

WHY DO INTERSTATE WATER DISPUTES EMERGE AND RECUR?

an anatomy of ambiguities, antagonisms and asymmetries



Srinivas Chokkakula



CENTRE FOR ECONOMIC AND SOCIAL STUDIES
BEGUMPET, HYDERABAD 500016

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RESEARCH UNIT FOR LIVELIHOODS AND NATURAL RESOURCES
Supported by Jamsetji Tata Trust



CENTRE FOR ECONOMIC AND SOCIAL STUDIES

Begumpet, Hyderabad 500016

December 2017

CENTRE FOR ECONOMIC AND SOCIAL STUDIES MONOGRAPH SERIES

CESS Monograph 45
RULNR Monograph 24
ISBN 978-81-931589-8-2
December 2017

Series Editor : M. Gopinath Reddy

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Centre for Economic and Social Studies, Hyderabad

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Cover page illustration: Samita Chatterjee

Rs. 200

Published by :

Centre for Economic and Social Studies, Begumpet, Hyderabad 500016

Ph : 040-23402789, 23416780, Fax : 040-23406808

Email : post@cess.ac.in, www.cess.ac.in

Printed by :

Vidya Graphics, 1-8-724/33, Padma Colony

Nallakunta, Hyderabad 500044

FOREWORD

The Centre for Economic and Social Studies (CESS) was established in 1980 to undertake research in the field of economic and social development in India. The Centre recognizes that a comprehensive study of economic and social development issues requires an interdisciplinary approach and tries to involve researchers from various disciplines. The Centre's focus has been on policy relevant research through empirical investigation with sound methodology. Being a Hyderabad based think tank, it has focused on, among other things, several distinctive features of the development process in the undivided state of Andhra Pradesh earlier and the Telangana state in the present times though its sphere of research activities has expanded beyond the state, covering other states apart from issues at the nation level. In keeping with the interests of the faculty, CESS has developed expertise on themes such as economic growth and equity, rural development and poverty, agriculture and food security, irrigation and water management, public finance, demography, health, environment and other studies. It is important to recognize the need to reorient the priorities of research taking into account the contemporary and emerging problems. Dissemination of research findings to fellow researchers and policy thinkers is an important dimension of policy relevant research which directly or indirectly contributes to policy formulation and evaluation. CESS has published several books, journal articles, working papers and monographs over the years. The monographs are basically research studies and project reports done through the Centre. They provide an opportunity for CESS faculty, visiting scholars and students to disseminate their research findings in an elaborate form.

This monograph by Dr Srinivas Chokkakula, a Fellow with the Centre for Policy Research, New Delhi presents an anatomy of interstate water disputes in India using the case of Krishna river water dispute. It is a political ecology analysis of interstate water disputes to explain their emergence and recurrence. This approach marks a departure from the usual legalist narratives. It has allowed him to engage with the politics of the disputes' making - an often neglected yet a crucial element - along with the material aspects of transboundary river water ecologies. The case study of the Krishna dispute has an advantage of two tribunals adjudicating the dispute 30 years apart. It enables a longitudinal analysis that situates the disputes at the intersection of politics, ecology, law, history and geography for a comprehensive explanation of why interstate water disputes emerge and recur. The analysis reveals a deep nexus between water and politics, presenting interstate water disputes as fertile sites of political mobilization, often for electoral gains.

The analysis is presented along three axes: legal and constitutional ambiguities; the antagonistic politics thriving on the opportunities offered by these ambiguities; and, the historical-geographies of river water resource development producing the asymmetries and inequities between states – which form the substantive basis for the contentious and antagonistic politics. The anatomy of interstate water disputes delineated in this manner makes it possible to argue that the interstate water disputes are perennial sources of conflicts. This central argument of the paper resonates with similar observations made about international water conflicts. The monograph thus potentially offers useful theoretical contributions for analyzing and understanding transboundary water conflicts generally.

The study also makes other policy relevant conclusions anchored around this central argument. The political ecology of perennial presence of conflicts combined with the nexus between water and politics poses complex challenges for their governance. It argues that the legal instruments are not adequate, but need to be supplemented with appropriate institutional solutions. However the legal ambiguities about creating institutional mechanisms, and lack of right kind of institutional models for interstate coordination are a big gap to address this challenge. In the end, the monograph calls for a larger paradigmatic shift from conflict resolution to enabling cooperation towards better governance of interstate river water sharing.

S. Galab
Director, CESS

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ABBREVIATIONS

AIADMK	All India Anna Dravida Munnetra Kazhagam
AP	Andhra Pradesh (united, before 2014)
BBMB	Bhakra-Beas Management Board
CMB	Cauvery Management Board
Cusecs	Cubic feet per second
CWC	Central Water Commission
CWDT	Cauvery Water Disputes Tribunal
CWPC	Central Water and Power Commission
DMK	Dravida Munnetra Kazhagam
GoI	Government of India
ILA	International Law Association
IRWDA	Interstate (River) Water Disputes Act 1956
JD(S)	Janata Dal (Secular)
KVA	Krishna Valley Authority
KWDIB	Krishna Waters Decision - Implementation Board
KWDT-I	1st Krishna Water Disputes Tribunal (Bachawat Tribunal)
KWDT-II	2nd Krishna Water Disputes Tribunal (Brijesh Kumar Tribunal)
MGR	Maruthur Gopalan Ramachandran
NCA	Narmada Control Authority
NCRWC	National Commission to Review Working of Constitution
NDA	National Democratic Alliance
NTR	Nandamuri Taraka Ramarao
NWDT	Narmada Water Disputes Tribunal
RBA	River Boards Act 1956
SLP	Special Leave Petition
TDP	Telugu Desam Party
TMC	Thousand Million Cubic-feet
UKP	Upper Krishna Project
UPA	United Progressive Alliance

ACKNOWLEDGEMENTS

This monograph has taken much longer than initially planned. The research presented here is part of my dissertation work, and I have planned to publish this soon after submitting the dissertation (for my Ph D from the University of Washington, Seattle, USA) in 2015. The earlier draft received some useful and critical inputs, which set me on revising it substantially and also increasing its scope. It is now considerably improved and I hope that it will be received with interest. I express my deep gratitude to two individuals on this account: Dr Radha D'Souza for her critical review and discussion of the draft, and Dr Gopinath Reddy at CESS for his extraordinary patience and undeserving belief in me and my work. I am also thankful to Prof Gopal Kadekodi for his comments on an earlier version of the draft.

I thank my colleagues at the Centre for Policy Research (CPR), New Delhi, for conversations, inputs and support at different stages of producing this research. I am grateful to Dr Pratap Bhanu Mehta and Dr Partha Mukhopadhyay for their unstinting support. I have been fortunate to benefit from generous conversations with late Prof Ramaswamy Iyer on the subject. I have also benefitted from interactions with several professional colleagues engaged directly with interstate water disputes resolution. I want to particularly acknowledge the enthusiastic and generous support of Mr Mohan Katarki. I also take this opportunity to thank Prof Edward Simpson at SOAS, University of London, for the flexibility allowing me to work on this monograph over the period of my association with SOAS as a Research Fellow. I owe special thanks to Ajay Katuri and Prerak Shah, for their help with maps. I also acknowledge the contribution of CPR and its communication team in elevating the monograph's presentation.

The research has been made possible with the support of South Asia Centre's fellowship at the University of Washington, and the funding I received from the National Geographic Society's CRE (Committee for Research and Exploration) research grant (#8831-10), besides the grant from the CESS, Hyderabad.

Author

INTRODUCTION

India's 29th state of Telangana was born on the 2nd of June 2014. Within no time, in July 2014, the state of Telangana made a formal representation to the Brijesh Kumar-led Krishna Water Disputes Tribunal (KWDT-II) to re-adjudicate the Krishna dispute, and re-allocate the Krishna waters among the now four riparian states of Telangana, Andhra Pradesh, Karnataka and Maharashtra.¹ Furthermore, Telangana claimed that its interests had not been adequately represented before the just concluded KWDT-II proceedings.

KWDT-II had earlier given its Final Award in 2010, and Further Report in 2013, specifying Krishna river water allocations to the riparian states of Andhra Pradesh (including the now Telangana state), Karnataka and Maharashtra.² This award was the culmination of long-drawn proceedings since 2004. KWDT-II had been set up to adjudicate the dispute after the expiry of the first Krishna Water Disputes Tribunal's (KWDT-I) award - in place during the previous 25 years from 1976 to 2000.

KWDT-II's Final Award is to be binding on the riparian states till 2050. When Telangana sought a re-examination of the award in July 2014,³ KWDT-II duly invited representations from other states, setting the dispute on course to a long drawn legal and political battle.⁴

¹ <http://www.thehindu.com/news/cities/Hyderabad/tstate-wants-tribunal-to-adjudicate-water-disputes/article6194030.ece>, last accessed on 22 February 2017.

² In the strict legal parlance, KWDT-II gave its "Final Award" in 2010. However, states were allowed to express concerns and seek clarifications under the provisions of the Section 5(3) of the Interstate (River) Water Disputes Act 1956. The Tribunal was to give a Further Report at the end of these proceedings, in which it might modify or elaborate the Final Award. Effectively, the award would be final after the conclusion of the Section 5(3) proceedings. KWDT-II gave its Further Report in November 2013.

³ The Andhra Pradesh Reorganization Act of 2014, creating Telangana state, provides (Section 84-89) for addressing water sharing issues between the successor states. Section 89 extends KWDT-II's term to resolve differences over water allocation between the two states.

⁴ The united state of Andhra Pradesh had already filed a Special Leave Petition (SLP) before the Supreme Court, challenging the tribunal's award, which later led to a stay on notifying the award. See <http://www.thehindu.com/news/national/karnataka/ap-challenges-second-krishna-tribunal-award/article5610975.ece>, last accessed on 22 February 2017.

The Supreme Court had allowed Telangana's petition over its 'independent' grievances, in December 2014. Telangana insisted that the state was created for the reasons of water and claimed the rights of an "unborn child". It demanded re-opening of the dispute on the grounds of claimed historical prejudices and marginalization of its interests by the earlier combined state.

Maharashtra accused Telangana of "frustrating" the proceedings of KWDT-II. Telangana countered that it had no other avenues left to "agitate" for its rights.⁵ The Supreme Court had agreed to hear, observing that it "cannot [could not] close doors" on Telangana.⁶ Fali Nariman, a Senior Advocate and a respected voice on interstate water disputes, appearing for Karnataka, questioned as to how the Supreme Court could allow Telangana's petition while the Tribunal was considering the issue.⁷

The dispute now faces the prospect of another prolonged legal battle. Besides the SLP (Special Leave Petition) before the Supreme Court, KWDT-II has to decide on whether the dispute is a bilateral one between the successor states of Andhra Pradesh and Telangana, or, whether the entire dispute needs a re-examination as a dispute concerning the four riparian states.⁸ The Supreme Court, in the meanwhile, has had to reconstitute the bench hearing the petition for other extraneous reasons, which in turn may increase the prospect of further delays.

THE CHALLENGE OF RESOLVING INTERSTATE WATER DISPUTES

These antagonistic politics - the mutually conflicting interests, driven also by political considerations - and prolonged adjudications typically characterise interstate water disputes resolution in India. It is also important to note that these disputes keep recurring on variety of grounds. In the brief instance of Krishna dispute's recurrence described above, the primary driver is the reorganization of state boundaries, besides the states disagreeing with the tribunal award.

⁵ <http://www.thehindu.com/todays-paper/tp-national/krishna-waters-sc-agrees-to-hear-telangana-plea/article7567437.ece>, last accessed on 22 February 2017.

⁶ <http://www.thehindu.com/todays-paper/cannot-close-doors-to-ts-plea-on-krishna-water-disputes-sc/article6653683.ece>, last accessed on February 2017.

⁷ <http://www.thehindu.com/todays-paper/cannot-close-doors-to-ts-plea-on-krishna-water-disputes-sc/article6653683.ece>, last accessed on 22 February 2017.

⁸ KWDT-II since then has determined that the dispute would be a bilateral one between the two new states. See <http://www.thehindu.com/news/national/No-relook-into-allocation-of-Krishna-water-Tribunal/article16075675.ece>, last accessed on 22 February 2017.

Further, when states approach the Supreme Court for relief, the problem of resolution has to negotiate the ambiguous spaces of law, including a bar on the Supreme Court's jurisdiction over interstate water disputes provided by the constitution. The tribunals, on the other hand, are temporary (time bound) and are dissolved once they give away awards.

The Krishna dispute has recurred several times in the past several decades after KWDT-I's award. The disputes over the Telugu Ganga project, the Almatti dam issues - to name a few instances - have turned river water sharing into a complex and fertile ground for legal and political contests between the concerned states. This frequent emergence and recurrence of the dispute is not exclusive to the Krishna dispute. Consider the recent other interstate water disputes. The Cauvery dispute tribunal, constituted in 1990, gave its final award in 2007, after 17 years. The Ravi-Beas dispute, which had a tribunal set up in 1986, remained unresolved so far. These delays are only partly due to legal ambiguities and prolonged proceedings. The disputes are also deeply political, and are subject to politicization; in that these are important avenues for thriving vote-bank politics (Chokkakula 2012, 2014). Political interests often use interstate water disputes as sites for political posturing and mobilization.

The frequent recurrence and long-drawn deliberations produce a variety of insecurities besides impacting people's livelihoods directly. The disputes also occupy public imagination and raise deeper concerns and dystopian imaginations. The popular prophecies of 'water wars' feed on the spectre of interstate water disputes' politics, haunting public imagination of impending water wars.⁹

Indeed, interstate water disputes in India have been on the rise of late. The history of independent India has witnessed five interstate water disputes tribunals concluded so far. The ongoing others, besides KWDT-II, include one over Mahadayi river (dispute) between Goa and Karnataka; and, the other over Vansadhara river between Odisha and Andhra Pradesh. There are demands for several others; the prominent ones include: the Mullaperiyar (between Kerala and Tamil Nadu), the Bhabli (between Maharashtra and Andhra Pradesh/Telangana) and the Mahanadi (between Odisha and Chattisgarh).

⁹ "Many of the wars this century were about oil, but those of the next century will be over water" - Dr Ismail Serageldine's (then Vice-President of the World Bank) prophecy in 1995 has since enjoyed a huge credibility. This imagined spectacle often frames any water dispute and informs the popular opinions and policy discourses. For example, the United Nations Secretary General, Ban Ki-Moon's warning in 2008 about impending water conflicts: <http://www.un.org/apps/news/story.asp?NewsID=25527#>. Uawx7NhZ5s4, last accessed on 31 May 2013.

The disputes also raise concerns regarding the changing state-state and centre-state relations in India, with greater implications for the federal integrity of the nation-state (Chokkakula 2014). These concerns are not without reason. The Krishna dispute apart, the sharing of Cauvery dispute has been the most active and vexing in the last couple of decades. The two states - Tamil Nadu and Karnataka - disputing over Cauvery waters have had several episodes of escalation, leading to civic strife, ethnic clashes and violence. Another case in point is the Telangana state formation itself. The regional imbalances in sharing of water resources had been at the core fuelling the agitation for the separate state for Telangana (for e.g., see Simhadri 1997). Thus, the politics of contestation and political mobilization over uneven water resource distribution is an increasingly defining feature of Indian politics and polity. The impact of such politics in transforming the intrastate and interstate political geographies in India is a vital concern.

CORE ARGUMENT

In this paper, I examine interstate water disputes in India critically for a comprehensive understanding of their anatomy - the making of disputes. I pursue some fundamental questions: Why do interstate water disputes emerge and recur? What factors contribute to their (re)making? What are the politics in their (re)making, to what end, and what are their implications?

My central contention here is that our failure to understand the problem in its entirety has obscured the search for solutions. In pursuing this line of argument, I show that the interstate water disputes emerge and recur due to their particular anatomy produced by three sets of characteristics: first, legal ambiguities; second, antagonistic politics - a making of the nexus of water politics and democratic politics; and third, due to their political ecology of asymmetries - deeply embedded as historically and geographically constructed power relations. I follow these three trajectories of analysis to present the anatomy of interstate water disputes in India.

In the first trajectory of analysis, I probe the ambiguities: the deeply entrenched condition of interstate water disputes and their resolution against the backdrop of a variety of legal and constitutional ambiguities. It is, therefore, a trajectory following the axis of law: the legal and constitutional structuring of the interstate water disputes and their resolution. This follows an earlier argument - how the debates and discourses around the subject have continued to remain legalist (Chokkakula 2012). I build on this argument to highlight a greater challenge of institutional vacuum in governing interstate water disputes.

Second, I explore the antagonisms at work in the disputation and their making - following the trajectory of politics. I probe the political nature of interstate water disputes, as part of an acute nexus between the politics of water struggles and that of democratic politics. Political interests ride on people's substantive and emotive association with water, appealing to notions of identity, territory and other boundaries to mobilize vote banks. The aleatory manner in which this nexus materializes tends to disrupt the resolution of the disputes. These politics shape not only the nature and extent of disputes, but also the interstate relations with implications for re-imagining and rethinking federal policies generally, and interstate water disputes resolution in particular.

The third trajectory is along the axis of ecology, more precisely that of political ecology. It examines the asymmetries associated with power and equity, embedded deeply in the transboundary relationship of territorial entities bounded by river water sharing context - constituting shared history, geography, political economy and ecology. This analysis builds on the previous two axes of analysis, of law and politics. This political ecology analysis is based on the premise that the ecological and geographical context of the river has implications for the nature of politics animated in the transboundary spaces. It subjects the Krishna dispute case to a closer dissection for unpacking its anatomy and animation as a dispute.

The political ecology analysis provides a comprehensive view of the inherent dialectics and dynamics of power, ecology and politics in the (re)making of transboundary water conflicts. It unveils a novel mode of understanding interstate water disputes, and generally transboundary water conflicts, for explaining why and how they emerge and recur. It shows how an interplay of law, history, geography and ecology generates a range of asymmetries and inequities which, in turn, make transboundary rivers perennial avenues for potential conflicts.

In other words, the interstate water disputes (or, generally applicable to transboundary water conflicts) exhibit a particular political ecology embodying asymmetries of power and equity, animating antagonistic politics which, in turn, thrive and assume complexity in the presence of ambiguous spaces of law. The political ecology approach allows for analysing these intricate linkages, and advances the existing understanding from the dominant legalist approaches. It builds a case for venturing beyond legal approaches to respond to the challenge of interstate water disputes.

LOCATING THE WORK

The next section carries an exhaustive review of literature on the subject. The review helps us recognize how this research breaks some new grounds. First, it makes an effort to understand the dimension of politics in interstate water disputes. Politics is seldom a parameter of analysis in search of solutions for interstate water disputes. The discourse reflects a visceral reluctance to engage with this important element, and treats it simply ‘undesirable.’ However, as will be seen, politics is central to interstate water disputes, influencing their outcomes profoundly.¹⁰ The research addresses this major gap how politics affects interstate water disputes and their resolution?

Secondly, the political ecology approach offers useful analytical frame for understanding the role of politics in interstate water disputes. The approach is new for the broader literature on transboundary water conflicts as well. It responds to a call for a shift from the dominant approaches anchored in International Relations discipline, to those relying on critical geopolitics and political ecology for explaining transboundary water conflicts (Furlong 2006).

Third, the contentious politics of interstate water disputes have a transformational impact on federal relations and democratic spaces in India (Chokkakula 2014). However, this dimension of interstate competition and tenuous politics over natural resources has not received due attention in the conventional accounts of politics and democracy in India. The literature on the subject is filled with success stories of an emerging strong and vibrant democracy (Kohli 2001, Corbridge and Harriss 2000). The discussions often engage with the centre-state relations (e.g., Manor 2001); others stress the historical reasons for its stability (e.g., Dasgupta 2001); some others have engaged with regional movements for reorganization within the states (Kale 2007). Yet, the issue of how states competing over natural resources affects federal relations has not received its due treatment. The research contributes to this crucial dimension by engaging with the idea of how interstate water disputes affect India's federal democracy.

ORGANIZATION

The rest of the monograph is organized into five more sections. The one immediately following this first section provides an overview of the existing literature on interstate

¹⁰ I have earlier argued for engaging with interstate water disputes keeping politics at the core of analysis (Chokkakula 2012). I have pursued this further in my dissertation (Chokkakula 2015). This monograph reproduces and builds on some portions of this research.

water disputes in India. The purpose is to give an idea of the nature of discourse about the disputes and their resolution. It draws attention to how the discourse and public debates in India, including scholarship, have remained legalist, with little or no attention paid to politics. This discussion provides a useful segue to the third section, which elaborates on the specifics of ambiguous legal and constitutional spaces. In addition to building on the previous literature review, the section also draws on the views of practitioners - lawyers, jurists, tribunals - to show how the ambiguities render the prevailing policy and institutional mechanisms impotent and ineffective.

In the fourth section, I focus on the antagonistic politics of interstate water disputes, taking the case of Krishna river water dispute. Using its historical recurrence of Krishna dispute, I discuss how politics has played an important role in shaping the Krishna dispute and its outcomes. The objective is to show the deep nexus between water disputes and democratic politics. This politics is not just about the struggles and contestations for water allocations, but also a means of practicing politics of power and democracy.

The fifth section then moves on to discuss the political ecology of asymmetries associated with interstate water disputes, which form the substantive basis for the disputes. This analysis takes the advantage of the availability of tribunal awards of both the KWDT-I and KWDT-II. These documents are comprehensive resources of the dispute. Located 30 years apart, the documents offer an exciting opportunity for a longitudinal perspective of the dispute. The section draws on eclectic sources and literature to show how the political ecology of interstate water disputes is unique and particular, and useful to explain the occurrence and recurrence of interstate water disputes. The final section concludes with different theoretical and policy implications for engaging with interstate water disputes in India.

THE NATURE OF DISCOURSE: THE LEGACY OF LEGALISM

Interstate water disputes enjoy a significant popular attention and public consumption. But the debates remain framed in intricate legal terms. Those who understand the intricacies - the legal community - are largely restricted to courts and litigations. Public scholarship transcending the esoteric legal spaces is almost absent, making the processes unintelligible to those outside the legal community. This makes the discourse susceptible to politically coloured interpretations and politicization - popular mobilization for political gains.

This brings the peculiarly puzzling limited body of scholarly work on the subject into a sharp focus. It is certainly not commensurate with the kind of attention the disputes receive. There are very few scholars who have produced a consistent body of work on the topic. Ramaswamy Iyer stands out as the singular exception. Among his several contributions, his recent most edited volume (2009) brings together some fine contributions by scholars as well as practitioners on the subject.

The limited body of work and the public discourse around interstate water disputes can be organized under three common themes. One is the natural and instinctive engagement with the effectiveness of the relevant existing laws and policies. Secondly, a popular theme, is to question the federal distribution of legislative responsibilities between the centre and states. The third, somewhat a minority, is the debate around the implications of these disputes for the larger political formation and federal democracy. I review these debates briefly below.

LAWS

The debates about governing interstate river waters primarily engage with the Interstate (River) Water Disputes Act of 1956 (amended in 2002) (IRWDA), which governs the resolution of interstate water disputes. The River Boards Act 1956(RBA) is the other, for it is conceived for water resource development projects and their management over interstate rivers. Both these laws share their evolution with the historic moment of the first reorganization of states, via the States Reorganization Act of 1956. The parliament debated these three legislations concurrently.

The IRWDA draws from the constitutional provisions under Article 262 and bars the jurisdiction of the Supreme Court over interstate water disputes.¹¹ It provides for setting up temporary tribunals for adjudicating disputes. The tribunals are dissolved after giving their decisions/awards.

Over the years, the IRWDA has attracted a great deal of attention over the effectiveness of these mechanisms. As a result, the Act has also gone through several amendments, more than half a dozen, since its inception in 1956.¹² The relatively recent amendment in 2002, happens to be the most comprehensive. This follows the report of the National Commission to Review the Working of the Constitution (NCRWC) submitted around this time (2002), and the earlier Sarkaria Commission's (1988) report which made recommendations along similar lines. The NCRWC (2002) has recommended, the repealing of the Act and, allowing for the adjudication of disputes by the Supreme Court. However, a few familiar respected voices on the subject, have argued against it, while observing that the unique arrangement should be preserved (Iyer 2002, Salman 2002). Of the two, Iyer (2002) has been particularly forceful in arguing against the idea of repealing the Act. He has favoured allowing an appellate authority status to the Supreme Court through an amendment to the Act. This issue of Supreme Court's jurisdictional bar in the context of various amendments to the IRWDA has remained a crucial, but poorly understood dimension.

However, it is very common that interstate water disputes invariably end up in the Supreme Court, for a variety of reasons. This engagement of Supreme Court with interstate water disputes, in spite of the bar, is an area not so well deciphered. The Supreme Court appears to have maintained a clear distinguishing line of not meddling with the awards given by tribunals, while entertaining the cases. However, some scholars are not convinced that the Supreme Court has been adequately scrupulous in complying with this bar (Iyer 2002, D'Souza 2009). In fact, the Supreme Court has been accused of having assumed jurisdiction over interstate water disputes in practice (D'Souza 2009). However, some practitioners have justified this as a necessary intervention when there are questions of law to be addressed, or when already adjudicated disputes

¹¹ The section following this, on legal ambiguities, carries a more detailed engagement with the specific provisions of the IRWDA.

¹² Another amendment bill, Interstate River Water Disputes (Amendment) bill 2017 has been introduced in the parliament in March 2017. For a brief discussion on these provisions, see, <http://indianexpress.com/article/opinion/columns/interstate-river-water-disputes-act-iwrda-dispute-redressal-committee-4454926/>, last accessed on 30 April 2017.

recur (Salve 2016). All the same, it is not an easy task to assess whether the Supreme Court has violated the bar; considering that it is subject to complex and convoluted legal interpretations. However, one must appreciate that the Supreme Court has had to, and in some cases, was forced to engage with interstate water disputes. Consider the following simple and most likely scenario. After the award is given, the tribunals are dissolved. If the dispute recurs, which is often the case; the states have no avenue or option other than approaching the Supreme Court. Similarly, what if the award is not complied with by one or other states? In the absence of clearly articulated institutional mechanisms for implementing the awards, states resort to approaching the Supreme Court.

These considerations are the basis for some scholars and practitioners for arguing in favour of lifting the bar on the Supreme Court's jurisdiction (Reddy 2013, Nariman 2009). The scanty and esoteric scholarship on the topic does not provide sufficient scope for robust debates on these complex issues. The subject has remained a major vexation for the policy makers. It has also been a consistent concern for various government-appointed committees. Since the Sarkaria Commission (1988), the topic has attracted attention from the NCRWC (2002) and the recent Punchhi Commission (2010).

The River Boards Act 1956 (RBA) is the other law of interest. The RBA allows for setting up river boards for regulation and development of interstate waters. However, the act conceives river boards as advisory bodies. Although the intent of the act is to regulate the sharing of interstate river waters by the central government in public interest,¹³ the scope of the act restricts boards to an advisory role when it comes to influencing states and their actions. In case of any difference between states over the advice of boards, the act allows judicial arbitration to resolve the differences. This provision sounds redundant, considering that the act does not empower river boards to impose any obligations on the part of states. The premise appears to be that the RBA facilitates interstate collaboration for river water development projects. This is not by any force of boards' directives, but more by taking advantage of the states' obligation to abide by agreements. This poorly conceived role of boards may be the reason why there have not been any river boards constituted under this act. More importantly, the act has been in disuse since its inception (Doabia 2012).

¹³ 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 interstate rivers and river valleys to the extent thereinafter provided."

The river boards set up so far (for e.g., Brahmaputra Board, Tungabhadra Board, Betwa Board) and their functioning draw legislative force from various other acts, not the RBA. These river boards are often set up for implementing or managing a river development projects (Chitale 1992, SANDRP 1999). We do not know the specific reasons for this choice of not using the RBA; there have not been any studies exploring this riddle. It has been argued that the states have not been either pro-active or enthusiastic about setting up of boards under RBA (D'Souza 2009, Iyer 2009). It is apparently because the states have felt that the setting up of boards may lead to diminution of their powers (Iyer 2009). But if the boards were to be only advisory, how can they impact states' powers adversely? Why are the states willing to be participants in the boards/ authorities - as they exist through routes other than the RBA - which impose greater obligations on the part of states?

The conception of river boards as advisory bodies under RBA is puzzling, especially in the absence of other institutional mechanisms for mediating, or mitigating the adverse impacts of conflicts. Nariman (2009) suggests that the historical context of drafting the RBA may be helpful in explaining this. The deeply centralized nature of the Indian state with a strong centre and subservient states in the 1950s could be a reason for assuming that advisory central institutions could be effective. However, this scenario underwent a change with the emergence of coalition politics in the 1990s. The shift in power politics has since led to stronger states and a rather amenable centre.

CENTRE OR STATES: WHOSE WATERS?

The other prominent aspect of the discourse about interstate water disputes is the division of legislative responsibilities under the constitution. Popular perceptions and debates often bemoan the status of water as the state subject as the primary reason for interstate water disputes, and argue in favour of shifting water as a central subject (for e.g., Reddy 2013).

The seventh schedule under article 246 in the constitution has three lists of subject matters: Union List, Concurrent List and State List. The parliament has exclusive powers to make laws related to subject matters in the Union List and the states have powers with respect to matters in the State List. The Concurrent List includes subject matters in respect of which the centre can also make laws besides the states. The entry 17 of the State List reads: "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 a predominant role to the states in managing water resources. The usual criticism is that the lack of

uniform policy and absence of synergy between states can lead to the emergence and recurrence of interstate water disputes. And a greater role to the centre may bring in synergy and the necessary power to control the propensity of disputes and their mitigation.

These arguments do not hold well, however. The entry 17 of the State List is subject to the entry 56 of the Union List, which states: "Regulation and development of interstate 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." This rather unambiguous power to regulate and develop interstate river waters to the centre provides the required space for intervention. Iyer (1994, 2002) argues that the centre has not exercised its powers under the entry 56 fully and preferred instead to let states take the larger responsibility. This has led to an understanding that the states have exclusive powers to manage water resources. The entry 56's emphasis on public interest extends the scope of centre's intervening power to matters where one state's actions affect another state in a harmful manner. Iyer (2002) also suggests, there are other possible ways of the centre exercising control over water. For e.g., the provisions of the entry 20 in the Concurrent List regarding economic and social planning require the states to take clearance from the centre for any project of water resource development - including irrigation projects, hydropower, flood control etc. Further, many other legislations make central clearances mandatory with respect to the use of natural resources. For instance, the Forest Conservation Act and Environment Protection Act require clearances for their respective considerations. These provisions allow the centre to exercise a reasonable control. Shifting water to the Union List may not help achieve any further control that can change the nature of interstate water disputes. Further, no such control can challenge the deep historical association with and control of states over water, especially considering the 'strong states-weak centre' trends of the changing character of the Indian federation. This issue of centre vs states' powers over water is a useful foreground for the next theme related to water and federal relations.

WATER AND FEDERAL RELATIONS

The third theme of the discourse is around the broader idea of how interstate water disputes affect federal relations. In one of the frequently cited papers, Richards and Singh (2002) describe interstate water dispute resolution policies as opaque and ambiguous that allow scope for continued disagreements. The delays involved in dispute resolution are because of inadequately defined laws, policies and institutions. Institutions fail to implement water sharing awards of tribunals and the processes

are inefficient, “...the process of resolving interstate 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” (Ibid., p.622). This characterization reflects the general narrative of interstate water disputes resolution in India.

This link with federalism and the impact on federal relations have not received their due attention in spite of this awareness. In some exceptional contributions, D’Souza (2006, 2009) critically engages with this issue. On the basis of an analysis of the Supreme Court’s engagement with interstate water disputes since the enactment of IRWDA, D’Souza accuses the Supreme Court of treating states as subservient to the nation, as opposed to their status as quasi-sovereign entities in the constitutional framing. She argues that it is the reason why the relevant constitutional provisions and IRWDA bar the Supreme Court’s jurisdiction over interstate water disputes. The Supreme Court’s overtures in interstate water disputes imply trends of altering the basic structure of federalism as enshrined in the Indian constitution. She also disagrees with the calls for getting away with article 262, and allow greater powers over water to the centre - a familiar argument noted earlier. For her (2009), it amounts to nationalizing of rivers through judicial strictures, rather than through the due legislative and political processes. However, Iyer (2009) does not take it as far, while observing that the Supreme Court’s interventions are to balance the centre’s ineffective use of its powers under the entry 56.

In other words, the dormant policy space occupied by the RBA has led to, or necessitated the judicial overtures. We may recall the unanswered questions around the RBA and its disuse. The idea of judicial interventions to address an ineffective policy space requires greater scrutiny from the perspective of its implications for federalism.

D’Souza’s (2005, 2006) earlier works help expand our understanding of interstate water disputes in a fundamental way. Using critical theory approaches, she shows how interstate water disputes are a manifestation of reproducing imperial and colonial power relations in India. Her analysis reveals how the history of colonial rule has led to asymmetries between states, which remain relevant in shaping the contemporary interstate water disputes. Of immediate interest is her argument about why water has to be necessarily a state subject matter. She links it to the roots and history of the Indian Union formation. For her, the Indian constitution is a compromise document evolved through negotiations between stakeholders and social forces during the formative stages of the Indian state. A large number of princely states acceded to the Indian Union on conditions and expectations of some degree of autonomy. Since many of these states were agrarian economies, they refused to part with regulatory powers

over water. They were not in favour of giving away these powers to a not-so-certain and remote federal government. In other words, water as a state subject was deeply central to the historical contingencies and the Indian state's aspirations of federal republic.¹⁴

¹⁴ Water was a provincial subject under the colonial administration as well. The Government of India Act of 1919 lists irrigation as a provincial subject (Guhan 1993).

AMBIGUITIES: THE LIMITS OF LAW

The dominant themes reviewed in the previous section characterize the nature of interstate water disputes in India. This deeply legalist approach to interstate water disputes has been, in part, a problem with approaches towards the resolution of disputes. We will revisit this issue towards the end. However, the obsessive character of the discourse concerning the legal aspects is not without reasons. Several ambiguities existing within the constitutional, legal and institutional provisions pose problems in engaging with the issue of interstate water disputes. It is perhaps for this reason that the discourse has remained legalist. This section deliberates over these ambiguities.

The RBA and IRWDA are mutually exclusive, and correspond to respective constitutional provisions. The RBA is in response to the entry 56, for regulating and developing interstate river water development projects; and, the IRWDA is in response to the provisions under the article 262 for resolution of disputes over interstate river water sharing. The IRWDA excludes matters that can be referred to arbitration under RBA.¹⁵ In other words, wherever river boards exist to “develop and regulate” interstate rivers, any dispute arising out of these schemes implemented by the boards cannot be referred to tribunals; these will be subject to judicial arbitration by courts.

As noted, we still need to understand why RBA has not been a basis for creating any river board. A further intriguing fact happens to be that the interstate water dispute tribunals have chosen not to rely on RBA for conceiving institutional mechanisms to oversee or implement their awards. Instead, tribunals recommend the setting up of other kind of institutional mechanisms. But these mechanisms materialized only in one exceptional case, that of the Narmada Control Authority (NCA). The Narmada Water Disputes Tribunal recommended the setting up of NCA to implement its award.

It is often presumed that interstate coordination mechanisms such as the Bhakra-Beas Management Board (BBMB) are constituted for implementing tribunal awards.

¹⁵ 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.”

This happens to be a common misconception. In all these cases, the interstate water management mechanisms draw their legal standing from other means - as mentioned earlier - via either special acts or exclusive directives of the government. The BBMB has been set up by the provisions of the Punjab Reorganization Act, 1966; the Upper Yamuna Board, by an exclusive resolution of the central government directives to implement an MoU between the participant states; similarly, the Brahmaputra Board was set up through a separate act of the parliament.

We do not know why interstate water dispute tribunals do not rely on RBA for mechanisms to implement their awards. But it is not just about RBA's suitability or usefulness for the purpose. Rather, the tribunal awards simply do not carry institutional mechanisms for their implementation, with the exception of NCA. More precisely, the tribunals have not "included" the institutional mechanisms as part of their awards, though they have recommended such mechanisms. This is an ambiguous space for tribunals.

The IRWDA, after the amendments to it in 1980s and later, vests the central government with the power of constituting the mechanisms for implementing tribunal awards.¹⁶ But the central government is stuck with the RBA, the 'dead letter' law, to conceive effective interstate river water coordination mechanisms. The tribunals, often realizing the void in this respect, have chosen to make recommendations of such institutional mechanisms, but not as part of their awards. Including the recommendations in the awards would be conflicting with the IRWDA provisions, where that power is vested with the central government. The IRWDA attaches the tribunal awards with the force of a Supreme Court decree - presenting the unwelcome prospect of this force conflicting with the centre's powers for constituting the institutional mechanisms.¹⁷ If the mechanisms recommended by the tribunal become part of tribunals' awards, the arrangements acquire the force of a Supreme Court decree and cannot be reviewed or modified by the central government. The recent Cauvery Water Disputes Tribunal (CWDT) award describes this dilemma while recommending a Cauvery Management Board (CMB) - not as part of its award - for implementing its award. These ambiguities produce inaction and institutional inertia. The implementation of tribunal awards

¹⁶ IRWDA, Section 6A (1): "Without prejudice to the provisions of section 6, the Central Government may, by notification in the Official Gazette, frame a scheme or schemes whereby provision may be made for all matters necessary to give effect to the decision of a Tribunal."

¹⁷ IRWDA, Section 6: "...t[T]he decision of the Tribunal, after its publication in the Official Gazette by the Central Government under sub-section (1), shall have the same force as an order or decree of the Supreme Court."

thus suffers from absence of institutions. States defy, do not comply, or disagree over implementing awards, leading to recurrence and escalation of disputes.

The other source of ambiguities is article 262 of the constitution, which is the basis for IRWDA. The article 262, besides making the parliament responsible for legislating the act, also provides for barring the Supreme Court, or any other court's jurisdiction over interstate water disputes. Accordingly, the IRWDA bars courts' jurisdiction over interstate river water disputes - including that of the Supreme Court.¹⁸ Instead, the central government has to constitute exclusive tribunals for adjudicating the disputes. The tribunals are disbanded after they give away the awards. This arrangement, when considered in the absence of reliable means for implementing the tribunal awards (or, giving "effect" to the awards), has led to ambiguous situations allowing recurrence and escalation of disputes. This has also partly warranted the intervening of the Supreme Court in the disputes.

Certain premises in the conception of the IRWDA appear to have led to these ambiguities. In its original form, the IRWDA was conceived with the premise that the party states would be responsible, on their own, for giving "effect" to the awards. In the latter amendments, through the introduction of provisions under Section 6(A), the central government has been made responsible for framing schemes for giving effect to the tribunals' decisions. There is an apparent disconnect between the premises of original conceptions of the law and those driving the latter amendments.

The absence of institutional models for interstate coordination and ineffective legislations (i.e., the RBA) leaves the states high and dry in the event of any disagreement or changed conditions after an award is given by tribunals. In such instances, the states invariably approach the Supreme Court. And the court is then obliged to engage with the dispute, despite the bar on its jurisdiction. Supreme Court has on occasions justified this engagement on the grounds that it has so far restricted its role to clarifying the tribunals' decisions, and sometimes extending executive force to ensuring compliance by states.

Thus, the space between the Supreme Court and the tribunals is not an unambiguous one. The institutional vacuum, when it comes to giving effect to the tribunal decisions, confounds it further. Supreme Court assuming an executive role is an added complexity.

¹⁸ IRWDA, Section 11: "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."

D'Souza (2009) has argued that the court's interventions tend to violate the IRWDA provisions. The excessive engagement of Supreme Court with tribunals' awards, she laments, has come to undermine tribunals and thereby hurting the underlying spirit and sentiments of federalism. As 'quasi-sovereign' entities under Indian federation, states cannot be treated as any other entities involved in property disputes.

On the other hand, practitioners favour the repealing of IRWDA to allow Supreme Court engaging with interstate water disputes directly (Nariman 2009). But D'Souza's (2009) are valid concerns that raise important questions related to federal governance. This is a crucial political dimension of interstate water disputes involving the participation of federal constituents having their own territorial identities. This dimension turns the disputes into potent sites of political mobilization, and is a critical element in understanding their implications and governing them (Chokkakula 2012, 2014).

This convergence, or perhaps more appropriately the nexus between identity politics and water politics also disrupts the formal conceptions of interstate water disputes resolution as a statist project. The IRWDA does not allow non-state actors to participate in interstate water disputes. Suits regarding interstate water disputes in the Supreme Court can only be filed by the states concerned or the union government. Under these constraints, non-state actors employ a variety of strategies for influencing the state governments to take positions in interstate water disputes. A predominant strategy is to align with the mainstream political parties. These tendencies open up opportunities for political parties to politicize interstate water disputes.

Even though the nonstate actors' participation is restricted, there are instances of nonstate actors directly influencing interstate water disputes, to a limited extent. The Supreme Court has allowed nonstate actors' engagement, at times, under article 32 - the right to water as fundamental right (Sankaran 2009).¹⁹ In the Cauvery dispute, the Tamil Nadu Cauvery Neerppasana Vilaiporulgal Vivasayigal Nala Urimai Padhugappu - a farmers association from Tamil Nadu had approached the Supreme Court under article 32. This had eventually led to the Supreme Court's directive to constitute the CWDT. Thus, there are opportunities for an active participation of nonstate actors as well, and possibly engage in politicization of disputes.

In addition to these ambiguities, there are other structural and procedural factors affecting the resolution of disputes adversely, mainly by causing delays. Fali Nariman

¹⁹ Article 32 provides for various remedies under the Constitution for enforcement of rights.

(2009), a respected jurist and lawyer, offers an inside view of the working of tribunals. These views are based on his long and rich engagement with the issue, going back to the first set of water disputes tribunals including the KWDT-I headed by Justice Bachawat. He lists several maladies associated with the functioning of tribunals, suggesting an apparent 'degeneration' of their effectiveness over time. The tribunals are headed by retired judges with no specified procedures for the tribunals' functioning. This arrangement has no incentives for expediting the completion of adjudication. Deliberations occur when the judge decides to have them. The tribunals also function like regular courts with adversarial proceedings between the parties concerned.

The setting up of tribunals itself is a layered process which in turn contributes to delays. The first layer involves the centre trying to mediate between the states. When the mediation fails, the centre sets up a tribunal to adjudicate the dispute. The centre has to make a decision on referring to a tribunal within a year after receiving a complaint or an appeal from a state. Over time, through several amendments aimed at reducing delays, the tribunals are given three years (extendable to not more than 2 years additional) to arrive at their decision. But in practice, political exigencies extend the terms of the tribunals beyond the stipulated time-frame.

The absence of effective ex-post mechanisms discussed earlier also contributes to the delays. The decisions of tribunals are often unacceptable to the states concerned. States also frequently flout, or sometimes even overrule tribunal awards. In the Cauvery and Ravi-Beas disputes, it is a common occurrence for the states to pass bills or resolutions of legislature against tribunals' decisions, sometimes, Supreme Court orders too. Thus, the disputes tend to recur over non-implementation of tribunal awards, leading to social and political unrest. Iyer (2002) observes that the absence of sanctions against non-compliant states contributes to this persistent recurrence.

Several questions emerge out of this challenge of defiance and non-compliance on the part of states. How can federal units defy the highest judicial institution in the country? Why should the Supreme Court intervene to enforce the awards? Does the intervention of the Supreme Court undermine tribunals' authority? What are the ways out when legislature pitches against judiciary? These are difficult questions that require revisiting some of the basic and foundational ideas of federal democracy and law.

The combination of these structural deficiencies and legal ambiguities, rather counter intuitively, provide conducive conditions for politicization of interstate water disputes. We will appreciate this better with the advantage of a case analysis of the Krishna dispute in the following sections. The recent instances of emergence or recurrence

- Delhi and Haryana over Munak canal, Punjab-Haryana over Sutlej-Yamuna canal construction, Cauvery over distress season distriction of allocated waters, Odisha and Chattisgarh over Mahanadi waters, Goa and Karnataka over Mahadayi - reveal these trends unequivocally.

ANTAGONISMS: THE PRIMACY OF POLITICS

The dominant legalist narratives avoid politics and political questions. The intricate and intensely deep legal aspects centric discourse accompanies a visceral rejection of politics, despite widespread acceptance of how politics matters in interstate water disputes and their resolution. This political dimension is repeatedly acknowledged; yet the failure to engage with it critically and constructively is baffling. Take for instance, in the words of Fali Nariman: “My experience is that none of the political parties in any of the complainant or contesting States (in interstate water disputes) is ever willing to concede a single point to the other State ...” (Nariman 2009:34). Popular commentaries too note the politics at play in the emergence or recurrence of disputes. 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 and not surprisingly, the literature on international water conflicts also attaches a considerable importance to political relations in the resolution of water conflicts. It argues for a contextual and political analysis for understanding and addressing water conflicts (Wolf, Yoffe and Giordano 2003; Giordano and Wolf 2003; Mostert 2003).

Politics and politicization play a disruptive role in the resolution of interstate water disputes already mired in legal ambiguities, constitutional anomalies and structural deficiencies. The legalist discourse and approaches do not allow space for understanding this crucial element of disputes. In this section, we will discuss how politics and politicization matter in interstate water disputes and their resolution. We will look into proliferation of the politics of contestation -antagonisms - in shaping interstate water disputes and their outcomes. It uses the historical trajectory of the Krishna dispute to present evidence, and to make a case for a necessary understanding of politics and politicization in interstate water disputes for their better resolution and governance.

POLITICS AND POLITICIZATION OF INTERSTATE WATER DISPUTES

It is not easy to draw a line between the politics of contestation over substantive reasons and those of mobilization for extracting political gains. Nor is it the intent of this section. The purpose is to present a reasonably compelling evidence regarding the nexus between water disputes and popular/democratic politics. The objective is to

make a case for considering politics as an important variable in our analysis of interstate water disputes, and our approaches for their resolution.

Politicization of disputes does not imply that the politics is entirely devoid of genuine concerns about water rights. Politics always animates around real and substantive issues of asymmetries and inequities. The point is, water disputes carry a particular anatomy of asymmetries and inequities which offer substantive and appealing grounds for political mobilization. Consider briefly the recent happenings in the Krishna dispute. In spite of a rigorous process of adjudication over a long duration, when KWDT-II delivered its award, political actors in the downstream states of Karnataka and Andhra Pradesh (AP) complained vociferously of unsatisfactory outcomes. Both the state governments led all-party delegations to make representations to the central government. The united AP (before bifurcation) claimed that injustice had been done to its interests and challenged the rationale of allocating surplus waters. It argued that "...the decision resulted in inequity in allocations and unsettled many of the settled issues."²⁰ The state decided to challenge the award in the Supreme Court the very next day, November 30, and filed an SLP before the Supreme Court on 23 January 2014.²¹ In Karnataka as well, soon after the award was given in November 2013, political leaders rejected it urging the government not to accept it. The opposition leaders in Karnataka also sought to challenge the award through an SLP by the state.²² This further deteriorated and turned complicated after AP got bifurcated, as discussed in the beginning.

Posturing in the name of protecting the state's interests can often be about populist and political gains. In recent times, the spectacles of political posturing are frequently showcased in the Cauvery dispute - perhaps the longest and most contentious dispute in independent India. The latest 2016 escalation typically exemplifies such antagonistic political posturing. The episode has escalated to a point of constitutional crisis where the Karnataka state assembly has resolved not to obey the Supreme Court orders. In

²⁰ <http://www.ndtv.com/article/south/andhra-pradesh-delegation-meets-prime-minister-manmohan-singh-over-krishna-water-row-460973>, last accessed on 15 January 2014.

²¹ <http://www.ndtv.com/article/south/andhra-pradesh-to-move-supreme-court-against-krishna-water-tribunal-award-452846> accessed on 15 January 2014; and, <http://www.thehindu.com/news/national/karnataka/ap-challenges-second-krishna-tribunal-award/article5610975.ece?homepage=true>, last accessed on 24 January 2014.

²² http://www.business-standard.com/article/pti-stories/ktk-cm-meets-oppn-floor-leaders-on-krishna-river-issue-114010801683_1.html accessed on 15 January 2014; and, <http://www.thehindu.com/news/national/karnataka/dont-accept-kwdtii-final-award-rayaraddi-tells-state/article5409019.ece>, last accessed on 15 January 2014.

an analysis of an earlier episode of escalation in 2012, I have shown how historical asymmetries, legal ambiguities, and ethnic antagonisms enabled political mobilization in the dispute (Chokkakula 2014). When the Government of India (GoI) notified the CWDT award in February 2013, about six years after it was awarded in 2007, the dispute too witnessed a similar kind of predictable antagonistic responses from political parties. Deve Gowda, former Prime Minister and the chief of Janata Dal (Secular) [JD(S)] party called the decision ‘political.’ He accused the UPA (United Progressive Alliance) government at the centre of favoring Tamil Nadu as part of deriving political support from the AIADMK (All India Anna Dravida Munnetra Kazhagam), heading the government in Tamil Nadu. Earlier, before the award’s notification, the UPA had been accused of favoring Karnataka, delaying the notification to gain political advantage in the just-concluded assembly elections in the state. Ms Uma Bharati, now Union Minister (at that time in the opposition) had said that the dispute was a political one.²³ The Krishna dispute analysed here points to a similar politics at play in its recurrence and escalation.

A POLITICAL NARRATIVE OF THE KRISHNA RIVER WATER DISPUTE

The Krishna river water dispute is one among the first few water disputes emerging after independence. It has also recurred and escalated several times, even during the time when KWDT-I’s award was in force. Both Krishna and Cauvery have had the same historical roots in the tenuous relations between the Madras presidency (of which AP and Tamil Nadu were part) and the Mysore princely state (present day Karnataka). But the Krishna dispute emerged first after independence and was one of the three disputes for which the tribunals were constituted for adjudication. The remaining section presents a political narrative of the dispute’s emergence and its episodes of recurrence since then.

The early Nehruvian era’s emphasis on irrigation development through the Five Year Plans had given a huge stimulus to competing interests of states and disputes. For preparing the First Five Year plan, the Planning Commission had organized interstate conferences among riparian states as part of making budgetary allocations to states for irrigation development. The interstate conference of 1951 for the riparian states of Krishna river was one such conference, which might be considered a catalytic moment for post-independence disputes over Krishna waters. The following decade saw a rapid

²³ <http://www.ndtv.com/article/south/cauvery-issue-is-political-can-be-sorted-out-says-uma-bharti-248840>, last accessed on 15 January 2014.

implementation of irrigation projects by the riparian states. The decade also witnessed the reorganization of state boundaries, which led to the consolidation of linguistic-based homogeneous geopolitical identities in the form of distinct territorial entities of states.

The riparian states of Krishna river had proposed several large projects along the course of the river beyond the limits set by the 1951 interstate conference. Most of these projects - the Nagarjuna Sagar and Srisailem projects in AP, the proposed westward diversion by Maharashtra, and the Upper Krishna Project (UKP) in Karnataka - had been sources of contestations between the riparian states. The centre's efforts to mediate and reconcile the states had nothelped. The central government had set up the Krishna-Godavari Commission (Gulhati, Jaini and Hoon 1962) to assess the potential augmentation of waters in the rivers.

These contestations came to dominate the state and national political debates at that time as well, suggesting at the deeply entrenched political nature and imaginations of the disputes. For instance, in a heated debate in the AP assembly in 1963, the state's then Minister for Irrigation, A C Subba Reddi had accused the Gulhati Commission of biased assessments.²⁴ As part of mediation between the states, Prime Minister Nehru had urged Maharashtra to explore alternatives for the proposed westward diversion of Krishna waters.²⁵ In another instance, Vasantarao Patil, the then chief of the Congress party in Maharashtra, had accused the centre of favoring AP in the Krishna-Godavari dispute.²⁶ The failure of the centre's mediation led to the eventual constituting of KWDTI in 1970.²⁷

In order to further demonstrate and substantiate this political dimension of the dispute, I have examined the historical preoccupation of the public sphere with the Krishna water dispute post-independence. I have taken advantage of the availability of *The*

²⁴ "Facts Twisted And Figures Juggled By Gulhati Body: Andhra Minister's Charge in State Assembly." *The Times of India* (1838-2004), March 15, 1963, 5. ProQuest Historical Newspapers.

²⁵ "Nehru Not For Diverting Krishna Waters Westward." *The Times of India* (1838-2004), January 14, 1964, 7. ProQuest Historical Newspapers.

²⁶ "Centre siding with Andhra on water row: MPCC chief." *The Times of India* (1838-2004), April 27, 1968, 7. ProQuest Historical Newspapers.

²⁷ It may be worth noting that the centre's efforts - the politics of mediation - had helped in other instances. As the Cauvery dispute emerged in the 1960s in its post-Independence manifestation, the mediations produced a mutual agreement between the riparian states. The tribunal had to be constituted much later in 1990.

Times of India newspaper digital archives to delineate and decipher the politics driving the dispute. I have paid a particular attention to political configurations - the political party affiliations at the centre and the states and the power equations - to speculate the political considerations in the recurrence of the dispute.

The ProQuest's historical database of *The Times of India* is a fairly well-archived database. I tried several combinations of key words besides looking at the records to check how the key word search fared in returning pertinent news items. The archives proved to be reliable in generating relevant returns. A search using a simple key word, "Krishna river water dispute" post independence of India generated 502 records.²⁸ I mapped the number of instances the dispute had been reported against each year and this resulted in the graph presented in Figure1 below.

The figure has some key milestones marked at different points of the visual. Considering these milestones, the visual represents the dispute's trajectory and trends reasonably well. The high and intense activity during the 1960s was prior to the constitution of KWDT-I, the years during which the centre had tried to mediate after the three states had sought legal adjudication - beginning with Karnataka's formal demand for referring the dispute to a tribunal in 1962. This continued till the constitution of KWDT-I in 1970. KWDT-I gave its final award in 1976, allowing its review in 2000. The award's expiry and fresh disputes led to the constitution of KWDT-II in 2004, which gave its Final Award in 2010 and Further Report in 2014. The dispute might be expected to occupy the public space to the extent that these milestones mattered - during and preceding the constitution of tribunals. However, the map shows regular spikes of escalation; why did the dispute escalate even though the award was in force? What particular political conditions and considerations had contributed to this apparent permanent state of conflict? The visual helps us discuss the political trajectory of the dispute.

The visual also includes a matrix of political configurations - political party affiliations and power alignments between governments at the centre and states - over the history of the dispute. The matrix presents the political party affiliations of governments in the respective nodes: the centre and the three riparian states. It is a fairly accurate representation of party affiliations of successive governments at these nodes, with

²⁸ I have looked for possible omissions of relevant records and irrelevant inclusions; the search has come out satisfactorily with mostly relevant records and almost no inclusions of irrelevant records.

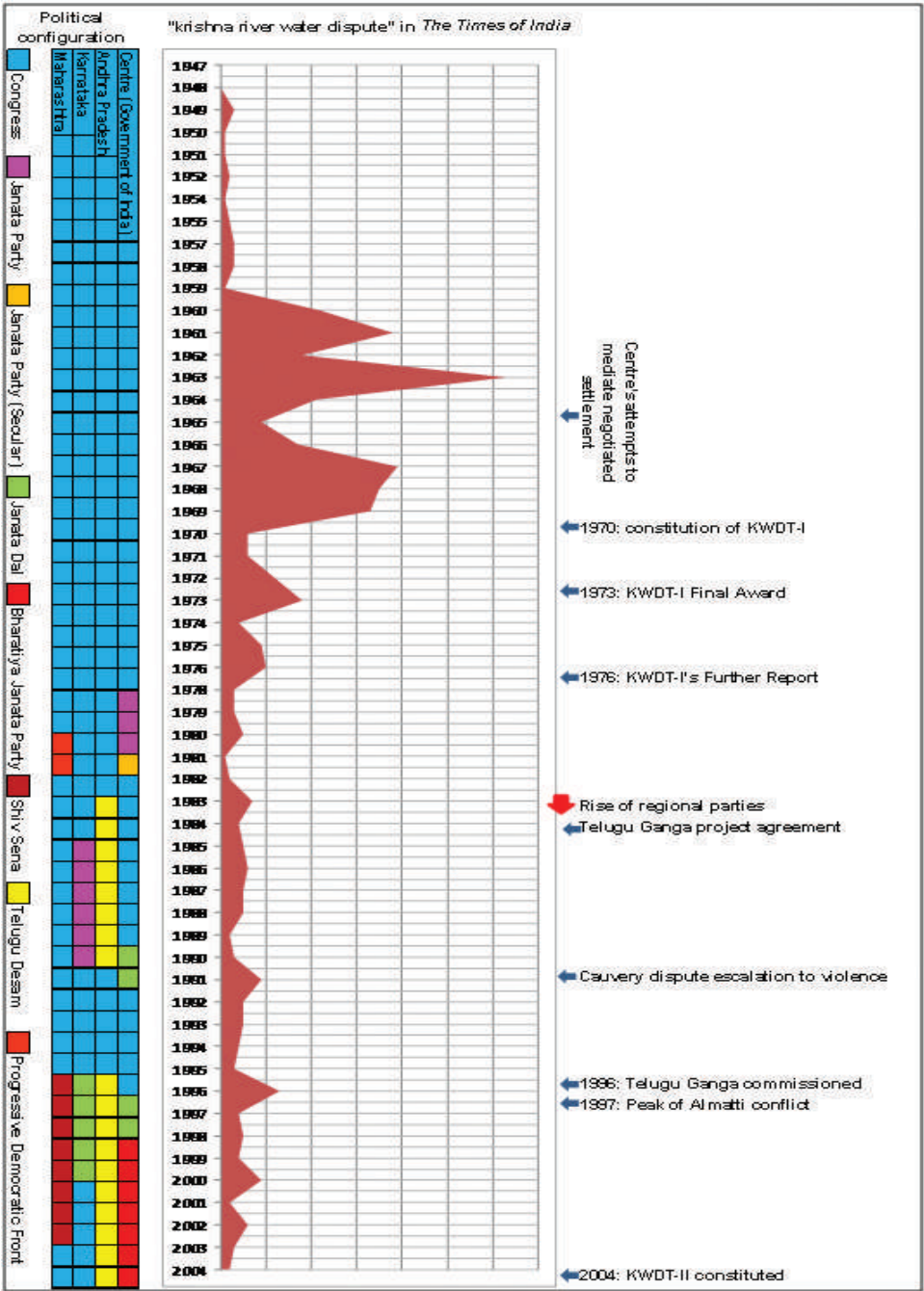
minor omissions of short-term and interim governments. When this matrix is juxtaposed with the Krishna river water dispute in *The Times of India* archives, the visual becomes a useful aid for discussing the politics of the dispute (re)making over time, with a particular emphasis on how the political configurations matter in the dispute's emergence and recurrence.

The Times of India is a mainstream English newspaper with its strong base in the Western and Northern parts of India. The archives are also of the Bombay edition of the newspaper, and often local Maharashtra issues are reported prominently as compared to news from Southern India. The coverage of interstate water dispute issues in mainstream English newspapers such as *The Times of India* compared to vernacular press is much lower. In vernacular newspapers, these issues are covered multiple times more. Very often, these are front page news. In English newspapers, this newstends to get relegated to the pages of regional news. Yet, the visual shows that the Krishna dispute managed to occupy the public sphere throughout the period since independence.

The 1950s were the times of Nehruvian development project with an enormous focus on irrigation development, with the states being encouraged to pursue irrigation development aggressively. Towards the end of the 1950s, the competition between states turned intense, and conflicts began to emerge. It is against this background that the Karnataka demanded that the Krishna dispute be referred to a tribunal. This led to spikes of activity around the disputes in the 1960s, prior to the setting up of the KWDT-I. These were the times when the centre tried mediating between the states for negotiated settlements.

In a similar fashion, the visual matches with other general milestones. After the KWDT-I's final award in 1976, the dispute tapered off briefly until the early 1980s. This was the time when the Indian state began shifting from its known unitary character, with the Congress party largely dominating, as it was in power at the centre as well as the states (Rudolph and Rudolph 1987). During this period, many states witnessed the emergence of strong regional powers, especially in the South Indian states. This emergence of regional powers was seen as a reconstructive moment of Indian federalism and a sign of its durability, with the regional powers contributing to the emergence of coalition politics at the centre (Dasgupta 2001). This transformation was also linked to the Congress party's institutional disintegration prior to this, which led to a short-lived BJP government at the centre in the 1980s (Rudolph and Rudolph 1987, Kohli 1988).

Figure 1 : “Krishna river water dispute” in The Times of India archives, 1947-2004



Source: Generated from ProQuest's *The Times of India* (1838-2004) historical newspapers digital archives, and other web portal sources such as India.gov.in

The degeneration of single-party dominance at the national level resonates with changes in the transboundary political spaces of the Krishna waters. As the matrix of political configuration shows, the early 1980s saw a change in political leadership in two of the three riparian states of the Krishna. Both Karnataka and AP had their first non-Congress governments: led by Ramakrishna Hegde of the Janata party in Karnataka, and N T Ramarao (popularly known as NTR) of the Telugu Desam party (TDP) in AP. The Congress party led government continued in Maharashtra. However, another non-Congress leader in the neighbouring southern state of Tamil Nadu, M G Ramachandran (popularly known as MGR) of AIADMK, succeeded in establishing a strong anti-Congress coalition of political forces in the South. This camaraderie, bolstered by their common opposition to the Congress party hegemony helped craft a "Southern Council." This Council, under the leadership of NTR, initiated debates on centre-state relations and the related constitutional provisions, specifically articles 256 and 257 (Prasad 1987). This anti-Congress coalition paved the way for the (re)emergence of the Telugu Ganga project, which symbolized the Southern states solidarity against Congress and was a site for vindictive, tenuous, and politicized centre-state politics during this period (Prasad 1987, Tummala 1986, Gopal 1989).

The Telugu Ganga project has since remained a source of sustained conflict between the riparian states. The disputes rooted in this project have had to be adjudicated by KWDI-II as well. The Telugu Ganga project - celebrated as one of the finest examples of interstate cooperation - itself an outcome of political expediencies, eventually became a source of persistent contestations and antagonisms. The unusual cooperation of the riparian states for a non-riparian state (of Tamil Nadu, for Chennai city drinking water needs) was in fact a deliberate manoeuvre effected by Mrs Indira Gandhi during the Emergency period, as part of appeasing Tamil people following the dismissal of the Dravida Munnetra Kazhagam (DMK) government in place (Chokkakula 2015). Ironically, the same project had earlier become a means to forge a Southern Council to antagonize Mrs Gandhi-led Congress rule. It is perhaps the reason for delays in its implementation. In spite of NTR's swift action in taking up the project immediately after coming to power in AP, the project got delayed for a variety of procedural delays. NTR accused the Congress-led government of dilatory tactics (Gopal 1989).

The project remained at the centre of public debates in the 1980s before the government changed at the centre. During 1989-1991, the Janata Dal (Prime Minister V P Singh) supported by National Front partners, followed by the Samajawadi Janata Party (Prime Minister Chandra Sekhar) supported by the Congress formed governments at the centre. The Congress party returned to power for another term during 1991-

1996. The Southern Council was dismantled as all the three riparian states brought back the Congress party governments.²⁹

The Telugu Ganga project took a backseat for a while. But the Congress party lost elections in 1996, paving the way for another not-so-conducive configuration of political powers. The United Front coalition came to power at the centre, with Janata Dal's Deve Gowda taking over as the Prime Minister. The Congress party also lost power in the three riparian states to other parties - TDP again in AP, Janata Dal in Karnataka, and the Progressive Democratic Front in Maharashtra. With Deve Gowda, a strong regional leader from Karnataka at the centre, the Krishna dispute was back on the front burner. This time the conflict over raising Almatti dam height began to escalate. Simultaneously, the TDP also hastened implementing of the Telugu Ganga project. Karnataka's contestation of the Telugu Ganga project (accusing AP of increasing its scope), and AP's protests against increasing the Almatti dam's height, raised the transboundary politics of the Krishna to a new level. Deve Gowda was seen as maneuvering the Almatti dam issue in favor of Karnataka (Swain 1998).³⁰ In 1997, Karnataka filed an Original Suit with the Supreme Court contesting the Telugu Ganga project. AP immediately followed it with a suit over the issue of Almatti dam's height against Karnataka.

The dispute over the Almatti dam height between AP and Karnataka had an impact beyond the course of the dispute. It defined the political battle lines both within the states and at the centre. While he was the Chief Minister of Karnataka before becoming Prime Minister, Deve Gowda had aggressively pursued the politics of mobilization on account of the Almatti project. When he became the Prime Minister in 1996, his actions in mediating the Almatti dispute were perceived against this background. It created complications for Chandrababu Naidu, the TDP Chief Minister in AP as well. TDP was a partner in the United Front government. Congress, the opposition party in AP, accused him of compromising on the state's interests for political gains. The pressure mounted to a point that Naidu warned of withdrawing the TDP's support to

²⁹ As a parallel, the Cauvery dispute between Karnataka and Tamil Nadu escalated to the point of setting up a tribunal in 1991. Though AP was not party to it, the already contentious nature of the Telugu Ganga benefitting Tamil Nadu had an influence on the transboundary politics between AP and Karnataka.

³⁰ After Deve Gowda's government fell in March 1997, Chandrababu Naidu, then AP Chief Minister and a strong stakeholder in the United Front, chose to support I K Gujral over Tamil Nadu's G K Moopanar apparently to avoid similar bases in southern interstate water disputes (Rubinoff 1997).

the United Front government. There was pressure on the Janata Dal government in Karnataka too from the opposition parties within the state. Naidu and, then Karnataka Chief Minister of Janata Dal, J H Patel engaged in the politics of posturing, escalating the dispute to a point of threatening the survival of the United Front government. The Congress party took advantage of the situation in having Deve Gowda replaced as the Prime Minister of the United Front government at the centre.

The two projects kept the transboundary politics of Krishna waters tenuous, and the dispute in the public sphere. In 1998, the Janata Dal-led United Front's government fell, and the elections brought back the BJP-led National Democratic Alliance (NDA) government at the centre. The KWDT-I award expired in 2000. The Supreme Court gave its decisions on the Original Suits, but also recommended a review of the KWDT-I award as part of resolving outstanding issues. Maharashtra also added other contentious issues to the already accumulated issues around the Telugu Ganga and the Almatti. Maharashtra demanded a review of the KWDT-I award and a share in the surplus waters. This eventually led to the formation of KWDT-II in 2004.

This narrative of Krishna's transboundary water politics is very broad and misses a more nuanced understanding of the actual politics underlying the dispute. The point is to showcase the mutually constitutive nature of the broader political alignments in shaping the Krishna dispute and its outcomes. To reiterate, the intent here is not to argue that the outcomes of the Krishna dispute, or interstate water disputes in general, are shaped entirely by political configurations; nor to say that interstate water disputes drive the political transformation and federal relations in India. The idea is to offer an alternative and more comprehensive explanation of the outcomes of interstate water disputes, with respect to their emergence and recurrence.

The other objective is to discuss the nature of democratic politics that tends to take advantage of the interstate water disputes. The disputes are important sites of political mobilization for political actors. This happens through invoking of tropes such as identity, ethnicity, culture, territory, and their historical geographies of association with rivers. To re-emphasize, this does not necessarily happen exclusively for political returns. The politics of mobilization also happens to be the only means through which political struggles over substantive issues of rights and allocations materialize. In the absence of formal institutional avenues or practices, the mainstream politics becomes the de-facto channel for engaging in struggles for rights and claims over river waters by interest groups and other nonstate actors. This relationship is the core of the nexus we witness between democratic politics and the politics of water.

Interstate water disputes and the underlying politics thrive by taking advantage of the legal and constitutional ambiguities discussed earlier. But central to such politics is the particular political ecology of the disputes, which produces asymmetries and power relations leading to contestations between the states. The simplest form of asymmetry between states is the upstream vs downstream power relation, defined by the shared river. The complex political ecology goes beyond this simplistic spatially defined power relation, and extends to ecological characteristics of water and its availability, historical geographies of territorial associations of the river, cultural and territorial identity politics, etc. These asymmetries provide the real and substantive reasons for disputation, and its subsequent escalation through politics of mobilization. For instance, the Telugu Ganga project presents an asymmetry presented by AP's advantage in using surplus waters. AP has been accused of attempting to acquire rights over surplus waters by increasing the scope of the project to include the irrigation component. Similarly, the Almatti dam dispute reflects an asymmetry, defined by an upstream state advantage, of Karnataka state retaining and storing water early in the season with a potential risk to the downstream state. These asymmetries can also be due to historical and other factors. The following section uncovers such asymmetries that characterise Krishna dispute as part of illustrating the diversity of factors that can contribute to the emergence or recurrence of such disputes.

ASYMMETRIES: THE ECOLOGIES OF POWER AND POLITICS

Interstate water disputes emerge, recur, escalate and abate in the broader canvas of legal and constitutional ambiguities, and the political antagonisms in a multi-party federal democratic setting. As noted, this happens through a dynamic collusion of these structural features with the complex political ecology of asymmetries at the core of disputes. In this section, I pursue a historical analysis of the Krishna dispute for an understanding of this political ecology of interstate water disputes: the production of asymmetries, power relations, and politics. In a way, the objective is to delineate and showcase the anatomy of disputes - accentuating the particular political ecology of transboundary river waters - in producing the disputes.

Towards the end, the section aims at illustrating an analytical approach to understanding the political ecology of interstate water disputes and transboundary water conflicts generally. It builds a case for appreciating why interstate water disputes are perennial sites of conflict and explain their recurrence, as observed in the Krishna dispute's historical trajectory visualized earlier (Figure 1).

This perennial conflict characterising the interstate water disputes begs a comparison with similar arguments concerning international water conflicts. Against the background of popular prophecies regarding impending 'water wars,' some key critical scholarly contributions have made similar observations about international river water conflicts. Transboundary waters are a source of contestations and disputations, though rarely to a point leading to violent conflicts or wars. As regards transboundary water sharing, water is both 'irritant and unifier' (Giordano and Wolf 2003). "...While water wars may be a myth, the connection between water and political stability certainly is not" (Wolf 1998: 261). These observations rely on empirical evidence of historical incidences of conflicts over shared waters. In contrast to these distanced and disembodied analyses, the approach here presents a deeper analysis of transboundary water disputes by looking at the disputes from within. This embodied approach presents the actual processes - the anatomical interactions of different constituent factors - involved in the making and remaking of disputes. It dissects and describes the production of asymmetries in the form of power differentials or substantive inequities, which are the fundamental basis for differences and contestations between geographic entities sharing river waters.

This approach is a response to Furlong's (2006) call for using critical theory and political ecology approaches, in contrast to the dominant International Relations approaches for understanding transboundary water conflicts. Thus, central to this analysis is the political ecology to reveal the politics and power relations at play in the (re)making of disputes. It ventures beyond the social and political sources of disputation, to reveal the spatial and ecological sources of power asymmetries (Furlong 2006; Paulson, Gezon and Watts 2003; Robbins 2004, 2011). The analysis pays a particular attention to the ecological characteristics of water - the spatial and temporal uncertainties, inequities induced by its fluidity, scarcity, territorial association, etc., and how they reconfigure and reproduce politics and power relations in the context of the dispute. In order to do that, it employs eclectic methods, combining genealogical analysis, historical and multi scalar analysis, and other political-ecologist tools at the intersection of politics and ecological principles (Robbins 2003).

THE KRISHNA DISPUTE

The Krishna river water dispute is one of the oldest disputes independent India has witnessed. The resources on the dispute are limited in the public domain, restricted to formal narratives in the form of the tribunal award documents (KWDT-I 1973, 1976; KWDT-II 2010, 2013). These are comprehensive sources of the technical and legal aspects of the dispute. The challenge is to construct narratives of politics around these. The dispute, however, has a particular advantage. It is the first and only interstate water dispute that has had two tribunals constituted for its adjudication, 30 years apart - offering a unique opportunity to compare and contrast the evolving and changing nature of the dispute.

Yet the dispute has not been subjected to a scholarly analysis, with the exception of the body of work produced by D'Souza (2006). Her work unravels the postcolonial condition of interstate water disputes. She argues that the disputes are an outcome of reproducing colonial and imperial power relations, transmitted through law. In contrast, my project here is more provincial and political. It builds on D'Souza's contention about the postcolonial condition of the disputes, and goes beyond to explain the production and recurrence of disputes. It shifts the focus from colonial to contemporary politics. In other words, I pick up the baton from D'Souza to explain how the internalized colonial power relations in collusion with the political ecology of interstate waters in a federal democracy contribute to disputes' emergence and frequent recurrence. The analysis begins with a brief description of the political and ecological context of the Krishna river to draw attention to the diverse geographical and ecological factors at play in the construction of its transboundary context.

The political and ecological geographies of the Krishna river

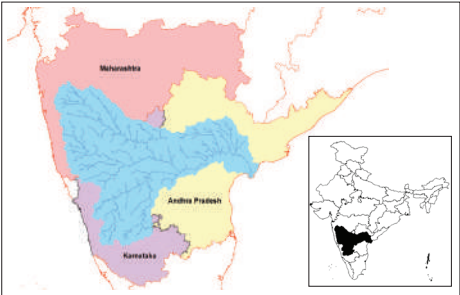
The Krishna River originates in the Western Ghats near Mahabaleshwar in Maharashtra state and runs across Karnataka and AP states for a total length of about 1,400 km before emptying into the Bay of Bengal. On its course, it is joined by a number of tributaries. Bhima and Tungabhadra, two of its tributaries, are also interstate rivers - the former between Maharashtra and Karnataka and the latter between Karnataka and AP. Figure 2 below provides the transboundary context of the river with the actual political boundaries of the riparian states and the spread of the river basin across the three states. A three-dimensional presentation of the basin in Figure 3 helps visualize the terrain and the physical geography. The basin has 13 sub-basins, corresponding to key drainage units in the basin. Figure 4 presents these sub-basins, major streams and reservoirs in the basin.

Krishna is a rain-fed river and flows through four ecological zones of India: the Western Ghats; the Deccan Plateau; the Eastern Ghats; and the Eastern Coastal Plains. The southwest monsoon accounts for more than 90% of the total rainfall in the basin, of which 73% arrives within the months of June and July. This rainfall in the two months is crucial for kharif crops (monsoon crops) in the region. The southwest monsoon retreats by October.

The climate in the basin is classified as tropical monsoon, known for high temperatures and small annual temperature ranges through the year, with an intense seasonal rainfall. The seasonality is a defining character. The high annual precipitation does not differ much from that of a rain forest, but it occurs in a concentrated spell, followed by an intense dry season during the low-sun season (winter) and, later, high temperature months (summer). This tropical climate combined with the physical geography featured by the rain-shadow inducing Western and Eastern Ghats on either side of the basin produces uncertainties and variations in rainfall. Many areas in the basin across the three states are drought-prone. The extent of drought affected areas is an important factor in making water allocations.

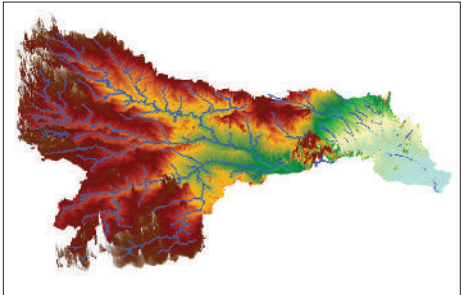
The ecological geographies indicate at the risks and uncertainties of water availability in the basin. The wide seasonal fluctuations require building storage and regulating structures. Due to the very warm temperatures, evapo-transpiration losses are also high - an important consideration in the basin's irrigation planning. These uncertainties define and shape the nature of water disputes in the basin.

Figure 2: Transboundary geographies of Krishna river basin



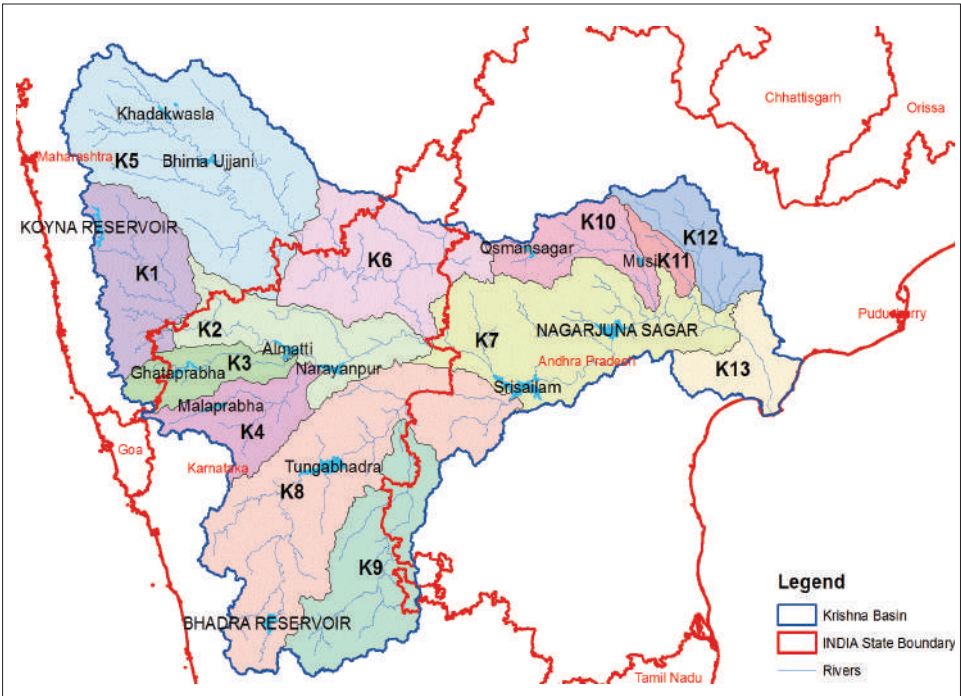
Source: Census of India 2001 and IWMI

Figure 3: A three-dimensional visualizing of Krishna river basin



Source: Generated from srtm.usgs.gov

Figure 4: Sub-basins, major streams, and reservoirs in Krishna river basin



Source: Regenerated and adapted, International Water Management Institute, Hyderabad.

The historical and territorial geographies of the dispute

The Krishna river dispute has a long history. Before independence, two British provinces of Bombay and Madras, two major princely states of Mysore and Hyderabad and some other smaller princely states have had riparian interests in the river. The first major river water sharing agreement related to the Krishna dates back to 1892, between the downstream British province of Madras and the upstream princely state of Mysore, over sharing of Tungabhadra waters. The dispute recurred and resulted in several more agreements prior to independence among three constituents - Madras, Mysore, and Hyderabad.³¹ The Bombay presidency was not a party to these disputes or to the later agreements. After independence, all four constituents - Bombay, Mysore, Hyderabad, and Madras-became states under the Indian Union.

After becoming a republic in 1950, the Planning Commission of India organized an interstate conference in 1951 with a view to facilitating the implementation of irrigation development projects by the states as well as the centre. A provisional agreement arrived at the conference became the basis for the Planning Commission for approving irrigation development projects to be taken up by the states.

This was followed by the territorial reorganization of state boundaries in the country. The state of AP was carved out of Madras and Hyderabad states in 1953, following a popular movement for a separate state by Telugu-speaking people. This was a precursor to the reorganization of states on a linguistic homogeneity principle. Following the States Reorganization Act of 1956, Maharashtra, Karnataka (initially Mysore) and AP became the new riparian states of the Krishna river. Madras state (the majority of which is now in Tamil Nadu) ceased to be a riparian state of the Krishna.

As an attempt to account for the territorial changes and to reallocate Krishna waters, the Central Water and Power Commission (CWPC) organized another interstate conference in 1960, with no significant outcome though. But the states contested the validity of the 1951 agreement at this conference. In 1962, the state of Karnataka (then Mysore) made a formal representation to the central government, seeking resolution of the contentious issues through a tribunal, as per the provisions of the IRWDA 1956; Maharashtra too made a similar demand in 1963.

³¹ Between Madras and Mysore in 1933; between Madras and Hyderabad in 1938; between Madras and Hyderabad in 1944; between Madras and Mysore in 1944; and, supplemental agreements among the three, Madras, Mysore, and Hyderabad, in 1945 and 1946.

The Government of India (GoI) made efforts to mediate and resolve the claims through negotiations, but with no success. Eventually, the GoI constituted the first Krishna Water Dispute Tribunal, KWDT-I, in 1969, which gave its report with its decision in 1973, and a Further Report in 1976. The award provided for a review of allocations after 30 years, in 2000. A set of fresh disputes, together with other contentious issues in the implementation of the KWDT-I award, led to the setting up of the second tribunal (KWDT-II) in 2004, which gave its report and decision in 2010, and a Further Report in 2013.

Maharashtra, Karnataka and AP states - the parties to the dispute - have histories of reorganized boundaries and reimagined geographies. Their graduation from being the constituents of a colonial rule to the states of an independent India included not only a change in their own status as part of the federation, but also a reconfiguration of their identities as homogeneous ethnic entities sharing common languages. The three states were carved out of the former presidencies (British India provinces) of Bombay and Madras, and the former princely states of Hyderabad and Mysore. This also involved a change in their substantive relationship with the Krishna River.

This reorganization of territorial boundaries was one of the central challenges that the KWDT-I had to deal with. It contributed in different ways to the emergence and recurrence of disputes over Krishna waters, over time. Table 1 presents the basic restructuring of territorial geographies and the consequent reconfigured association of the territories with the river.

It will help understand the distinct historical and territorial geographies of the riparian states. The British colonial rule had two types of territories differentiated by forms of imperial domination: one, directly-ruled provinces known as British India, and two, indirectly-ruled princely states. The former was governed by comprehensive bureaucratic governance structures led by the Indian Civil Services under the command of the Governor-General, the Crown's representative; the latter was indirectly ruled through paramountcy relations.

Table 1: States and their changing relation with the Krishna River

	Riparian states	Krishna river	
		Length (km)	Basin Area (sq km)
Before reorganization	Bombay	552	104,861
	Hyderabad	357	30,137
	Mysore	257	90,023
	Madras	193	33,926
Notes: 8 km along the common boundary between Bombay and Hyderabad; 290 km along the common boundary between Hyderabad and Madras.			
After reorganization	Maharashtra	300	69,425
	Karnataka	483	113,270
	AP	576	76,252
Notes: 6.4 km along the common boundary between Maharashtra and Karnataka; 42 km along the common boundary between Karnataka and AP.			

Source: Compiled from KWDI-I and KWDI-II awards (the length of the river across the constituents before independence might have varied depending on the source).

All the three states include parts of former presidencies and princely states. Maharashtra and AP were primarily carved out of the British India territories of Bombay and Madras presidencies, respectively. Karnataka, on the other hand, comprises largely the former princely states of Mysore and Hyderabad. All the three states have had their own fractured histories and hybrid sovereignties in their making. It is more so in the two downstream states. Maharashtra too has had its own share, but less so. Excepting the Marathwada region (part of Hyderabad princely state), most of Maharashtra was directly ruled by the British as part of the Bombay Presidency.

The princely state of Mysore was known as the Mysore Kingdom before it came under the direct rule of the British in 1799, when its ruler Tipu Sultan lost a war with Hyderabad state, aided by the British East India Company. After the war, the East India Company took over some parts, with other parts being incorporated into Hyderabad state. But after a series of insurrections from within Mysore, followed by famines and 1857 Indian Mutiny), in 1881, the Crown returned rule to a native ruler through its 'rendition,' and under conditions of paramountcy. Under this indirect rule, Mysore

suffered debilitating consequences.³² Later, through a series of changes in the British policy, mainly forced by obligations to the international community, Mysore came to enjoy a certain amount of autonomy in governing its internal affairs until independence (Hettne 1978, D'Souza 2006). But the iron grip of imperial rule continued to remain intact in other external and strategic matters. Effectively, most Kannada-speaking areas that today form the state of Karnataka remained under the indirect British rule for long periods before independence.³³ This history created its own regional distinctions in the united Karnataka: the actual Mysore state, the Hyderabad parts of Karnataka, and the Bombay parts of Karnataka.

AP shares an equally agonizing history. This Telugu speaking state's population was distributed between presidency and princely state territories during the colonial times. Its history of mutilation and discontinuity goes back to the times when most of the Telugu-speaking populations were part of Hyderabad state under Asaf Jah I of Hyderabad in the 1700s. But through a series of agreements for strategic cooperation, bits and pieces of Telugu-speaking areas became part of the Madras presidency, under the direct British rule. The rest of the Telugu-speaking areas, known as Telangana region (now a separate state), remained part of the Hyderabad princely state and under indirect rule of the British. Through agreements in 1759 and treaties in 1766 and 1768, the British came to gain revenue rights over Musilipatnam and other territories known as "circular districts." Later, the present Rayalaseema districts were also ceded to the British by Hyderabad in such exchanges. All the three regions were brought together following the reorganization of states in 1956. These different historical trajectories of the regions led to their own distinct regional identities and uneven development geographies. The parts under direct rule experienced a fair level of irrigation development much earlier as compared to those under the princely state. This uneven development was the source of frequent sub-regional movements - the recent creation of the new Telangana state being a case in point.

³² See Hettne (1978) for a comprehensive discussion of how indirect rule impacted the political economy of Mysore. For impacts of the British indirect rule on princely states and their economies generally, see Hurd II (1975a, 1975b).

³³ Some Kannada-speaking areas were also part of Bombay presidency.

PRODUCTION OF ASYMMETRIES:
SOURCES OF DISPUTES AND CONTENTIOUS POLITICS

a. Colonial constructions³⁴

The first formal dispute over Krishna river waters goes back to the agreement of 1892 between the Mysore princely state and the Madras presidency, an outcome of a dispute raised by the Madras presidency in June 1890. The Madras presidency had complained to the colonial government of India against construction of irrigation projects by the state of Mysore across Tungabhadra (a Krishna tributary) and Cauvery (or Kaveri, as it was known earlier) river systems. It alleged that their irrigation projects - the Kurnool-Cuddapah canal and the Cauvery anicut (dam) - would be adversely affected by Mysore state's proposed works. In legal parlance, Madras had claimed easement and prescriptive rights acquired on the basis of their long-standing use of water in the two river systems.³⁵ Madras's claims drew on the provisions of the Madras Compulsory Labour Act of 1858, the Madras Irrigation Cess Act of 1865, and the Indian Easement Act of 1882. All these acts had been either enacted by the British provincial governments or the Government of India in British India. They were applicable to their respective jurisdictions, but not to the princely states (D'Souza 2005, 2006).

D'Souza's (2006) incisive analysis establishes the asymmetrical power relations internalized in these negotiations of the 1892 agreement, which remain a source of contention even now. Madras as a presidency was under the direct rule of the colonial government of India, while Mysore state was a princely state under indirect colonial

³⁴ Besides the two tribunal award documents and the CWC's (1995) compilation of legal instruments on interstate water sharing, scholarly works on the Krishna dispute are limited to D'Souza (2005, 2006) and Hussain (1972). D'Souza's too relies primarily on these limited sources. In this particular section, I draw on D'Souza's (2006) and her sources.

³⁵ Easement is "a privilege, service, or convenience which one neighbour has of another, by prescription, grant, or necessary implication, and without profit; as a way over his land, a gate-way, water-course, and the like." Prescription is "a mode of acquiring title to incorporeal hereditaments [privileges or rights inherited] grounded on the fact of immemorial or long-continued enjoyment." (Black's Law Dictionary: <http://thelawdictionary.org>). As Hussain (1972) documents, twenty years of existence of irrigation works is fixed as the period for claiming prescriptive rights by Madras.

rule.³⁶ A Resident placed by the political department of the Government of India was based in the princely state to coordinate affairs on behalf of British India. The Dewan of the princely state communicated with the Crown's representative in India via the Resident.³⁷ Within the colonial hierarchy, the Resident represented the princely state's interests, while a Governor was responsible for presidency.³⁸ The paramountcy and subsidiary power relations under the colonial rule enabled the 1892 agreement and several other subsequent agreements. The prejudiced agreement of 1892 led to later disputes that resulted in Griffin's arbitration in 1913, and later, another agreement in 1924. Further agreements on Krishna waters in 1933, 1938, 1944, 1945, and 1946 were similarly unilateral and prejudiced in favor of the Madras presidency's interests (D'Souza 2006). Below I discuss these agreements briefly to demonstrate how the colonial power asymmetries came to be internalized - a postcolonial condition - which led to the recurrence of the dispute later.

In 1890, when Madras raised the dispute, Tungabhadra and Vedavathy were the main transboundary rivers between Mysore state and Madras presidency.³⁹ The agreement dated 18 February 1892 was titled as restrictive rules, "Rules defining the limits within

³⁶ After the Anglo-Mysore wars, Mysore was annexed to British India. But the British restored 'autonomy' by way of a subsidiary alliance and the Mysore state's rendition happened through an oppressive and opportunistic Instrument of Transfer which provided for: (i) the Governor General's right to derecognize the ruler if the native ruler was found unfit to rule; (ii) upholding the treaty of 1799, which ensured subsidiary alliance; (iii) Mysore state was to pay Rs 350,000 of subsidy per annum to the Government of India; (iv) restrictions on Mysore state's military resources and communication with other states; and, (v) obligations of Mysore state to provide land and other support for railways, telegraph and other infrastructure, and extradition of criminals. For further details of the rendition of Mysore state, see Hettne (1978). The transfer of the Mysore state to its native ruler happened because of increasing ungovernability of the state, which included frequent insurrections and the successive famines preceding the rendition. The rendition was to avoid the burden of governing the state. The relation is typical of 'indirect rule' characterized by subsidiary relation and semi-sovereign status of Mysore. A good deal of literature describes this relationship (Copland 2002; Fisher 1984; Hurd II 1975a, 1975b; Menon 1956).

³⁷ Resident was the representative of the Governor-General at a native court; Dewan was the prime minister of a native court (Henry Yule's *The Hobson-Jobson Anglo-Indian dictionary* at <http://dsal.uchicago.edu>).

³⁸ Even the appointment of Dewan of a princely state could occur only with the approval of the Government of India (Hussain 1972).

³⁹ Other rivers shared by the two entities are also included in the agreement, a total of 15 rivers including the Pennar, Chitravathi, Papagni, Palar, South Pinakini. Some of them are not part of the Krishna basin.

which no new irrigation works are to be constructed by the Mysore state without previous reference to the Madras Government” (Central Water Commission [CWC] 1995, p. 279). The agreement identified the categories of irrigation works not to be taken up by Mysore state without the prior consent of the Madras presidency. If any construction or repair work was to be taken up, full information had to be shared with the Madras government prior to the commencement of work. The Madras government was bound not to refuse consent as long as their prescriptive rights did not suffer. Any difference or dispute would be referred to mutually agreed arbitrators or those appointed by the colonial government of India. There was no provision for further appeal and the arbitrator’s finding would be final and binding. For those times, it was unusual to grant a downstream entity with such veto powers.⁴⁰

The then Dewan of Mysore, Seshadri Iyer’s response to Madras’s claims further illustrate the power relation at play. Iyer was a Tamil Brahmin and belonged to the cadre of British-trained officers.⁴¹ Yet Iyer had forcefully resisted Madras’s claims. In his memo to the Resident, Iyer countered the claims of Madras on valid grounds (D’Souza 2005).⁴² For instance, the laws of applying private property rights to water through prescription cannot be the basis for assessing whether one state’s action affects another state’s interests. It should be based on ‘higher grounds of public welfare and prosperity’. Even if the alien system of private riparian rights were imposed, practices

⁴⁰ This happened around the times of Harmon’s doctrine, the draconian principle of absolute territorial sovereignty, which advantages an upstream state. In the Rio Grande river dispute with Mexico, the Attorney General of United States, Judson Harmon opined in 1895: “The jurisdiction of the nation within its own territory is necessarily exclusive and absolute. It is susceptible of no limitation not imposed by itself. Any restriction upon it, deriving validly from an external source, would imply a diminution of its sovereignty to the extent of the restriction, and an investment of that sovereignty to the same extent in that power which could impose such restriction. All exceptions, therefore, to the full and complete power of a nation within its own territories must be traced up to the consent of the nation itself. They can flow from no other legitimate source” (McCaffrey 1996: 565-566).

⁴¹ Iyer, a Tamil Brahmin, was a choice over the local Mysore Brahmins. This administrative control by British-educated Tamil bureaucrats in Mysore princely state was also a source of rancor and social cleavage between the Kannadigas and Tamils. For some discussion on these fault lines, see Hettne (1978) generally, and specifically, p.72-74). These fissures resurfaced and became a source of social conflicts and linguistic nationalist politics in Bangalore and Karnataka in general (Nair 2005). This is one of the cultural fault lines over which political mobilization happened frequently in the Cauvery dispute.

⁴² The actual correspondence between the parties was reproduced in Hussain (1972), with Seshadri Iyer’s memo in pages 48-55. For a comprehensive legal critique of this memo and the agreement of 1892, see D’Souza (2005).

of international law do not deny the natural right to use water flowing through a territory, when it could not cause injury to downstream interests. If a claim for right of easement by prescription is indeed valid, can the 20 year term prescribed by the Easement Act be adequate to determine such rights?

However, Iyer's efforts proved futile in the end. Later, after the 1892 agreement, he appealed for maintaining an inventory of irrigation works in Madras and sharing the information to make the agreement work. But no such systems were put in place.⁴³ This lack of inventory had become an issue before Griffins's arbitration, over another dispute related to the Cauvery river system. When in 1910, Madras objected to Mysore's Krishnarajasagara dam, the colonial government of India referred the matter for arbitration. Griffins had supported Mysore's stand on the inventory.⁴⁴ The government ratified the Griffins's award, but Madras appealed to the Secretary of State for India who later suspended the award owing to its inadequate protection of Madras' interests (Gulhati 1972). Fresh negotiations later led to the agreement of February 1924, enabling the implementation of two other contested projects - the Krishnarajasagara dam in Mysore and the Mettur project in Madras.⁴⁵ This followed additional supplementary agreements, in 1929 and in 1933 on additional projects; and, in 1938 and 1944 on Tungabhadra waters (CWC 1995, 294-301).

The Griffins arbitration exemplifies the politics of interstate water dispute resolution under the colonial rule. The asymmetrical power relations internalized and institutionalized through the 1892 agreement could neither be assimilated nor mitigated by law. Attempts to correct these asymmetries by law were simply obliterated

⁴³ D'Souza (2005), drawing on Vani (1992) and Sengupta (1985), attributes this lack of systems to the impossibility of the task: first, the tank systems were largely community-managed; secondly, the Indian Irrigation Commission Report (1903) observed that it would be an enormous task. The 39,000 odd tanks in the Mysore province alone would take 15 years for 100 personnel (Vani 1992). But as Col Mc N Campbell's (Chief Engineer at Mysore) memo to the Indian Irrigation Commission (1903, p.320) puts it, the concerns were about cost effectiveness and utility of such an exercise, which conspicuously did not include the purpose of enabling the implementation of the 1892 agreement.

⁴⁴ For a more detailed discussion of the arbitration, see Gulhati (1972: 117-122). Also see Chauhan (1992:155-163).

⁴⁵ The power asymmetries between the two states underlined the effecting of the agreement of 1924: "the Cauvery dispute between Mysore and Madras, settled in 1925 was a dispute between British India and the other was (sic) a dependent princely state under the British suzerainty. The dispute was not settled by the appropriation of Law, but through the authoritative decision of the sovereign power or the British Crown." Berber (1959:180-81) cited in Hussain (1972:8).

by imperial power. These internalized asymmetries have remained a perpetual source of disputation, much more so in the Cauvery dispute (CWDT 2007).

The later agreements on Tungabhadra waters reflect similar a internalization of power asymmetries under the colonial rule. The Tungabhadra agreements of Madras were with the Hyderabad state, and did not involve Mysore in spite of its riparian status; nor the Bombay presidency, another riparian state to the Krishna river system.

These ad-hoc, prejudiced and fragmented agreements have had an important and complex bearing in shaping the post-independence interstate water disputes and their politics. After independence, two transitions are of import: (a) from a colonially ruled diverse amalgamation of presidencies and princely states to a federated republic of states; and, (b) transformation of these entities into semi-sovereign states with their own ethnic and linguistic identities and geopolitical imaginations. This marks the primary source of structural tension at the core of the interstate water dispute politics in India. This, in fact, is an important but a less explored feature of India's postcolonial condition.

In the immediately following sections, I engage with this postcolonial condition - the historical geographies of the structural conditions reproducing contestations over interstate river water sharing disputes. I pursue two lines of inquiry. First, I present how this postcolonial condition of asymmetries is central to the emergence and recurrence of the Krishna dispute. Second, I examine how the efforts towards resolving the dispute for a just and equitable water sharing arrangement are only temporary. The tenuous link between the two lines of inquiry is self-evident. The asymmetries produced by colonial histories have eventually been internalized structurally in the form of uneven historical geographies of development. These have to be reconciled to the realm of modern international customary law principles of equitable sharing between federal constituents after independence. For instance, illustrated in simple terms, the erstwhile indirectly ruled princely states generally lagged with respect to a large-scale irrigation infrastructure development, while directly ruled presidencies benefitted from advanced development.⁴⁶ Harmonizing the uneven geographies and achieving equity is a complex challenge and is fraught with frequent contestations.

⁴⁶ This is generally the case with a large-scale irrigation infrastructure provision, with the obvious advantage of the colonial power in technology and capital inputs. However, this may not be true in respect of all sectors and there may be exceptions of progressive princely states. For example, Kale (2014) has argued that Mysore state has had a progressive model in state-directed development and industrialization in comparison to the Madras and Bombay presidencies.

b. Postcolonial constructions

After independence, Krishna water dispute has recurred many times. But as a legally recognized dispute, it was adjudicated in the 1970s (KWDT-I) and the 2000s (KWDT-II). KWDT-I tribunal, headed by Justice Bachawat, adjudicated the Krishna dispute along with the Godavari river water dispute. KWDT-I gave its Further Report, the final decision in 1976.⁴⁷ The award came into force soon after that, and expired in 2000. By that time, several accumulated and irreconcilable disputes between the states led to the setting up of another tribunal (KWDT-II), headed by Justice Brijesh Kumar, in April 2004. KWDT-II gave its award in December 2010 and Further Report in November 2013.

The sharing agreements under the colonial rule were central to the deliberations before KWDT-I. In the seven major issues framed by KWDT-I, two concerned the pre-independence agreements of 1892, 1938, and 1944. The tribunal also had to adjudicate disputes over issues emerging out of other agreements after independence and the reorganization of states in 1956. KWDT-II, in 2004, had far more complex issues to resolve, framed as a long list of 30 issues. The range of issues and the manner in which the issues were adjudicated by the two tribunals, set apart by 30 years, offer illuminating insights not only into the transforming nature of disputes, but also the changing character of interstate relations. Here I trace the dispute to uncover the deeper structural and historical conditions contributing to the contestations over, and politicization of, the dispute.

b.1 The post-independence politics of producing the postcolonial

KWDT-I had to confront the contentious issues around the colonial agreements, which were further complicated by the post-independence territorial reorganization (states' reorganization in 1956). This was not just about a simple reorganization of states' boundaries, but about creating hybrid territorial identities - which were now based on linguistic homogeneity. The colonial agreements had been subjected to interrogation. The states' reorganization exposed the asymmetries internalized and, the fragmented

⁴⁷ The KWDT-I's scope included matters related to proposed diversions of Godavari River waters into the Krishna basin by some states. Hence the party-states initially included riparian states of Godavari - Madhya Pradesh (now divided into two states - Madhya Pradesh and Chhattisgarh) and Odisha (then Orissa). After the proceedings commenced, the party-states declared (on 19 April 1971) that they would not seek any mandatory order for such diversions of Godavari waters to the Krishna river. Hence the two riparian states of Godavari were excluded from the dispute (KWDT-I 1973, page 3).

and arbitrary nature of the agreements. Consider the following related issues framed by KWDT-I for adjudication:

III: Is the Agreement of July, 1944 valid and subsisting and, if so, with what effect? Was it invalid as Bombay, Sangli and Hyderabad were not parties to it? Was it rendered ineffective by the Supplemental Agreement of 1945? Did it survive on the merger of the princely state of Mysore in the Republic of India? Had it ceased to be operative on the reorganisation of states?

IV: Are the Agreements of 1892 and 1933 so far as they relate to river Krishna and its tributaries subsisting and, if so with what effect? Did they survive on the merger of the princely state of Mysore in the Republic of India? Have they ceased to be operative on the reorganisation of states?

In reconciling to these challenging questions, the party-states' arguments took advantage of their vantage positions. AP relied on a case of contractual obligation, whereas Karnataka based its arguments on historical prejudices: "...AP's conception of justice and equity was a legal and contractual one, whereas Karnataka's was a historical and political one" (D'Souza 2006, 193). This typically illustrates the conundrum: the conflict between the historical and colonial contradictions and the ideas of equitable apportionment. Righting historical prejudices would not be easy. The irreversible uneven development of water resources, and the legal principles of *qui approbat non reprobat* create a particular kind of tenuous structural condition, bearing a propensity of a prolonged litigation. This sets a limit on the law.

KWDT-I chose not to adjudicate some of these matters. It encouraged a political solution, asking the two states of AP and Karnataka (the state of Maharashtra had no interest in this issue) to resolve the issue through mutual negotiations and deliberations. Subsequently, the two states arrived at a series of agreements. In an agreement dated 2nd September 1971, the two states agreed on a schedule of projects in the Tungabhadra system beyond which they would not take up new works without each other's consent. This was a partial reconciliation of issues listed under Issue IV, and was included in the final order of KWDT-I award.

In another, dated 23rd October 1972, the two states requested the tribunal not to decide Issue IV and declared they would not ask for any relief on the basis of the 1892 and 1933 agreements (KWDT-I 1973, pages 45-46). The two states also requested the tribunal not to decide on the enforceability of other ad-hoc agreements made in 1944,

1945, and 1946, listed under Issues III and IV. The tribunal consented and did not allow any further arguments on these issues.

The tribunal incorporated these mutual agreements of the states in their order and ruled that their order would supersede all the earlier agreements made during the colonial rule - those of 1892, 1933, 1944, 1945, and 1946. The respective proportions accrued via the agreements were accounted for in the state-level allocations on the basis of equitable apportionment principles (KWDT-I 1973, 47). D'Souza (2006) argues this integration of the colonial era agreements as an instance of internalization of colonial power relation: "In incorporating the 1892 and 1933 Agreements in a form modified and acceptable to the parties, the KWDT[-I] internalized what was until then a problem imposed by the externality of colonization" (p.195).

I have partial disagreement with D'Souza's reading here. It is true that the colonial contradictions have been internalized in this process. But it is not the law (KWDT-I), but the political ecology - the irreversibility of water use that led to internalization. The tribunal had recognized the irreversible nature of these colonial contradictions and the inequities within the Tungabhadra sub-system. It tried to address this inequity through politically negotiated settlements, not entirely though. It responded within the limits available, allowing state level allocations to compensate for the Tungabhadra sub-system inequities. Thus, it deployed the politics of re-scaling through negotiated agreements as a strategy for addressing inequities and defusing disputes.

It is, however, true that within the Tungabhadra sub-system, the asymmetries and unevenness represented a tenuous structural condition created by the history of colonial rule. It might not have been a source of recurring contestation in the Krishna dispute, after this negotiated settlement facilitated by the tribunal. But in respect of the Cauvery dispute, these colonial agreements did remain a source of contestation (CWDT 2007).

The reproduction of colonial and imperial power relations is not just limited to the uneven geographies of development and the associated asymmetries. D'Souza (2006) has argued that the imperial style of functioning of institutions from colonial era has had other impacts. In 1951, the Planning Commission had sponsored an interstate agreement to enable the states meet their immediate interests of irrigation development. This was a major source of contestation later before KWDT-I. The agreement was also challenged after the 1956 states' reorganization, when CWPC attempted to reallocate the shares in 1959-60 (KWDT-I 1973, 35). The states disputed the validity of this agreement as also several specific projects taken up after the

agreement: Mysore's abstraction of supplies by Gayathri reservoir in 1957, Bombay's Koyna project in 1958, another Mysore project on the Ghataprabha in 1959.

Mysore claimed this agreement invalid, arguing that it was not bound by it as it had never ratified it. The other two party-states, Bombay and AP, claimed it to be a ratified agreement. The conference was attended by the four riparian states of that time: Bombay, Mysore, Hyderabad, and Madras. The three states of Bombay, Hyderabad and Madras had projects already lined up; but Mysore was lagging in its plans as a state newly integrated (in 1949) into the Indian Union. The three states presented their needs and demands with much preparation, but Mysore was ill-prepared for the conference. Mysore's Chief Minister, K C Reddy, attended the conference, but not participated in all the sessions, nor the technical personnel from Mysore attended; but the conference had negotiations with the participation of technical teams from the other states. In a session he attended on the first day, Reddy handed over a note with utilization details of Krishna waters in Mysore, which was not part of the technical note already prepared for discussion by CWPC. This technical note differed from Reddy's note and assessed Mysore's needs at 124 TMC, whereas Reddy's note had it as 148.6 TMC. In the final memorandum of agreement, Mysore was allocated a share of 118.5 TMC, less than that from either note (KWDT-I 1973, p.32). Later, the three other states ratified it, but Mysore did not. Both Maharashtra and AP argued that Mysore state was party to the agreement. The tribunal examined the evidence and ruled the agreement invalid. It also noted that the Planning Commission had no authority to award allocations.

D'Souza (2006, 203) argues that the presumptive notions of the Planning Commission in allocating shares, and the imperial style of federal governance by the GoI, were inherited from the former colonial government. Indeed, the casual approach to water allocations, the arbitrary nature of arriving at agreements, and the presupposition of ratification support her contention. In the interim period between the agreement and the tribunal's adjudication, the Planning Commission continued to clear and sanction projects on the basis of the supposed agreement of 1951. This further widened the disparities in irrigation development between Karnataka and the other states. These asymmetries characterize the postcolonial condition of interstate water disputes.

b.2 Boundaries, reterritorialization, and recurring disputes

From a union of 14 states at independence, India now has 29 states with state boundaries reorganized several times. These boundaries overwrite several other fault lines inscribed from the colonial era, of loosely federated British ruled presidencies and hundreds of princely states. These diverse territorial identities continue to remain relevant to the formation of identities and their articulation, in terms of political mobilization

(Wood 1984). This geopolitical genetic code of the Indian Union does disrupt often the cartographic territorial representations.

The linguistic-based reorganization of state boundaries in 1956 complicated the sharing arrangements in addition to becoming a regular source of disputation between the riparian states over Krishna waters. The creation of Andhra state in 1953 involved the transferring of some Kannada-speaking blocks from Bellary district of Andhra state to Mysore state, and further more in the 1956 states' reorganization. Subsequently Mysore state insisted on reconsidering the 1951 agreement-based allocations taking into account this inclusion of new territories; the state refused to ratify the 1951 agreement until this could be achieved (KWDT-I 1973, p.34).

The states' reorganization in 1956 also brought together Telugu-speaking parts of Hyderabad state and Andhra state as a unified state of AP. As with Mysore, AP state also demanded additional allocations on account of this. However, KWDT-I relied on the provisions of the States Reorganization Act of 1956, providing for the centre's directions whenever the states failed to arrive at mutually agreed arrangements. To illustrate the complexity of issues, some key decisions by the KWDT-I are presented here.

(i) Mysore's claim over the releasing of water from Koyna hydroelectric project in Maharashtra: The Koyna hydroelectric project, conceived in 1952, envisioned the provision of irrigation water to Bijapur district (then in Maharashtra) through lift irrigation. But after reorganization, Koyna remained in Maharashtra, while Bijapur became part of Mysore. In the meanwhile, Koyna project's costs escalated and providing lift irrigation to Bijapur proved economically infeasible. In 1958, Maharashtra offered to provide irrigation water to Bijapur, provided Mysore bore the cost. But Mysore was unwilling to agree, claiming that Bombay was obliged to provide irrigation water to Bijapur district. However, KWDT-I decided against this claim.

(ii) Mysore's claim over the release of water from Ajra storage dam in Maharashtra: Maharashtra proposed that the Ajra dam on the Hiranyakeshi River under the Ghataprabha Valley Development Scheme remain with Bombay state after reorganization, even though part of the area to be irrigated belonged to Mysore. Mysore claimed that Maharashtra remained obligated to supply water to these areas from Ajra dam, though during the proceedings, Mysore relented on this demand.

(iii) AP's demand for extension of the Tungabhadra Left Bank low level or the UKP to meet the irrigation requirements of Gadwal and Alampur talukas (administrative

unit below district). The scheme was a collaborative project between the states of Madras and Hyderabad at Mallapuram, and envisioned a Left Bank low level canal extending up to 127 miles into Raichur district, then bifurcating into North and South Gadwal branches to serve parts of Gadwal and Alampur talukas of Raichur district, but restricting the irrigated area to 450,000 acres.⁴⁸ The UKP proposed by Hyderabad state was to supplement irrigation for the two talukas. The entire Raichur district was part of Hyderabad state before states' reorganization, but was subsequently transferred to Mysore state, excepting the Gadwal and Alampur talukas which became part of the AP state. AP claimed that Mysore was obligated to extend the canal branches, or to include the talukas under the UKP for providing irrigation water in the two talukas. However, the tribunal relied on the recommendations of the Krishna Godavari Commission (Gulhati, Jaini and Hoon 1962), while denying the claim. The tribunal also stressed the Krishna Godavari Commission's suggestion about AP seeking cooperation from Mysore state for providing irrigation water to the two talukas while observing that demanding through a formal process could only result in a vigorous opposition by Mysore state.

(iv) AP's demand for extension of Bhima project: Before reorganization, Hyderabad had envisaged a Bhima reservoir project near Tangadgi in Gulbarga district for irrigating an area of 400,000 acres in Gulbarga and Mehboob nagar districts. But, after reorganization, most parts of Gulbarga, including Tangadgi, got transferred to Mysore state, while Mehboob nagar district became part of AP. After reorganization, AP wanted to proceed with the reservoir project with head works at Tangadgi to serve the irrigation needs of Mehboob nagar district. On the other hand, Mysore state wanted the two projects - Bhima Lift Irrigation Scheme at Sonna and Bhima Irrigation Project at Sonthi - to meet the irrigation needs of Gulbarga district. However, the tribunal did not consider the proposals in the absence of necessary sanctions.

(v) AP's claims over power from Munirabad Power House: Before reorganization, Hyderabad state had constructed the Munirabad Power House. After reorganization, the Tungabhadra Left Bank Canal and the Munirabad Power House came under Mysore state's control. AP claimed a share of power from Munirabad Power House, while arguing for vesting the control of the Power House with the Tungabhadra Board. However, the tribunal determined that AP was not entitled to any share of power from the Munirabad Power House and also denied vesting its control with the Tungabhadra Board.

⁴⁸ The rest of the irrigation needs of the two talukas were to be met by another Upper Krishna Project. This also was to be decided by the tribunal.

These issues were decided strictly by the provisions under the States Reorganization Act 1956. But it cannot be claimed that these issues were resolved fully. The decisions of the tribunal left loose ends and ambiguities that eventually reappeared in modified forms. The following examples illustrate this. The tribunal did not find any merit in AP's demand for the extension of either the Tungabhadra Project or the UKP for providing irrigation to Gadwal and Alampur talukas. Even though the two projects originally were to provide irrigation water to the two talukas, they did not qualify for irrigation provision due to the transboundary administrative constraints. But there was no doubt about the technical feasibility or historical validity in the claim with respect to meeting the irrigation needs of the two talukas by the two projects of Mysore. If the two talukas were part of Mysore state, it would have been a possibility; rather it would have been an obligation on the part of the Mysore state. The tribunal's observation that AP would not succeed if it pursued the formal means, reflects the structural constraints and limitations of formal and legal approaches in addressing them. The tribunal instead recommended political solutions through 'mutual cooperation and adjustments,' outside the legal spaces of adjudication.

The implementation of the Tungabhadra related agreements was another example where reconfiguration of state boundaries had been a source of regular disputation. The problem was one of those recurring ones, and had to be addressed by both KWDT-I and KWDT-II. Both the tribunals ruled that the existing arrangement should continue till a Krishna basin level governance mechanism was put in place. However, this did not materialize and the transboundary tensions persisted. The Tungabhadra project was a pre-independence collaborative project between the Mysore state, the Hyderabad state and the Madras presidency. The Tungabhadra Board was created to manage the project through a presidential order in 1953. AP was not unified then, but was a recently separated Andhra state. After the reorganization in 1956, the left canal system became part of the Mysore state. The right side canal systems crisscrossed the boundary between Mysore and AP, first flowing through Mysore, then in AP before re-entering Mysore state.

Another project, the Rajolibanda Diversion Scheme (RDS) also turned a transboundary project with the head-works, about 27 miles off the main canal with a command area of 5,600 acres in Mysore state limits, and the rest of the canal with 87,000 acres of command area in AP limits. Before KWDT-I, AP argued that these portions should also be managed by the Tungabhadra Board. Till then, only the right half of dam, right bank low level and high level canal systems and two power houses had been entrusted to the Board. Mysore demanded that the Board itself be abolished, charging the Board

with a partisan approach against Mysore.⁴⁹ KWDT-I, however, declined to engage with these arguments (partly for reasons of lack of jurisdiction) and recommended continuing with the existing arrangements until the government decided to put in place a mechanism for the entire Krishna basin.⁵⁰

The differences continued to simmer before eventually coming up before KWDT-II as well. When Karnataka proposed a mini-hydel project on the common pondage of RDS, AP objected to it and thus came up as an issue before the tribunal. The tribunal considered various factors including the critical importance of RDS in serving the drought-prone areas of AP, before directing Karnataka not to implement the project (KWDT-II 2010, 571-572). AP argued again, before KWDT-II, that the Tungabhadra Board should take over the portions on either side of the boundary. However, KWDT-II denied this before ruling that the existing arrangements should continue till a Krishna basin-level mechanism was put in place.

The Telugu Ganga project is the other instance of a sustained source of disputation, partly due to the reorganization of boundaries. This project for augmenting Krishna waters for Chennai's water supply needs goes back to a Krishna-Pennar link proposed in 1951 (before the reorganization of Madras state) for providing irrigation to parts of Rayalaseema and, an assured power and water supply to Madras and other cities with an industrial development potential. The project did not take off at that time; instead the Nagarjuna Sagar project was taken up (KWDT-I 1973, 136). But the idea of Krishna as a potential water supply source for Chennai city remained. The proposal was discussed in the Parliament in 1963,⁵¹ before being revived by an initiative in 1976-77 by the then Prime Minister, Indira Gandhi - as noted earlier. In October 1977, the three states and the GoI entered into an agreement permitting the state of Tamil Nadu to draw 15 TMC (5 TMC each from the riparian states' shares) from Srisailem reservoir during 1 July to 31 October. Maharashtra and Karnataka alleged before KWDT-II that AP

⁴⁹ This was the position of Karnataka at that time; but later during the time of KWDT-II, the state changed its position. The administration and maintenance of canals came under Karnataka and the state had no interest in maintaining the head-works for the tail end areas of AP.

⁵⁰ The tribunal also felt it could not override an already existing agreement between the two states. In this agreement of 1959, the two states had agreed to share the liabilities of RDS, as per the proportions of water quantity allocations under the scheme. And, in another mutually agreed arrangement dated 25th January 1971, the two states submitted a scheme for sharing of benefits from RDS before KWDT-I.

⁵¹ <http://basemaps.in/pdf/TGP.pdf>, last accessed on 24 December 2013.

violated this agreement by expanding the canal and using it for irrigation purpose as well. The tribunal determined that the agreement of 1977 was with reservations from AP about using the canal exclusively for Chennai's water supply (KWDT-II 2010, 717).

b.3 The boundaries unbound

The tension between the physical boundaries of river basin and the states' administrative boundaries is the other common source of disputation. The former is a physical boundary determined by hydrology, while the latter constructed by cartographic territorial representation for administration - often delineated on the basis of language or culture. The question of whether the allocated water from a river should be utilized only within a river basin's boundary or, whether it could be used for requirements outside the basin boundary but within the riparian state concerned - is a challenging and complex one. This question could not be resolved by legal approaches. Recognizing this, KWDT-I encouraged resolving the problem through deliberative processes. The Issue VI, about diversion of Godavari river water for supplementing Krishna water, illustrates this tension best (KWDT-I 1973, 67).

Issue VI: Is it possible to divert waters from the river Godavari to the river Krishna? Should such diversion be made and, if so, when by whom, in what manner and at whose cost? Is the Tribunal competent to adjudicate on these questions?

Mysore and Maharashtra states' worries of dealing with deficits have led to raising of this issue. The utilization claims of all the three riparian states together before KWDT-I had aggregated to 4,146 TMC, which was much higher than the total available water in the Krishna, estimated to be 2,060 TMC at 75% dependability. The two states accused AP of over-appropriation of Krishna waters, and asked that AP should explore the options of diverting Godavari waters for meeting its demand beyond its legitimate share in Krishna waters. AP questioned whether it would be within the remit or scope of a water dispute under IRWDA for the tribunal to give such directions. It also claimed that diversion of allocated resources within its jurisdiction was its own internal matter. The state did not want to consider the option, fearing that it might harm its interests related to Krishna waters. Mysore and Maharashtra argued that in the event of AP deciding to divert Godavari waters to Krishna, the two states should be allowed to claim benefits from the diverted waters. The tribunal rather preferred a political solution. Accordingly, the states got together and agreed to the following, which the tribunal included in its order (KWDT-I 1973, 66):

(1) Parties have agreed that each of the states concerned will be at liberty to divert any part of the share of the Godavari waters which may be allocated to it by the Godavari Tribunal from the Godavari basin to any other basin.

(2) In view of the pleadings and the statements of the states concerned, none of the states asks for a mandatory order for diversion of the Godavari waters into the Krishna basin.

The states arrived at this agreement to keep allocations of the two river basins separate. This agreement helped the tribunal defer a potentially tenuous implication of augmenting Krishna waters through a transboundary diversion, but posed the challenge of managing (in)equities at intersecting boundaries - hydrological and geographic. The agreement allowed the tribunal to initially contend that any such diversion could be contested when its award would become due for review after 31 May 2000 (KWDT-I 1973, 230). But Mysore raised this issue again during the explanatory hearings, claiming that such diversion was feasible under the proposed Polavaram project well before the 2000 review date.⁵² Thus AP would have an undue advantage until the award expired. Further, the tribunal's decision would prevent other states from agitating over the over-subscription of Krishna waters until then. The tribunal then modified its award, allowing a review before the award expired, clause XIV(B):

In the event of the augmentation of the waters of the river Krishna by the diversion of the waters of any other river, no state shall be debarred from claiming before any authority or Tribunal even before 31st May, 2000 that it is entitled to a greater share in the waters of the river Krishna on account of such augmentation nor shall any state be debarred from disputing such claim. (KWDT-I 1976, 101, underlined emphasis mine)

Thus did the tribunal recognize the need of the states to contest in the event of an additional availability of water through diversion, before the award expired. But it did not deliberate where or how, for no other court could adjudicate such a matter; the only possibility was that the states could seek another tribunal to adjudicate the

⁵² The Krishna-Godavari Commission (1962) looked into the diversion of Godavari waters, and suggested the Polavaram project as an option. The Parliament also discussed this in 1963. The project included a dam at Polavaram with a link canal feeding into the Krishna close to the Prakasam barrage, irrigating lands in West Godavari, Vizianagaram and Visakhapatnam districts. However, the project has been at the centre of politics in recent times, before and after Telangana's separation from AP. See Gujja et al (2006) for conflicting perspectives of diverse political actors in the state.

matter. This, however, did not happen, as the Polavaram project failed to materialize by 2000.⁵³ KWDT-II also had to address this issue of augmentation of Krishna waters from external sources. The Polavaram project was brought up again and KWDT-II reaffirmed the right of the states to claim greater shares (KWDT-II 2010, 681).⁵⁴ This remained a space for disputation among states.

Diversion of waters outside of the Krishna basin had also been a source of recurring disputation. Both the tribunals of Krishna had dealt with these instances, relying on the precedents in the relevant international customary law. The dispute arose because of the different positions of party-states regarding the diversion of waters outside the basin boundary. Mysore had no such instances, nor plans to divert water outside the basin. Presumably for this reason, the state argued that such diversion was illegal. But the other two states already had instances of diverting waters outside of the Krishna basin. Maharashtra's Koyna project involved diverting water outside the basin, both for power generation and irrigation. AP was diverting outside basin in more than one instance. AP held the position that such out-of-basin transfers should be allowed only for irrigation requirements. KWDT-I evolved some principles to follow drawing on the US case law, and other relevant debates in international customary law.

- (i) Diversion of water outside the Krishna basin is legal as long as the diversion is for the benefit of the areas situated within the territorial boundaries of the riparian states.⁵⁵
- (ii) As a principle of equitable apportionment, future requirements within the basin have to be prioritized over those outside the basin.
- (iii) All existing uses outside the basin have to be protected at par with the uses within the basin.

In evolving these principles, the tribunal upheld the epistemic authority of administrative boundary over hydrological conception of boundary.

⁵³ In an agreement before the Godavari Water Disputes Tribunal (also headed by Justice Bachawat), the three states of Maharashtra, Karnataka, and AP arrived at an agreement in 1975 about sharing waters of the Polavaram project. With the projected diversion of 80 TMC, the three states agreed to share 14, 21, 45 TMC respectively.

⁵⁴ In a reverse diversion, Maharashtra proposed diverting Krishna waters to the Godavari basin for a project. The tribunal negated the proposal, reiterating the principle of prioritizing in-basin requirements (KWDT-II 2010, 682).

⁵⁵ The tribunal clarified that it did not have any opinion about diverting waters to areas situated in non-riparian states (KWDT-I 1973, 126).

A state is one integral unit and its interests encompass the well being of all its inhabitants within its territory including areas outside the river basin. Under Section 3 of the Inter state Water Disputes Act, 1956, the crucial question is whether the interest of the state or of any of its inhabitants in the waters of the interstate river and river valley is prejudicially affected by the action of another state. Thus, the relevant consideration is the interest of the state as a whole and all its inhabitants and not merely the interest of the basin areas of the state (KWDT-I 1973, 126-127, underlining in the original).

KWDT-II (2010, 485) also concurred with this interpretation. This has an important implication for politics of mobilization around water and the idea of rights over river waters. It is not the physical boundary or any limited sense of spatial proximity to the boundary that determines the territorial association of river waters. But it formally recognizes the cartographic boundaries as the basis for geopolitical imaginations of territorial associations. Thus, it essentially allows for political mobilization by interest groups to the scale of state, bringing the identity politics of “us” vs “them” into play (Chokkakula 2012).

Using this interpretation, the tribunal decided to protect several existing projects in AP involving the diversion of Krishna waters. Mysore and Maharashtra, while agreeing in principle, disputed the extent of protection to be provided. The tribunal had eventually decided to provide protection fully to these works, outside the basin, but within the territory of a state. The projects, listed below, illustrate how the notion of territory matters in protecting the rights of a state.

- (i) The Krishna Delta Canals and the Guntur Channel: the Krishna Delta canal system, constructed in 1855, supplies water to extensive delta areas. The Guntur Channel supplies water to the higher lands adjoining the Krishna delta area outside the basin.
- (ii) The K-C (Kurnool-Cuddapah) Canal, constructed in 1866 on the Tungabhadra, takes water to famine-vulnerable areas in Kurnool and Cuddapah districts. About 90% of these areas fall in the Pennar river basin.
- (iii) The Tungabhadra Right Bank High Level canal and the Nagarjunasagar Right Bank Canals cater to the irrigation needs in areas that fall in the Pennar river basin.

Maharashtra’s westward diversion, outside the basin, in the Koyna hydro-electric project was one of these projects that had been a long-standing source of dispute. This issue had to be addressed by both the tribunals. Maharashtra was diverting

Krishna waters westwards for power generation for over a half century, using two major sets of projects: the Tata Hydel Projects diverting 42.5 TMC (+2.4 TMC for evapotranspiration losses); and the other, the Koyna hydro-electric projects of 67.5 TMC (+7.3 TMC for evapotranspiration losses). The two projects together accounted for an annual utilization of 119.8 TMC. The quantity of diversion was not to exceed this limit, as per the agreements reached at the Planning Commission's interstate conference in 1951. Maharashtra had proposed to divert an additional 32.5 TMC, and further to expand to include several other multi-purpose projects involving diversion of another 108.1 TMC, taking the planned diversion to a total of 260.4 TMC. The lower riparian states' opposition to these proposals was one of the primary reasons for calling the interstate conference in 1951.

This was one of the instances of tribunals resorting to a context-specific and discretionary decision making - here in response to changes in priorities over time. Maharashtra wanted to supplement the irrigation needs of Ratnagiri and Kolhapur districts - places already endowed with an assured rainfall - through diversion. KWDT-I felt that such supplementing could be achieved through other possible projects. KWDT-I relied on international and interstate water conflict cases to determine that there could not be any pre-set or preferred order of water use priorities. It concluded that it had to be contextual and contingent, and that the order of priority could vary depending on economic, social, cultural, and technical factors specific to the particular spatial and geographic context.

KWDT-I's approach marked this highly context-specific and contingent view about prioritizing the use in investigating Maharashtra's power generation project proposals. It considered the alternative sources, the benefit-costs and water losses outside the basin as compared to potential benefits if water was used within the basin, not only from the Krishna basin's development perspective, but also from India's overall needs of achieving food security at that time before arriving at the following guidelines:

- (i) Projects which will add to the food production in the country must receive priority over projects relating to other uses of river waters.
- (ii) Projects which are more remunerative in direct financial returns, in terms of cost of irrigation per acre or per unit of power generated and in total benefit to the community, and those which would yield quick results should be given preference.
- (iii) Region-wise requirements of food and power must receive due consideration, and also the need of backward areas (KWDT-I 1973, p.140).

The tribunal reiterated its reservations about these guidelines becoming a precedent for deciding any other contentious issue or in the context of any other basin: “Regional needs and the best means of developing the region on the basis of its geography and the natural advantages available to it must receive due consideration” (KWDT-I 1973, p.140). The emphasis on geographical context and the need for flexibility in prioritizing uses were the key points here. Using this rationale, the tribunal determined that the state of Maharashtra had other alternatives for power generation, whereas 75-78 percent of the population within the basin depended on agriculture. Considering climatic and physical characteristics, irrigation within the basin was to be preferred to westward diversion for power generation. The tribunal denied a further westward diversion by Maharashtra, restricting the existing and permitted diversion to 67.5 TMC for the Koyna and 42.5 TMC for the Tata Hydel projects. It ruled that the westward diversion could in no way exceed these limits (KWDT-I 1973, 148).⁵⁶

This contingent, flexible and discretionary prioritization can be further illustrated, if we look more into this case. Maharashtra persisted with its demand for additional diversions to generating power. Eventually, it had to be adjudicated by the second tribunal. KWDT-II also used this context-specific contingent prioritization, but with contrasting priorities. This time, KWDT-II prioritized Maharashtra’s power generation needs over irrigation, while allowing the additional diversion outside the basin. It allowed 25 TMC from a 65% dependable flow for the Koyna project, recognizing the changed political economy priorities of the country; it felt that the priority was no longer food production. Now, electricity generation for the rapidly growing Mumbai and other cities was to be given preference (KWDT-II 2010, 785-786).

This eclectic application of approaches to resolving the tension between the physical hydrological boundary and the political boundary is noteworthy. It required a combination of techno-legal, deliberative and political approaches to addressing the disputes emerging from diversions into, and outside the basin. This gives us a sense of the policy and institutional space needed for resolving these conflicts - a space that provides for applying such diverse approaches (Chokkakula 2013).

⁵⁶ The tribunal noted that Maharashtra had been breaching this limit of 67.5 TMC for a few years, and in 1971, it was more than 97 TMC. Upon Maharashtra’s request, the tribunal allowed a transitional period of 20 years for reducing this diversion back to 67.5 TMC, with the consent of the other two states.

b.4 Prior-appropriation rights: the historical-geographies of spatial inequities

History-induced uneven geographies of irrigation development, colonial-rule produced or otherwise, pose a complex challenge. It is particularly so with river water use rights, as these are guided by the doctrine of *qui approbat non reprobatur*. Historically, AP had achieved advanced levels of irrigation development compared to the other two states.⁵⁷ This is also partly an outcome of colonial rule; AP was part of Madras presidency and hence was able to receive early and sustained investments in irrigation development. By the 1970s, it had already appropriated a substantial portion of Krishna waters. AP wanted to protect its existing uses. The state argued that all the committed uses before the 1951 conference and later up to 1960 should be protected, and that the water unutilized after 1960 be considered for *de novo* allocation. However, Mysore and Maharashtra disputed AP's claims. KWDT-I's extensive review of precedents favoured protecting the existing uses, with almost no exception (KWDT-I 1973, 98-101).⁵⁸ The case law material from the USA used priority of prior-appropriation as a guiding rule. Indian law, both in the Indus Commission report earlier cases held that existing uses were to be given superiority of right. International Customary Law principles such as the Helsinki Rules (International Law Association: ILA 1967), include existing and reasonable uses as an important factor in equitable apportionment.⁵⁹ KWDT-I held that protecting the existing uses was to be preferred to contemplated uses, unless the latter offers benefits outweighing the former.

Thus, the historical geography of utilization was a central factor in adjudicating the Krishna dispute. KWDT-I recognized that all the projects reasonably committed until the September 1960 interstate conference were to be protected. KWDT-I encouraged the states to arrive at a mutual agreement on *de novo* allocation of Krishna waters - which they did eventually. The states arrived at a collective agreement on

⁵⁷ The central coastal districts of AP in the Krishna basin and delta areas were one of the first sites to experience irrigation development, way back in the late 19th and early 20th century. See Ranga (1926), Washbrook (1973), Upadhyaya (1988a, 1988b) for an interesting account of early irrigation development, capital accumulation and associated politics in coastal Andhra districts.

⁵⁸ The exception noted was the case, *Nebraska vs. Wyoming*, where junior uses of Colorado were preferred to senior uses of Nebraska. The exceptions were not about whether existing uses had to be protected or not, but about within the existing uses: whether the recent or earlier should be protected. Here the criteria of which use was more beneficial prevailed in the decision making.

⁵⁹ The later and refined rules of ILA, the Berlin Rules (ILA 2004), also held a similar position with respect to existing uses.

the list of projects to be protected in their states. The tribunal gave decisions on other projects where the states disagreed, such as: the Krishna project on the Venna river in Maharashtra, the Gokak canal in Mysore, allocations for the Srisailem and Nagarjunasagar projects, and protection for Krishna Delta Canals. The same benchmark was used largely in these rulings: the projects that began construction before the 1960 reference point were to be preferred to contemplated uses.

However, there were a few instances where the tribunal deviated from this norm. These instances further showcase the flexible, subjective and discretionary nature of adjudication by the tribunal. AP had gone ahead with the Srisailem project despite formal protests from Maharashtra and Mysore in 1960, taking permission from the Planning Commission. The tribunal refused to provide protection against evapotranspiration losses on the grounds that the state had disregarded the protests of co-riparian states. In respect of the Nagarjunasagar project, the tribunal allowed the construction of crest gates. This was despite the Planning Commission's earlier refusal on the grounds that AP needed carryover storage capacity.⁶⁰ In some other projects, the Tungabhadra agreements during the colonial rule provided the basis for preferential allocation, for examples, the Bhadra Reservoir Project, the Tungabhadra Left Bank Canal project, and the Vijayanagar Channels in Mysore. Similarly, the issue of protection to minor irrigation works (using less than 1 TMC annually) by prior-appropriation rights was also resolved, again through a mutual agreement between the states concerned.

Prioritizing by protection of prior-appropriation rights introduced a form of inequity, which had to be addressed for applying equitable apportionment principles. An added complexity was the spatial association of these projects. The locations of the projects were geographically determined and were already in place, and operational. They were identified sub-basin wise (K1-K12 as in Figure 5) to protect the prior-appropriation rights of the states. But these spatially-fixed projects and their irrigation benefits were unevenly distributed, both within the states, and across states. It is important to note here that this unevenness or more precisely, the spatial inequities further multiplied the challenges posed by historical uneven irrigation developments in

⁶⁰ This is another specific characteristic of allocation of waters associated with rainfed rivers like Krishna. In order to exploit the water available to the maximum extent, the tribunal ruled that the states should be allowed to construct carryover storage capacities. This additional augmentation capacity sometimes allows states, particularly the upstream states, to store more water than their allocation, which could lead to contestation.

realizing and implementing the idea of equitable apportionment. These multiple inequities materialized at different scales, depending on the size of projects, were often the sources of contestations. These offer opportunities for localized political mobilization by interest groups and political actors, which escalate as interstate water disputes depending upon the contingent political opportunities.

c. Limits to knowledge: data, information and technical ambiguities

The particular characteristics of water's political ecology manifest in the uncertainties and ambiguities linked to its spatial and temporal availability. The technologies of producing knowledge about water availability can only minimize the limitations, but are not entirely definitive or flawless. The generation of data, organization of information and analysis for knowledge production are frequently contested and are a source of disputation. In here, I discuss a variety of differences and a range of contested forms of knowledge about water availability, use and allocations. Much of this discussion draws on the two tribunals' engagement and proceedings around the related issues. This does not mean that these disputations are restricted to the realm of litigatory spaces of tribunals. The techno-legal arguments directly impact and shape the politics of interstate water disputes, and their outcomes. This is best illustrated by the episodic escalations of interstate water disputes, especially during distress periods.

For instance, consider the recent escalation of the Cauvery dispute in 2016. In spite of the Cauvery tribunal award in force since 2013, the dispute has escalated to a point of civic unrest and violence over the release of waters due to Tamil Nadu. The state of Karnataka claimed not enough waters to release, while the state of Tamil Nadu agitated for its due share to protect its cropping season. Although the distress formula awarded by the tribunal was contested, the states disagreed on the waters available in Karnataka for it to release to the downstream state. Tamil Nadu approached the Supreme Court. The court, without the benefit of a direct access to ground realities, ordered the release of waters as per the tribunal award, first at the rate of 15,000 cusecs and later at reduced rates. Karnataka refused to comply with the order claiming not enough waters to release at that rate. With a sustained defiance on the part of Karnataka state, the Supreme Court constituted a high level technical committee to assess and recommend the appropriate rate at which Karnataka should release. The committee recommended at the rate of 2000 cusecs after assessing the ground level situation of water availability. This process took about six weeks; over this period, widespread protests in both the states escalated, leading to violence and destruction of public property. With the political leadership too resorting to a tough posturing

and grand standing, the situation eventually led to a kind of constitutional crisis. The Karnataka legislative assembly resolved not to release waters, leading to a stand-off between legislature and judiciary. In the meanwhile, Tamil Nadu claimed loss of crops, and filed another suit before the Supreme Court for a compensation of Rs 2,480 crore.⁶¹ This instance may be construed more as a challenge of execution, though it clearly illustrates how disagreements over data, or the methods of its assessment can be a ground for escalating disputes, and political mobilization. More importantly, how do the data and information, with their limitations, are represented and deployed for political mobilization also matters significantly. The limits to an accurate knowledge production manifest in different ways on the ground, often aimed at political mobilization. The litigations over data and disputes are not covered so much by the mainstream English media. But the vernacular media covers it on a regular basis and the proceedings are often reported and discussed in the prime slots.

Both the tribunals had to deal with the differences over data over the very fundamentals. The dependable flow, the available water to be allocated among the states, had serious data limitations during KWDT-I. The conventional method of estimating yield using the rainfall-runoff relation could not be used for lack of systematic data. Instead, estimates based on the flow at the final draining point, the weir in Vijayawada, were used for estimating the dependable flow. Flow observations at the Vijayawada weir were not consistent and adequate enough to estimate the dependable flow without disagreements. The weir in Vijayawada had been commissioned in the 1850s and had gone through modifications many times, besides suffering damage from floods. In the absence of reliable data, the states had prolonged arguments over calculated flow estimates and the accuracy of the parameters involved. The tribunal finally used the flow data series for 78 years (1894-95 to 1970-71), less than the 100-year data series needed, to determine the total water available annually in the river as 2,060 TMC at 75% dependability. In order to bind the states over these estimates, the tribunal had the states sign an agreement to this effect.

It is a matter of great satisfaction that the dispute on a very crucial matter in the case which had been the subject matter of serious controversy between the parties and which was mainly responsible for the prolongation of the trial in this case has been thus satisfactorily resolved. We place on record our appreciation of this attitude adopted by the parties. (KWDT-I 1973: 81, underlined emphasis in the original).

⁶¹ <http://indianexpress.com/article/india/cauvery-dispute-supreme-court-to-hear-the-plea-today-tamil-nadu-karnataka-4534004/>, last accessed on 20 February 2017.

The states, however, persisted with differences on the related issues. During explanatory deliberations, Karnataka demanded the distributing of excess waters at above 75% dependability flow in surplus years (KWDT-I 1976, 23). The tribunal refused to accept this argument on the grounds of technological limitations in making it feasible.

This redistribution of water in excess of 75% dependability had to be addressed by KWDT-II. With the advantage of a better database, it attempted a similar approach like that of KWDT-I. It sought redistribution proposals from the states. The proposals were along the expected lines, designed to serve each state's individual interests. The upstream states estimated a higher availability of water, while AP, the farthest in the downstream, submitted that there was no additional water for distribution (KWDT-II 2010, p.236). The tribunal finally used the 47-year data series from 1960-61 to 2007-08 for estimating the yield in the river, and the surplus waters to be redistributed.⁶² The new data series produced an average yield of 2,578 TMC (theoretically the upper limit for the river yield); the 65% dependability yield at 2,293 TMC; and, the 75% dependability yield at 2,173 TMC - an excess of 113 TMC from the 2,060 TMC estimated by KWDT-I. This excess could be either due to better and more accurate data, or because it accounted for return flows (KWDT-II 2010, 320-21).⁶³ By 2006-07, the total utilization by the three states at 2,313.06 TMC had exceeded the 75% dependability yield. The states had also achieved considerable levels of carryover storage capacity. The average yield was also high at 2,578 TMC. Keeping in view these improved yield conditions and carryover storage capacities, KWDT-II decided to allocate at 65% dependability yield (2,293 TMC). The tribunal also ruled that the allocations by KWDT-I at 2,130 TMC (2,060 TMC allocated + return flows of 70 TMC), would be protected. This left 163 TMC (the allocated 2,130 TMC deducted from the 65% dependable 2,293 TMC) of additional water. The tribunal took up the task of allocating surplus waters above 65% dependability flow as well. The surplus water was the difference between the average yield of 2,578 TMC and the 65% dependability flow of 2,293 TMC, i.e., 285 TMC.

The surplus waters component was a frequent issue of contention between the states. KWDT-I allowed the use of surplus waters by AP (without acquiring any right) to account for technology limitations in assessing accurate yields and to address adverse impacts on the downstream state due to possible deficit in some years (75% dependability = 25 deficit years in 100 years). This had been an issue of conflict

⁶² The flow data from 1950-51 to 1960-61 data was anyway unusable as the barrage at Vijayawada suffered a breach during this period.

⁶³ Return flow is the portion of water that rejoins the river after its use, mostly from irrigation.

between the states throughout the operational period of the KWDT-I award up until the 2000 review. In the 30 issues framed by KWDT-II, five issues were about surplus waters, essentially seeking their redistribution. The two upstream states accused AP of creating permanent structures for utilizing surplus waters (KWDT-II 2010, 150-156). The frequent protests over this eventually led to Karnataka approaching the Supreme Court in 1997, requesting the implementation of Scheme B as part of creating an implementation mechanism, a Krishna Valley Authority (KVA), which had been recommended by the KWDT-I.⁶⁴ Karnataka demanded that until the Scheme B was implemented, AP not be allowed to use surplus waters. In response, AP filed another suit challenging the Supreme Court's admission, on the grounds that the IRWDA 1956 and Article 262 barred the Supreme Court's jurisdiction.⁶⁵ The two suits eventually led to the Supreme Court recommending the constitution of KWDT-II.

The KWDT-II reiterated that AP would not have any rights over the use of surplus waters, and set out on allocating water between the three states (KWDT-II 2010, 677-678). There was more to this component of surplus waters. Beyond surplus waters, there still remained what the tribunal termed as "remaining waters:" the component of excess waters of the average yield. KWDT-II allowed AP to utilize the waters, following the same rationale as KWDT-I, to compensate for the risks assumed by the downstream state (KWDT-II 2010, 806). However, this decision was contested, with the upstream states bringing it up during the subsequent explanatory hearings. The tribunal decided that AP was free to utilize it without acquiring any right and that the states could stake claims on this component when a competent authority was put in place at a later stage (KWDT-II 2013, 46-47).

There were two other issues mired in technical ambiguities of assessment. One of them was groundwater: both the tribunals chose not to consider this component in their allocations. But groundwater was set to be a critical issue in the future. KWDT-I ruled that the states were free to use groundwater within their respective territories, in a manner that it would not affect the rights of private individuals, bodies, or authorities. The tribunal noticed the lack of systematic data for groundwater assessment and

⁶⁴ Original Suit No. 1 of 1997 (state of Karnataka vs. state of AP and others). The Suit also sought restraints on AP's implementation of other projects - Telugu Ganga, Srisailem Right Bank Canal, Srisailem Left Bank Canal Bhima Lift Irrigation and Pulichintala project - which were later referred to KWDT-II.

⁶⁵ Original Suit No. 2 of 1997 (state of AP vs state of Karnataka and others). The suit also sought relief from Karnataka's proposed increase of Almatti dam height.

decided not to deal with its apportionment. The tribunal did ask the states not to use groundwater as an alternative means of meeting their needs (KWDT-I 1973, 71-72). Curiously, KWDT-II did not even consider groundwater as an issue.

The second issue concerned the return flow component, where data and technical knowledge required for its assessment posed a challenge for KWDT-I. The states had differing positions regarding the assessment of return flow, mainly to serve their respective advantages. Maharashtra argued that the return flow could be in the order of 30 to 40% before rejoining the river within a short time. Mysore was uncertain about both the method of estimation of return flow and the duration after which it would re-join the river, while AP argued that it should not be considered as a component in allocations. KWDT-I relied on international experiences and earlier studies on the Krishna basin in determining the return flow to be varying from 4-10% of water diverted to irrigation. It also relied on expert testimonies to determine that the return flow from new irrigation projects would appear within 5 years after the projects became operational. The challenge was to apportion the 75% dependable flow, as it would get augmented which, in turn, would contribute to return flows. The return flows were expected to accumulate the utilization of the river increased. When KWDT-I adjudicated the dispute, Krishna river waters were not fully utilized. The incremental utilization would generate incremental return flows; this was to be apportioned as well. The tribunal encouraged the states to deliberate before reaching an agreement on the estimated return flow. Subsequently, the states agreed to abide by the tribunal's assessment of return flow, i.e., at 7.5% of utilization by new irrigation projects (exceeding 3 TMC use) operationalized after the year 1968-69 - which would appear as return flow after every 5 years. This return flow proportion was later revised to 10%, following the explanatory hearings (KWDT-I 1976, p.20). This proportion of return flow was to be added to the already allocated waters every 5 years to generate new apportionments. The final award accordingly included these incremental additions of return flow to be calculated after every 5 years to be added to the 75% dependable flow allocations.

d. The illusive and elusive equitable apportionment: contextual, contingent, and contentious

Equitable apportionment was to be accomplished within all the restraints and restrictions set by the preferential allocations, spatial fixities, technological limitations, disputable diversions, etc. These ruled out equitable apportionment as being a simple allocation of available water resources, besides posing the challenge of reconciling the uneven and differential geographies. This was to be achieved within small and highly contested margins of waters available. For KWDT-I, out of the 75% dependable flow

of 2200 TMC to be allocated, 1693 TMC was already protected or preferred, while KWDT-II had the limited quantities of 163 TMC to be allocated, eked out of the 65% dependability flows. KWDT-II also was left with the difficult component of surplus waters to be allocated.

KWDT-I had sought proposals from each state for arriving at equitable apportionment. Each state proposed a method that suited its own interests. Maharashtra considered the following factors: drainage contributions to the basin, water-scarce areas, cultivatable area, and population within the basin. Maharashtra proposed the following allocations based on these criteria: Maharashtra-908 TMC, Mysore-865 TMC, and AP - 427 TMC. Karnataka (then Mysore) used its own criteria for demanding an allocation of 1430 TMC for its annual requirements. AP argued for protecting its existing uses, given its extensive reliance on irrigated agriculture by virtue of its historically advanced development. AP proposed three categories of prioritization: utilization up to 1951 (interstate conference organized by the Planning Commission); utilization between 1951 and 1960 as part of preferential allocation (when formal protests were made); and those projects contemplated after 1960. AP demanded the allocation of the residual waters, after setting aside the first two categories, equitably among the states, while staking its own claim to as high as 2,000 TMC. The claims far exceeded the available water of 2,200 TMC. This contest became fiercer issue before KWDT-II. By that time, the states had utilized the KWDT-I allocated resources: by 2005-06, Maharashtra, Karnataka, and AP utilization levels were close to 564, 696, and over 1,000 TMC respectively. The three states presented ambitious irrigation master plans, with the combined demand coming close to 4,800 TMC (KWDT-II 2010, 744), as against the available waters of 2,293 TMC at 65% dependability.

The tribunals' engagement with the claims for equitable apportionment reveals the challenges of such an endeavour in practice. It shows the illusive and elusive character of equity, and the need for a pragmatic approach embodying contextual and contingent strategies. After an extensive review of the case material, Justice Bachawat, while observing that there could be no universal method, preferred a highly contextual and contingent approach for equitable apportionment: "There is no mechanical formula of equitable apportionment applicable to all rivers. Each river system has its own peculiarities" (KWDT-I 1973, 93). And, "The weight to be given to a relevant factor is a matter of judgment on the pertinent facts of the particular case and no hard and fast rule can be laid down" (KWDT-I 1973, 94). Further, "...it will be needless endeavour on our part to search for a formula which may assist us in dividing the waters of the river Krishna" (Ibid, 174).

The conceptual notion of equity might vary depending on the ecology, or historical trajectories of utilization, or politics. River systems vary in terms of the availability of water and priority of uses. In some states, there may be greater reliance on storage, while in others, it is a little or none. In the case of others, party-states might prefer water sharing based on cooperation and trade-offs. For some others, the preference may be for a clear specification of allocations. In other words, the approaches have to be tailored to each basin needs and evolved, taking into consideration its contextual parameters and unique characteristics. Both the tribunals followed this strategy for ensuring an equitable share by way of addressing and managing inequities based on discretionary and case-by-case rationale.

For example, one of the primary considerations before KWDT-II was the extent to which the proposed use addressed the drought-prone areas' needs. This also had to engage with complex questions of whether the extent of drought-prone-regions within the basin only should be factored in, or instead the drought-prone areas of the entire state. The tribunal recognized that while these different factors were all-important, there could be no strict formula or setting of priorities for any use. The tribunal considered the needs and claims, historical trajectories, and geographies of irrigation of these states, but avoided any uniform set of parameters or principles in its allocation.

Before KWDT-I, the historically induced uneven development among the states was a major challenge. The upstream states of Maharashtra and Mysore expressed their apprehensions regarding the potential perpetuation of inequities, in the event of the tribunal awarding any further allocations to AP with an advanced irrigation development history. The two states argued that they were not in a position to augment Krishna waters in the past in spite of their needs, and that they would have been entitled to do so had they been allocated waters equitably earlier. But the tribunal pointed out that the allocation was happening under conditions and circumstances prevailing at the time of proceedings, and, therefore, that it was bound to protect earlier uses, considering the needs as they stood. KWDT-I protected not only AP's existing uses, but also awarded additional allocations, considering its needs. KWDT-I also noted that in the future with improved data, the dependable flow might be greater, as its estimates were conservative. The tribunal was inclined towards ensuring equitable allocations, based on the availability of better estimates in future.

Allowing for review and reallocation in future, after expiry of its award, KWDT-I provided for the following. One, it restrained the upstream states of Maharashtra and Karnataka from using any more water than was allocated in its award. Two, the tribunal permitted AP to use surplus waters, but without acquiring any rights over

the waters that it could claim in the future. The restrictions on upstream states were to prevent claiming rights over waters beyond their allocated shares. The allowance to the downstream state of AP was to manage any inevitable inequity that the state of AP might suffer, considering that the flow of 75% dependability would statistically leave 25 years of deficit flow. The tribunal also permitted the state to create carryover storage capacities for utilizing surplus waters.

Similar provisions were made by KWDT-II as well. Its decision to reallocate at 65% dependability was on the basis of improved storage facilities in the states as compared to the times of KWDT-I. However, the states were not happy with these decisions and challenged this rationale on several occasions. For instance, AP had claimed that the 'success rate' (of realizing its allocation share) was only 68%, whereas the two upstream states claimed a success rate of close to 100% over the 47 years. The tribunal refused to accept AP's claim about higher success rates achieved by the upstream states, reminding AP of the concessions it had received with respect to the utilization of surplus waters and carryover storage allowances as part of compensating for its alleged 'poor' success rate (KWDT-II 2010, 433). Similarly, KWDT-II allowed for an additional carryover storage to Karnataka in the Almatti dam, considering the drought conditions prevailing in the state. It decided to allow an increased storage of up to 303 TMC in Almatti, from the earlier KWDT-I allocated 173 TMC. Thus, it went about allocations on a case-by-case basis, often giving importance to the critical nature of the claim of the states.

The challenge of ensuring equitable apportionment was not restricted just to managing the spatial inequities, but also to temporal inequities. Ensuring that the allocations reached the beneficiaries in time was a vital consideration. AP sought regulating release of waters from the Almatti dam to ensure a timely arrival of water for crops downstream AP, considering the increased storage allowed in the upstream Almatti dam. Accordingly, KWDT-II provided for it by directing Karnataka to release 8 to 10 TMC of water from the Almatti to AP during the months of June and July (KWDT-II 2010, 698). The final allocations by the tribunal, after minor modifications during explanatory deliberations, stand as the following (Table 2).

Table 2: Final allocations by KWDI-II

Component	Allocations to riparian states (in TMC)		
	Maharashtra	Karnataka	AP
75% dependability allocations (by KWDI-I) including return flows	585	734	811
65% dependability allocations	43	61	43
Surplus flows	35	105	145
Total	663	900	999
Minimum flows from 65% dependability	3	7	6
Grand total	666	907	1005

Source: KWDI-II 2013, 402.

This contingent, contextual, and discretionary approach for ensuring equitable apportionment is not an exclusive feature of interstate water disputes. In spite of the highly refined and developed principles for equitable apportionment, international water conflicts too resort to such contingent approaches. The characteristics of local settings have an important bearing on the application of equity principles. Although conflicts tend to emerge on the grounds of legal riparian rights, the resolution of which has always been based on needs-based criteria for water allocations (Wolf 1999).

e. The ‘spatial-fix’ to the ‘fixed’ spatial inequities

The spatial inequities of water allocations among the states are not the only sources of contentious politics. The inequities across regions within the individual states have also presented challenges in the adjudication of disputes. Both the tribunals paid a particular attention to the spatial inequities. KWDI-I allowed an additional 50.84 TMC to AP on top of the already protected uses of 749.16 TMC as part of addressing the spatial inequities within the state. Some of this allocation was to allow carryover storage in Srisailem project. The rest, of 17.84 TMC, was aimed at addressing the regional inequities within AP. This was allocated to the Jurala Irrigation Project Stage-1 in the Telangana region. The tribunal, while considering the historical conditions of Telangana region’s merger with AP, observed that the region should not be deprived of irrigation simply because the rest of the state had achieved an advanced irrigation development. This was an interesting ‘spatial-fix’ for regional imbalances within the state. Interestingly, the tribunal further stressed that in the eventuality of the Jurala projects turning out to be infeasible, the allocated water was to be augmented in the

Telangana region alone, not anywhere else in the state. In no other allocations were such specifications made.

Thus, the notion of territory in allocations was made subject to other important spatialized territorial imaginations. Here, while state-level allocations were being made, regional unevenness in irrigation development mattered in defining equity, and this required defining another boundary differentiating regional imbalances. This unevenness and difference was at the centre of Telangana separatism (Simhadri 1997) - which eventually led to the creation of the new state of Telangana. It is important to note how politics emerge around inequities and asymmetries. But then this could be an exceptional case where such asymmetries aligned with other boundaries of differentiation, leading to politicization and, eventually, the escalation of agitation towards the goal of Telangana statehood (Srikanth 2013, Chokkakula 2014b). Thus, ensuring equity, spatial differentiation acquires significance when sub-regional identities and politics are articulated substantively.

This approach of 'spatial-fix' can manifest in other ways too, while addressing other inequities that are often sources of disputations. In order to safeguard AP's interests to ensure an adequate flow in the Krishna's main stream, KWDT-I imposed restrictions on uses in sub-basins adjoining the main tributaries - the Bhima and Tungabhadra. KWDT-I put restrictions on further augmentation in K-5, K-8, and K-9 sub-basins, spread over all the three states.⁶⁶ In some sub-basins, it placed limits on maximum augmentation.

KWDT-II, while concurring with such restrictions, agreed that restrictions could be reviewed if new evidence emerged about greater availability of water in the respective basins (KWDT-II 2010, 596, 704). KWDT-II in fact relaxed some restrictions in the light of new evidence about more water availability.⁶⁷ But it also laid down some new restrictions - not just spatial, but also regarding the amount of water that could be drawn from different dependable flows, the timeliness of releases, etc. Thus, the fixing of local (or sub-regional in this case) inequities has linked implications at the state level, offering avenues for contestations and political mobilization across scales.

⁶⁶ Some of these restrictions were relaxed partially but not fully upon appeal from states during explanatory hearings under section 5(3) of IRWD Act 1956 (KWDT-I 1976).

⁶⁷ KWDT-II, with the advantage of a fresh series of data, determined that there was indeed more water available in K-8. It relaxed the restrictions imposed by KWDT-I and allowed projects proposed by Karnataka in the basin, after establishing that these did not adversely impact AP in any manner (KWDT-II 2010, 525-526).

Further, this nature of contingent, contextual, and discretionary decision making has implications for transboundary politics. The deeply contextual nature of allocations does not subscribe to standard principles of equity, which leave space for contestation. This can be seen in the manner the states responded to priority ascribed to existing uses. The states agreed to the tribunals' rulings, but the perceptions about not having received a fair share persisted. Such perceptions of injustice lead to disputation and politicization, especially during deficit monsoon seasons.

The awards of the two tribunals are also distinct contributions to transboundary water sharing law on their own, for they showcase how international customary principles are reinterpreted in the context of a federal nation-state containing distinct semi-sovereign geographic entities.

This changing context adds an entirely different set of complexities in the application of equitable apportionments. In the transboundary sharing between federal units, the idea of equity changes with time, with the changed context of development priorities at the national or sub-national levels. The adjudication of the Krishna dispute 30 years apart reveals these changed and changing priorities and equity considerations, e.g., an elevated priority given to power generation by KWDT-II as compared to agricultural production by KWDT-I, hence allowing additional westward diversions of Krishna waters to the Koyna project in Maharashtra.

The tribunals also recognized that Krishna basin-specific equity considerations are not going to "endure forever." Hence both the tribunals provided for a review of their respective awards after a certain period. As observed by KWDT-I: "...population, engineering, economic, irrigation and other conditions constantly change and with changing conditions new demands for water continually arise. A water allocation may become inequitable when the circumstances, conditions and water needs upon which it was based are substantially altered" (KWDT-I 1973, 158).⁶⁸ The changing development priorities and notions of equity over space and time turn equitable apportionment into an aleatory concept, open to severe contestations.

⁶⁸ The tribunal cited the US case law literature while making this observation, especially the case of *New Jersey vs. New York on Delaware water* and also Frankfurter and Landis (1925); the relevant text from this article may be illuminating and educative: "Wherever the pressure is felt one answer is clear: no one state can control the power to feed or to starve, possessed by a river flowing through several states. A great number of our streams have this potency. Moreover, there cannot be a definitive settlement. Population, engineering, irrigation conditions constantly

f. Giving “effect” to tribunal awards: the glaring gaps and undead disputes

The crux of the interstate water disputes problem in India can be narrowed down to the noncompliance of the states (Iyer 2002, Chokkakula 2012, 2014a). The institutional and governance failure in implementation - i.e., giving effect to the awards - is the reason for recurrence of disputes (Chokkakula 2012). As discussed earlier, the failure is partly due to the legal and constitutional ambiguities. But the crucial reason is the institutional vacuum in “giving effect” to the tribunal awards. The law does not provide for an institutional mechanism for implementing the tribunal awards. River boards, under the RBA could potentially offer the frame for constituting such a mechanism. However, as noted, for inexplicable reasons, RBA has not been used to setting up such institutions. But there seem to be other reasons why this gap exists. KWDT-I, the first tribunal constituted to adjudicate interstate water disputes, had relied on Section 6 of the parent act then in force, Inter-State Water Disputes Act, 1956 (Act no 33 of 1956), and avoided recommending such a mechanism. The section specifies that the implementation of the tribunal award would be made by the states themselves.⁶⁹ This was supplemented by amendments in 1980 to the Act (section 6A), empowering the central government to formulate schemes with a subsequent approval by the Parliament.

But these amendments have not helped much, instead led to additional ambiguities. The later tribunals are expected to identify these limitations as constitutional anomalies that need to be resolved. CWDT (2007) observed that there was no adequate clarity as to whether a tribunal had the authority to formulate an operational mechanism to implement its award. It also recommended a Cauvery Management Board (CMB) for implementing its award, while avoiding to make it part of its award.⁷⁰

change; they cannot be cast into a stable mould by adjudication or isolated acts of administration. The whole economic region must be the unit of adjustment; continuity of supervision the technique. Agreement among the affected states and the United states, with an administrative agency for continuous study and continuing action, is the legal institution alone adequate and adapted to the task” (p.701)

⁶⁹ Section 6 of the parent act: “The Central government shall publish the decision of the Tribunal in the Official Gazette and the decision shall be final and binding on the parties to the dispute and shall be given effect to by them.” (underlined emphasis by me).

⁷⁰ CWDT relied on an earlier interpretation of the Narmada Water Dispute Tribunal in this respect (NWDT 1979). For a detailed discussion of related constitutional anomalies and how CWDT interpreted it as its responsibility to recommend CMB, see CWDT’s award (2007), Volume V, pages 216-223.

KWDT-I did not look for separate mechanisms either. Justice Bachawat's interpretation of awards' implementation through voluntary and cooperative efforts of the states turned out to be unrealistic. KWDT-I, however, did recognize the need for a supportive institutional mechanism to ensure an effective implementation of the award. It also recognized the practical difficulties in ensuring allocations prescribed to the states:

...while determining whether there is deficiency or surplus such an authority shall have to find out the utilisations made by all the states in a water year. This naturally involves a comprehensive collection of data regarding utilisations of all the states by that authority. There are bound to arise differences between the parties with regard to the quantity of water utilised by a party in a water year at one place or the other. The nature of the differences may be varied and unless the determination of utilisation made by that authority is made final and binding on the parties there will always be room for trouble. Again, when and how much water should be transferred from the reservoir of the upper states to meet the need of the lower state for use in a water year may be a cause of conflict between the parties and one or the other party may not be easily reconciled with the decision of the authority. (KWDT-I 1973, p.165, underlined emphasis mine)

The problem of implementing tribunal awards cannot be described any better. This is the core of the problem, where the asymmetrical power differential of upstream vs. downstream perpetually creates conditions for conflict. Upstream states prefer to store for the contingency of water deficits, which may result in downstream states suffering from delays in the arrival of water. Any delay leads to fear of an adverse impact on the agricultural cycle and distress in downstream states, triggering political mobilization. In such circumstances, law and technology cannot respond satisfactorily, given their limitations. These need to be supplemented with institutions to respond to such contingencies by facilitating information exchange and ensuring coordinated efforts to cope with inherent risks. KWDT-I recommended KVA for overseeing the implementation of the award. But it did not make it part of the award, as it had failed to acquire a consensus from the states for its existence. While the KVA in Scheme B was not made mandatory (not part of the award), the Scheme A, spelling out the allocation of shares, was mandatory.

KWDT-II too concurred with the idea that responsibility lied with the states in “giving effect” to the awards. But it also realized the need for an implementation mechanism to be put in place for a better compliance by states. KWDT-II conceived and detailed a Krishna Waters Decision - Implementation Board (KWDIB) for implementing its award, though it did not make it the mandatory part of its award (KWDT-II 2010, 795).

The legal ambiguities and institutional vacuum tend to complicate the challenge of implementation. On top of it, the interstate relations are competitive and mistrustful of each other, as witnessed in litigations. The uncertainty associated with the availability of water increases with the decreasing dependability. Hence a 65% dependability and estimated surplus flow allocations are much more uncertain. There is no fool-proof method to predict precisely the total quantity of water available in the river during a given season. If an upstream state is allowed to augment its share first, the downstream states may not realize their shares fully - especially in the event of the total flow falling short of the 65% dependability. This is AP's primary apprehension. Hence, the tribunal has laid down a scheme for distribution of waters, somewhat unprecedented, to ensure realizing equitable allocations - i.e., for distributing the risks associated with uncertain flows (KWDT-II 2013, 404-413).

Under this scheme of KWDT-II, the states are allowed a simultaneous withdrawal of 75% dependability allocations in the first instance. In the second instance, the upper riparian states are restricted from augmenting their 65% dependability allocations, until downstream states fully realize their 75% dependability allocations. In the third instance, upstream states cannot augment their surplus flow allocations until downstream states realize their 65% dependability allocations. For example, Karnataka is not allowed to augment its share from the 65% dependability share of 61 TMC (above its 75% dependability share of 734 TMC) until it has ensured AP's full realization of its 75% dependability share of 811 TMC. Karnataka fought this scheme strenuously before the tribunal on the following grounds: (i) in some years, it may be too late for upper riparian states by the time AP realizes its share; (ii) AP may not have an adequate storage for using water at the required time, and the water would then be wasted. The arguments eventually led to slight modifications in the scheme, but the overall strategy remained the same. However,

Notwithstanding anything contained in sub clauses (i) and (ii)(a) of Clause 2 above, the three riparian states, in the light of the opinion of their experts about the assessment of expected rains, or otherwise, in the best of the spirit of cooperation and share and care to achieve their share fairly and smoothly, are free to make any other arrangement by means of a written agreement amongst the three states, in respect of the manner of withdrawal as to at what point of time they may draw their share in full or in parts thereof, at 65% dependability. (KWDT-II 2013, 406-407, underlined emphasis mine)

It is an irony that the implementation of awards requires cooperation and coordination between the states - lack of which happens to be the reason why disputes have to be

adjudicated. The awards, however, provide a framework for cooperation between states. However, the competitive interstate relations and the predisposed tendencies for politicization do not offer conducive conditions for cooperation. This is particularly daunting in distress years, when ensuring that the states realize the allocated shares hinges on the ability to forge transboundary coordination and collaboration. In spite of the prolonged adjudication and elaborate techno-legal specifications, mechanisms finally rely on the weak link of cooperative spirit between the states.⁷¹ Whereas, it happens to be the most glaring gap of the policy framework. The RBA is a 'dead letter' and there are no institutionalized practices or avenues for forging or facilitating cooperation. In the absence of political and institutional space for nurturing this collaboration, these transboundary spaces of interstate water disputes tend to be thriving spaces for contestation and disputation (Chokkakula, 2014a).

⁷¹ The detailed mechanism also included an additional part specifying the procedure for real time ascertainment and exchanging of use and forecasting of available waters to support this coordination between the riparian states (KWDT-II 2013, 409-413).

CONCLUSIONS

In this paper, I have made an attempt to analyse and explain the making and remaking of interstate water disputes in India, using the Krishna river water dispute case. I have argued that the particular political ecology of interstate water disputes - the anatomy - is constituted and animated by: ambiguities in legal and constitutional arenas, policy and institutional gaps; antagonistic politics and politicization of water disputes in a federal democracy; and, asymmetrical power relations produced by the historical-geographies and ecologies of transboundary river waters. This anatomy makes the interstate river water sharing (and generally, transboundary river water sharing) a perennial source of conflict.

In order to demonstrate and substantiate this argument, I have examined the historical construction of the Krishna river water dispute, while taking advantage of its formal adjudication by tribunals twice, 30 years apart. This longitudinal analysis, useful in unpacking the anatomy of disputes, has also revealed the changing interstate relations, and the river water sharing geographies in India. The dynamic transboundary political spaces, fuelled as they are, by contentious politics over water sharing, pose far reaching implications for the federal structure, politics and the making of Indian state.

The analysis has also exposed the glaring policy and institutional gaps, which have failed to contain the tendency of the disputes from recurring and escalating due to the dynamic and contingent politics and politicization of disputes. But, the discourse and responses have remained primarily legalist, with little understanding or appreciation of the politics shaping the disputes. The analysis of the Krishna dispute has shown, in far less unequivocal terms, how politics play an important role in shaping the disputes and their outcomes. This important parameter has not received adequate attention in analysing and understanding the making of interstate water disputes.

The paper has engaged with this important gap by examining the antagonisms contributing to the historical recurrence of the Krishna dispute. It reveals the processes in which these politics animate in India's federal democratic set up, and the close convergence - or the nexus - between the politics of water struggles and the democratic politics. The historical-geographies of water resource development, interplaying with the particular river ecologies in a transboundary setting, generate uneven geographies of developments accompanied by asymmetrical power relations. These uneven geographies and inequities provide a substantive basis for political struggles and contentious politics.

In the presence of active, responsive and democratic constituencies, the dynamic transboundary politics entail enduring conditions for contestation and politicization. The explorations into this particular and dynamic anatomy of interstate water disputes allow four broad conclusions with policy relevance.

INTERSTATE RIVER WATER SHARING IS A PERENNIAL SOURCE OF DISPUTATION

The colonial history forms and informs the post-independence politics of interstate water sharing in India. The historical-geographic specificities of India have had an important bearing in the making of interstate water disputes, here the Krishna water dispute. The asymmetrical power relations between the directly-ruled presidencies and the indirectly-ruled princely states have remained embedded at the core of the dispute. Fragmented and prejudiced agreements reached during the colonial rule, and other historical-geographic asymmetries generally, have led to uneven geographies of development over time. Reconciling with these uneven geographies has been a central challenge in the adjudication of the dispute after independence - a postcolonial condition of interstate water disputes in India.

The internalized asymmetries, the politics of Indian Union's making and, the 'geographic genetic code' (of multiple territorial identities -a combination of presidencies and princely states) have a bearing on the post-independence contestations over interstate rivers. The contests emerge around the asymmetries and inequities inherited by the newly created states after independence. The imposition of secular linguistic homogeneity as the basis for reorganizing states has led to overlapping histories of uneven geographies - increasing avenues for contentious politics, e.g., regional imbalances instigating a separatist movement within AP. The territorial boundary reorganization has also restructured hydrological regimes in the states - changing the river water entitlements. Simultaneously, the territorial identities have consolidated with their own imaginations of rights associated with the river waters. The tension between the two, the uneven outcomes, and the marginalized needs of sub-regional interests provide opportunities for political mobilization and escalation around identity politics.

Drawing on the analysis of disputes and the underlying contentious issues of the two tribunal awards helped distil the sources and factors contributing to disputation and the politics involved. The politics reveal a series of sources of conflict other than the postcolonial historical and structural conditions. These include a set of techno-legal factors such as the protection of prior-appropriation rights, technical limitations and ambiguities, changing priorities of water uses, competing interests and conflicting

strategies of states, etc. These factors complicate the ideas of equitable apportionment. The challenge is no longer achieving equity, but managing and mitigating inequities - both spatial and temporal. This requires, as the adjudication by the consecutive tribunals for equitable apportionment shows, highly contingent, context-specific, and discretionary decision making. This approach itself is a source of prolonged litigations and contestations by states, often providing a promising space for political mobilization. The politics thrive in the ambiguous legal spaces and weak institutional support. Thus, the interplay of history, geography, ecology and law in interstate water disputes turns them into a perennial source of disputation - even after the awards are given and while they are in force.

THE WATER-POLITICS NEXUS: A CRUCIAL PARAMETER

The anatomy of perennial conflict of the interstate water disputes presented in the paper has a parallel narrative of politics. The range of factors considered - structural, historical, ecological and technological - are not just sources of difference and disputation. These are also potent sources of contentious politics offering opportunities for politicization and political mobilization, leading to escalation of disputes. This is because of a deeply entrenched nexus between politics of access and use of water, and mainstream democratic politics (Chokkakula 2014a, 2015).

The antagonisms section specifically treats this feature of interstate water disputes. Although the section presents the antagonistic politics between states, the water-politics nexus is not exclusively between states with the mainstream political parties engaging in power plays. The nexus is far more intricate and encompassing across the scales. It manifests in several ways with nonstate actors engaging in a variety of political strategies as part of pursuing their interests associated with water allocations. These include alignment with the mainstream political parties, contesting or co-opting of governments at different scales. As it has been argued, this nexus shapes the very nature of interstate water disputes and their outcomes. This is a political reality in federal democratic societies. However, there is a tendency to avoid acknowledging this central feature of interstate water disputes in India. It is imperative that we recognize and consider this as an important parameter in policy thinking or institutional design for governing interstate water sharing or dispute resolution.

LAW IS NOT ADEQUATE

It has to be supplemented and supported with the right kind of institutions and political practices towards mitigating adverse impacts of interstate water disputes. The perennial nature of interstate water disputes limits the effectiveness of legal approaches in resolving the disputes. Yet the scholarship puts a great deal of emphasis on legal approaches. It is clear that the law itself suffers from a variety of structural deformities in the form of constitutional anomalies and legal ambiguities. The bar on Supreme Court's jurisdiction is a peculiar feature and deprives a proper avenue for states' grievances arising after the tribunal gives away its award. The adjudication by tribunals itself has turned adversarial, and filled with litigations, causing frustratingly long delays.

Thus, the legal arrangements are there to respond to only exigencies; they are not designed to respond to contingencies. Whereas, as the analysis of the Krishna disputes reveals, interstate water disputes - and transboundary water conflicts generally - are highly contingent to the dynamic political ecology. The disputes can arise due to changes in ecological conditions, geographical unevenness, historical asymmetries, or changes in political configurations of party states, etc.

In fact, the historical origins of the Supreme Court's jurisdictional bar go back to the colonial rule, and are premised on the inability of the law to respond to interstate water disputes. The Government of India Act 1935 too barred the jurisdiction of Federal Court over the inter provincial water disputes. The Joint Committee on Constitutional Reforms in 1934 had observed that the procedures of courts of law cannot produce satisfactory outcomes in inter provincial dispute resolution (Chokkakula 2015). It had recommended barring the Federal Court's jurisdiction, and discretionary power to the Governor General in resolving inter provincial disputes. While the colonial roots of these provisions need to be reviewed in a much broader horizon and scope, the take away point here is that the interstate water disputes resolution cannot exclusively rely on legal procedures.

The legal adjudication procedures have to be supplemented by appropriate institutional and political practices for responding to the contingent recurrence and escalation of disputes. This has to be both ex-ante, to mediate for resolving without adjudication; and ex-post, to ensure an effective implementation of the tribunal awards. As of now, the only ex-ante practice is for the centre to mediate between the states. If these efforts fail to yield results within a year after receiving a formal complaint from any of the states, the centre has to constitute a tribunal. In these times of competitive states, coalitional

politics and assertive regional powers, the centre's mediation is unlikely to help. There have not been any recent instances of the centre having mediated a settlement between the disputing states. Consider recent instances where tribunals were constituted, the Mahadayi, the Vansadhara; or, those which are heading towards the constitution of tribunals over Sone, Mahanadi disputes - none have yielded settlements. These ad-hoc and informal practices will not be adequate with an increasingly perceived subjective role of the centre and fiercely opposing and assertive states.

In the ex-post space, there is an absolute vacuum of institutions or practices to give "effect" to the tribunal awards. Justice Bachawat has interpreted an idealistic view of giving effect to the awards in that the states are expected to give effect on their own, which could be a plausible assumption during the 1960s and 70s. But the changing federal political relations, and the competitive and contesting states are unlikely to be conducive to such possibilities. Besides this, the legislative space created under the Entry 56 of the Union List for regulating and developing interstate rivers has remained dormant due to an ineffective RBA. The fact that the act has not been used for setting up a single board so far is telling, and exposes the neglected policy space of enabling interstate coordination and collaboration.

EXCESSIVE EMPHASIS ON CONFLICT RESOLUTION

The long neglected gap left in the crucial legislative space occupied by RBA is baffling. It is important to recognize the fact that interstate collaboration is necessary in the least for giving effect to the tribunal awards -even as it is desirable for pursuing the larger goal of interstate cooperation and coordination over shared rivers. This glaring neglect is a sign of a larger syndrome, of an excessive emphasis on interstate dispute resolution, not on enabling interstate river water cooperation. This calls for an urgent shift, paradigmatically, from conflict resolution to one of facilitating cooperation. It requires a careful and decisive shift from a mind-set of relying on exigency strategies of dispute resolution, to responding to contingent impulses of conflict for building cooperation opportunities. We need an ecosystem of policies, politics and institutional practices for enabling cooperation between the states.

This call for a paradigm shift builds on the credible record of cooperation over shared waters internationally as well as over interstate rivers. The historical record of governing international transboundary basins has shown that the shared rivers are often more a source of cooperation and a less of conflict. Indeed, the record of cooperation over interstate water rivers in India is comparatively vindicative. The CWC (2015) has documented over 160 water sharing agreements over interstate water rivers, while, in

contrast, we see handful of conflicts. One of the first steps towards the paradigmatic shift is to start paying attention to this excellent record of cooperation to draw lessons for what really matters and contributes to this cooperation. The fact that this record of cooperation has occurred in the absolute policy and institutional vacuum is an intriguing puzzle worth exploring into.

The examination of the cooperation record has to inform a bigger policy reform towards the paradigmatic shift: to repeal the RBA and replace it with a more comprehensive legislation and other instruments for forging interstate river water cooperation. The legislation has to encompass the whole breadth of functions, beyond its fundamental scope of ex-ante practices, covering the ex-post processes of giving effect to tribunal awards.

Implementing tribunal awards is a deeply tenuous space of contentious politics. The reality that this emerges from a context of dispute resolution endures its framing as a dispute, and carries the baggage of antagonistic politics. The policy and institutional reforms constituting repealing RBA and more, have to address this challenge critically. But the first step here is to wriggle out of the ambiguities marring the conception of institutional mechanisms for implementing the tribunal awards - emerging from the conflicting provisions of the IRWDA, elaborately discussed by CWDT (2007). Consecutive tribunals have avoided including institutional mechanisms for implementing their awards in the mandatory parts of the award because of these ambiguities. This has to be cleared, though it needs to happen in tandem with the larger reforms proposed in the RBA, and possibly with IRWDA. These institutional mechanisms often tend to be restrictive in their scope, again partly due to somewhat legalist conceptions of tribunals with an inadequate attention to politics. The institutional mechanisms need to draw their force from a larger ecosystem of policies and other institutional practices for enabling interstate cooperation. An ecosystem implies, and should encompass and consider processes and practices not restricted to simply the RBA (or the one in its place) or IRWDA. The architecture of the ecosystem has to consider and include all the key actors, and institutions in this space of interstate cooperation, not necessarily restricted to water. For instance, the Interstate Council is a constitutional body under article 263 for the precise purpose of interstate coordination, but neglected and hardly plays a role in such processes. It cannot be a coincidence that the constitutional provision follows immediately after the article (262) that provides for the peculiar exception of interstate water disputes to the Supreme Court's jurisdiction.

Finally, the mother of all these ambiguities, the constitutional anomaly of an exception to the Supreme Court's jurisdiction cannot be left without a critical examination.

The recent reforms approved by the Cabinet, to set up a Permanent Tribunal for adjudicating interstate water disputes, unfortunately refuse to confront this question. As I have argued (Chokkakula 2017), the Permanent Tribunal is a middle ground that eschews the difficult and uncomfortable questions about the continuing validity of the Supreme Court's jurisdictional bar under article 262. The Permanent Tribunal has two potential dangers, of adding another layer for states to litigate and allow persistence of adversarial litigations; and, undermining the authority of tribunals in the face of the Supreme Court's continuing obligation in entertaining states challenging the tribunal awards. There is credible evidence to argue that the jurisdictional bar is a colonial construct, felt necessary by the constitution framers during the times of convalescing and formative times of a fledgling Indian Union (Chokkakula 2015). This must be revisited and reviewed towards a more effective and efficient dispute resolution.

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