

Working Paper No. 108
RULNR Working Paper No. 13
January, 2012

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Srinivas Chokkakula



RULNR

RESEARCH UNIT FOR LIVELIHOODS AND NATURAL RESOURCES

(Supported by Jamsetji Tata Trust)



CENTRE FOR ECONOMIC AND SOCIAL STUDIES

Begumpet, Hyderabad-500016

Acknowledgements

I am grateful to the following people who have read earlier drafts and offered comments: Ramaswamy Iyer, B G Verghese, Pratap Bhanu Mehta, Partha Mukhopadhyay, Anant Maringanti and the RULNR reviewer P Ramaraju. I take this opportunity to gratefully acknowledge funding support received for the research from the RULNR program at CESS and the National Geographic Society's Committee for Research and Exploration grant (#8831-10).

Disputes, (de)Politicization and Democracy: Interstate Water Disputes in India

Srinivas Chokkakula*

Interstate water disputes in India often prolong over long periods and tend to recur. The Cauvery dispute tribunal was constituted in 1990 and the final award was given in 2007, after 17 years. The 2nd Krishna water dispute tribunal, constituted in 2004, gave its final award recently in December 2010. These long delays are partly due to elaborate judicial proceedings and deliberations. But more importantly, the adjudication proceedings are often circumvented and impeded by variety of political interests. The aleatory nature of politics reshapes the nature and extent of a dispute and contributes to its frequent recurrence. Discourses of policy and governance reforms usually do not account for this contingent nature of politics.

The frequent recurrence and long deliberations produce various kinds of insecurities and impact people's livelihoods. Further, interstate water disputes raise deeper and morbid concerns in the light of the prophecies about future wars over water resources. Indeed, the interstate water disputes in India have been on rise in recent years. Besides the concluded five tribunals, the Government of India is in the process of setting up two additional tribunals: one over Mahadayi river dispute between Goa and Maharashtra; and the other over Vansadhara between Orissa and Andhra Pradesh. Two other disputes are under consideration - the Mullaperiyar (between Kerala and Tamil Nadu)¹ and the Bhabli (between Maharashtra and Andhra Pradesh). These disputes caused concerns about their potential impact over State-State relations in India, with greater implications to the federal integrity of the nation-state. These concerns are not without reason; the recently concluded Cauvery dispute between Tamil Nadu and Karnataka led to civic strife, ethnic clashes and violence in 2002 and later. Another case in point is the recent Telangana separatist movement. Though not an interstate water dispute, regional

* Ph D Candidate, Department of Geography, University of Washington, Seattle, USA and Visiting Fellow, Center for Policy Research, New Delhi. Correspondence to: svas@uw.edu

¹ The Mullaperiyar dispute is not an interstate dispute over shared waters in its strict sense, for the dispute is not over riparian rights; but the dispute is indeed an interstate one and over water resources.

imbalances in sharing of water resources was one of the core issues at the heart of the movement. Political mobilization over uneven water resource distribution is proving to be a major challenge for policy makers in India. Such political movements do have implications for the state in India and its federal structural relations.

In this paper, I critically examine some of these concerns by reviewing literature about interstate water disputes and comparing with experiences of international water conflicts and their resolution. In the process, I put forward a series of propositions for studying interstate water disputes. First, I argue that techno-legal approaches have dominated the research about interstate water disputes in India. For this reason, I suggest, the discourses of interstate dispute resolution tend to seek policy level reforms whereas the problem is essentially of governance in nature: ineffectiveness of institutions and lack of adherence to tribunal awards. This however does not mean to suggest that improving governance would resolve the problem. My contention is that the search for solutions is obscured by our failure to understand the problem itself completely: the problem lies in lack of acknowledgement of the critical significance of politics in emergence and recurrence of disputes.

This argument draws support from the second proposition that builds on the body of literature about international water conflicts. International water conflicts differ significantly from interstate water disputes; but the research about international water conflicts offers important lessons for the latter. The research emphasizes three key dimensions in understanding water conflicts: politics, geographical and historical context, and, institutions. While the latter two receive adequate attention in interstate water dispute debates, politics are ignored and treated 'undesirable.'

Third, these politics are critical in shaping not just the outcomes of interstate water disputes, but also how they impact reproduction of federal relations and democratic spaces in India. An evolving body of literature stresses this historical context of evolution of interstate water politics and its implications for democracy and institution in India. I propose that there is a need to bridge the two streams: the policy discourse excessively relying on legalist means and the historically constructed nature of politics and its implications for disputes.

Fourth, adjudication by tribunals between states has remained inert to these multi-actor driven multi-scalar politics. The multiplicity of actors and processes constantly rework the dynamics of interstate water disputes, which in turn affect the emergence and recurrence of disputes. Intra-state inequities in water allocation across regions within a state sometimes abet these politics.

Using an extensive review of interstate water disputes in India, I illustrate how a variety of political interests engage in interstate water disputes, not necessarily for substantive reasons of water allocation but to further their immediate political interests. Dispute resolution policies and mechanisms need to consider these inequities and multiplicities of political interests towards an effective mitigation of interstate water disputes and/or their impacts.

In the end, I propose a research agenda for studying interstate water disputes with politics at its core. I suggest that this not only helps working towards greater effectiveness in engaging with disputes, but also to understand the deeper and latent effects of the politics over State-State relations and, how they transform the democratic spaces within which they articulated and realized. This requires a change in perspective that builds on the lessons offered by international water conflicts: shared water resources are not always a source of conflict, but more frequently induce cooperation and accentuate interdependencies between States and other political constituencies. The politics of contestations over shared water resources constantly pose challenges to policies, practices and exert pressure over institutions and structural relations. This is likely to offer opportunities to rethink institutional spaces for assimilating the tensions towards deepening democracy and cementing federal relations.

The research agenda can potentially contribute to recent literature about India filled with success stories of emerging strong and vibrant democracy (Kohli 2001; Corbridge and Harriss 2000). These works do not consider politics of resource sharing between the States. Those who examined federal structural relations have largely focused on the relations between the Center and the States (Manor 2001); others examined historical reasons for its stability (Dasgupta 2001); some others focused on movements for reorganization within the states (Kale 2007). My research addresses the gap about how politics of interstate competition for resources impact federal relations and democratic spaces within a nation-state. At policy level, the research contributes in multiple ways. First, the interstate water dispute debate in India, largely dominated by techno-legal perspectives, can benefit from a political approach through an understanding of how politics are mobilized and put to action in emergence, recurrence and mitigation of interstate water disputes. Second, the long history of interstate water disputes resolution and policy dialogues are already showing inclination towards considering alternative means of addressing the problem by exploring approaches outside formal redressal mechanisms (Iyer 2009). This research can further inform these approaches. Third and more importantly, the research engages with the contentious question of equity and stretches it beyond the formal conception of interstate equity; and, posits if it is necessary to provide space for regional interests and other political actors for participating in formal resolution processes.

The paper is organized in four parts. In the first part, I review the literature about interstate water disputes in India to argue that, so far, scholars have largely approached the problem from techno-legal perspectives and neglected politics. In spite of acknowledging the central and critical role in shaping the disputes and their outcomes, politics have often been treated as undesirable or unnecessary hindrance. The second part deals with international water conflicts. Here, I review the literature about international water conflicts to draw lessons for research about interstate water disputes. Toward the end of the part, I discuss the critical importance of considering the role of politics in shaping water disputes and their outcomes. Building on first part and the learnings from international water conflicts, I argue that transboundary politics of sharing water is crucial in analyzing interstate water disputes. In the third part, I elaborate this dimension of transboundary politics using examples of interstate water disputes in India. The meaning of transboundary politics is extended beyond the physical boundaries to include social and political boundaries. Drawing on the recent literature about boundaries, I rework these disputes to show how boundary-makings of 'us' vs 'them' and associated 'scale-jumping' can explain emergence and recurrence of interstate water disputes. I explore other sources of opportunities for political actors to engage in and escalate interstate water disputes. In the final part, I summarize the analysis proposing a framework of transboundary analysis to explore interstate water disputes.

Part I: Interstate water disputes: techno-legalism?

Richards and Singh (2002) describe interstate water dispute resolution policies in India as opaque, ambiguous and allow continued disagreements. For them, delays in dispute resolution are because of inadequately defined laws, policies and institutions. Institutions often fail to implement water sharing awards and the process is inefficient, "...the process of resolving inter-state water disputes, and of allocating water more generally, has been made inefficient by being entangled in more general political conflicts, conducted within the current structure of Indian federalism"(p.622). This is the general tone and tenor of many scholars writing about interstate water disputes. Politics as an impediment to successful resolution of disputes is widely shared, though inadequately discussed. In the following sections, I review debates about interstate water disputes and show that these focus largely on legal and technical matters and treat politics as an unnecessary hindrance.

Debates around interstate water disputes in India are esoteric. There are few scholars who write consistently about the issue. Ramaswamy Iyer is one of them and his recent edited volume (2009) about water laws in India allocates substantial space for interstate water disputes. The contributions in this volume show the complexity of constitutional

and legal issues about interstate water disputes. These and other works about the subject may be organized in the following categories, considering their focus:

- (i) The respective powers of the Center and the States with respect to interstate rivers are ill-defined. A general consensus may be observed about this argument: division of legislative powers as per the Constitution is interpreted to be largely in the domain of States instead of the Center.
- (ii) The legislations directly related to interstate water disputes resolution and other relevant institutions are ineffective. This is essentially about the Interstate Water Disputes Act of 1956 (later amended in 2002) and the River Boards Act 1956.
- (iii) The third strand is the concern is about federal structure in India and how practices of interstate water disputes and their resolution impact these federal relations.

Water as subject of Center vs States and interstate river waters

Popular perceptions and debates in India often point to the constitutional division of legislative powers between the States and the Center as one of the reasons for interstate water disputes; the other is, poor implementation of awards. Article 246's Seventh Schedule of the Constitution includes three lists of subject matters: Union List, Concurrent List and State List. The Parliament has exclusive powers to make laws about subject matters in the Union List and the States have powers with respect to the matters in the State List. The Concurrent List includes subject matters where Union (Center) can also make laws besides States.

Water is in the State List as the Entry 17: "Water, that is to say, water supplies, irrigation and canals, drainage and embankments, water storage and water power subject to the provisions of entry 56 of List I." This listing of water in the State List has given predominant role to the States in managing water resources. It is argued that lack of uniform policy and synergy between the States lead to emergence and recurrence of interstate water disputes. This led to the belief that shifting water to the Union List would provide greater role to the Center, which in turn could bring the necessary synergy.

These arguments however appear ill-informed. The Entry 17 of the State List is subjective to the Entry 56 of the Union List, which states: "Regulation and development of inter-State rivers and river valleys to the extent to which such regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest." In an extensive critique of this view, Iyer (1994a, 1994b, 2002) argues that the Center has never exercised its powers under the Entry 56 and always allowed States to take the larger responsibility. This willful abdication by the Center led to an

understanding that the States have exclusive power to manage water resources. The Entry 56's emphasis on public interest extends the scope of Center's involvement to matters where one State's actions affect another State in a harmful manner. This applies even when a river flows entirely within a State's boundary, but with impacts in other States.

Iyer (2002) insists that there are other possible ways of extending Center's control over the use of water resources. For e.g., the provisions of the Entry 20 in the Concurrent List about economic and social planning requires the States to take clearance from the Center for any project of water resource development - including the projects for irrigation, hydropower, flood control etc. Further, there are several other Acts that requires clearances from the Center to satisfy other considerations. For instance, Forest Conservation Act and Environment Protection Act require clearances for their respective considerations. These various provisions allow the Center to be responsible for water resource development and also provide powers to regulate and control them. Center has not fully exploited these provisions so far (Ibid.). The point here is: listing of water under State List cannot be a reason for emergence of interstate water disputes. It is the application (or lack) of available Constitutional provisions that is contributing to disputes.

Ineffective legal instruments and institutions

The second stream of debates focus on legislations related to the interstate water disputes resolution. There are two legislations directly relevant: the Interstate Water Disputes Act 1956 (later amended in 2002) and the River Boards Act 1956. Both these acts were introduced along with the States Reorganization Act of 1956. The two acts are in response to corresponding provisions in the Constitution. To regulate and develop interstate rivers as in Entry 56 in the Union List, the River Boards Act 1956 (RBA) was enacted. The Interstate Water Disputes Act 1956 (ISDA) was in response to the Article 262, which stipulates that the Parliament should make necessary laws to adjudicate disputes between States over interstate waters.

RBA is the only instance where Center has used powers accrued under Entry 56, in matters related to interstate waters and basins. The Act enables setting up of River Boards by the Center to regulate and develop interstate waters. But these Boards were conceived as advisory bodies with no regulatory functions. Though the intent of the Act was regulation of interstate rivers by the Central Government in public interest,² the scope of the Act restricts the Boards to advisory role when it comes to influencing

² River Boards Act 1956, Section 2. "It is hereby declared that it is expedient in the public interest that the Central Government should take under its control the regulation and development of inter-State rivers and river valleys to the extent hereinafter provided."

States and their actions. In case of any difference between States over the advice of Boards, judicial arbitration can be resorted to. This provision sounds redundant, considering that the Act does not empower river boards to impose any obligations over the States. States are bound by the agreements they enter into through mutual consent, but not by any directive by the Boards. A comprehensive review of functioning of the Boards set up so far under the Act is long due. Some recent works suggest that the Boards are often set up to implement or manage a particular project (Chitale 1992, SANDRP 1999).

In the absence of alternative institutional mechanisms to manage interstate rivers, conception of the River Boards as advisory is puzzling. Nariman (2009) suggests that the historical context of drafting the Act could explain this. The deeply centralized nature of the Indian state with strong Center and subservient States in 1950s could be a reason for assuming that, advisory Central institutions like the Boards could be effective. This certainly changed after the onset of coalition politics in 1990s. The shift in power politics led to stronger States and a rather weak and amenable Center - at least from the context of water resource development and management. Efficacy of laws and legislations are subjective to historical context, which makes a case for their periodical review. The National Commission for Review of Working of Constitution (NCRWC) in its measure termed it a "dead letter" and recommended repealing of RBA and replacing it with a more comprehensive legislation (NCRWC 2002)

The RBA and the ISDA appear independent to each other even though these two, along with the States Reorganization Act of 1956, emerged out of a single historic moment - the reorganization of States (D'Souza 2009). The ISDA's scope excludes the matters that can be referred to arbitration under RBA (Section 8 of ISDA)³. In other words, wherever the River Boards exist to "develop and regulate" interstate rivers, any disputes arising out of these schemes implemented by the Boards cannot be referred to tribunals; these will be subject to judicial arbitration by courts. There are River Boards set up under RBA, but these were set up to implement a mutually agreed sharing agreement between States, e.g. Upper Yamuna River Board, Betwa River Board. But, River Boards cannot be set up under RBA to oversee implementation of Tribunal awards. For e.g. institutions like the Narmada Control Authority to implement tribunal awards are not River Boards.

³ Interstate Water Disputes Act 1956, Section 8: "Bar of Reference of Certain Disputes to Tribunal: Notwithstanding anything contained in section 3 or section 5, no reference shall be made to a Tribunal of any dispute that may arise regarding any matter which may be referred to arbitration under the River Boards Act, 1956."

On the other hand, ISDA was drafted in response to Article 262, which carries an exception to *original jurisdiction* of Supreme Court under Article 131. Interstate water disputes are to be governed exclusively by provisions of Article 262. Hence the two acts are independent and follow their respective constitutional provisions and their intent: RBA for Entry 56 and ISDA for Article 262.

Though the two acts were enacted along with the States' reorganization and were concerned with water, ISDA received greater attention in comparison to RBA. This is understandably demand driven from the growing interstate water disputes combined with their prolonged nature and political intractability. Added to these, frequent recurrence of disputes and absence of mechanisms to ensure proper implementation of awards invited much of criticism of the ISDA.

Besides these, there are procedural criticisms of tribunals attributed to long delays in dispute resolution. Retired judges of Supreme Court usually head the tribunals set up under ISDA. There are no specially designed procedures for their functioning. Deliberations occur when the judge decides to have them, in a typical fashion of regular court functioning (Nariman 2009). The setting up of tribunal itself goes through a series of layered process, which contributes to delays. The first layer involves Center trying to mediate between the States. If this fails, Center sets up a tribunal to adjudicate the dispute. And then, States can question the award of the tribunal, under Section 5(3). The recent amendments (in 2002) were intended to help reducing these delays. As per these amendments, Center has to make a decision about referring to a tribunal within a year after receiving a complaint or an appeal. The tribunal is given three years (extendable to not more than 2 years additional) to arrive at the award.

The other criticism is the absence of effective ex-post mechanisms as leading to prolonged disputes. This refers to absence of proper mechanisms for implementation of awards (Iyer 2002). Awards of tribunals are very often unacceptable to State governments or other key political actors (Nariman 2009). There are many instances of flouting and over-ruling tribunal awards. Typical examples are: the Cauvery dispute and Ravi-Beas dispute leading to constitutional crises. In both cases, Supreme Court's intervention followed by Presidential reference settled matters. Disputes tend to recur over non-implementation of tribunal awards leading to social and political unrest. Some such instances will be discussed in detail in later sections. This inadequate attention to effective ex-post mechanisms is baffling even though ISDA provides tribunals with powers to consider and recommend setting up of such institutional arrangements. Further, "the decision of the Tribunal... shall have the same force as an order or decree of the Supreme Court." (Section 6, ISDA). Yet, non-compliance by States remains not so uncommon. Iyer (2002) thinks that the absence of sanctions against non-compliant States contributes

to this persistence. Several questions emerge out of this non-compliance, both legal and operational. Why a particular Act cannot be operationalized in its letter and spirit? Why should Supreme Court intervene to enforce the awards? Does Supreme Court's intervention not undermine tribunals? Why non-compliance is not treated as contempt of court? Can Supreme Court charge non-compliant States with contempt of court?

These problems however fall into the category of institutional and governance failures. Even then, legal scholars like Fali Nariman (2009) suggest overreaching solutions like repealing the ISDA in its entirety; and, bring interstate water disputes under the Supreme Court's jurisdiction. The NCRWC report (2002) too recommends the same. However, there must be a reason why framers of the Constitution thought it was necessary to treat water disputes separately from other interstate disputes. Following section engages with some related issues.

Legalism and federal democracy

There are few alternative perspectives to the legal ones we discussed so far. Perhaps a lone voice is from Radha D'Souza. D'Souza (2004, 2009) examines the historical and political contexts of evolution of interstate water disputes. She (2004) argues that interstate water disputes are a manifestation of reproducing of imperial and colonial power relations in India. While these arguments will be further discussed later, D'Souza's analysis (2009) offers plausible explanations to some legal questions discussed so far. It also helps us to speculate about the possible reasons for keeping interstate water disputes out of Supreme Court's *original jurisdiction*.

D'Souza (Ibid.) argues that water has to be necessarily a State subject matter. She discusses two grounds for why it has to be so. One has its roots in history of formation of Indian union and the second one is linked to the goals of preserving democratic federalism. For her, the Constitution is a kind of compromise document evolved through negotiations between several stakeholders and social forces involved during the formative stages of Indian state, especially during the crucial stage of Constituent Assembly debates. Large number of Princely States acceded to Indian union on conditions and expectations of certain amount of autonomy. Since many of these States were agrarian economy based, they refused to part with regulatory powers over water, and give away to not so certain and remote federal government. In other words, making water as a State subject was a critical part of unification process and also reflected historical aspirations of federal democracy of Indian nation state⁴.

⁴There are others tracing this to further earlier antecedents. Guhan (1993) observes that the Government of India Act of 1919 made irrigation as a provincial subject but reserved the inter-provincial matters as a matter of Central Legislature.

These aspirations of disparate political constituents were the foundational blocks for federalism in India and the Constitution had to acknowledge this. This is perhaps the rationale for the Article 262, enabling the Parliament to make separate laws for adjudication of water disputes between States. As 'quasi-sovereign' entities in Indian federation, States cannot be treated as any other entities involved in property disputes (D'Souza 2009). ISDA, complying to Article 262, requires Parliament to refer interstate water disputes to independent tribunals. Further, the tribunals' award will have 'same force' as that of Supreme Court; and, "Notwithstanding anything contained in any other law, neither the Supreme Court nor any other court shall have or exercise jurisdiction in respect of any water dispute which may be referred to a Tribunal under this Act." (Section 11, ISDA).

D'Souza (2009) traces legal trajectories of some disputes to highlight several instances of Supreme Court's interventions with interstate water disputes, violating these provisions of ISDA. This excessive engagement of Supreme Court with tribunals' awards, she laments, is undermining tribunals and consequently hurting the underlying spirit and sentiments of federalism. This is an interesting way of looking at interstate water disputes and not much has been said about this dimension of the problem. But the perspective poses a potent challenge to otherwise well-informed, pragmatic suggestions about extending the Supreme Court's jurisdiction to interstate water disputes (Nariman 2009).

Supreme Court's interventions with respect to interstate water disputes received some attention recently. The interventions are often justified by recognizing the right to water as fundamental right under Article 32 (Sankaran 2009)⁵. This allowed individuals and other non-state actors to file cases about interstate water disputes and associated tribunal awards. However, this contradicts provisions of Article 131 concerned with *original jurisdiction* of the Supreme Court. Under the Article, suits about interstate water disputes in Supreme Court can only be filed by the States or the Union Government. This contradiction was even noted by NCRWC (2002). While the contradiction is to be resolved, this helps to raise the issue of individuals' or groups' participation in adjudication over interstate water disputes. While there appears to be a case for participation of non-state political actors, existing legal structures and their conceptions do not allow this.

Interstate water disputes policies: Politically myopic?

Previous sections recount the gamut of legal debates about interstate water disputes. Narratives of these legalist debates tend to elide the politics and political questions. It is puzzling how these intricate and intense legal deliberations carry somewhat visceral

⁵ Article 32 provides for various remedies under the Constitution for enforcement of rights.

rejection of politics. This is in spite of repeatedly acknowledging and admitting politics as an integral component of interstate water dispute resolution. Take for instance, in the words of Fali Nariman, a highly respected lawyer and having participated in several tribunals, including the long drawn Narmada and Cauvery disputes:

My experience is that none of the political parties in any of the complainant or contesting States (in inter-State water disputes) is ever willing to concede a single point to the other State(2009:34)

Most commentaries and opinion pieces focusing on legalities of disputes refer to politics at play in emergence or recurrence of dispute. But these are seldom taken as a variable during their analysis and while exploring solutions. For example, while discussing the Ravi-Beas dispute soon after Punjab's unilateral decision to annul water sharing agreements, Iyer observes: "It has been clear from the start that what we are witnessing in Punjab is as much a political game as a water dispute" (Iyer 2004: 3435). Interestingly, the rich body of literature about international water conflicts also acknowledges the role of political relations in water conflicts and their resolution; and, insists on contextual and political analysis as an important element towards mitigation of conflicts. The next part of the paper presents this literature tracing historical development of key principles of international water conflict resolution and other findings relevant to interstate water disputes.

Part 2: International and interstate water conflicts: a comparison

In comparison to interstate water disputes, literature about international water conflicts is far more comprehensive and inclusive. Though legalist debates continue to dominate, a vibrant and eclectic scholarship approaches the subject from varied perspectives and offers useful and critical analysis. For instance, the scholarship debunks the populist prophecy I referred in the beginning, that of Dr Ismail Serageldin, former Vice-President of the World Bank: "Many of the wars this century were about oil, but those of the next century will be over water." Since this enunciation in 1995, there have been several assertions of similar nature, both among scholars and in popular press. However, evidence from critical and historical analysis of managing shared water resources globally contradicts this: water is increasingly becoming a source of cooperation, rather than conflict (Wolf 1998, Giordano and Wolf 2003).

The Geosciences department at the Oregon State University (OSU) in USA led by Dr Aaron Wolf maintains a GIS based transboundary database of freshwater conflicts across the world. Their analysis suggests that the global record of water conflicts remarkably contrasts with respect to the number of sharing agreements as against conflicts. Over

the last 50 years, there have been over 150 water treaties compared to 37 acute disputes - acute implying conflicts involving violence. In the 37 acute conflicts, 30 conflicts involve Israel with its neighboring countries (Giordano and Wolf 2003; Wolf, Yoffe and Giordano 2003). Historical analysis of the database further showed that most of the time, water is not the primary driver of conflict. There are many more issues over which conflict is negotiated and cooperation induced.

In a critically engaging article, Wolf (1998) challenges the assumptions underlying many earlier works proclaiming water as a source of conflict. Many of these papers suffer from loose or anecdotal understanding of conflicts and their extent. The papers refer to select case like that of Israel, and ignore instances where water provided a bonding between (nation) states. The 'hydraulic imperative,' a theory often used to justify wars in the middle-east, is precisely the reason why likelihood of war is limited. Water wars do not make sense strategically or in pragmatic sense in modern times. In a typical situation, an upstream state does not have to fight for water, whereas a downstream state cannot attack upstream installations, for risks of flooding and pollution. In other words, there is no winner in wars fought exclusively over water.

However, it is not just the strategic rationality and hydraulic pragmatism that work against wars over water. The other key elements include existence of institutions and supportive political relations between the parties. Institutions provide space for deliberations, participative collaborations while the political relations provide the context. Drawing on the freshwater dispute database, Giordano and Wolf (2003) show that cooperation among riparian states is likely to be more when treaties exist and the same is less in the absence of treaties. This is far more critical compared to other conventionally understood factors contributing to water conflicts, like scarcity of water, climate change, population pressure etc: "[t]he likelihood and intensity of dispute rises as the rate of change within a basin exceeds the institutional capacity to absorb that change" (Wolf, Yoffe and Giordano 2003: 51). The often quoted examples in these examples are not far from the subcontinent: the Indus Treaty and the Ganges Treaty. The Indus Treaty survived more than one war between India and Pakistan, and was acclaimed as a success story. The Ganges Treaty on the other hand was considered a watershed in bilateral relations between India and Bangladesh.

Existence of strong supportive relations for inducing cooperation, though sounds natural requisite, has not been emphasized enough. Politics of water are not exclusive, but are part of larger political context between the nations involved. Political relations, often fluctuating over time, have direct implications over the manner in which water related differences are negotiated. Analysis of acute conflicts across the globe showed that the

outcomes of water conflicts are specific to historical and geographic contexts. The outcomes of water conflicts need to be analysed and understood within the contingent nature of these political relations (Giordano and Wolf 2003; Giordano, Giordano and Wolf 2002; O'Loughlin and Ralieggh 2007). In a detailed account and historical analysis, Salman and Uprety (2002) show how relations between India and its neighbouring countries have always had an impact over conflicts and/or cooperation agreements for sharing of international waters. Indus Treaty with Pakistan has remained exceptionally resilient⁶. But water sharing with Nepal and Bangladesh was always subjective to larger political relations between the countries.

In most instances of below acute level of conflict, water is both 'irritant and unifier' (Giordano and Wolf 2003). In Wolf's words: "...while water wars may be a myth, the connection between water and political stability certainly is not" (1998: 261). In other words, competition for scarce freshwater resources is certainly a source of contentious politics, but rarely to the point leading to violent conflicts. This is an important insight that asks for deeper consideration and contemplation. What is the nature of politics that water disputes incite and stimulate? What are the implications of these politics for a functioning democracy? How can one make best out of these politics? These are some questions that are inadequately addressed. These are central to this research, in particular with respect to disputes between states within a nation.

However, the question that follows is what really led to this apparent progress made in mitigating the propensity of water conflicts in the international domain. Giordano and Wolf (2003) point to the active global governance institutions and their consistent incorporation of lessons learnt from experiences of conflicts across the world. A great deal of this learning is attributed to the growing knowledge-base about water conflict resolution and robust principles generated over time. This refers to the history of evolution of legal principles for resolution of international water conflicts, beginning from Helsinki Rules of 1966 till the most recent Berlin Rules of 2004, including the United Nations Convention on Law of the Non-navigational Uses of International Watercourses of 1997 (UN Convention)⁷. The following section discusses the principles and their development within their respective evolutionary contexts.

⁶ For an interesting explanation along the lines of 'geographic fix' that worked with Indus Treaty, see Iyer (2007). While insisting that the political relations played a major role, Iyer observes that the particular geographic organization of tributaries facilitated less complicated allocation between India and Pakistan. According to him, the allocation also favoured Pakistan - the lower riparian.

⁷ For a detailed discussion of these principles, see Salman 2007.

Water conflicts and principles of international law

Since 1820, there have been more than 400 bilateral and multilateral treaties and agreements for water sharing, half of which came into existence in the last 50 years. At least 54 of them came into effect within a span of 10 years after the Rio Summit in 1992 (Giordano and Wolf 2003). This has been attributed to active and effective institutions of global governance (Ibid.), though there are others who disagreed with this impression (Biswas 1999). Notwithstanding, the analysis of international treaties in 10 years after the Rio Summit suggested lacking in five key elements for their long endurance: (i) adaptable institutions for management; (ii) water allocation criteria and quality management; (iii) ensuring equity; (iv) enforcement provisions; and, (v) clear conflict resolution mechanisms (Giordano and Wolf 2003). This is not quite surprising even though international community boasts of rich history of evolution of legal principles for transboundary water sharing. Legal principles may be necessary, but not sufficient for success of transboundary water sharing management; they have to be accompanied by institutions. However, it will be useful to review how these legal principles evolved.

The history of legal principles for international transboundary water sharing goes back to the infamous and notorious Harmon Doctrine. The doctrine has its roots in an opinion prepared by an Attorney General of the US in 1895, Judson Harmon, with respect to US's dispute with Mexico over sharing of Rio Grande river waters⁸. The doctrine propounded absolute territorial sovereignty allowing a state to do anything it pleases with its share of watercourse without any concern to the downstream state. The doctrine however was discredited within US and has never been formally part of international law (McCaffrey 1996). Interestingly, interstate differences between its own upstream states (Colorado and New Mexico) and downstream states (New Mexico and Texas) contributed to US's reluctance to apply the doctrine with Mexico (Ibid.). This might have prevented the doctrine's ascendance and extension as a hegemonic principle.

The Riparian Doctrine is now widely practiced and became popular over the last century. The doctrine acknowledges equitable share of benefits to both upper and lower riparian countries (Biswas 1999). Two non-governmental scholarly agencies played major role in developing transboundary water principles in vogue under this doctrine; these are: Institute of International Law (IIL) and International Law Association (ILA) (Salman 2007; Giordano and Wolf 2003). First instance of formal enunciation of such principles for non-navigational use of international waters was through the Madrid Declaration in 1911, drafted by the IIL. The Madrid Declaration had the following key

⁸ For an interesting historical account of the Harmon Doctrine, see McCaffrey 1996.

recommendations: (i) setting up permanent joint commissions to manage transboundary waters by corresponding riparian states; and, (ii) no unilateral changes and harmful modifications to transboundary basins (Giordano and Wolf 2003).

These principles were interpreted in several ways and applied in varied contexts by states and international tribunals over time. Salman (2007) argues that four basic principles gained currency, especially after the Second World War. These are: (i) cause no harm to interests of other riparian states; (ii) absolute territorial integrity (as opposed to sovereignty), implying protection of rights accruing from natural flow of an international river; (iii) "limited territorial sovereignty and limited territorial integrity"-entailing right to use water for every riparian state while obligating it not to cause any harm to any other riparian state's rights and interests; and, (iv) this is an elaboration of the third to a context of collective of co-riparian states. In this, the river basin is treated as an economic unit with rights to all co-riparian states distributed by an agreement or by proportionality.

Many agreements and treaties were guided by the third principle: "...equality of all riparian states, encompasses both the right to use the waters of the shared watercourse, as well as the duty not to cause significant harm to other riparians" (Ibid: 628). This was considered a trade-off between two extreme positions: no harm to lower riparian, advocated by ILL; and, 'reasonable and equitable utilization' between the riparian states, advocated by the ILA.

ILA drafted the famous 'Helsinki Rules on the Uses of Waters in International Rivers' in 1966, which were widely used and quoted, including the India-Bangladesh negotiations over Ganges (Salman and Uprety 2002). The Helsinki Rules also, for the first time, expand their scope to cover groundwater as well. The Rules recommend considering several factors for determining reasonable and equitable sharing⁹. The

⁹ Article V(II) of Helsinki Rules (1967): "Relevant factors which are to be considered include, but are not limited to: 1. The geography of the basin, including in particular the extent of the drainage area in the territory of each basin State; 2. The hydrology of the basin, including in particular the contribution of water by each basin State; 3. The climate affecting the basin; 4. The past utilization of the waters of the basin, including in particular existing utilization; 5. The economic and social needs of each basin State; 6. The population dependent on the waters of the basin in each basin State; 7. The comparative costs of alternative means of satisfying the economic and social needs of each basin State; 8. The availability of other resources; 9. The avoidance of unnecessary waste in the utilization of waters of the basin; 10. The practicability of compensation to one or more of the co-basin States as a means of adjusting conflicts among uses; and 11. The degree to which the needs of a basin State may be satisfied, without causing substantial injury to a co-basin State." (ILA, 1967: 1)

weightages of the factors vary and to be negotiated within the corresponding specific contexts of the countries involved (ILA 1967). The Rules were recognized as customary international law (Bourne 1996). Note that the Rules include past utilization of waters (prior appropriation) as one of the criteria for determining reasonable and equitable utilization. Further, the Helsinki Rules do not sufficiently emphasize the rule about no significant harm, except when they refer to pollution (Article X). This critique received lot of attention in ILA's later review and updating of the Rules (Salman 2007). In their "Complementary Rules Applicable to International Water Courses" issued from Seoul Conference in 1986 and subsequent Supplementary Rules, ILA dealt with substantial injury to co-riparian states, transboundary groundwater sharing and conjunctive use of surface and groundwater resources. ILA later issued a consolidated version of Helsinki Rules known as "The Campione Consolidation of the ILA Rules on International Water Resources 1966-1999," which in their ultimate form resulted in now well known as Berlin Rules issued in 2004. The Berlin Rules represent the consolidated knowledge base from continuous updating of international customary law drawing on rules and principles applied in various international agreements (ILA 2004 - final report). These rules include, in addition to the principles of reasonable and equitable utilization, principle of obligation not to cause significant harm, principles of cooperation, exchange of information and collaborative consultation, and principles for dispute settlement (Ibid). However, the Helsinki Rules or the Berlin Rules have no formal standing or recognition that required states to follow; but they became part of international customary law.

In 1970s, UN commissioned the International Law Commission (ILC), a UN body with legal experts nominated by states, to study international law for transboundary water sharing of international water courses. ILC's work resulted in the UN Convention in 1997. The UN Convention is yet to come into force since it has not received the minimum 35 number of ratifications. The Convention draws on both the works of ILA and IIL and gives due importance to both the principles of 'reasonable and equitable utilization' and 'no significant harm.' Articles 5 and 7 specifically deal with these two principles respectively. Further, the factors to be considered while applying the 'reasonable and equitable utilization' include all the provisions of Helsinki Rules. This includes existing uses (prior appropriation) as well. The Convention also applies to both surface and groundwater¹⁰. It further includes other key principles, as in Berlin Rules - the principles of cooperation, information exchange, collaborative consultation and dispute

¹⁰ as long as both the components are part of a single unitary whole system and flowing into a common terminus.

settlement. So far, 16 countries signed and 23 ratified the convention; India is not one of the parties to the Convention yet¹¹.

Reasons for reluctance of countries to ratify the convention are not difficult to speculate. These may be the following. First, the highly specific nature of stakes involved in transboundary water sharing makes the states wary of generalized codification of principles. Second, asymmetric politics of upper riparian versus lower riparian states are dialectic and dynamic. Disputes emerge, evolve and recur as sequential response to reciprocities not restricted to just water sharing, but also include the spectrum of issues that impact political relations.

Specific considerations of acceding to the Convention's principles are centered on the contentious positions of the two key principles - 'reasonable and equitable utilization' vs 'no significant harm.' Debates among the Working Group of ILC while drafting the Convention focused over this issue. It is natural for the lower riparian states to favour the principle of 'no significant harm' because it helps to protect their interests, in particular their existing use of water (prior appropriation). The principle of 'reasonable and equitable utilization' is favoured by the upper riparian states because it gives space to negotiate further development of resources as reasonable utilization, to the extent that the equitable utilization allows. For its emphasis over the 'reasonable and equitable utilization,' Helsinki Rules were often understood as subordinating the other principle - 'no significant harm.' The UN Convention is considered to subordinate 'no significant harm' principle in a similar way. Though the Article 7 specifically addresses 'obligation not to cause significant harm,' the provisions under the Article were made subject to the Articles 5 and 6 dealing with the principle of 'reasonable and equitable utilization' (Salman 2007)¹².

¹¹ http://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII12&chapter=27&lang=en#1 accessed on 31 March 2011

¹² *Article 5: Equitable and reasonable utilization and participation:* 1. Watercourse States shall in their respective territories utilize an international watercourse in an equitable and reasonable manner. In particular, an international watercourse shall be used and developed by watercourse States with a view to attaining optimal and sustainable utilization thereof and benefits therefrom, taking into account the interests of the watercourse States concerned, consistent with adequate protection of the watercourse.

2. Watercourse States shall participate in the use, development and protection of an international watercourse in an equitable and reasonable manner. Such participation includes both the right to utilize

the watercourse and the duty to cooperate in the protection and development thereof, as provided in the present Convention.

The more recent Berlin Rules by ILA appear to have addressed some of these issues, though these Rules continue to face criticism (see Salman 2007). The issue of subordination of one or other of the two key principles was resolved by placing the two as subjective to each other. Articles 12 and 16, addressing the two principles respectively are:

Article 12.1 *Equitable Utilization*: Basin States shall in their respective territories manage the waters of an international drainage basin in an equitable and reasonable manner having due regard for the obligation not to cause significant harm to other basin States.

Article 16: *Avoidance of Transboundary Harm*: Basin States, in managing the waters of an international drainage basin, shall refrain from and prevent acts or omissions within their territory that cause significant harm to another basin State having due regard for the right of each basin State to make equitable and reasonable use of the waters.

Article 6: Factors relevant to equitable and reasonable utilization

1. Utilization of an international watercourse in an equitable and reasonable manner within the meaning of article 5 requires taking into account all relevant factors and circumstances, including: (a) Geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character; (b) The social and economic needs of the watercourse States concerned; (c) The population dependent on the watercourse in each watercourse State; (d) The effects of the use or uses of the watercourses in one watercourse State on other watercourse States; (e) Existing and potential uses of the watercourse; (f) Conservation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect; (g) The availability of alternatives, of comparable value, to a particular planned or existing use.

2. In the application of article 5 or paragraph 1 of this article, watercourse States concerned shall, when the need arises, enter into consultations in a spirit of cooperation.

3. The weight to be given to each factor is to be determined by its importance in comparison with that of other relevant factors. In determining what is a reasonable and equitable use, all relevant factors are to be considered together and a conclusion reached on the basis of the whole.

Article 7: Obligation not to cause significant harm

1. Watercourse States in utilizing an international watercourse in their territories, shall take all appropriate measures to prevent the causing of significant harm to other watercourse States.

2. Where significant harm nevertheless is caused to another watercourse State, the States whose use causes such harm shall, in the absence of agreement to such use, take all appropriate measures, having due regard for the provisions of articles 5 and 6, in consultation with the affected State, to eliminate or mitigate such harm and, where appropriate, to discuss the question of compensation (UN Convention 1997).

The ILA drafting committee's commentary notes the change in phrasing of the two articles as an improvement from the Helsinki Rules and the UN Convention. This "...emphasizes that the right to an equitable and reasonable share of the waters of an international drainage basin carries with it certain duties in the use of those waters." (ILA 2004: 20). Article 16 along with other principles of sustainability (Article 7), and the principle on minimization of environmental harm (Article 8) might suggest that the principle of 'no significant harm' may have outweighed the principle of 'reasonable and equitable utilization'¹³.

Notwithstanding the criticism, Berlin Rules is an important contribution in several ways. 'Berlin Rules on Water Resources,' as it is titled, goes beyond the scope of international water courses. The Rules can be applied to transboundary sharing of national waters as well - as in the case of interstate water disputes in India. In the words of the drafting committee, the rules "... present a comprehensive collection of all the relevant customary international law that a water manager or a court or other legal decision maker would have to take into account in resolving issues relating to the management of water resources" (ILA 2004: 2). This includes established human rights related to access to water and their right to participate in decisions that affect them. In Chapter II that outlines the principles concerned with management of all waters, Article 4 exclusively addresses participation by persons in Articles 4, 17 and 18: "States shall take steps to assure that persons likely to be affected are able to participate in the processes whereby decisions are made concerning the management of waters" (Article 4, ILA:2004: 12). Other principles also mark key departures by emphasizing management of surface water and groundwater use, their conjunctive use, integrated management, sustainability and minimization of environmental harm (Articles 5-8).

International water conflicts: key lessons

Principles for transboundary sharing and management of waters in the UN Convention or the more comprehensive Berlin Rules build on rich history of international customary law. These principles, especially from Berlin Rules, can be usefully applied in the context of transboundary sharing of national waters, i.e., the interstate water disputes. However, as I attempted to argue in the early in the paper, these are only legal principles. Application of these principles requires adaptation to and consideration of social, political and historical contexts and the institutions in place.

Historical analysis of international water conflicts offer lessons along these lines. Successful implementation of transboundary water sharing arrangements has some key attributes.

¹³ See Salman (2007) for a detailed discussion of specific arguments about the subordination or lack of it of the two principles in Berlin Rules. Also see Rahaman (2009).

First, active and resilient institutions are extremely important for making transboundary water sharing arrangements work. These institutions need to provide space and flexibility for informed negotiations and, facilitate transparency and information exchange. Institutions help to absorb instabilities and insecurities caused by uncertainties, diffuse tensions and avert conflicts. Conflicts emerge when changes in water sharing regimes cannot be absorbed by the capacity and resilience of institutions (Giordano and Wolf 2003, Wolf, Yoffe and Giordano 2003). Second, political relations between the parties are critical for successful endurance and implementation of water sharing agreements. Domestic politics about water influence international cooperation, which is not necessarily water related. In other words, politics about water are embedded within a larger spectrum of political relations (Giordano, Giordano and Wolf 2002). This leads to the third key attribute - the subjectivity of cooperation to historical and geographical context. Water conflicts are deeply entrenched in specific historical and geographical contexts (Giordano, Giordano and Wolf 2002). Each water conflict has its own specific geographic characteristics and historical context that contribute to emergence and recurrence of disputes. Institutions and other instruments of cooperation have to account for them.

Application of principles of international law has to occur while accounting for at least the three above attributes for successful transboundary water sharing arrangements. Going by the apparent complex nature of interstate water disputes, this may be true to them as well. The interstate disputes' embedded nature within a federal structure is an additional dimension. The next part examines how some of these attributes, in particular the political relations and contextual analysis, may be important in the emergence, recurrence and resolution of interstate water disputes.

Part 3: Interstate water disputes: a transboundary political analysis

An underlying theme in the first two parts is that the discourse about transboundary water disputes has been legalist and paid inadequate attention to other factors contributing to emergence, recurrence and resolution of disputes. Literature about international water conflicts identified historical and geographic context as a critical factor, besides political relations and institutions. In this third part, I will make an attempt to unpack these factors with respect to interstate water disputes in India. The relevant debates about law and institutions have been covered in the first part. Here, I discuss specific cases of interstate water disputes illustrating how political relations and, historical and geographical context matter in emergence, recurrence and resolution of interstate water disputes.

There have been several interstate water disputes in India before and after its independence. Intersecting of river's natural course by political boundaries induces an asymmetrical power relationship between the States involved. The upstream State is always at an advantage. This power relationship is complicated in countries with a history of colonial rule; political boundaries are often reorganized. States in India have undergone reorganization more than once. River courses or resource distribution were not considerations in delineating state boundaries. The reorganization does not just complicate existing water sharing agreements, but also becomes a breeding ground for politically inspired contestations and disputes. Linguistic homogeneity was the basis for reorganization of states in India after its independence. It is quite possible that the previous agreements for sharing water resources are contested later¹⁴. While this is a common issue at the root of major interstate water disputes in India, there are several other factors. These are organized and discussed under four broad heads: (i) Colonial and postcolonial reorganization of boundaries; (ii) Construction of social and political boundaries of us vs them; (iii) Disputing of water sharing arrangements as part of political power plays triggered by say, change in political configurations or a 'vote bank' political strategies; and, (iv) structural deficiencies induced by techno-legalism.

Colonial rule and postcolonial reorganization: boundaries, bonding and structural violence

In 1947, Indian nation was founded as a highly heterogeneous collage of several princely states and other provinces under direct British rule. The *White Paper on Indian States* (GoI 1950) by the then Ministry of States, Government of India estimates that just above half of (52 per cent) Indian territory was under the direct rule of British Rule. About 28 per cent of the territory, comprising more than 550 princely states, was under the British indirect rule. The rest were either independent states or other princely states later acceded to the Indian Union. The Indian Union, later reorganized on the basis of linguistic homogeneity, has inherently retained this deeply diverse political and social heterogeneity. Sometimes these have developed into enduring and irreverent fault lines; the Telangana separatist movement is a case in point.

Each State in India contains parts of former British-ruled and princely states. This historical-political heterogeneity of the States is not adequately considered in political analyses of States. Political mobilization and participation of constituents in India are often shaped and influenced by this heterogeneity (Richter 1973). In a historical analysis

¹⁴ Scholars celebrated linguistic homogeneity as a secular basis for reorganization and preempt development of secessionist tendencies by eliding ethnic or other fault lines of division. See Dasgupta (2001) for a detailed discussion.

of political mobilization in Gujarat and in particular that of elite participation in Gujarat, Wood (1984) observes:

"The Gujarat evidence demonstrates that linguistic affinity alone has not determined the territorial composition of the states in column two of Table 1 [States with significant historical-political heterogeneity]; nor is linguistic affinity a guarantee of the evolution of these states into political communities. India's linguistic states are not natural states; they are artificial constructs" (p. 95).

Historical and socio-cultural constructed regionalism is a reality and needs to be considered as an important dimension in understanding political geography of States in India¹⁵. Linguistic reorganization has not entirely elided the fractured constituencies and their aspirations (for e.g., see Simhadri 1997). The principle of linguistic affinity itself has a long history of several decades before it was operationalized in 1956 by independent India. The report of the States Reorganization Commission (GoI 1955) traces this thought back to the protests of Indian political parties against the partition of Bengal in 1905. In its recommendations for reorganization, the Commission had carefully listed the key considerations in redrawing the map of India¹⁶. The foremost consideration for the Commission was the unity and security of India and its consolidation as a nation. This was emphasized repeatedly in no uncertain terms, by not just the States Reorganization Commission of 1955, but also by the previous Dar Commission and also the JVP Committee. Major political parties including the Indian National Congress, Hindu Maha Sabha and the Community Party were unanimous in stressing this as primary concern. This primacy of unity of the nation superseded other considerations of natural resource distribution, like rivers, or the potential disputes over these resources¹⁷.

¹⁵ See Khan (1973) for an interesting proposition of socio-cultural regionalization of India and delineation into more than 57 socio-cultural sub-regions.

¹⁶ Report of the States Reorganization Commission: Part II, Chapter I, 93. The principles that emerge may be enumerated as follows: (i) preservation and strengthening of the unity and security of India; (ii) linguistic and cultural homogeneity; (iii) financial, economic and administrative considerations; and, (iv) successful working of national plan (GoI 1955: 25)

¹⁷ The States Reorganization Commission (1955) did consider river management in couple of instances. The most famous was that of Andhra Pradesh state formation. The Commission felt that there is an advantage in bringing the two basins of Godavari and Krishna rivers under unified control and, recommended the formation of a united Andhra Pradesh by merging the Andhra state and the Telangana region of the then Hyderabad state (GoI, 1955: 101-109). The irony, unfortunately, is the Telangana separatist movement continues to thrive on allegations of uneven distribution of river waters.

The reorganization of States' boundaries, however, did not stop after 1956; it continued and it is likely to continue if the trends are any indication. Since the carving of separate Andhra State from Madras State in 1953, boundaries of States and Union Territories in India were redrawn many times. In 1956, the States Reorganization Commission recommended reorganization of the Indian territory into 14 States and 4 Union Territories; now India has 28 States and 7 Union Territories. With the Telangana separate state agitation going strong and other imminent demands for other separate States, the political boundaries of States are likely to alter further. These changes complicate existing transboundary sharing agreements and become sources of political contestations. The following case of Punjab-Haryana dispute illustrates such complexities.

In 1955, just before the States reorganization in 1956, an interstate water sharing agreement was reached to share the surplus waters of Ravi and Beas rivers. It involved the then States of Punjab, PEPSU (Patiala and East Punjab States Union), Jammu and Kashmir and Rajasthan. Rajasthan, though was not a riparian state, was included as a beneficiary in then on-going Indus Treaty negotiations; hence, the share to Rajasthan State. In the estimated surplus waters of 15.85 MAF, after deducting prior appropriation share of 3.13 MAF, Punjab received 5.9 MAF; Rajasthan - 8.0 MAF; PEPSU - 1.3 MAF; and, Jammu and Kashmir- 0.65 MAF. After the States reorganization in 1956, Punjab and PEPSU were merged. Later in 1966, through another round of reorganization, Punjab was divided into two states: Punjabi speaking Punjab and Hindi speaking Haryana. The Punjab and PEPSU States' share of 7.2 MAF was to be shared between Punjab and Haryana. Through an intervention of Central Government in 1976 and under Punjab Reorganization Act 1966, this share was divided with 3.5 MAF to each State and the rest of 0.2 MAF was given to Delhi. Punjab disagreed with the award and filed a suit in the Supreme Court challenging the decision and Haryana filed another suit to make Punjab implement the award. Through an intervention of Prime Minister Indira Gandhi, another agreement was struck between Punjab and Haryana in 1981. Under the agreement, Punjab received 4.22 MAF and Haryana received 3.5 MAF from a revised total available water of 17.17 MAF. Later, a new dispute continued to simmer over implementation of the agreement and construction of Sutlej-Yamuna Link (SYL) canal, which would give Haryana access to its share. This figured in the Rajiv Gandhi-Longowal accord, and led to setting up the Ravi-Beas tribunal in 1985. The tribunal gave its award in 1987, and awarded 5.0 MAF to Punjab and 3.83 to MAF to Haryana. The dispute however continued to recur, the primary reason being the construction of the SYL canal. Though the tenuous situation in Punjab partly contributed to non-implementation, Punjab always opposed construction of SYL canal. In 2004, Punjab created a constitutional crisis sort when the Punjab Assembly, through a resolution, unilaterally annulled all the earlier agreements with Haryana and Rajasthan

for sharing Ravi-Beas Rivers. This was referred to the Supreme Court by the Central Government and the matter is yet to be resolved (Iyer 2004, Padhiari and Ballabh 2008).

Punjab's unilateral decision received lot of attention and triggered many political and legal debates. The case however usefully illustrates how boundary reorganization affects water disputes. Punjab justified its action on two key accounts. First, it argued that it had claims over the entire 7.2 MAF allocated to it before the division. Second, it rejected the idea of sharing Ravi-Beas river waters with Rajasthan, because it is not a riparian state to any of these two rivers. Iyer (2004) questions these while raising some germane points. First, because Haryana divided from Punjab, does it lose its riparian status? The share allocated to Punjab was on the basis of water requirements in former state of Punjab, which also includes Haryana. On the other account, Ravi and Beas along with Sutlej are part of Indus river systems. India's access to these rivers was provided by the Indus Treaty. The total share of water from the three eastern rivers (first 15.85 MAF and later 17.17 MAF) was negotiated as part of the Indus Treaty with Pakistan to share water from the Indus river system¹⁸. Rajasthan's requirements were considered in estimating and negotiating India's share in Indus system of rivers. Negotiations at a higher level boundary between India and Pakistan elided boundaries at a lower level and contributed to making Rajasthan a riparian to the Ravi, Beas and Sutlej rivers. Reorganization of boundaries thus complicated earlier agreements and provided opportunities for political actors to mobilize and appeal to their respective constituencies.

Boundaries and their reorganization pose other challenges than redistribution of shares. The asymmetrical power relationship over transboundary water sharing between political entities can be a source of continuing political contestations. Punjab, the upper riparian would not resort to such unilateral decision had it not been at an advantageous position. This asymmetry in power influences negotiations and consequently agreements, often favouring the more powerful. In a changed political context at a later stage, these agreements may be contested. A typical example is the Cauvery water dispute between Karnataka and Tamil Nadu States, which was a legacy of an agreement entered in 1924 between the Mysore princely state and the British ruled Madras Presidency. This 1924 agreement itself was a revised agreement of an earlier one in 1892. In the late 19th century, when Mysore princely state - a status accorded to states ruled by local Indian princes, but paying taxes to British Government - made plans for irrigation works on

¹⁸ See Iyer (2004, 2007) for specific details of Indus Treaty negotiations between India and Pakistan that led to geographic division of rivers: the three eastern rivers (Ravi, Beas and Sutlej) to India and the other three western rivers (Jhelum, Chenab and Indus) to Pakistan

the upstream of the Cauvery River, Madras presidency - an entirely British ruled state - protested against the proposal. Mysore approached the British Government for resolution, which resulted in the agreement of 1892. According to the agreement, Mysore on the upstream is required to take consent from Madras presidency for any water augmentation works in Mysore. Now, in a democratic set up, the prejudiced history of earlier agreements and corresponding provisions became a source of contestation for the States and also non-state political actors. Before the Cauvery Tribunal as well, Tamil Nadu insisted on respecting the provisions of the 1892 and subsequent 1924 agreements; Karnataka argued that the agreements were inequitable and agreed under duress (Guhan 1993).

D'Souza (2006) approaches this problem of recurring disputes from a different perspective. She argues that reproducing colonial and imperial structural relations are at the root of the problem of interstate water disputes in India. Using a historical analysis of Krishna water dispute, D'Souza investigates into the genesis of Krishna dispute. Krishna water dispute too has the same history as that of the Cauvery dispute. The dispute is between Karnataka (former Mysore Princely state), Andhra Pradesh (a divided state from Madras Presidency) and Maharashtra, with the former two states. Till the first Krishna Water Dispute Tribunal (KWDT) was set up, sharing of Krishna river waters was governed by two agreements from colonial times: the 1892 agreement between the Mysore Princely State and the Madras Presidency; and, the 1933 agreement between the Hyderabad Princely State and the Madras Presidency. Both the agreements had the Madras presidency at an advantage for the reasons discussed earlier. These agreements put certain restrictions in undertaking or modifying new works by Mysore and Hyderabad states. Before the KWDT, the issue of how the two agreements had to be treated came up. KWDT did not unequivocally declare the agreements as invalid. Instead, it modified in a manner to grant protection to already existing irrigation works in Karnataka and Andhra Pradesh. D'Souza observes: "In incorporating the 1892 and 1933 Agreements in a form modified and acceptable to the parties, the KWDT internalized what was until then a problem imposed by the externality of colonization" (Ibid: 195). She further argues that the water resources development, mainly driven by construction of large dams in post-independence India is an imperial project. Promoted by international institutions like the UN and the World Bank, river basin development as a development project was embraced by postcolonial nations like India. For D'Souza, Krishna dispute emerged out of two structural conditions. The first is a condition created by continuation and internalization of colonial power relations (legal, institutional and administrative) - as illustrated by incorporation of agreements from colonial period, which remained sources of conflict. The second is a condition likened to contemporary reproduction of imperial order where postcolonial institutions like KWDT failed to recognize this as a

result of internalizing colonial power relations in the manner above. Further, KWDT's attribution and treatment of interstate dispute as a problem of (river basin) development - which itself a manifestation of post-war imperial order.

This is an interesting thesis that has not been adequately addressed while analyzing interstate water disputes. Colonial structural infirmities and postcolonial processual inadequacies are not difficult to encounter in our investigations into the anatomy of interstate water disputes. Disputes often emerge because States contest, seek ratification of, or draw support from water sharing agreements of colonial or precolonial times. Internalization of these agreements, as in the case of Krishna dispute, to protect prior appropriation and other exigencies complicates subsequent reviews and awards.

'Us vs Them': Social and political construction of boundaries and escalation of disputes

Interstate water disputes are frequently used by States and political actors to appeal to vote banks and appease political constituencies. Just as the Punjab dispute demonstrates, the 'political game' of unilateral termination of earlier water sharing agreements was more an effort to gain political mileage. Water is an emotional subject; State and non-state actors use it for mobilizing masses and reap political benefits. Political mobilization often happens along the already existing fault lines of ethnic and other social, cultural and political boundaries. These are used to construct 'the other' - to distinguish 'us vs them' - and deploy them as strategies in politics of water sharing.

The nature and politics of boundaries has been theorized with significant rigour by political geographers. Boundary construction and scaling up of conflicts are interconnected in an interesting way. Taylor and Flint (2003) deploy Schattschneider's (1960) thesis about conflicts to explain this. Outcome of a conflict does not depend on the relative powers of the parties; but upon their respective abilities to increase the scope of conflict by invoking their networks. The scale of conflict then depends on the parties' ability to redefine themselves as a group of 'us' opposed to 'them.' In other words, boundary defines the scale of conflict. Scale and boundary mutually constitute each other in a conflict. Neil Smith (1991) conceives boundary as a marker of difference and scale of conflicts is all about negotiating this difference. The politics of negotiation are contingent to the overlapping, intersecting and interconnected boundaries. Scale is defined by the difference, or the boundary invoked to engage with the conflict. Neil Smith calls this manipulating of 'scale jumping.' Others put it more explicitly: "It [scale-jumping] enables us to describe the moments at which boundaries are reconfigured and struggles rearticulated" (Newstead, Reid and Sparke 2003: 486).

Politics of interstate water disputes display an array of practices reflecting these theories. This is best seen in disputes like Cauvery and Narmada, which witnessed intense political tussles. The politics did not restrict to just parties - the States involved - but also escalated to involve international networks of activists and interesting groups, along the lines of Smith's 'scale jumping.'

Cauvery dispute between the States of Karnataka and Tamil Nadu caused frequent civic unrest and involved violence. The dispute often traversed the terrains of water sharing politics, and invoked ethnic and social networks of animosity. The dispute has its history going back to beginning of 19th century with evidence of initial communication between the Madras and Mysore States about water sharing in the 1800s. Much later, a concern raised by Madras (under British direct rule) 1870 against the Mysore Princely State's (under indirect rule) proposed irrigation works resulted in an agreement in 1892¹⁹. Various provisions under the agreement, especially Madras's entitlement to protection of prescriptive rights, provided much scope for conflicts later²⁰. Some key milestones before independence include the Griffin arbitration in 1913-1914 and the agreement in 1924.

The Griffin arbitration was necessary to resolve the dispute between the States when Mysore and Madras simultaneously proposed projects on either site around 1910: Mysore's proposed dam at Kannambadi village (later known as Krishnarajasagar [KRS] Dam, also known as Mysore-Cauvery project at that time; Madras proposed another dam at Mettur (also known as Madras-Cauvery project). Madras refused consent arguing that the Mysore project would affect its Mettur project. The Griffin arbitration by the GoI as per the 1892 agreement, denied prescriptive rights status to the claims made by Madras. Madras refused to accept the Griffin award and made another representation to the GoI, which led to another long cycles of negotiations. These negotiations were finally concluded with the 1924 agreement. The agreement had the following provisions:

¹⁹ See Guhan (1993) for more details of the agreement; known as "Irrigation Works in Mysore State - The Madras-Mysore Agreement of 1892." Three specific provisions of the agreement are at the core of the dispute: (a) Mysore Government should not build any new irrigation works in specified parts of basin without prior consent of Madras government; (b) Mysore to share full information about the new irrigation works while seeking prior consent; and, (c) Madras is bound not to refuse consent unless it establishes that the proposed works affect an existing use or its prescriptive rights already acquired (p.10). [Prescriptive Rights:

²⁰ For e.g., see the news item in The Hindu, Venkatesan (2002): "Tamil Nadu today [27 February 2002] claimed before the Cauvery Tribunal that it had obtained "prescriptive rights" in the use of Cauvery water as per the 1914 arbitration award, and the 1892 and 1924 agreements."

(i) Madras gave its consent to the Krishnarajasagar dam; (ii) Mysore agreed to regulate KRS dam discharge as per a set of rules; and, (iii) it specifies limits to future irrigation development on both sides²¹. This agreement, to be effective for the next 50 years, left it ambiguous about future validity of 1892 agreement. This and the set of rules became sources of contention in the later years. Otherwise, the agreement was lauded as an effectively conducted negotiation process, with arbitration followed by adjudication and key players - political and technical- players playing to their roles (Guhan 1993).

While extolling the negotiation process, Guhan (1993: 17) observes: "The absence of mass populist politics in those days was also an important factor." It is not difficult to surmise why it is the case, but it can be definitely said that the architects of the agreement(s) had no inkling about the shape and structure of the mass politics to come in the later years and how these agreements became an instruments and inspiration for such politics. The history of Cauvery dispute after independence is of copious contentious mass politics.

Political boundaries of Mysore and Madras changed significantly after the independence to become separate states of Karnataka and Tamil Nadu, and, democratically elected federal constituents of India²². However the agreements remained binding and operational till the expiry of the 1924 agreement in 1970s. In the 1950s, Tamil Nadu opposed the Karnataka's proposed Kabini project. After a series of failed attempts to mediate between the States, GoI set up a fact finding committee to support further negotiations. By 1970s, the other riparian States, Kerala and Pandicherry also joined the dispute. Based on the fact finding committee reports, GoI organized a series of meetings with the parties during 1973-73, but failed to achieve any agreement. Changing political regimes in the States also hampered the process. This will be dealt in further detail in the next section. But in 1976, Tamil Nadu requested GoI to refer the matter to a tribunal under the ISDA act. GoI continued its efforts to mediate while mulling over the idea of referring to the tribunal. In the meanwhile, changing political regimes, especially in Tamil Nadu and Karnataka, began engaging in politically motivated measures. In 1978, a newly elected AIADMK government in Tamil Nadu, replacing the DMK, rejected the GoI's proposed draft agreement. The positions of the two States were deeply separated by historically entangled and politically colored arguments. Broadly put, Tamil Nadu insisted on continuation of 1892 and 1924 agreements. Karnataka

²¹ See Guhan (1993) for specific details of the 1924 agreement.

²² Change in political boundaries is indeed a major consideration. Mysore's area has increased with addition of Kannada speaking districts of Hyderabad state into Karnataka. Madras State lost lot of area due to separation of two States after independence: Andhra Pradesh and Kerala.

rejected the two agreements on the grounds that those are historically prejudiced (Benjamin 1971; Guhan 1993)²³. These retaliatory and provocative politics continued while the bilateral negotiation sponsored by GoI achieved little consensus. In 1986 and later in 1989, Tamil Nadu reiterated its request for setting up a tribunal. After Tamil Nadu's formal refusal to join negotiations, GoI finally set up the Cauvery Dispute Tribunal in 1990. Since the beginning of dispute in 1968 till setting up the Cauvery Disputes Tribunal in 1992, GoI organized 26 ministerial level meetings to settle the matter! (Guhan 1993)

In the 1960s, in spite of early stages of regional political parties and Congress dominance at the Center, mass politics did have a role in influencing the negotiations. Political expediencies of electoral politics and power sharing have had an impact over the outcomes (Benjamin 1971). But after setting up the Cauvery Dispute Tribunal, the politics took a different shape. They did not restrict political maneuverings by leaders and strategists, but spread into masses. In the initial hearings of the tribunal, Tamil Nadu requested for an interim relief order to make Karnataka release timely and adequate supplies of water downstream to meet its requirements. The tribunal passed a relief order on June 25, 1991 specifying the schedule for release of water and also restricting Karnataka from increasing irrigation under Cauvery beyond certain limit till its final order. Karnataka refused to comply and questioned the soundness of the order. The State passed a resolution in its both Houses of legislature rejecting the order, and promulgated an Ordinance to the effect. The State also moved Supreme Court against the Tribunal. In the meanwhile, GoI referred the matter to Supreme Court; the Court ruled the Ordinance unconstitutional and upheld the tribunal's order. GoI finally published the Tribunal's order in gazette in December 1991, which triggered an unprecedented civic unrest and violence, first in Karnataka and later in Tamil Nadu. All the political parties in Karnataka got together and called for a state-wide *bandh* protesting the order. The *bandh* turned violent with various political groups giving it a color of ethnic clash. In Bangalore and later in the border districts, Tamil population in Karnataka were targeted and attacked. Independent human rights groups estimated that over 1,00,000 people were made to flee from Karnataka (Sebastian 1992). This was followed by another *bandh* call by Tamil Nadu and attacks against Kannadigas in Tamil Nadu. Later the Tribunal gave another order clarifying the contingent nature of the order and relaxing the requirements to be met by Karnataka.

²³ There are certain provisions of the 1892 and 1924 agreements that turned around in their implications for both the States due to irrigation development that happened since then. Some provisions earlier advantageous to Tamil Nadu earlier became disadvantageous in 1970s and vice versa (Guhan 1993).

This however marked a pronounced division and construction of boundary along ethnic lines. Political groups actively used it to mobilize and escalate conflict between Tamils and Kannadigas. It only required a simple flash point to trigger clashes. Several such flash points were provided by poor monsoons and also political maneuverings by political actors on either side.

One of the first flash points was when the monsoon was poor in 1995. Karnataka could not release water as per the interim order. Tamil Nadu, led by AIADMK with Jayalalitha as Chief Minister approached the Supreme Court which was in turn, referred to the Tribunal. Finally, the then Prime Minister P V Narsimharao's mediation helped abate the conflict. GoI later set up a Cauvery Monitoring Committee (CMC) with the Prime Minister as the Chair and the Chief Ministers of the four States as committee members to oversee implementation of interim order. This did not always help. Another monsoon failure in 2002 was ingeniously used to gain mileage by political actors, especially by Jayalalitha, reelected as Chief Minister in Tamil Nadu. Jayalalitha walked out of the CMC meeting and later boycotted the meetings. Congress (I) led Karnataka responded with another open defiance of Tribunal's interim order.

Jayalalitha was accused of playing populist politics in this episode. She was going through difficult times in her second term with corruption charges and her own vindictive actions against her political opponents, Karunanidhi and Murasoli Maran. She was using the opportunity to gain political advantage. On the other hand, Congress (I) led Karnataka was unhappy with the BJP led Central government. Political groups, from film star fans to farmers' associations on either side joined protests. Farmer groups in Tamil Nadu were marked by suicides, more dramatically by jumping into Mettur reservoir. A pan-Tamil militant group blasted the power transformer (in TN) that supplies power to Karnataka and Andhra Pradesh. Communities clashed in both States leading to violence. S M Krishna, the then Chief Minister of Karnataka conducted a *padayatra* to pacify the communities in the command area. Supreme Court stepped in finally and censured the two State governments, particularly Jayalalitha for her popular politics. Both the Chief Ministers tendered apology. By this time, Karnataka resumed supply of water and also monsoon improved and the dispute eased off. These politics show how constructed boundaries (here along ethnic lines) escalating to larger networks for political benefits, redefining the scope and scale of the conflicts.

However, in another parallel development, a different set of political actors contributed to scale-fixing of the conflict at a different scale contributed to mitigation of the conflict further. Some civic society actors from either side organized multi-stakeholder dialogue outside the formal scope and spaces of adjudication. Farmers associations from Karnataka

and Tamil Nadu along with other civic society actors came together to engage in site visits and dialogues to dissipate tenacious relations between the two sides (Janakarajan and Joy 2011, Janakarajan 2008, Iyer 2003).

Cauvery Dispute Tribunal gave its final award in 2007²⁴. Karnataka and Kerala were not satisfied with it, but finally relented. Tamil Nadu with DMK's Karunanidhi as the Chief Minister observed that justice was finally done²⁵. So far, the award has not yet been put to test and no recurrence of the dispute so far.

The other well-known case of interstate water dispute is that of Narmada, which experienced long and intense multi-scalar political engagement, from mass politics at grassroots level to large scale involvement of transnational networks of NGOs and advocacy groups (Khagram 2004). But the Narmada interstate water dispute for which the tribunal was set up had the historical reasons discussed earlier: (i) postcolonial reorganization of boundaries of Gujarat and Maharashtra; (ii) upstream vs downstream perceptions of inequity in appropriation of water - Gujarat's complaint about prejudicial appropriation of water by Madhya Pradesh and Maharashtra (NWDI 1978). Scale-jumping or up-scaling of the conflict however was less about water allocation, but more about relocation and rehabilitation issues. The dispute, focused on developmental issues, had different kinds of boundary constructions of us vs them: for e.g., the beneficiaries of the dam and those displaced and marginalized (Khagram 2004). But a historical analysis of the Narmada similar to that of Cauvery discussed above will reveal boundary constructions of similar nature employed to create political opportunities. These boundaries manifested at different scales and by corresponding political actors constitute scale-making of the dispute either by escalating or mitigating disputes. The multi-scalar, multi-actor animation and mitigation of interstate water disputes actively restructure power relations and reproduce political spaces to inform and shape interstate relations and in turn the federal structure of the nation.

The vote bank politics and political manoeuvrings described in the Cauvery case do not just showcase boundary constructions, but also a certain kind of contingent power plays based on party politics and political constellations and configurations. The following sections describe how these particular kind of politics impact the outcomes of interstate water disputes.

²⁴ The Hindu. 06 February 2007. Final order of the Cauvery Water Disputes Tribunal. accessed at <http://www.hindu.com/2007/02/06/stories/2007020603861000.htm> on 30 April 2011

²⁵ The Hindu, 06 February 2007, Justice done: Karunanidhi accessed at <http://www.hindu.com/2007/02/06/stories/2007020608060100.htm> accessed on 30 April 2011. Karunanidhi further observed that he negotiated with 11 Chief Ministers of Karnataka since its beginning 1968.

Political power plays, configurations, constituencies

I will continue with the case of Cauvery for the reason that the earlier sections provide a context to the point that I wish to illustrate here. Further, the case also has an advantage of well-documented case and was subjected to intense deliberations over long 17 years. Anand (2004) refers to the triadic asymmetrical relationship between the central government and the two State governments having an impact over the outcomes of the dispute. He refers to it in a structural sense, the hierarchical embeddedness of the parties of the dispute. But this relationship is not just structural, but also relational. The party affiliations of the governments at the Center and of the States construct a particular and contingent organization of power. This power geometry defines the implications of escalation or mitigation of a dispute to each of the parties in the constellation. The following table, though not exhaustive, may illustrate the point. The idea is see if the political party affiliations and their configurations have any generated any consistent outcomes. It does not reveal the intense political deliberations and maneuverings that led to each of those outcomes. Though Kerala and Pondicherry are formally parties to the dispute, the stakes are minimal and have been less active in escalation or de-escalation of the dispute. The dispute was primarily between Tamil Nadu and Karnataka. The table is a schematic record of political configurations at various points in the history of the dispute. At least couple of patterns emerge here. First, the outcome often favours the State with political party in power having congenial relation with that at the Center. Second, strong government at the Center could always mediate between the States and temporarily resolve the dispute.

Dispute-Milestone and reason	Political party affiliations - States	Political party affiliation - Center (GoI)	Mediation/ adjudication	Outcome
1950-1970s: Karnataka's beginning of work on Kabini and Hymavathy	Karnataka - Congress Tamil Nadu - DMK	Congress	12 meetings by the Center with party States separately; no bilateral meetings GoI's sets up Fact Finding Committee and Prime Minister Indira Gandhi mediates	Karnataka refused to respect 1892&1924 agreements or suspend work on projects DMK's Karunanidhi decides to withdraw suit in Supreme Court
Late 1970s: Karnataka's proposal to construct Harangi dam	Karnataka - President's rule; Congress (I) Tamil Nadu - President's rule; AIADMK	Congress	4 Ministerial Level meetings; no bilateral meetings Fact Finding Committee's proposals rejected by both States	Tamil Nadu requests referral to a Tribunal

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Dispute- Milestone and reason	Political party affiliations - States	Political party affiliation - Center (GoI)	Mediation/ adjudication	Outcome
1980s-1991 Farmers' As- sociation from Tanjavur files case in Supreme Court (1986)	Karnataka - Congress(I) Tamil Nadu- AIADMK	Congress	4 bilateral meeting be- tween Karnataka and Tamil Nadu; 3 separate Ministerial level meet- ings	The dispute continues through representations and counter-representations
1991	Tamil Nadu - AIADMK Karnataka - Congress (I)	Janata Dal with V P Singh as Prime Minister	Janata Dal did not have the political capital to mediate	Three member Cauvery Tri- bunal set up
1991: Tribunal passes interim order which asks Karnataka to ensure stipulated water to Tamil Naidu	Karnataka Congress (I) Tamil Nadu- A I A D M K (Jayalalitha)	Janata Dal	Karnataka refuses and annuls Tribunal's order through an ordinance; Supreme Court strikes off the ordinance and forces Karnataka to implement the order.	Situation flares up in both States with large scale vio- lence, especially in Karnataka
1992: Tribunal passes clarificatory order - implemen- tation of in- terim order without hardship to Karnataka	Karnataka Congress (I) Tamil Nadu AIADMK	Congress (I) with P V Narsimha Rao as the Prime Minister	A civic society initiative to mediate and concili- ation of the dispute	Dispute temporarily settles

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Dispute- Milestone and reason	Political party affiliations - States	Political party affiliation - Center (GoI)	Mediation/ adjudication	Outcome
1995: Monsoon fails; Tamil Nadu ap- proaches Supreme Court and Tribunal	Tamil Nadu- AIADMK Karnataka - Janata Dal	Congress (I)	Court directed media- tion by the Prime Min- ister P V Narsimha Rao	Dispute temporarily abates.
1997: con- tinuation of 1995 dispute	Tamil Nadu- DMK Karnataka - Janata Dal	Janata Dal with H D Deve Gouda as the Prime Minister	GoI sets up a Cauvery River Authority (CRA) to ensure implementa- tion of the interim order.	CRA monitoring of imple- mentation of Tribunal's in- terim order
2002: Monsoon failed again and summer 2002 led to violent pro- tests in Karnataka	Tamil Nadu - A I A D M K (Jayalalitha) Karnataka - Congress (I)	GoI led by the BJP's NDA - Vajpayee as the PM.	CRA fails to mediate and Karnataka defies. Violence breaks out. Chief Minister of Karnataka, SM Krishna goes on padayatra to pacify communities.	Supreme Court intervenes and criticizes both the State governments for their com- pliance to escalate dispute
2 0 0 7 : Cauvery Tribunal gives its fi- nal award	D M K (Karunanidhi) Karnataka - Congress (I)	Congress (I) led UPA		

Source: compiled from various sources including newspapers and Guhan (1993)

The impact of political party configurations is a known phenomenon, though not sufficiently accounted for, in the analysis of outcomes of interstate water disputes. Even in the nascent stage of party politics in India, in the beginning of Cauvery dispute in 1970s, the influence of political coalitions over the negotiations of water disputes was acknowledged. Benjamin (1971) observes:

This dispute, which is basically economic, seems to be getting more complicated owing to political factors. These are mainly three: (1) the DMK supported the Congress (R) in its recent power struggle and C Subramaniam, Union Minister for Planning, has his

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stake in Tamil Nadu, (2) Mysore is under President's Rule and elections for the State Assembly are to be held in the not-too-distant future; (3) Kerala is a stronghold of communists (p.1795)

Power plays from political configurations and coalitional politics manifest in different forms in influencing the outcomes of interstate water disputes. Politics of Ravi-Beas dispute between Punjab and Haryana described earlier are similar populist politics to those in Cauvery dispute. Krishna dispute, which shares the history of Cauvery dispute, too flaunts fascinating power plays. The height of the Almatti dam was a long standing contentious issue between Andhra Pradesh and Karnataka. In 1996, when the Central Government allocated 2 billion rupees to construct Almatti dam, the dispute was revived between the two States. The United Front government at the Center was drawing support from regional parties and the dispute threatened the stability of the government. The United Front government was led by Deve Gowda as Prime Minister. Deve Gowda was from Karnataka and had to balance the interests of preserving the government and provincial interests of Karnataka. Deve Gowda sets up a committee of four Chief Ministers to look into the matter, which in turn recommends against increasing the height of the dam. Karnataka refuses to accept and decides to go ahead with construction as Andhra Pradesh approaches the Supreme Court; and the dispute flares further. "With inflamed passions in both states, it would be political suicide for both Andhra Pradesh and Karnataka politicians to offer concessions in order to reach an agreement" (Swain 1998: 175). Similarly, the Karnataka government supposedly used the Deve Gowda's regime to go ahead with the project on Kalasa-Bandurinala project on Mahadayi river without the required environmental clearance. This project is one of the issues to be adjudicated under the newly formed Mahadayi Dispute Tribunal.

Such power plays and associated political opportunities emerge from several kinds of contingencies. These include techno-legal uncertainties as well, besides seasonal uncertainties of water availability. In spite of dominant engineering-driven paradigm for water resource development projects, the technological uncertainties contributed to emergence of disputes or creation of opportunities for political actors. The following section describes how excessive reliance on science and technology is belied by inherent uncertainties, which in turn led to creation or recurrence of interstate water disputes.

Data and scientific method, (un)certainities and (in)equities

"[W]ater sharing agreements that flow from a good scientific understanding by both the riparians of the river system, of its behaviour and capabilities, will lead to peace and understanding that last, while those with scientific uncertainties will always provide opportunities for strife and dispute." (Gyawali and Schwank 1994: 235, quoted in Salman and Uprety 2002: 122).

This 'good scientific understanding' appears to be elusive in most interstate water disputes. Every award given so far by tribunals was subjected to criticism on technical grounds: the method of estimation of flows, the ideas of equitable apportionment, etc. For instance, one of the recent awards- that of Cauvery Dispute Tribunal, claimed to be scientific, recommends a distress-sharing formula. The formula includes monthly schedules to be ensured by Karnataka in normal months and in distress years, the sharing to be done proportionately. The method has been criticized as far from fool-proof and still leaves ambiguity of sharing resources, in the wake of the inability to predict the rainfall (Venkatesan 2007). Take another instance, the recent most award of the second Krishna Water Dispute Tribunal. Experts disagreed with the method of estimation of dependable flows used to allocate shares. But the problems of technological uncertainties in Krishna dispute are much deeper. DSouza (2006) probes into them at length.

The first Krishna Water Dispute Tribunal set up in 1962 had to face many challenges posed by data constraints and methodological applicability. The tribunal's report acknowledges this repeatedly in their report (KWDT 1973). The foremost and the biggest challenge for the Tribunal was about estimating the dependable flow in the river to work out allocations - by the principle of equitable apportionment or otherwise²⁶. In order to estimate the dependable flow, the tribunal had to choose a method that would fit with the available data. Estimation of dependable flow using runoff - one of the methods - require rainfall and other data about several features of the catchment over long time, at least for 50 years. Since the data was not available, the Tribunal resorted to an inferior method of using streamflow data. The streamflow data available too, was inadequate. The tribunal had no means of arriving at dependable flow through acceptable scientific means. The States disagreed with the methods proposed by the tribunal in-lieu of the conventional approaches. Each State had preference for its own method to estimate dependable flow, which suits its position. Tribunal had neither means nor sources to agree or disagree with the data sets or methods proposed by the States. Premier technical agencies relied by the tribunal had also expressed their helplessness in providing help in the absence of accurate data. In specific terms, for instance, Maharashtra conducted three dimensional modelling at the Central Water and Power Research Station in Pune and used an earlier data set by the Krishna Godavari Commission to propose 75 percent dependable flow as 2176 tmc or above. Andhra Pradesh refused to accept these on the grounds that the three dimensional modelling method was unacceptable, because the modelling was based on unreliable data. The disagreements and deliberations continued over values, coefficients, formulae etc. There

²⁶ Dependable flow is the quantity of water "assuredly expected at a given point on the river in some scientific or rational basis inspiring confidence" (KWDT 1973a: 74)

were more substantive issues as well, related to estimations of groundwater, return flows - both of which could not be estimated in certain terms. Fortunately, the States came to an agreement about excluding groundwater estimations and sharing from the dispute. On return flows, the States took different positions. Maharashtra proposed 30-40 percent of new irrigation projects could be considered. Karnataka and Andhra Pradesh felt that the return flows could not be estimated. But when KWDT persisted with consideration of return flows, each State proposed their respective estimates using diverse methods: Andhra Pradesh - not less than 4 percent of withdrawals from irrigation projects; Karnataka- not less than 20 percent; and, Maharashtra not less than 10 percent. Finally, the KWDT estimated the return flows as 7.5 percent of utilized waters of each State respectively (DSouza 2006).

Other issue over which the States disputed was about Andhra Pradesh's alleged over-appropriation of Krishna waters. Maharashtra and Karnataka complained that Andhra Pradesh over-appropriated Krishna waters. In order to maintain equity in allocation, Andhra Pradesh should be directed to divert waters from Godavari at its own cost. This may sound bizarre, but highlights the historical implications for application of equitable apportionment. The case of Krishna (likely in other disputes) illustrates how historical and geographical contexts complicate principles like equitable apportionment. The colonial history of Krishna made it obligatory to apply principles of intelligent differentia based on rights accrued to the parties in different political and legal regimes. The KWDT had to treat already existing uses of water by the parties (States) with differential priority. KWDT identified and classified three cut-off dates and their corresponding uses as the following: (i) all projects in operation or under construction before 27 July 1951 were treated as 'protected use'. This was the date of first interstate conference organized by the Planning Commission after independence and whose agreement was disputed by the parties; (ii) all projects commenced or completed between July 1951 and September 1960 were treated as 'preferential use'. The later date was that of second interstate conference where the Planning Commission unsuccessfully tried to arrive at an agreement between parties after the States Reorganization in 1956; and, (iii) any project after September 1960 was treated as 'new use'. Among the three uses, KWDT applied equitable apportionment principle to only those utilizations considered to be 'new use.' The other two uses were deducted from dependable flow while allocations were decided. The over-appropriation by Andhra Pradesh, under 'protected use,' had to be compensated to maintain equity in allocations of Krishna waters; else, Andhra Pradesh could gain larger share. Maharashtra and Karnataka proposed that Andhra Pradesh should divert Godavari waters at its own cost. This became a major contentious issue before KWDT and after much deliberations, KWDT disagreed with the position of Maharashtra and Karnataka and refused to include Godavari waters in its allocation. It finally went ahead

with 'equitable' apportionment of 'new uses' of Krishna waters after deducting the protected uses (DSouza 2006). There are two points of interest here. First, principle of equitable apportionment is subjective to both data constraints (in calculation of dependable flow) and also, the particular geographic and historical context of the dispute. Second, these (data) constraints and contexts provide fertile sources of disputation for political actors at opportune times. As DSouza (2006: 232) observes: "...the perception that the equities in the *equitable apportionment* were skewed did not go away. Indeed the Krishna waters has remained a source of interstate tensions ever since."²⁷

Technologically more complex issues like groundwater sharing, its use, impact of one State's use on that of the other State etc., have not yet been made contentious. For example, change in hydrological use and associated trade-offs between surface water and groundwater kind of can generate inequities between upstream and downstream States (Kumar 2010, Shah 2009). In the absence of scientifically acceptable methods to estimate such components, these issues can become deeply contestable.

Part 4: Concluding discussion

Policy discourses about interstate water disputes in India appear largely legalist in nature. Through a discussion of various disputes and their historical analysis, the paper presents extensive evidence highlighting the nature and critical role of politics in the emergence, recurrence, mitigation and resolution of interstate water disputes. In spite of this, policy debates tend to evade political questions and issues in their analysis. Some emerging key conclusions are discussed here.

Interstate water disputes: a problem of governance and institutions?

While politics is a major gap, even the legalist debates seem misplaced. A review of these debates reveals that the ineffectiveness of legislations and policies stems largely from institutional inadequacies and governance deficit. More specifically: tribunals fail to ensure appropriate institutions are in place to implement awards; and, tribunals and their awards are undermined by jurisdictional conflicts with the Supreme Court. Clearly, the relevant act, ISDA and its provisions were not used and/or implemented in letter and spirit. Instead of addressing this as such (a governance problem), debates take a typical (macro)myopic view and call for policy and legislative changes. In somewhat futile exercise, the debates search for causes and solutions in abstract and complex terrains such as: Constitutional (re)organization of legislative powers about water, repealing of ISDA, imposition of *original jurisdiction* of Supreme Court and so on. Further, the

²⁷ See D'Souza 2006, Chapter 8 for detailed discussion about disputes involving data over Krishna waters.

factors contributing to supposed ineffectiveness of ISDA are extraneous in nature and are erroneously attributed to ineffectiveness of ISDA. Lack of compliance of tribunal awards by States is a governance problem. Politically motivated actions by States and Supreme Court's excessive engagement are again external factors. Procedural deficiencies (Nariman 2009) in the functioning of tribunals require reconsidering the institutional design.

ISDA empowers tribunals to recommend appropriate institutions to ensure that the awards are implemented; but tribunals do not pay adequate attention to supply and design of institutions while giving away awards. The jurisdictional conflict or excessive engagement of Supreme Court with interstate water disputes is a legal matter to be resolved. Though, this cannot be treated as purely a jurisdictional conflict; but has to be situated in its historical context. It is important to understand why the Constitutional framers deemed it necessary to exclude interstate water disputes from the *original jurisdiction* of the Supreme Court.

The flaws associated with governance and institutions are however of immanent nature and have deeper roots. Interstate water disputes recur partly because their history and evolutionary context provide opportunities for contestations. D'Souza's (2006) insistence that interstate water disputes are a manifestation of reproducing colonial and imperial structural conditions deserves merit here.

(De)politicizing disputes and democratic design

There is an undeniable gap in the understanding the design, context and motives of Constitutional provisions and associated legal instruments for interstate dispute resolution. The Entry 56, the Article 262 and corresponding RBA and ISDA need to be situated in their historical and evolutionary context to arrive at a better understanding of their application and utility. The history of unification process, conception of Indian state and evolution of its federal design - are some vital considerations that do not find place in the debates. D'Souza's (2009) claim that keeping water as a State subject was a pragmatic necessity in the unification process, though lacks evidence, is persuasive and worthy of reflection. Exclusion of interstate water disputes from the *original jurisdiction* of Supreme Court may have been driven by such considerations. The spirit, intent and context of the Constitutional provisions and legal instruments need to be rationalized and reconciled with changing political context of federal relations such as coalitional politics, competitive nature of the States and a shift in nature of Indian state from Strong Center- Weak States to Weak Center-Strong States.

This proposition to situate policies, legislations and governance in historical context marks an important shift in approaching interstate water disputes. This also helps us to

distinguish two distinct streams of research about interstate water disputes: one, the dominant legalist approach that tends to depoliticize disputes; and the second, the emerging stream seeking to situate law and democracy in the historical context of Indian state's evolution. This paper's insistence to focus on politics analysis intends to bridge the two streams for the benefits it offers. First and obvious is to recognize and consider history and politics in shaping the very design of legal instruments and policies. Second, it forces the policy debates to acknowledge how political dynamics influence outcomes. Third, it begs to consider the impact of these politics over the state and federal democracy in India.

International water conflicts and interstater water disputes: principles, perspectives and policies

The history of international conflict resolution offer several useful principles and perspectives for interstate water dispute resolution. The body of literature however cautions about the geographic and historical specificity in applying these principles and perspectives. A singular contribution though is, it helps debunking populist prophecies about 'water wars' and calls for a paradigmatic shift in approaching conflicts over shared water resources. Transboundary water sharing is not always a source of conflict, but a means of inducing cooperation between political entities. The prophecies of 'water wars' ignore the glaring history of cooperation in contrast with that of conflicts: over 1500 cooperation agreements against about 30 water conflicts, few of them acute conflicts (involving violence). Indeed, concerns over rising interstate water disputes in India do not consider fairly large number of water sharing agreements between States. Against six interstate water disputes that required adjudication via tribunals, there are about 130 cooperation agreements for basin level water resource development (Ministry of Water Resources 2011).

Historical analysis of international water conflicts further suggests that successful cooperation and implementation of sharing agreements depends on three critical elements: political relations, historical and geographic context and institutions. Water sharing cooperation is embedded in broader political relations between the political entities. The historical and geographical context is crucial in designing of agreements and institutions. Institutions provide the necessary dynamic and resilient space to absorb changes in hydrological regimes as well as political relations and mitigate propensity for recurrence of conflicts.

The principles for international conflict resolution have a rich history of evolution marked by popular milestones such as Helsinki Rules (ILA 1967), UN Convention (UN 1997), and Berlin Rules (ILA 2004). These rules have influenced the history of

cooperation over shared waters across the world and became part of International customary law. A contentious but primary point of discussion was the tussle between the principles of "equitable apportionment" vs "no significant harm" between the parties (usually upstream and downstream). The Berlin Rules of 2004 are considered to be a comprehensive set of rules striking balance between the two principles; and also, in including groundwater sharing and other key components of transboundary water sharing.

There is mixed understanding about the extent of their use in transboundary agreements in South Asia. Some claim that the interstate tribunals in India actively drew upon the international law (Nariman 2009). But this is apparently not the case with respect to international water agreements in South Asia. Many water sharing agreements in South Asia came into force during 1950-2000, when the international law had its major milestones; but none of the agreements in South Asia directly incorporated specific legal principles from the international law (Salman and Uprety 2002).

However, their application can be deeply subjective to historical and geographical specificities, as noted. To illustrate, application of equitable apportionment required consideration of colonial and postcolonial history of political reorganization and geography in India. In the first KWDT "[T]he very idea of equitable apportionment of dependable flow entails precise quantification of available water and its apportionment between States for 'protected', 'preferential, and 'new' uses" (D'Souza 2006:216). This categorization of existing uses was necessary to protect prior appropriation uses under different colonial and postcolonial historical periods and political contexts. Further, "[T]he politics of *equitable appropriation* requires insights into the nature of Indian federalism and its evolution under colonial rule" (Ibid: 214).

Scale vs equity: a contentious question in interstate water disputes

The knowledge about international water conflicts, though comprehensive, is a work in progress. The rules and principles have been criticized for lack of sufficient consideration for issues like exclusion of key stakeholders other than states, effective enforcement mechanisms for implementation of agreements. These are vital, particularly for interstate water disputes. Incorporating stakeholder groups other than States in tribunal's adjudication process is a key discussion point. This becomes pertinent considering the regional imbalances, sub-regional identities and fractured political constituencies in India. The imbalances and fractured identities are increasingly becoming active forces of political polarization and contestation in interstate water disputes (see Simhadri 1997, Khan 1973). Though participation in formal adjudication processes in India is restricted to States involved, other stakeholders found ways to actively engage in interstate disputes,

by invoking right based Constitutional provisions. The limited experiments of alternative approaches also argue for active participation of stakeholders as in *Cauvery family* initiative and other propositions for 'track two' dialogues (Janakarajan 2006, Iyer 2003a). This complicates the idea of equitable apportionment and poses the fundamental question of, at what scale equity questions need to be pursued. This is a potent space for increasing political participation and contestations.

Politics and democratization of spaces: an agenda for future research

The paper discussed politics of interstate water dispute in India at length under the broad heads of colonial and postcolonial histories of political reorganization, social and political construction of boundaries and scale-jumping of disputes, political power plays and configuration, and, techno-legal structural deficiencies. The opportunities for political actors operating at multiple scales are abound and contribute to emergence, recurrence, mitigation and resolution of interstate water disputes. To negate and avoid understanding these politics in search of solutions is flawed and irrational.

In a profound observation, Gupta (1995) argues that it is impossible to design governance procedures and institutions without ambiguity; and, this is where political action is inevitable. Political action and activism are located where institutions and policies are imperfect. Institutions and governance of interstate water dispute resolution in India are nothing but imperfect and suffer from range of deficiencies and deformities. To list a few: misunderstanding of intent of legislations; encroachment of jurisdiction of tribunals by Supreme Court; non-compliance and violation of awards by States; colonial and imperial history inherited structural conditions; procedural dysfunctionality in tribunals; technology produced uncertainties etc. These provide fertile ground for political action and activism.

It is commonsensical, however, why politics are inevitable and pragmatic reality in a multi-party democracy. Political parties, in search of either reviving their political fortunes or consolidating them, rally by the fissiparous transboundary politics of interstate water disputes.

"...it is extremely difficult to secure a political settlement because of its repercussions on State Governments. Few governments would wish to take the responsibility of arriving at a settlement - which involves give and take - for fear of being charged with selling out the rights of their States ..." (H M Seervai 1984: 1012, quoted in Guhan 1993: 55)

Having built a case for deeper political analysis, the paper gives a flavour of how these political dynamics manifest and shape the outcomes of interstate water disputes. The

multi-actor driven multi-scalar everyday politics in the transboundary spaces of interstate water disputes effectively work towards 'decentering the state.' The differentiated and particular meanings of democracy generated by these political practices away from state can illuminate our understanding about radical democratization in Indian politics (Barnette and Low 2004).

These practices can further help relating with other literature about democratization of space. The transboundary politics of interstate water disputes may be generating what Mitchell (1991) called a structural effect of ideological project, or what Sparke (2006) identified as 'transcendental state-effect.' What kind of 'structural effect' that the politics of interstate water disputes induce and what are the implications of this effect to democracy and stability of state in India?

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