

Resolving inter-state water sharing disputes

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WATER does not respect any boundary. Most of the larger rivers in India meander through the administrative boundaries of the Indian federal system. Sometimes a river itself is the boundary: the Indravati forms the boundary between Maharashtra and Chhattisgarh for a part of its flow. Often rivers mark metaphorical boundaries as well: the Ganga is the vehicle to the heavens whereas the Vaitarani marks the crossing from this world of mortals to an infernal one. Therefore, in a fundamental sense, all rivers are transboundary.

But for our somewhat mundane discussion, it's the wayward rivers that do not obey the diktats of human cartographic exercises that end up being marked and categorized as transboundary. For our purpose, we focus on rivers that arise in one province of India but end up in another. All of the longer and major rivers in India are transboundary rivers: the Mahanadi originates in Amarkantak in Chhattisgarh and crosses over into Orissa before finding its way to the Bay of Bengal; the Chambal rises near Mhow in Madhya Pradesh before meandering for more than 900 kilometres to the Yamuna in Uttar Pradesh, after having acquired the formidable reputation as a river of the badlands.

The Chambal is a telling example of a river, a large one with a length of around 960 km, that complicates the ways in which rivers in India are clubbed together and categorized. It arises in the central highlands and drains into the Yamuna which itself drains into the Ganga, thus forming part of a larger Gangetic river system. But it is difficult to locate it within the four-fold categorization of rivers of India into Himalayan, peninsular, inland and small coastal rivers flowing into the Arabian Sea.

The Ganga, Yamuna, Son, Gandak, Brahmaputra, Lohit and Teesta are examples of Himalayan rivers. A large part of the water that Himalayan rivers receive is from the snowmelt during summer and therefore perennial in nature. Most of the larger rivers in peninsular India are east flowing, apart from a few exceptions such as the Narmada and Tapi that drain into the Arabian Sea. The important east flowing rivers of peninsular India are the Subernarekha, Mahanadi, Brahmani, Godavari, Krishna, Cauvery and Pennar.

The Western Ghats form an important watershed for the southern part of the country. Apart from many of the east flowing rivers that rise here, many small and fast flowing rivers

such as the Zuari, Mandovi, Netravati and Periyar originate in the ghats and after flowing fast over a short distance, drain into the Arabian Sea. Most of the other rivers in India are transboundary, be it a large river such as the Ganges or a relatively smaller one as the Pennar. Rivers such as the Ghaggar and Luni do not find an outlet into the sea and lose their way in the desert wastes of Rajasthan and Gujarat.

The transboundary rivers have significant implications for water usage and policymaking, especially because while India has around 16% of the population and 2.45% of the land area of the world, it has only 4% of its water resources. In gross national terms the availability of water is comfortable. But this situation can easily change with increased demand due to changing patterns of economic growth and urbanization. Further, there is a large variation in terms of both spatial and temporal aspects. Spatially speaking with respect to water, the northern and eastern parts of the country are better endowed as compared to the western and southern. The less endowed regions with respect to water are located in arid parts in the states of Rajasthan, Gujarat, Maharashtra, Karnataka, Andhra Pradesh and Tamil Nadu that lie in one rain shadow region or the other.¹

India has a monsoonal climate and the average annual rainfall is 1,170 mm. It varies from less than 150 mm/year in northwestern Rajasthan to more than 10000 mm/year of rainfall in Meghalaya. A large part of the country, however, receives rain for only 100 hours in a year. More than half of the precipitation is received in rainfall of less than about 20 hours.² There-

fore, the storing and subsequent usage of water is of utmost importance. It is this imperative to store water that creates potential for conflicts over transboundary rivers.

All rivers which flow across international and inter-state boundaries are a source of potential conflict. Fortunately, the experience around sharing of both international and inter-state transboundary river waters is not all that grim. The Indus Water Treaty between India and Pakistan that emerged out of a process of mediation facilitated by the World Bank is an important example of a working and 'successful' resolution of disputes surrounding an international transboundary river. The treaty which awarded nearly 80% of the water of the river system to Pakistan and 20% to India has survived three wars between the two countries. It can thus be safely described as a good example of successful transboundary water sharing in a politically volatile region.

The dispute between India and Bangladesh over the Ganges, especially the one surrounding the Farakka barrage, was addressed with the signing of a 30 year water sharing treaty in 1996. This was an important step towards figuring out mechanisms for sharing the waters of other transboundary rivers between the two countries on a mutually acceptable basis.³ And while tensions continue to episodically flare up, they have never reached the level of conflict.

Examples of successful dispute resolution of river waters related to India can be cited not only in the case

2. Anil Agarwal, Sunita Narain and Srabani Sen (eds), *The State of India's Environment: The Citizen's Fifth Report*, Centre for Science and Environment, New Delhi, 1999.

3. N. Shantha Mohan, 'Locating Transboundary Water Sharing in India', in N. Shantha Mohan, Sailen Routray and N. Shashikumar

of international rivers but with respect to inter-state transboundary rivers as well. These include rivers such as the Damodar, Gandak and Subarnarekha. Especially important is the example of a complex multi-basin and multipurpose project such as Parambikulam-Aliyar, where a joint water regulation board was established with members from the riparian states. However, it must be admitted that despite some examples of successful and mutually beneficial water sharing, the potential for conflict remains.⁴ Rivers such as the Yamuna, Krishna and Cauvery have, for instance, been bitterly fought over.

The Yamuna is the largest tributary of the Ganga and an important source of water for irrigation and urban use in northern India. It drains the North Indian states of Uttar Pradesh, Himachal Pradesh, Haryana, Rajasthan and Delhi. The total present claims on the river add up to more than twice the total water available. In 1954, the waters of the rivers were shared between the states of Uttar Pradesh and undivided Punjab. Uttar Pradesh controls the eastern Yamuna canal whereas Haryana, as a successor state of undivided Punjab, controls the western Yamuna canal.

With increasing demand from the growing and urbanizing state of Delhi, this arrangement soon faced conflicts between Delhi, Haryana and Uttar Pradesh on sharing the waters of the Yamuna, especially during the lean summer months. Matters have often landed up in the courts, including the Supreme Court of India, through the public interest litigation route. With water demand continuing to grow in the basin states, especially in Delhi,

(eds), *River Water Sharing: Transboundary Conflict and Cooperation in India*, Routledge, New Delhi, 2010, pp. 3-22.

4. Ibid.

1. Ramaswamy Iyer, *Water: Perspectives, Issues, Concerns*, Sage Publications, New Delhi, Thousand Oaks and London, 2003.

the conflicts surrounding Yamuna waters see no signs of abating.⁵

In peninsular India, the Krishna has seen disputes over its waters as well. The second longest river in peninsular India, the Krishna drains the states of Maharashtra, Karnataka and Andhra Pradesh. After the reorganization of the states on a linguistic basis in the 1950s, the 25 year agreement on the Krishna waters signed in 1951 between Bombay, Hyderabad, Mysore and Madras states began to be questioned. The Krishna Dispute Tribunal headed by Justice Bachawat gave its award in 1976 with the states being asked to utilize their respective allocations by the year 2000. This in turn fuelled a frantic race for utilization of water of the river between the various claimants.

Agrowing demand and attendant conflicts surrounding the river are exemplified in the problems between Andhra Pradesh and Karnataka over the Almatti dam in Karnataka. Any attempt by Karnataka to raise the height of the dam from its original height of 519 metres to 524.25 metres would have reduced the capacity of the Nagarjunasagar and Srisailem projects in Andhra Pradesh pushing the two states on a path of confrontation. But when Maharashtra, the upper riparian, tried to develop its water allocation, both Karnataka and Andhra joined hands to oppose such a move. We thus witness a complicated process of cooperation and confrontation depending upon contingent self-interest of the different parties. The concerned states routinely complain to the central government regarding water usage by other states, setting the stage for central mediation. With increasing intensity

of resource utilization, such conflicts can only escalate as the Krishna river basin is one of the most over-utilized river basins in peninsular India.⁶

The Cauvery in peninsular India too has been a site of cooperation and conflict over a period of time. The regions of present day Tamil Nadu were the first movers in using the water of the river. In the era before the growth of modern dam-building technologies, the Cauvery was not dammed and its waters were only sparingly used in the upland areas of present day Karnataka. Attempts in the latter half of the 19th century by the then Mysore princely state to dam and use the waters of Cauvery river led to protests by the Madras Presidency and the beginning of negotiations between the two, eventually resulting in a treaty signed by the two relevant governments in 1892. This agreement, after placing on record the projects already taken up, stipulated that the Government of Mysore would not initiate any new projects and maintain the status quo.

So when Mysore proposed the construction of the Krishnaraja Sagar dam on the Cauvery, the Madras government challenged the decision of the arbitration committee, under the agreement of 1892. On receiving an adverse judgment from the committee, the Government of Madras took the matter to the Secretary of State in 1919 and managed a favourable response. Soon thereafter, negotiations started between the two governments and a 50 year agreement was reached in 1924, allowing for the construction of the Krishnaraja Sagar dam in the then Mysore state and the Mettur dam in Madras Presidency. It also provided a framework for the development of irrigation in the Cauvery basin.

6. Ibid.

This agreement was not renewed in 1974, at the end of its 50 year period. This 50 year period saw the intensification of irrigation development in both Karnataka and Tamil Nadu, the successor states of the princely state of Mysore and the Madras Presidency respectively. Increasing intensity of water use, especially for irrigation, led to conflicts. Tamil Nadu, that had enjoyed the first mover advantage with respect to irrigation development, now complained about the increasing use of water by Karnataka, the upper riparian. Tamil Nadu demanded the setting up of a tribunal for resolution of these disputes and sharing Cauvery waters. The Cauvery Water Disputes Tribunal was established in 1990 and gave its awards in 2007, unfortunately satisfying neither side.⁷

The history of inter-state transboundary river water sharing in India is thus characterized by both cooperation and conflict. Water conflicts are of many types depending upon the nature of the contesting parties and contestation involved. The issues pertaining to resolution of conflicts surrounding transboundary rivers are made especially complex because of a lack of adequate legal and institutional mechanisms. Take for instance irrigation, which as a sector consumes more than 80% of all available water in the country; it is listed under the state list in the Indian Constitution.

Entry 17 in the state list in the Constitution of India is important in this regard. It is subject to the provisions of entry 56 of the Union list which enables the central government to legislate on inter-state transbound-

7. S. Settar, 'Kaveri in its Historical Setting', in N. Shantha Mohan, Sailen Routray and N. Shashikumar (eds), *River Water Sharing: Transboundary Conflict and Cooperation in India*, Routledge, New Delhi, 2010, pp. 99-107.

5. A. Swain, *Struggle Against the State: Social Network and Protest Mobilization in India*, Ashgate, Farnham and Burlington, 2010.

dary rivers. But entry 56 of the Union list is much underused. Article 262 of the Constitution provides a role for the Centre in adjudicating conflicts surrounding inter-state transboundary rivers. The Inter-State Water Disputes (ISWD) Act 1956 has been promulgated under article 262. This act provides for the formation of tribunals for settling such disputes.⁸

According to the provisions of the ISWD Act, a state government can approach the central government to set up a tribunal for adjudication of the dispute. The tribunal is headed by a chairperson with two other members, all three nominated by the Chief Justice of India. At the time of nomination, the chairperson and members have to be judges of the Supreme Court. The tribunal is empowered to appoint assessors to aid in investigation and provide advice in the proceedings. The act mandates that the award of the tribunal is to be published and that its decision is final and binding on the parties to the dispute.

The tribunals set up for settling the disputes surrounding the Krishna, Godavari and Narmada rivers are perceived to have been successful. Nevertheless, their efficacy to settle inter-state transboundary rivers is increasingly coming under question. There have been substantial problems surrounding the tribunals set up to settle the disputes surrounding the water of Ravi-Beas and Cauvery. The awards of both the tribunals failed to resolve the disputes and have led to greater bouts of intense politicking even though the tribunal's award now has the status of a decree of the Supreme Court of India by virtue of recent amendments to the ISWD Act.

One problem is that the tribunals take time to reach a final settlement.

Though the amended Act of 2002 mandates a time limit of six years, it still is a long period of time. In this context, mention must be made of several non-official civil society efforts to address the issue of river water sharing. The Madras Institute of Development Studies (MIDS), Chennai, initiated a process of creating a platform to facilitate dialogue between the farmers of Karnataka and Tamil Nadu in the Cauvery basin. Through the process of dialogue, farmers are developing a better understanding of each others problems and needs and thus reducing the potential for conflict.⁹

We now list some ways to help address issues of transboundary water conflicts. The first path is of an institutional nature. We suggest that a combination of existing institutions, such as the inter-state council, and the creation of new institutions such as river basin organizations, can go some distance in resolving water conflicts. We also need to use some new tools or old tools differently, to creatively deal with conflicts. In this regard, we look at mediation and an alternative approach to scenario building as two possible ways.

Article 263 of the Indian Constitution envisages establishing an Inter-State Council (ISC) with the mandate of enquiring into and advising upon disputes arising between the various states of India, to investigate subjects of common interest amongst the states, and to make recommendations upon such subjects for the better coordination of policy and action. The Inter-State Council was finally established by presidential order on 28 May 1990 as a recommendatory body to fulfil the already mentioned constitutional mandate.

The council comprises of the prime minister of India; chief ministers of all states; chief ministers of

union territories; administrators of union territories; six ministers of cabinet rank in the union council of ministers and permanent invitees. Any matter in the Union list, Concurrent list or the state list of the Constitution of India in respect of which there exists a common interest as referred to in clause (a) of paragraph iv of the said order or a need for better coordination as referred to in clause (b) of the paragraph can be considered.

The council provides a forum for discussion on complex public policy and governance issues having a bearing on centre-state relations or with an inter-state dimensions. Because the council is a constitutionally mandated body, and has now built a wealth of experience in dealing with matters that are of common interest to states, it can play a useful role in facilitating dialogue and discussion towards resolving conflicts.¹⁰

There is a need to look at arbitration and negotiation as methods of conflict resolution. One institutional arrangement that can be used to facilitate negotiation surrounding inter-state transboundary rivers is the River Basin Organization (RBO). RBOs can be set up under the River Boards Act of 1956 (RBA), legislated under article 56 of the Union list. These are empowered to regulate and develop inter-state rivers and their basins. The board must comprise of members with expertise in fields such as irrigation, water and soil conservation and finance.

But so far river boards have not been established in the country under the provisions of this act, in part

9. Ibid.

10. Ramaswamy Iyer, 'Inter-State Water Disputes Act 1956 Difficulties and Solutions', *Economic and Political Weekly* 37(28), 2907-2910, 2002; and N. Shantha Mohan, 2010, op cit.

because state governments fear that they will intrude upon their authority and power.¹¹ However, given the era of coalition politics, and an increased self-confidence of the states, there is need to take a fresh look at the possibility of setting up RBOs.

Till date seven tribunals have been established to deal with disputes surrounding the water of inter-state transboundary rivers. But they have not always helped resolve the disputes in a satisfactory manner. These tribunals depend upon the legal principle of arbitration. The awards of these tribunals, although supposedly final and binding, have been challenged in the courts. The judicial process is essentially an adversarial process and damages the relationship between the disputants.

In contrast, mediation is a process that employs a neutral person or persons to facilitate negotiations between the disputing parties so as to arrive at a mutually acceptable solution. Mediators should not have any direct interest in the conflict as they both control the process of mediation and its outcome. In actuality, it is the parties or disputants in whom the real power is vested. Mediation is a flexible and informal process and draws upon the multidisciplinary perspectives of the mediators.

In the South Asian context, the World Bank played the role of mediator between India and Pakistan, which resulted in a successful resolution of the conflicts surrounding the rivers of the Indus basin. In the Zambezi river dispute involving eleven countries, the Vatican mediated an agreement to use and manage the river waters jointly.¹² Thus, there is great merit in the proposal to deploy mediation as a

11. Ramaswamy Iyer, *Towards Water Wisdom: Limits, Justice, Harmony*. Sage Publications, New Delhi, 2007.

tool for conflict resolution and participatory management.

The way scenario building in the water sector usually takes place, it is reduced to a 'technical' tool for prediction. Scenario building, however, is not a tool for projection and need not be used as one. It is essentially an imaginative exercise involving political and social choices; as much a tool for action as it is of thought. While undertaking an exercise in scenario building, one needs to take into account the physical qualities of water as a resource. Generally, in exercises of scenario building surrounding water, the current patterns of consumption are taken as a given, based on which various demand projections for future points of time are generated. Thus, this exercise is a projection of current patterns of demands into the future.

We argue that there is a need to look at scenario building completely differently. We need to hypothetically freeze the total available water, or the quantum at current levels of total consumption, for a given region or unit of analysis and build scenarios of alternative usage patterns. Instead of trying to predict the total quantum of water demand at a future date given certain conditions, one must plan as if water and its characteristics as a life-giving resource matter. This will necessarily be a non-technocratic and democratic exercise, since the simu-

12. Geeta Devi, *Legal Framework for Resolution of Water Disputes*. Paper presented at The National Consultation on Water Conflicts in India: The State, the People and the Future, 15-16 March 2010, NIAS, Bangalore.

13. Sailen Routray, *Water Conflicts and Scenario Building in Orissa: An Alternative Approach*. Orissa Environmental Congress, 22-24 December 2010. Regional Museum of Natural History, Bhubaneswar, Orissa, India.

lation depends on the social choices that we might want to make if water availability and/or consumption were to be frozen at some arbitrary point in the present. Such an exercise will also help unravel the assumptions we make while making projections, as also help us radically interrogate theories of risk society by positing scenarios as 'designs'.¹³

Water is increasingly an important site of contestation between states in India because of the rapid pace of economic growth, growing populations and increasing urbanization. The growing importance of forging coalition governments at the national level and the related assertion of regional identities add to the intractability of the problems. More often than not, such issues arise as a result of a focus on demand-side management. Many scholars have argued that supply-side management might be one way of dealing with such issues. While there is merit in this argument, we need to undertake institutional innovations as well.

The suggestion for setting up RBOs and providing a greater role for the inter-state council in dealing with inter-state transboundary rivers needs to be seen in this regard. Given the changing political dynamics in the country, it should not be difficult to convince the states that the relationship between state governments and the Centre need not be a zero-sum game. An increasing role for central institutions in dealing with issues emerging out of sharing the waters of transboundary rivers does not necessarily mean a whittling down of the powers of the states. Second, one needs to creatively use existing tools (such as mediation and scenario building exercises) for managing water resources of inter-state rivers more effectively and democratically.