involvement of international agencies can provide important inputs, but should occur in a manner that is sensitive to local sentiments and should not push for specific options in a way that will create a sense of imposition or will diminish ownership of the process by basin states and local communities.
11. There should be clear-cut timelines for the creation of the transboundary river basin organizations.
12. While these are being put in place, basin states should arrive at agreements to ensure that further deterioration in flows, river ecology and livelihoods does not take place.
13. Non-governmental organisations and other groups in the region should initiate transboundary dialogues and discussions in "Track-II" style to prepare grounds for the more formal processes.
14. South Asian states should expressly articulate a commitment to customary international law, and move towards a ratification of the UN Convention on the Law of the Non-Navigational Uses of International Watercourses.
15. An effective system of monitoring and verification is critical to the proper implementation of environmental flows. Local communities and non-governmental organisations must have a role in this process.

These measures will help put in place for the transboundary rivers of South Asia a comprehensive river basin management framework with environmental flows at its centre.

Ultimately, a comprehensive dialogue across boundaries, involving governments, citizens, non-governmental organisations, and riparian and basin communities remains the best way to create a convergence of interests and the political will in the basin states for an effective implementation of environmental flows in the transboundary rivers of South Asia.

note

The River Teesta
Photo by Samir Mehta, International Rivers

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