



**HOW TO  
SHARE  
A RIVER  
IN INDIA**

Pathways of Change

Tandem Research &  
The Asia Foundation



**The Asia Foundation**

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## PREAMBLE

Tandem Research, in partnership with the Asia Foundation organized a Policy Lab on How to Share a River in India on 16th August 2017.

Tandem Policy Lab brings together multiple stakeholders for collaborative and iterative public policy solutions. The policy lab method seeks to collectively evaluate the political, social, and value-based contestation underlying the framing of problems, goals, and solutions, to identify pathways for shared sense-making and collective action.

The aim of the lab was to examine river sharing arrangements in India, in particular the role of paradigms, politics and policies that frame conflicts over water allocation. Drawing on conversations at the lab, some insights for river sharing in India have been captured in this report. However, river sharing is a complex social process and many institutional and political processes remain under researched; research priorities for informing policies were discussed extensively at the lab and have been outlined in this report.

The River Policy Lab brought together around fifteen participants from Goa and elsewhere, representing a diversity of stakeholders engaged in river governance. The lab examined river sharing arrangements in India in four sessions over the course of the day, focusing on:

- Underlying knowledge paradigms, world-views and framings that shape river sharing arrangements;
- The legal and policy framework for managing inter-state rivers in India's federal structure;
- Grass-root, local government and civil society led action for resolving water conflicts and
- Pathway strategies for facilitating policy change, in particular the role of media in shaping public opinion and policy narratives.



establish scope and identify  
knowledge



generate ideas and insight



develop, test, and refine shared  
ideas and proposals

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## 01. PARADIGMS

River sharing arrangements are overwhelmingly shaped by how river systems are defined, understood and studied. To date, the understanding of rivers has been dominated by engineering, reductionist and utilitarian epistemologies which view rivers as 'plumbing' through which water flows, hydrologically. Water sharing arrangements, between Indian states and with our neighbours need to be realigned to more holistic knowledge paradigms – like those of systems ecology - which look at the complexity of river systems, from the source to the sink; not just the cusecs of water but also the ecology it supports. The 1977 UN Convention on the Law of the Non-Navigational Uses of International Watercourses lays down non-binding principles advising nation states on river sharing agreements, which are also relevant for river sharing arrangements between Indian states. While for all practical purposes the Convention is still not in force, it makes a significant contribution in defining 'Watercourse' as "...a system of surface waters and ground waters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus" .

Traditionally, ownership of land through which the river flows has in a large way dictated the use of water resources, arranging legal rights around upper riparian and lower riparian positioning. Disputes reflect infringement on the rights of others and their use of the resources, as users have a right to manipulate the water but not alienate it from its source as that impacts the lower owners. All the countries which voted against the UN Convention suggestions were mainly upper riparian. China is the most relevant case in

point in the South Asian context, as five of the main Asian rivers originate from the Tibetan plateau.

Customary international law has identified three main requirements as obligatory for the basis of river sharing negotiations: equitable and reasonable utilization; prevention of significant harm and prior notification of any construction and obstruction. In disregarding the Watercourse Convention principles, China's stance of indisputable territorial sovereignty over rivers that flow through its territory also disregards these customary laws. As powerful countries capitalize on their access; causing concern not only on the grounds of equal distribution, but in doing so they also threaten the very sustainability of the natural river ecosystems.

There are examples of the sharing of transboundary rivers both internationally- among countries and nationally, between Indian states that need to be further evaluated to improve the understanding of river sharing and arrive at foundational principles for successful agreements between governments. For example, in 1995 more than 131 river sharing agreements were recorded between different states within India. These agreements have never been analysed or examined and there is an urgent need to do so.

While water sharing has led to various conflicts and inequitable situations around the world, The International Commission for the Protection of the Danube River, for example, highlights the potential for cooperation between



multiple nations. The Danube passes through fourteen states, which are all members of the Commission as is the European Union. The underlying question regarding the special case of the Danube Commission is whether such cooperation would be possible without the engagement of a neutral party such as the EU?

One of India's most significant water agreements is the Indus Water Treaty with Pakistan, which, some may argue, forms the basis of a tenuous peace between the two otherwise hostile nations. The treaty divides the Indus system through whole rivers (as opposed to dividing the rivers itself)- with Pakistan taking over rights of the western rivers (Indus, Jhelum and Chenab) and India the eastern (Ravi, Beas and Satluj). However as water flow in both the eastern and the western Indus system falls due to the impacts of climate change and development, there is perhaps a need to revisit the 1960 Indus Water Treaty and use it a 'site' for working towards more peaceful regional dynamics.

Basin wide approaches are also critical for river sharing within India. In India the Telugu Ganga Project on Krishna rivers is often celebrated as India's success story of sharing arrangements between Indian states. In 1983, in Hyderabad, the Chief Ministers of Andhra Pradesh and Tamil Nadu came together to sign the Interstate agreement for the supply of Krishna water to Chennai city and to irrigate the arid areas in Andhra Pradesh enroute. However, Karnataka objected to the irrigation scheme on the grounds that its own project to harness Krishna waters was still incomplete

while Maharashtra opposed it as almost 75% of the Krishna basin area in Maharashtra is drought prone, claiming that the project violated the 1977 interstate agreement.

What all these international and national cases signify is a need to reconsider our framing of the water sharing debate, adapting it to the ecological and cultural context. The positioning of local rights and marginalized communities should be taken into account in the larger paradigm of river sharing, especially in the Indian context.

Scholarship on water sharing between Indian states is limited, but in the context of international trans-boundary rivers the spectre of potential 'water wars' is often conjured by analysts. The 'water wars' thesis however ignores the history and experience of water co-operation and the peace building agency of water sharing arrangements. Within India, there are many more basin co-operation arrangements than disputes.

## 02. POLITICS AND POLICIES

The majority of water laws (international and Indian) were written during a period when political and economic control of rivers was the primary driver of river management efforts. However, newer paradigms place ecological health as a crucial condition for managing waters; we are yet to see this reflected in the development and implementation of our policies. For India, the river basins of the Ganga and the Yamuna have thrived for centuries as pilgrimage centres, and the waters are used for daily rituals and purification. Yet, lack of pollution control and the plethora of dam and diversion schemes, since the 1960s, highlight the limited policy concerns for water quality, ecology and natural flow.

Within India's federal setup, water has been considered a state subject on the grounds of two primary arguments: one illustrates the very roots of the formation of the Indian union; and the other reflects the goal of preserving democratic federalism. Since the majority of states were agrarian economies, they refused to part with regulatory powers over water and give way to uncertain and remote federal governments. With the introduction of Article 262, the national parliament was given certain powers to regulate water disputes through independent tribunals. The awards of these Tribunals are equivalent to that of the Supreme Court, and neither the Supreme Court nor any other court can exercise any jurisdiction in respect to any water dispute which may be referred to a tribunal under this act. On the other hand, the Supreme Court's interventions with respect to the interstate water disputes are justified by recognizing the right to water as a fundamental right under Article 21

in the Indian Constitution. This allows individuals and other non-state actors to file independent cases (often PIL's) regarding any water disputes.

The persistent Cauvery dispute, between Karnataka and Tamil Nadu has raised concerns around the capabilities of states to successfully come to agreements on the sharing of rivers. The 2007 Tribunal judgement on the Cauvery dispute has also been criticized by both states. The Cauvery conflict is far from settled; the Cauvery dispute between Tamil Nadu and Karnataka led to riots on the streets of Bangalore in September 2016. Punjab has gone one step ahead by unilaterally passing a Bill terminating all previous agreements and accords on river waters, thereby vitally affecting irrigation and drinking water supply in the neighboring states. Punjab's action has triggered a whirlwind of protest and has raised core issues of national importance, the solution to which would determine the future course of action on such issues . In several instances, for example around dam schemes, states have disregarded their own local stakeholder groups- from farmers, tribal communities, to coastal and fishing groups, focusing more on larger, private interests.

Citing instances where states have acted in narrow self-interest, some analysts have argued for the need for nationalising interstate rivers, thereby recognizing the need for the integration of policies for river systems, from 'source to sink'. Possible ways of extending the centre's control over the use of water resource include the provision of Entry 20 in

the Concurrent List regarding economic and social planning, requiring clearance from the centre for any projects on water resource development, including the projects for irrigation, hydropower, and flood control. While this limits the scope of Centres involvement to development projects; these have often been identified as the main conflict areas, not just between but also within states.

However, the problem with a Central monopoly over decisions and regulations is not merely a technical but a deeply political issue- the government in power will always be more inclined to favour their party states and vote banks. Furthermore, can the centre truly facilitate equal involvement and say of all state and non-state actors? What is the place of de-centralised bodies, addressing and representing local needs and interests; in the debate of State vs Union control over water resources? The 74th constitutional amendment attempts to look at the discretionary powers of the District level panchayati raj institutions, at the Zila Parishal Level. The state finance commission has the power to give funds to the gram panchayat, and the Drinking Water & Sanitation area does in fact fall under the panchayat's ambit.

There are no simple answers to the conundrum around the degree of questions around nationalization and decentralization as these discourses point towards the contrasting worldviews of policy-actors. Contradictory certitudes frame the policy narratives of various actors around how to share rivers. Despite a plurality of

governance approaches, legalistic debates on 'controlling' volumes of river water (as 'cusecs') dominate. More varied pathways are needed for resolving disputes, avoiding conflict and sharing rivers in India.

### 03. GRASSROOTS ACTION

While the management and control of water resources largely falls under the state and union debate, it is imperative to recognize the work of non-state actors and civil society groups in facilitating multiple voices and perspectives. The question underlying this participation is of course how do grass root processes engage with legal and formal ones and what is the possibility of 'scaling up' successful action? Multi stakeholder platforms are crucial experiences from which we can learn.

One of the first water related multi-stakeholder dialogues took place in the Palar basin in Tamil Nadu, a highly irrigated and flourishing agrarian area with access to urban markets. However, pollution caused by the tanneries in this area could be felt in the reduced agricultural yield, polluted surface water, abandoned wells, serious drinking water shortages and health problems. A dialogue was organized to find ways to prevent further degradation of resources, while working towards a common development agenda that was acceptable to all the stakeholders. The dialogue on the Palar basin had over thirty members across sectors and the first meeting's proceedings were made into a publicly available document. The outcomes of this dialogue were positive and the stakeholders met periodically to find a solution. Although tanneries were polluting, a decision was reached that banning the tanneries altogether would not be viable. The members came to an agreement around the sharing of information on all aspects concerning tanneries, as well as regular monitoring of the common effluent treatments plants.

In 2003, the farmers of Karnataka, Tamil Nadu and Kerala, as well as academics and other stakeholders met as part of a non-political initiative to arrive at a solution to the Cauvery water dispute . Drawing inspiration from the Palar basin negotiations, they held over a dozen negotiations to arrive at a fair decision for sharing the river in water deficient years, one of the major sources of conflict in the Cauvery dispute . The former Secretary, Water Resources Ministry, Government of India, Ramaswamy R. Iyer noted that the meeting, although attended by over a hundred farmers from the contending and nearby states, as well as media people, engineers, former administrators, and others, was peaceful, and was marked by a sense of fraternity and a strong desire to come to a solution that everyone was comfortable with. The MSD was also praised by UNESCO for its efforts to bring about reconciliation through a people-to-people dialogue, thereby encouraging trust and informed engagement. The Cauvery Family was close to a breakthrough, having shortlisted five solutions and nearly zeroed in on one. However, even after having managed to convince all the farmers' groups on the equitable distribution solution, the lack of support and interest from either governments or the tribunals halted the progress of the committee.

A running theme across civil society initiatives is the unbiased dissemination of information in an attempt to bring together all parties and perspective, and in the process, empowering disenfranchised groups such as fishermen, coastal communities and small scale farmers.



While most state efforts focus largely on macro level issues, grass roots efforts, by their very nature, reflect micro level concerns which are often intertwined with the conservation of river systems itself. The Narmada Bachao Andolan has been an important social movement in the fight to preserve the natural course of the Narmada river, and prevent the displacement of various communities many of which are marginalized tribal groups.

However, the disconnect from legal and formal processes and the reliance on charismatic individual leaders, rather than robust institutions, has limited the scope and reach of such movements preventing them from 'scaling up' in influence. The state and tribunal structures don't provide any platforms for non-state actors to be heard. Considering the 74th amendment, there are constitutional provisions for decentralization, cases of Pani Panchayats and decentralized governance within states like Kerala need to be further examined as models for the country.

Other, smaller systems have been set up locally to respond to area specific problems. In the North East, for example; as the Brahmaputra is prone to flooding- the Central Water Commissions has created flood forecasting mechanisms. Furthermore, the people (in higher areas) themselves play an important role by alerting downstream communities, so that adequate precautions are taken in time in situations of high rainfall or increases in river levels. Integrated information systems around water resources, with contributions from all non-state actors, can prove to be an

essential element of questioning current power dynamics and holding state processes accountable. Conservation efforts, in collaboration with grass root actors- communities geographically and culturally linked to river systems, can prove to be more beneficial in the long run.

## 04. PATHWAYS OF CHANGE

Decision-making processes regarding shared water resources must increasingly involve a greater interaction between stakeholders: from farmers and fishermen to environmentalists and private sector representatives. Social scientists can design and facilitate these interactions. However, water managers and formal agencies, still, tend to have a strong bias for only considering technical inputs as the sector has been dominated by technocrats. Tribal populations and rural communities, on the other hand, often distrust government agencies and their facts, data and science; considering their knowledge production and use as deeply entrenched in underlying power structures. Science does not driver policy, nor should it. Knowledge itself needs to be democratised. Policy processes need to be aligned with collaborative processes to account for local knowledge's and aspirations; but doing so in not easy .

Aside from civil society groups and grass root movements, another potentially effective (and often unexplored) medium to influence policy change by non-state actors is the media. While the historical role of the media in public debates has been entangled in controversy- questioning the control of media resources and opinions by large corporate or political players; the platform continues to be an essential space for informing citizens and holding the state accountable.

Evocative storytelling through visual and written representation, of ecological and grass root narratives otherwise ignored or inaccessible, allows for the restructuring of traditional pathways of influence. However,

the key problematic remains, mainstream news channel, print and television media- with the widest access across the nation- are dominated by political agendas. What sells and what is profitable to sell gets reported. Furthermore, english mainstream media is very far from vernacular and regional media outlets. The imperative question remains; how can we reinsert the question of water sharing, moving beyond controversial and interest driven narratives, to the dissemination of relevant information in a vivid manner?

The very nature of 'media' has also shifted drastically from traditional platforms. In our current day to day lives, with the rapid increase of social media traffic (specifically in India- through mobile access)- platforms such as facebook and twitter have become central in reaching out to the public. The Tamil Nadu weatherman, for example, has 77,000 followers on twitter- in a flood prone area with a dire need for forecasting his impact could be far reaching.

But even with an extensive outreach, how much direct and tangible influence can media platforms have on policy making processes? Who creates and controls these processes and how does one involve multiple stake holders? Advocacy is seen as an opportunistic endeavour, issues need to be dealt with, and decision making bodies engaged with in real time. The role of the media is essential in affording transparency and accountability.

Non-state agencies, such as independent research centres, think tanks and other advisory bodies, could play a crucial

role in influencing policy, based in partnerships, with the involvement of the media. Insights from the field and new disciplinary approaches highlight the informal and often messy ways in which policy is formulated. Methods and frameworks that can capture these change pathways, to unpack the policy process and find strategies for progressive policy change are needed.

## END NOTES

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- UN, 'Convention on the Law of the Non- navigational Uses of International Watercourses', legal.un.org, 2014, p. 2, legal.un.org/ilc/texts/instruments/english/conventions/8\_3\_1997.pdf, (last visited on 21-09-17')
- Prof. B. S. Thandaveswara. 'Telgu Ganga Project'. Hydraulics, Indian Institute of Technology, Madras, available at: nptel.ac.in/courses/105106114/pdfs/Unit2/2\_5a.pdf (last visited on 21-09-17' )
- M.S Menon. 'Nationalise Interstate Rivers., The Hindu,27-07-04', available at: www.thehindu.com/op/2004/07/27/stories/2004072700131500.htm (last visited on 21-09-17')
- Forum for Policy Dialogue on Water Conflicts in India, 'Multi Stakeholder Dialogue as a Possible Way fo Conflict Resolution', available at: indiawaterportal.org ; www.indiawaterportal.org/sites/indiawaterportal.org/files/
- Ramaswamy R. Iyer, 'Cauvery Dispute: A Dialogue Between Farmers', Vol. 38 No. 24, Economic & Political Weekly, 06-20-03', pp. 2350- 2352, available at: www.jstor.org/stable/4413671 (last visited on 21-09-17')
- B.S Nagaraj. 'Solution to the Cauvery Issue Must be Sought Outside the Court'. The Quint, 16-09-16', available at: www.thequint.com/blogs/2016/09/16/solution-to-the-cauvery-issue-must-be-sought-outside-the-court-tamilnadu-karnataka-bangalore-bengaluru (last visited on 21-09-17')
- Irene J. Klaver (auth.). Barbara Rose Johnston, Lisa Hiwasaki, Irene J. Klaver, Ameyali Ramos Castillo, Veronica Strang (eds.)-'Water, Cultural Diversity, and Global Environmental Change\_ Emerging Trends', UNESCO- 1HP projects, 2012

- Ingram, H., and J. Endter-Wada. 2009. Frames and ways of knowing: Key considerations for policy responses to climate risk and vulnerability. Paper for the 7th International Science Conference on the Human Dimensions of Global Environmental Change, UN Campus, Bonn, Germany, 26–30 Apr 2009.

## PARTICIPANTS

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