

India's Water Federalism

New Perspectives
for Public Policy

Editor

SRINIVAS CHOKKAKULA

Consulting Editor

BALVEER ARORA



India's Water Federalism

New Perspectives for Public Policy

Editor: Srinivas Chokkakula

Consulting Editor: Balveer Arora

Foreword: Volker Lennart Plän & Sabyasachi Dutta



First Published in 2022 by



The Asian Confluence Centre
Lady Veronica Lane,
Laitumkhrab, Shillong,
Meghalaya, India-793003,
Email: info@asianconfluence.org
Website: www.asianconfluence.org.

Hanns Seidel Foundation, India
4/6, Siri Fort Institutional Area,
New Delhi-110049
Tel.+91 11-41680402
Email: delhi@hss.de
Webiste: www.hss.de/india

ISBN: 978-93-93172-00-6

Copyright: © Asian Confluence and Hanns Seidel Foundation, India

Citation: Chokkakula, S. (Ed.) (2022). *India's Water Federalism: New Perspectives for Public Policy*, Asian Confluence and Hanns Seidel Foundation India.

Produced and Distributed by: Divya Jeevan Foundation Society and Hanns Seidel Foundation India

Design and Layout: Asian Confluence

Cover Design: Sristi Bhatt

Cover Image: Ajay Katuri

Copy Editor: Rimlee Barooah

Disclaimer: The views expressed here are those of the authors and do not reflect the view of Asian Confluence and Hanns Seidel Foundation, India. All rights reserved. No part of this book shall be produced, stored in retrieval system or transmitted by any means, electronic, mechanical, photocopying, recording, or without permission from the publisher and the copyright holders. Usual disclaimers apply.

Content

<i>Foreword by Volker Lennart Plän & Sabyasachi Dutta</i>	v
<i>Editor's Note by Srinivas Chokkakula</i>	vii
<i>Acknowledgments by Volker Lennart Plän & Sabyasachi Dutta</i>	xi
<i>List of Contributors</i>	xii
<i>Glossary</i>	xv

1. India's Water Federalism: The Reconfigured Topologies <i>Srinivas Chokkakula</i>	1
--	---

PERSPECTIVES

2. Water Federalism: Policy and Institutional Frame <i>Govinda Bhattacharjee</i>	21
3. Water Federalism: Encased in Environmental Lawmaking <i>Rakshita Goyal, Arkaja Singh and Srinivas Chokkakula</i>	35
4. Federalism and Sovereignty- Centric International Law <i>Mohan V. Katarki</i>	51
5. Sectionalism, Identity and Water Governance in Federal Political Systems <i>Scott Moore</i>	63

6.	Conflicts over Water and Central Intervention: Why Politics Matters <i>K. K. Kailash</i>	79
7.	Water Federalism, Economic Drivers and Fragmented Governance of Interstate Waters <i>Nilanjan Ghosh</i>	93
8.	Federalizing Waters: How are the Stakes Changing between the Centre and the States? <i>Prakriti Prajapati and Srinivas Chokkakula</i>	111
9.	Flows and Flaws: Questioning River Hierarchies of the Brahmaputra <i>Nimmi Kurian</i>	129
CASE STUDIES		
10.	Customary Rights and Water Governance in Northeastern India <i>Shawahiq Siddiqui</i>	145
11.	Confluence of National and Transboundary Federalism: The Case of the Brahmaputra <i>Chandan Mahanta</i>	157
12.	Multilevel Federalism for Groundwater Governance in Uttar Pradesh <i>Venkatesh Dutta</i>	165

Foreword

In the general discourse of development of any nation, the governance of fresh waters has ramifications on overarching national policy areas. Besides being a central part in the water–energy–food nexus, water governance affects security, commerce, health, and is crucial for the successful fight against climate change. Effective management of this scarce natural resource requires a coordinated approach to the governance of surface water, groundwater, watershed and basins. This is a challenge for various levels and actors of government and administration. Legal provisions usually reflect traditional responsibilities and the role of water in the economy. Consequently, the management is governed by different public or private entities such as environmental authorities, ministries (agriculture, mining or environment) or private households. The legal provisions rarely provide for effective management or conflict resolution.

A federal form of government can be an additional challenge. It distributes responsibilities further across subnational entities, which – in the case of water governance – can lead to shared jurisdiction of transboundary water bodies. A decentralized structure can, however, also increase effectiveness of governance through localized and precise approaches. Once water sources are threatened through overutilization, droughts, pollution or loss of biodiversity, water federalism becomes a challenge for both legislature and judiciary.

This makes India a most interesting case: The country's federal structure is defined as a 'union of states'. As such, legal sovereignty

is divided under three lists: union, state and concurrent. Responsibility for water finds itself in both state and central lists – depending on the nature of the subject. Governance of India's rivers spans national as well as state boundaries across different jurisdictions: Centre, states, and local government. In India, water governance intersects multiple sectors such as agriculture, industries, navigation, disaster management, local water supply and public service. Various ministries share jurisdiction that further cascades from central via state levels down to local self-governance. The present governmental structure faces increasing challenges in balancing subnational interests and maintaining legal efficacy; in catering to the needs of various water user groups, while simultaneously pursuing economic development. As the particularly vertical administrative and governance system faces increasing difficulties in addressing these challenges efficiently, calls for reforms have grown louder. An increased number of conflicts, aggravated by global warming and population growth, add to the urgency.

A number of individual suggestions to reform India's complex governance and institutional web have already been made. Most of these focus on resolution or prevention of interstate water conflicts. The unique diversity of the subject of India's water requires looking at the legal and political concepts of water as a whole.

This book is a step forward in that regard, bringing together various viewpoints and fostering further constructive debate and discussion on water federalism. The edited volume combines a discourse on Indian federalism with research on water issues. It draws from various disciplines such as political science, international relations, law, ecology, security and economics to provide a new perspective on water federalism in the Indian context

– a perspective that showcases a more inclusive and participatory policy formulation as well as a better institutional arrangement for effective federal water governance.

This book is also the result of the longstanding cooperation of two organizations dedicated to India's development in the areas of federalism and water. Asian Confluence is a think tank that works on regional cooperation between the nations of South Asia and Southeast Asia. It views rivers and river basin management as a basic premise to foster narratives of connectivity between institutions and ideas in the region bridging silos of various disciplines. Hanns-Seidel-Stiftung India (HSS), a German political foundation, dedicates itself to the study of effects and solutions for systemic obstacles in the areas of water, climate change, regional understanding and federal governance. HSS and Asian Confluence have been exploring the current status of decentralized water governance in India in a number of inclusive conferences and dialogues. This edited volume represents the combination of the discourses on water and Indian federalism in a first-ever comprehensive and scientific compendium on water federalism in India.

Volker Lennart Plän
Resident Representative
Hanns-Seidel-Stiftung India

Sabyasachi Dutta
Executive Director
Asian Confluence



Editor's Note

Water federalism is a less explored and poorly understood dimension of India's federalism discourse. The dominant lens of interstate water disputes elides and obscures a multitude of conceptions and constructions of India's federalism and federalizing water governance. These are reconfigured and reproduced by: the development and water security goals, which are increasingly interstate in nature; emerging risks such as climate change, eluding local action and transcending multiple jurisdictions; and new governance challenges such as dam safety, necessitating greater coherence in federal responses. Water federalism in India is also recast by the imperatives of strategic shifts for long-term water security: from supply augmentation to demand management; from resolving disputes to enabling cooperation; and from quantity to quality challenges.

This volume is a humble effort to showcase India's enigmatic and evolving water federalism. It pools in perspectives from a diverse set of contributors: academics, practitioners and activists. They engage with questions and challenges of water governance in India from varied backgrounds, frames of reference and scales of interest. We hope that the volume generates interest and triggers debate around this grossly understudied aspect of India's water security.

The credit for putting this effort together goes to Asian Confluence and Hans Seidel Stiftung India, with their core interests in the intersectional space of water and federalism. I thank them for the opportunity to edit the volume. The ongoing pandemic caused disruptions and led to delays in what began as a modest effort of

three months. I express my deep gratitude to the authors for their contributions and patience in bearing with the delays. The effort greatly benefitted from the wise counsel and inputs of Prof. Balveer Arora, the Consulting Editor.

Srinivas Chokkakula

Editor

Acknowledgments

Over the past years, Hanns-Seidel-Stiftung India and Asian Confluence have supported scientific discourse on the topic of water federalism. This concept is born out of necessity. Research in law, political science and hydrology identified it as a solution to the different problems around water in India. The authors of this book bring in the experience of this academic range. Through scientific analysis and documentation of issues, through investigation of causes and solutions, they contribute to the emergence of a holistic concept of water federalism in India.

This book is a well-researched fundament for governance intervention in the country's water resources. It is not only a culmination of past efforts but also aims at merging the debate on India's soaring water problems with the discourse on its federal setup. This has been achieved by bringing together two of the most eminent experts on the subject. It was a privilege to work with Srinivas Chokkakula and Balveer Arora, who ensured the high quality and relevance of every article of this volume. Special thanks to the team at Asian Confluence and Hanns-Seidel-Stiftung India for their back-end support and to Rimli Borooah for help with copy-editing.

This book also contains the work and inputs of many experts who are not mentioned as authors. Contributions by speakers during the events on water and federalism organized by Hanns-Seidel-Stiftung India and Asian Confluence in the past years have helped to identify the need for such a book and its scope.

This publication is a result of successful cooperation and, as such, is an analogy for cooperative federalism – something that the coordinators hope it will contribute towards in the field of India's water. Asian Confluence and Hanns-Seidel-Stiftung will support this idea by continuing to work together on the topic of water federalism in India.

Volker Lennart Plän
Resident Representative
Hanns-Seidel-Stiftung India

Sabyasachi Dutta
Executive Director
Asian Confluence

List of Contributors

Srinivas Chokkakula, Ministry of Jal Shakti Research Chair – Water Conflicts and Governance, Centre for Policy Research (CPR), New Delhi.

Govinda Bhattacharjee, Professor of Practice at the Arun Jaitley National Institute of Financial Management, Faridabad, and Visiting Senior Fellow at the Centre for Multilevel Federalism, New Delhi.

Rakshita Goyal, Research Associate, MoJS Research Chair – Water Conflicts and Governance, Centre for Policy Research (CPR), New Delhi.

Arkaja Singh, Fellow, Centre for Policy Research (CPR), New Delhi.

Mohan V. Katarki, Senior Advocate, Supreme Court of India and Distinguished Visiting Faculty, Bangalore University's Law College.

Scott Moore, Director of China Programs and Strategic Initiatives; lecturer in political science; and Senior Fellow, The Water Center at Penn, University of Pennsylvania.

K. K. Kailash, Department of Political Science, University of Hyderabad.

Nilanjan Ghosh, Director at the Observer Research Foundation (ORF), India.

Prakriti Prajapati, Research Associate, MoJS Research Chair – Water Conflicts and Governance, Centre for Policy Research (CPR), New Delhi.

Nimmi Kurian, Professor, Centre for Policy Research (CPR), New Delhi.

Shawahiq Siddiqui, Founding Partner, Indian Environment Law Organization.

Chandan Mahanta, Professor and Head of the Civil Engineering Department, Indian Institute of Technology (IIT), Guwahati.

Venkatesh Dutta, Former Expert Member in the Drafting Committee of the State Water Policy 2020 of Uttar Pradesh.

Glossary

AIADMK	All India Anna Dravida Munnetra Kazhagam
ASSOCHAM	Associated Chambers of Commerce And Industry of India
BJP	Bharatiya Janata Party
BOD	Biochemical Oxygen Demand
CACP	Commission for Agricultural Costs and Prices
CEPT	Centre for Environment Planning and Technology
CGWA	Central Ground Water Authority
CGWB	Central Ground Water Board
CoI	Constitution of India
CPCB	Central Pollution Control Board
CPR	Centre of Policy Research
CWC	Central Water Commission
CWDT	Cauvery Water Disputes Tribunal
CWMA	Cauvery Water Management Authority
DMK	Dravida Munnetra Kazhagam
DoE	Department of Environment
DRC	Dispute Resolution Committee
DVC	Damodar Valley Corporation
DVC	Damodar Valley Corporation

EIA	Environmental Impact Assessment
EPW	Economic And Political Weekly
FCI	Food Corporation of India
GST	Goods and Services Tax
HSS	Hanns-Seidel-Stiftung India
INR	Indian Rupee
IRBM	Integrated River Basin Management
IRWDA	Interstate River Water Disputes Act
IWAI	Inland Waterways Authority of India
KSLU	Karnataka State Law University
MoJS	Ministry of Jal Shakti
MSP	Minimum Support Price
MSP	Minimum Support Price
MWRRA	Maharashtra Water Resources Regulatory Authority
NCDS	National Committee on Dam Safety
NDSA	National Dam Safety Authority
NWRC	National Water Resources Council
NWs	National Waterways
ORF	Observer Research Foundation
PIL	Public Interest Litigation
PRI	Panchayati Raj Institutions
RBA	River Boards Act
SEIA	State Level Environment Impact Agency
SPCB	State Pollution Control Board

TERI	The Energy And Resources Institute
TREADs	Transboundary Rivers Ecologies and Development Studies Programme
UN	United Nations
UP	Uttar Pradesh
USA	United States of America
USC	US Constitution
UT	Union Territory
WRI	World Resources Institute
WRIS	Water Resources Information System



1

India's Water Federalism: The Reconfigured Topologies

Srinivas Chokkakula

Abstract: This introductory chapter presents India's reconfigured water federalism in the intersection of the politics of the transforming Indian (federal) state and the emerging water governance challenges and risks. Moving away from the water federalism discourse that is dominated by interstate river water disputes, the chapter gives a synoptic overview of the expanding topologies of federal water governance. It outlines the evolving multiplicities of federalizing waters and their implications for India's long-term water security. These are presented as the following: *contours* of federal water governance spaces, chasms in negotiating interstate cooperation and federal responses, and *crevices* of contra and contested federalism. In delineating these topologies, the chapter also provides a window to the contributions in the volume engaging with a diverse range of policy and institutional challenges of federal water governance in India.

Keywords: India's water federalism, Centre-state relations, interstate river water disputes, interstate cooperation, multilevel federalism

India's Water Federalism

The Indian federation has several distinct features that sets it apart from other federal democracies. It began as an avowedly unitary state and an ambivalent federation. The Constitution calls it a 'Union of States'. An extensive body of

work acknowledges the unitary characteristics of the Indian state in its structural, legal and institutional framing (e.g. see Tillin, 2019). However, the trajectory and transformation of the Indian state over time has tested this unitary nature. The rise of identity politics, assertive subnationalism and deep territorialization have decentred the state and politics in several ways. This was aided and abetted by the growing autonomy of political economies of the states to a point that Indian federalism has been described as 'federation without a Centre' (see Saez, 2006). The kaleidoscope of Indian federalism boils down to this overarching tension between unitary conceptions and federal imaginations.

This volume engages with this tension through the relatively unexplored dimension of water federalism. The dominant frame of analysing Indian federalism is that of political economy focused on fiscal federalism. Resource federalism in India is generally little explored, and even less so from the point of emerging topologies of water governance. There are good reasons for this. The complex political ecology of water – neither a stationary nor a fugitive resource, deeply politicized with embedded power asymmetries – confounds the legal and geographical conceptions of ownership or allocation rights, besides being deeply technical. This has profound implications for how the federal organization of powers should be practiced in ensuring its sustainable use.

The Constitutional organization of powers for water governance between the Centre and the states has an equivocal character. Water is a state subject, with the dominant executive power (Entry 17 of the State List, Seventh Schedule) invested in states. These powers are subject to the Union's over regulation and development of interstate rivers (Entry 56 Union List, Seventh Schedule). The history of the Union's formation explains the origins and roots

of this organization, both *de jure* and *de facto* (Chokkakula, 2015; D'Souza, 2006). Additionally, the Constitution's Article 262 attaches special status to interstate river water disputes and provides for the barring of the jurisdiction of courts, including the Supreme Court. India's water federalism discourse is dominated by interstate river water disputes, and is coloured by the poor track record of their resolution and the antagonistic interstate relations produced by them.

The equivocal nature of federal water governance stems from the question of what precisely it entails with respect to regulation and development of interstate rivers when the states have dominant executive powers within their territorial boundaries. The overlapping of these powers is not well addressed. The Union used the powers under Entry 56 to enact the River Boards Act 1956 (RBA 1956) to facilitate interstate river water cooperation. The Act has been in disuse: it has never been applied to create a river board or any other institution for the purpose of regulation or development of interstate river waters. Thus, the Centre's role under the Entry 56 provisions has been effectively non-existent.

This vacuum in federal water governance has been characterized in various ways by earlier works as 'abdication of its role' by the Centre (Iyer, 1994), Centre's 'lost ground' (Chokkakula, Kapur & Singh, 2021) and 'federal anarchy' (Chokkakula & Prajapati, 2021). The vacuum is puzzling given the Indian state's unitary nature. On the other hand, this untended vacuum might have led the states to progressively usurp and assume a greater and exclusive role in water governance (Chokkakula, Kapur & Singh, 2020).

The dominance of states in water governance combined with the vacuum in federal governance may be contributing to the somewhat uninspiring national water governance and security indicators.

'Water stressed' India (by Falkenmark indicator, see CWC, 2019) is subjected to competitive politics by states, leading to deeply territorialized strategies for water governance. The interstate river water disputes are growing and are becoming increasingly intractable. Groundwater levels are depleting precariously. Among the 6,584 blocks monitored by the Central Ground Water Board (CGWB), a significant 1,034 are overexploited (CGWB, 2018). Deteriorating quality of water sources is an emerging concern. Depleting groundwater levels pose the risk of exposure to fluoride, arsenic and other heavy metal contamination (see Ayoob & Gupta, 2006; Chakraborti et al., 2003). The Central Pollution Control Board's (CPCB, 2018) monitoring of rivers reveals that BOD (Biochemical Oxygen Demand) levels in all the 351 river stretches monitored exceed the desired levels of 3 mg/l. In a more alarming conclusion, Damania et al. (2019) suggest that the adverse impacts of the long-term use of fertilizers in India may be leading to an 'invisible water quality crisis'. The World Resources Institute's (WRI) *Aqueduct Water Risk Atlas*, a more comprehensive assessment of risks, puts India in the 'Extremely High' risk category (WRI 2019). These are cumulative outcomes of states' (including the Union Territories) governance of water resources. The challenge is to improve these outcomes through collective action by states, anchored by the Centre. This challenge along with the changing Centre–states relations are at the core of India's emerging water federalism.

This volume on *India's Water Federalism* is thus about the inflection point marked by the transformed Indian state and the emerging challenges of water governance – the shifting topologies of federal water governance. It is about the changing Centre–states and interstate relations and their implications for India's long-term water security and sustainability. I discuss these reconfigured

topologies briefly as the following: the *contours* of expanded federal spaces, the confounding *chasms* in pursuing effective interstate river water governance, and the crippling *crevices* of contradictions and contested terrains of water governance.

Contours of Expanding Federal Spaces

The contours of contemporary Indian federal water governance are inscribed by the increasingly interstate nature of the national development and sustainability programmes. The programmes such as river rejuvenation, interlinking of rivers and inland navigation are essentially located in the realm of interstate river water governance. These programmes require robust structures and processes for interstate cooperation and collaboration. Competition between states for greater water allocations – reflected by increasing water disputes – is driving states' continued preference for supply augmentation strategies. This is inhibiting and hampering the paradigmatic shift to demand management strategies. National water security needs sustained investments in infrastructure and institutions to pursue growth while ensuring a balance between development and sustainability goals (Grey & Sadoff, 2007). The challenge calls for greater and coherent federal responses. The onus is on the Centre to work with the states to affect this shift through an effective deployment of its leverage – using policy, institutional, legal, financial instruments – for mobilizing and materializing the necessary change (Chokkakula, Kapur & Singh, 2021).

The development and sustainability goals also accompany emerging risks and governance challenges that require concerted and coordinated interstate and Centre–state responses. These include both known and unknown/uncertain ones. The known challenges include dam safety, floods, deteriorating water quality of both surface water and groundwater sources, etc. The greater and

unknown risks include those of climate change. Climate change can impact hydrological regimes and water resources development in fundamental ways. The basic premise of 'stationarity principle' in water resources planning is dead (Milly et al., 2008). The systems for water resources planning and management must be recalibrated to address the climate change-induced risks and challenges. But there are significant ambiguities and uncertainties about the impact of climate change at the basin, regional and local scales (UN-Water, 2020). This typically illustrates the emerging federal challenge of addressing climate change. The propensity for extreme events is known, but there is little understanding about how these translate at local scales to inform response. Attending to this knowledge gap is a crucial part of the challenge. It will need knowledge-driven locally empowered responses. Groundwater governance via the UP Groundwater Bill 2020 is one such example (Dutta, this volume). More importantly, the scale factor posited by climate change is the crux of the evolving water federalism. It presents a formidable federal challenge of coordinated and coherent interstate coordination and collaboration. The response may require carving out new ways of organizing powers and governance roles between Centre and states and building a new federal consensus (Chokkakula, 2020).

Chasms in Negotiating Cooperation and a Coherent Federal Response

The challenge of interstate cooperation and collaboration banks on an enabling and conducive federal ecosystem. Engineering such an ecosystem will be a long haul for the following reason. India's federal policies and politics need to make a very difficult transition: from a state of 'vacuum' – marred by competitive and intractable

interstate river water disputes – to an ecosystem for interstate cooperation.

The federal response must begin with recognizing and negotiating at least two major chasms. The first one is linked to policymaking, which must include a shift from conflict resolution to enabling cooperation (Chokkakula, 2019b). The history of interstate river water governance in India is all about responding to the problem of disputes as a contingency or an exigency measure (ibid.). The country has inexplicably neglected creating an ecosystem for interstate cooperation – as is exhibited by the ‘disuse’ of the RBA 1956 and the consequent vacuum pointed out earlier. This is further substantiated by the significant number of amendments to the Inter-State River Water Disputes Act 1956 (IRWDA 1956) in contrast to none to the RBA 1956 (ibid.). Besides the IRWDA 1956, federal water law and governance has largely relied on other instruments unconnected to water-related provisions in the Constitution. These instruments of governance have evolved primarily through environmental lawmaking (Goyal, Singh & Chokkakula, this volume). The other often-assumed leverage, using fiscal transfers, has also reduced over time with the states increasingly becoming autonomous in terms of their water resources development expenditure (Prajapati & Chokkakula, this volume). The Union can work with states for better outcomes with the help of increased investments and in consonance with other instruments (ibid.). There are other ways as well. The application of the Entry 56 provisions remains an underutilized source of leverage. They can be deployed innovatively in the backdrop of the emerging risks and new challenges. Besides replacing the RBA 1956 with a more effective legislation, the Centre can include other avenues of deploying Entry 56 provisions to address emerging federal water governance challenges. For instance, it can consider taking on a

pre-eminent role in building a credible information architecture for dispute resolution and decision-making (Chokkakula, Kapur & Singh, 2021).

The second chasm to be negotiated is the politics of enabling interstate cooperation: the antagonistic interstate politics of water sharing. In the absence of a reliable ecosystem for interstate coordination, the intractable and frequently recurring disputes have led to antagonistic politics as the normative character of interstate relations (Chokkakula, 2014, 2017). The transition to interstate cooperation overcoming the antagonisms would be a challenge. The emerging quality-related conflicts over existing disputes such as the Cauvery and the Mahadayi have enlarged the scope of the conflicts and exacerbated their nature. The case is different in Europe where quality concerns have set a path for transboundary collective action, as in the case of Rhine . It will be a challenging endeavour to make the transition from antagonistic interstate politics of water sharing to collective action towards long-term security and sustainability goals.

The extant role of the Centre is inadequate to negotiate these chasms. It is limited to an ad hoc mediatory role in disputes resolution, as ex ante mediation adjudication by tribunals under the IRWDA 1956. The Centre's role should be carved out to mobilize the necessary federal responses, with active support from states. The Centre–state and interstate relations need to be redefined to respond to the reconfigured topologies of India's emerging water federalism. The suggested new federal consensus must aim at delineating these roles and responsibilities of the Centre and states. Building such a federal consensus, however, requires enduring institutional avenues and practices for sustained deliberation, supported by credible federal politics. It may be

possible by elevating and empowering the Interstate Council – a constitutionally sanctioned institutional space for interstate coordination (Chokkakula, Kapur & Singh, 2021; Chokkakula, 2019b; Mukarji & Arora, 1992). The politics and institutional practices for building the consensus can build on the experiences of materializing the GST reforms (Bhattacharya, this volume; also see Chokkakula, 2018).

Crevices of Contra and Contested Federalism

The reconfigured topologies of water federalism are also shaped by new priorities in water governance. These may challenge the conventional conceptions of federalism. India has just embarked on an important drinking water security mission with an unprecedented budgetary allocation of more than INR 4.5 lakh crore to the Centrally Sponsored Scheme of Jal Jeevan Mission – both rural and urban together. This increased footprint of the Centre in an essentially states' domain – more precisely that of the Panchayati Raj Institutions (PRI) – may be suggestive of a contra-federalism, in tension with the subsidiary principle. Yet it is a necessary impetus for achieving drinking water security. This may lead to new and productive forms of multilevel federalisms yet to be fully understood.

The production of multilevel federalisms is not going to be restricted to the tension between the local–state–Centre scales for implementing the Jal Jeevan Mission. It can occur in other ways to include the supranational scale as well; Kurian (this volume) draws our attention to this dimension forcefully by examining the subnational and international transboundary engagement in Northeast India. The discussions about India's emerging water federalism must accommodate these new forms of multilevel federalisms.

The dominant strand of water federalism so far – interstate river water disputes resolution – itself is muddled with several ambiguities and contradictions. The disputes resolution suffers from a variety of challenges that can be categorized into the following: (i) the long delays in adjudication; (ii) states' lack of compliance with the decisions; and (iii) politicization of the disputes.

The amendments to the IRWDA 1956 have historically responded to the issue of delays, primarily by setting time limits. These have not helped, and the adjudication continues to suffer from delays. These are often attributed to the tribunals' functioning and their transformation over time in undesirable ways (Nariman, 2009; Chokkakula, 2016). Part of it also stems from the complex challenge of addressing the uniquely complex nature of interstate river water disputes – asymmetries and inequities produced by historical geographies of Indian states (D'Souza, 2006; Chokkakula, 2017). Even though the literature on international transboundary river water disputes resolution builds on federal water disputes resolution, it is a huge challenge to apply it to the specific context of India and the complications of its interstate river water disputes (Katarki, this volume; Chokkakula, 2017).

Yet the history of interstate river water disputes resolution in India shows that the bigger challenge lies in the non-compliance of states with the decisions of the tribunals or the Supreme Court. States have often refused to comply when the decisions do not suit them. Part of the problem lies with the legal provisions for implementation under the IRWDA 1956. In the early decades of the Act, the implementation relied entirely on the consensus of states. Justice Bachawat, who chaired the first Krishna Water Disputes Tribunal (also the Godavari Water Disputes Tribunal) in the 1970s, insisted on the consensus of states as a precondition to recommend the implementation mechanism, the Krishna Valley

Authority. He did not include it as part of the final award when he could not achieve the party states' consensus (Chokkakula, under review). Justice Ramaswamy presiding over the Narmada Water Disputes Tribunal at the same time had the consensus of states and thus could recommend the Narmada Control Authority in his decision. The IRWDA 1956 was later amended to make the central government responsible for creating the implementation mechanisms, but with no explicit precondition about the states' consensus. The recent Cauvery Water Management Authority (CWMA) was created in 2018 using these powers of the Centre, in response to a fiat from the Supreme Court. This shift in giving effect to decisions from legal adjudication reveals the testing transformation as well as the contesting conceptions of Indian federalism. The Cauvery basin has not had a distress rainfall year since then, and the efficacy of CWMA is yet to be tested. This is an experiment to watch and to learn from about institutional models for interstate river water coordination, cooperation or collaboration.

The absence of reliable institutional models for interstate cooperation is a strange travesty, considering that India has a remarkable track record of interstate cooperation. There are more than 160 interstate river water sharing arrangements (CWC 2015, Chokkakula et al, under review). This track record has not been subjected to any kind of critical examination to inform policy thinking about an ecosystem for interstate cooperation. The scholarship about this rich history of interstate cooperation is described as abysmal, uncritical and unduly celebratory (Chokkakula et al., under review).

The 'disuse' of the RBA 1956 does not mean that there have not been any institutions for coordination. A variety of alternative channels have been used to create interstate institutions. The

Damodar Valley Corporation, the Brahmaputra Board and the Betwa River Board were created through separate Acts of Parliament. Most other interstate institutions have their genesis in respective state bifurcation laws. This preference for alternative channels for the purpose is yet to be coherently and comprehensively explained.

The absence of robust and resilient interstate institutions has aided the politicization of interstate river water disputes. Acute subnationalism and territorialization of disputes is a prominent feature of India's federal polity. Territorialization combined with identity politics is an understudied dimension of interstate river water disputes (D'Souza, 2006; Chokkakula, 2014, 2015). These politics are deeply context-specific, but institutionalization of sectional identity politics has always contributed to exacerbation of interstate river water disputes (Moore, this volume).

Another often-ignored dimension is the economic drivers of the disputes. The skewed promotion and prioritization of cropping systems and water management practices through federal policies exacerbate the competition for water resources (Ghosh, this volume). The disputes also cause significant economic costs – often not part of conversations. A couple of examples illustrate the scale of costs involved. For the delays caused by Karnataka in releasing its due share to Tamil Nadu in 2017, the latter state claimed a compensation of INR 2,480 crore for a single season (*The Indian Express*, 2017). In another estimate, the ASSOCHAM (Associated Chambers of Commerce and Industry of India) claimed that the escalation of the Cauvery dispute in 2016 caused a loss of INR 25,000 crore to the industry sector in Bengaluru city alone (*The Economic Times*, 2016).

Despite the greater attention it receives, legal adjudication for resolving interstate river water disputes too suffer from similar

contradictions. As we know, the Constitution provides for barring courts' jurisdiction over interstate river water disputes. The IRWDA 1956 too bars their jurisdiction and reinforces this by attaching tribunal awards with the force of a Supreme Court decree. Two developments in recent years further muddle these waters with their inherent contradictions. First, the Supreme Court, in its decision on the Cauvery dispute in 2018, asserted its appellate jurisdiction over the disputes, in a major departure from its earlier history of engaging with the disputes (Chokkakula, under review). Second, Parliament passed the Interstate River Water Disputes Amendment Bill in 2019 proposing to set up a Permanent Tribunal and persists with the bar on the courts' jurisdiction, despite the Court's above decision to the contrary. In sum, these developments risk extended adversarial litigation, accentuated politicization of disputes and interstate antagonisms (Chokkakula 2019a). These contradictions, gaps and omissions reflect the narrow discourse about interstate river water disputes constituting an erasure of their embeddedness in the larger federal framing, and in the transforming topologies of water federalism. This must be addressed by expanding the scope of water federalism and investing in designing robust federal systems across structural, political, judicial instruments and processes (Bednar, 2009).

This Volume

This volume is a modest effort to pool in perspectives engaging with these reconfigured topologies of water federalism and the emerging challenges. The contributors are from a wide-ranging spectrum of academics, practitioners and activists. The volume makes deliberate efforts to go beyond the dominant theme of interstate river water dispute resolution and presents the diverse and varied dimensions of water federalism.

References

- Ayoob, S., & Gupta, A. K. (2006). Fluoride in drinking water: A review on the status and stress effects. *Critical Reviews in Environmental Science and Technology*, 36, 433–487.
- Bednar, J. (2009). *The robust federation: Principles of design*. Cambridge University.
- CGWB (Central Ground Water Board). (2018). *Groundwater quality in shallow aquifers in India*.
- CPCB (Central Pollution Control Board). (2018). *River stretches for restoration of water quality*.
- Chakraborti, D., Mukherjee, S.C., Pati, S., Sengupta, M.K., Rahman, M.M., Chowdhury, U.K., Lodh, D., Chanda, C.R., Chakraborti, A.K., & Basu, G.K. (2003). Arsenic groundwater contamination in Middle Ganga Plain, Bihar, India: A future danger? *Environmental Health Perspectives*, 11(09), 1194-1201.
- Chokkakula, S. (2014). Interstate water disputes: perils and prospects of democratisation. *Economic and Political Weekly*, 49(9), 75–81.
- Chokkakula, S. (2015). *The political geographies of interstate water disputes in India* University of Washington.
- Chokkakula, S. (2016). Tribunals on trial. In *Down to Earth: Annual State of India's Environment – SOE 2017* (pp. 136–138). Centre for Science and Environment.
- Chokkakula, S. (2017). *Why do interstate water disputes emerge and recur?* Centre for Economic and Social Studies.
- Chokkakula, S. (2018, 11 February). Mahadayi issue demonstrates why India needs a GST Council-like forum for river governance. *The Economic Times*. <https://economictimes.indiatimes.com/news/politics-and-nation/mahadayi-issue-demonstrates-why-india-needs-a-gst-council-like-forum-for-river-governance/articleshow/62866080.cms?from=mdr>

- Chokkakula, S. (2019a, 2 November). Call of the river. *The Indian Express*. <https://indianexpress.com/article/opinion/columns/interstate-river-water-disputes-bill-policy-making-call-of-the-river-6098671/>
- Chokkakula, S. (2019b). Interstate river water governance: Shifting the focus from conflict resolution to enabling cooperation. In *Policy Challenges 2019–2024: Charting a new course for India and navigating policy challenges in the 21st century* (pp. 118–121). Centre for Policy Research.
- Chokkakula, S. (2020, 18 September). India's response to Covid-19 reflects the power, problems, potential of federalism. *The Indian Express*. <https://indianexpress.com/article/opinion/columns/coronavirus-covid-19-pandemic-and-federalism-6600329/>
- Chokkakula, S. (under review). *The Bar and the binding: The Supreme Court and interstate river water disputes*. Ministry of Jal Shakti, Government of India.
- Chokkakula, S., Dasgupta, D., Goyal, R., & Prajapati, P. (under review). *Integrating India: Interstate river water cooperation in India*. Ministry of Jal Shakti, Government of India.
- Chokkakula, S., Kapur, A., & Singh, A. (2021). *Water and federalism: Working with states for water security*. TREADS Working Paper. Centre for Policy Research.
- Chokkakula, S., & Prajapati, P. (2021). Whither India's federal governance for long-term water security? In G. Chadha & A. B. Pandya (Eds.), *Water Governance and Management in India* (pp. 165–185). Springer.
- CWC (Central Water Commission). (2015). *Legal instruments on rivers in India, Vol III: Agreements on interstate rivers*.
- CWC (Central Water Commission). (2019). *Reassessment of water availability in basins using space inputs*.
- Damania, R., Desbureaux, S., Rodella, A.-S., & Russ, J. (2019). *Quality unknown: The invisible water crisis*. The World Bank.

- D'Souza, R. (2006). *Interstate disputes over Krishna waters: Law, science and imperialism*. Orient Blackswan.
- Grey, D., & Sadoff, C. W. (2007). Sink or swim? Water security for growth and development. *Water Policy*, 9(6), 545–571.
- Iyer, R. R. (1994). Federalism and water resources. *Economic and Political Weekly*, 29(13), 733–736.
- Milly, P.C.D., Betancourt, J., Falkenmark, M., Hirsch, R. M., Kundzewicz, Z. W., Lettenmaier, D. P., & Stouffer, R. J. (2008). Stationarity is dead: Whither water management? *Science*, 319(5863), 573–574. <https://doi.org/10.1126/science.1151915>
- Mukarji, N., & Arora, B. (1992). Restructuring federal democracy. In N. Mukarji & B. Arora (Eds.), *Federalism in India: Origins and development* (pp. 265–278). Centre for Policy Research.
- Nariman, F. S. (2009). Inter-state water disputes: A nightmare! In R. R. Iyer (Ed.), *Water and the laws in India* (pp. 32–57). Sage
- Saez, L. (2002). *Federalism without a Centre: The impact of political and economic reform on India's federal system*. Sage.
- The Economic Times*. (2016, 13 September). Cauvery dispute causes Rs 25,000 crore loss to Karnataka: ASSOCHAM. <https://economictimes.indiatimes.com/news/politics-and-nation/cauvery-dispute-causes-rs-25000-crore-loss-to-karnataka-assochem/articleshow/54314316.cms>
- The Indian Express*. (2017, 9 January). Cauvery water issue: Tamil Nadu seeks Rs 2,480 crore as compensation from Karnataka. <https://indianexpress.com/article/india/cauvery-water-issue-tamil-nadu-seeks-rs-2480-crore-as-compensation-from-karnataka-4466146/>
- Tillin, L. (2019). *Indian federalism*. Oxford University Press.
- UN-Water. (2020). *United Nations world water development report 2020: Water and climate change*.
- WRI (World Resources Institute). (2019). *Aqueduct water risk atlas*.

Srinivas Chokkakula is the MoJS (Ministry of Jal Shakti) Research Chair – Water Conflicts and Governance at the Centre for Policy Research (CPR), New Delhi, where he leads the Transboundary Rivers, Ecologies and Development Studies (TREADs) programme. He is also a member of the Drafting Committee of India's National Water Policy.

Srinivas' research and policy interests lie primarily in the water sector, with a focus on transboundary water conflict/cooperation and governance. He has written and published widely on the topic, both in academic journals and mainstream outlets. His interests extend to the broader area of the politics of infrastructure development, including inland waterways, smart cities and rural roads.

Before his PhD and the shift to academics, Srinivas worked as a professional, engaging with wide-ranging topics including urban and regional planning, and local governance in India; disaster response and reconstruction; and indigenous knowledge systems for natural resource management. A keen supporter of the non-profit sector, Srinivas has founded and served/is serving on the boards of various organizations.

Srinivas has an interdisciplinary training in geography, planning and engineering. He has a PhD from the University of Washington, Seattle, and an MA from the University of Miami, Florida, in political geography; an earlier master's in urban environmental planning from CEPT University, Ahmedabad; and a BTech in civil engineering from Kakatiya University, Warangal. He has received several scholarships and fellowships, including the British Council's Chevening Scholarship for the Young Indian Environmental Managers programme in 2000. Srinivas is the inaugural Fulbright-Nehru Visiting Chair in Public Policy designate for 2022–23 at the University of Massachusetts, Amherst, USA.



Perspectives



2

Water Federalism: Policy and Institutional Frame

Govinda Bhattacharjee

Abstract: Water governance in India is beset with many structural flaws and a dated institutional structure. While water is a subject in both the Union and State Lists, there are multiple overlapping areas which are sources of potential conflict. The Centre has an upper hand in water governance, and the existing legal and constitutional frameworks do not encourage participation of states in policy formulation and implementation. The country's water policy has so far remained lopsided, being limited only to the allocation of shares of river waters to states. This in turn has led to many interstate disputes, to resolve which the existing institutional arrangements have proved grossly inadequate. The water sector infrastructure also remains among the most neglected. The third tier of the government, where most of the water usage takes place, is almost entirely missing from water governance. An outdated institutional architecture cannot address the challenges of 21st century India. These can only be tackled through cooperative federalism by bringing the Centre and the states on a common consultative platform through a federal interstate body such as the Goods and Services Tax (GST) Council.

Keywords: federal water governance in India, policy and institutional framework

Legal and Constitutional Framework

Most of India's rivers span multiple states, but an efficient federal framework for water management is missing in the country. Water remains embedded in multilayered constitutional entanglements, which make them both central and

state subjects. Entry 56 in the Union List includes the regulation and development of interstate rivers and river valleys, making them a central subject, while Entry 17 in the State List gives the states legislative control over water supplies, irrigation and canals, drainage and embankments, water storage and water power, but subject to the provisions of Entry 56. Besides, Article 262 of the Constitution gives supreme power to Parliament to make laws regarding the adjudication of interstate disputes on river waters and makes such legislation non-justiciable in any court of law, including the Supreme Court. Thus, while the Centre has jurisdiction over interstate rivers and waters, the states can exercise their user rights over water exclusively within their own territories in the manner that suits them best. This ambiguity engenders potential for conflicts, making the Centre tread the terrain rather cautiously, especially in relation to basin-level governance.

Using its powers under Entry 56 and Article 262 respectively, the Centre had enacted two legislations in 1956: the River Boards Act and the Interstate River Water Disputes Act. The River Boards Act enables the Centre to create river boards to advise on the regulation and development of interstate river basins in consultation with the states concerned. River boards can advise on conservation, control, optimum utilization of water resources, promotion and operation of irrigation schemes, flood control, etc. The advisory nature of the board under this legislation makes it powerless; in fact, the Act has been in disuse since inception (Doabia, 2012, cited in Chokkakula, 2017). The Interstate River Water Disputes Act empowers the central government to set up ad hoc tribunals for adjudication of disputes between states in relation to interstate river waters or river valleys; their decisions are final and binding on the disputant states.

So far the Parliament has made little use of Entry 56. Quite a few river boards and authorities have been created but with only advisory powers, instead of complete powers of river basin management. The Damodar Valley Corporation (DVC) was modelled in its inception on the Tennessee Valley Authority, but never functioned as such (Iyer, 1994). In March 1948, the Damodar Valley Corporation Act was passed by the Parliament, requiring the central government and the governments of Bihar and West Bengal to participate jointly in the DVC, which was the first multipurpose river valley project of independent India. Today it is an almost defunct organization, beset with huge debts, uncollected dues and various organizational problems. Similarly, the Brahmaputra Board, set up under a Parliamentary Act, was vested with the powers of project execution like a river basin authority, but has remained a weak and ineffective entity with its role limited to the preparation of a master plan. Other authorities that have been set up, such as the Narmada Control Authority or the Ganga Flood Control Commission, have very limited functions – cost allocation, flood control, etc. – far from what would be expected of a river basin authority. There were proposals for establishing a Krishna River Authority or a Cauvery River Basin Authority which never came through, because the states whose geographical territories these rivers span could not come to any agreement about an integrated interstate plan for the optimal use of river waters or for their development.

By and large, state governments still determine the utilization of river waters, and since rivers flow across different states, disputes are bound to occur in this institutional framework. The existing institutional machinery has proved unequal to the task of resolving these disputes. The only available mechanism to adjudicate these disputes is setting up an ad hoc interstate water disputes tribunal.

Since 1956, nine such interstate tribunals have been set up – for the Krishna (two tribunals), Godavari, Narmada, Cauvery, Ravi–Beas, Mahadayi/Mandovi, Vansadhara and Mahanadi rivers. As against the limit of five years, the Ravi–Beas Tribunal took 33 years for resolution, the Cauvery Tribunal 27 years and the Godavari Tribunal 12 years; the others took around a decade each. The verdicts of the Krishna (II) and Mahanadi tribunals are yet to be published. Without any time limit for publication of awards, the states have no recourse and no remedies. The result of such arbitration is binding upon the disputing states; there is no possibility of appeal against it in any court of law, obviously to avoid protracted litigation and consequent irresolution of the dispute. In most cases, however, agreements or awards have followed protracted negotiations, as in the case of the Krishna, Godavari or Narmada tribunals. But in many cases, post-award disputes have also arisen, as with the distribution of Ravi–Beas waters amongst Haryana, Jammu and Kashmir, Rajasthan and Punjab. Even central intervention has not helped. A permanent institutional mechanism is vital for the speedy disposal of such disputes.

Overlapping Areas in Water Management: Potential for Centre–State Conflicts

The Centre exercises influence over states' approaches to water governance by using other entries in the Concurrent List. For instance, Entry 20 in the Concurrent List, 'Economic and Social Planning', makes subjects such as major and medium irrigation, hydro-power, flood control and multi-purpose projects subject to central clearance. The projects require environmental clearances and also clearances under the Forest Conservation Act (Iyer, 1994). This is often resisted by states, but the Centre has overarching powers under the existing framework tending to centralization.

Again, Entry 24 of the Union List relates to shipping and navigation on inland waterways which are classified as National Waterways (NWs) under Parliamentary statutes. A single piece of legislation – the National Waterways Act enacted in 2016 – declared 106 waterways NWs, in addition to the pre-existing five NWs, to be developed and maintained by the Inland Waterways Authority of India (IWAI), the nodal agency for water navigation. This was an assertion of the Centre's power over the states in respect of river waters even within their territories. However, despite the powers exercised by the Centre, resistance by the states has led to perpetual tension in water governance in the country.

Another potential source of tension between the Centre and the states is the use of water for agricultural purposes (Ghosh, 2020). Agriculture belongs to the State List under Entry 14, but it is the Centre that drives water use in agriculture through its policy of administered Minimum Support Price (MSP) in agriculture. This has led to a distorted cropping pattern sustained by free or subsidized power and water, especially in Punjab, Haryana and western Uttar Pradesh. Therefore, 'To the extent that changes in farming practices are required for cost-effective improvements in water efficiency, water policy has to integrally involve agriculture policy makers' (Singh, 2010, p. 8). In fact, an integrated approach in water management is missing in the policy domain, since the issue of the use of water for agriculture is treated independently of the associated issues of water management through flood control schemes and large irrigation works.

Policy and Institutional Framework

It is obvious that a state cannot have autonomous powers even in respect of a river flowing entirely within its territory, because

of associated environmental and other consequences in the neighbouring states: an independent action by a state may affect groundwater aquifers across its boundaries. There are also water surplus and water deficit states, but no policy or institutional mechanism exists for equitable sharing of water resources between them. Thus a national coordination mechanism is a critical need, which was why the National Water Resources Council (NWRC) was established in 1983; but it has remained practically a non-starter (Iyer, 1994). All that it has done so far is frame a National Water Policy in 1987, which stated in Para 1.8: 'water is a scarce and precious national resource, to be planned, developed and conserved as such and in an integrated and environmentally sound basis, keeping in view the need of the states.' Thus, water becomes a national resource only if states give their consent. Right to life is a fundamental right under Article 21 of the Constitution, and water is fundamental to life. But this implicit fundamental right to water is subject to states' consent as per this policy.

The National Water Policy was reviewed and updated in 2002 and again in 2012. In the 2012 policy, privatization of water supply services and pricing and regulation of water was recommended. Drinking water and sanitation needs were prioritized and the rest of the uses were to be allocated using economic principles to avoid wastage of water. This was adopted despite opposition from some states, with major issues like water pollution or exploitation of ground water for commercial purposes left unaddressed. The Centre has taken a few initiatives under the national policy, such as establishing a National Water Informatics Centre under the National Hydrology Project, and setting up a web-based Water Resources Information System (India WRIS) by transferring all unclassified data of the Central Water Commission (CWC) and the Central Ground Water Board (CGWB) into this portal. To

address the new challenges that have emerged in the water sector since the 2012 revision of the National Water Policy, the Ministry of Jal Shakti has constituted a drafting committee in November 2019. The committee has submitted a draft in November 2020 and it is under consideration of the Ministry of Jal Shakti.

CWC (erstwhile Central Waterways, Irrigation and Navigation Commission) is the oldest institution dealing with water in the country dating from pre-Independence days. It is a technical organization that coordinates with the states on conservation and utilization of water resources, flood control, irrigation and dam safety, navigation, drinking water supply, water power development, etc. A National Water Board was constituted in 1990 to review the progress of implementation of the National Water Policy for reporting to the NWRC and also for systematic development of the country's water resources; however, precious little has been done so far in this regard.

Additionally, the institutional framework for federal water governance includes multiple types of institutions such as the Central Ground Water Board, Central Water and Power Research Station, Ganga Flood Control Commission, Farakka Barrage Project and Upper Yamuna River Board. There are also a number of statutory bodies, such as the river boards in respect of the Tungabhadra, Betwa, Brahmaputra, Godavari and Krishna, the Narmada Control Authority, etc. Further, there are autonomous bodies like the National Mission for Clean Ganga, National Water Development Agency, National Institute of Hydrology, and the North Eastern Regional Institute of Water and Land Management, besides two Central Public Sector Undertakings dealing with water: the National Projects Construction Corporation Limited and the Water & Power Consultancy Services Limited. All these bodies

have now been brought under the single Ministry of Jal Shakti which was formed in May 2019 by merging the two erstwhile water ministries (the Ministry of Water Resources, River Development and Ganga Rejuvenation, and the Ministry of Drinking Water and Sanitation) for coherence and effective coordination – a move that was long overdue.

Till 2019, 16 states/union territories (UTs) have formulated and adopted their own water policies. However, the existing framework does not appear to encourage participation of states in policy formulation and implementation; in the absence of this, water governance in the country retains its predominantly unitary (rather than federal) character. This impedes institutional reforms, rendering India's water sector infrastructure neglected and underdeveloped. There is no policy for groundwater storage or management, the major focus of India's policy being towards irrigation and flood management as evidenced by the multitude of government programmes directly linked to agriculture and associated concerns: the Accelerated Irrigation Benefits Programme, Command Area Development, Flood Management, National Project for Repair, Renovation and Restoration of Water Bodies, etc. Growing demand, increasing droughts, declining groundwater quality and non-availability of safe drinking water continue to plague the country's water management.

Strangely, the third tier of the government – the municipalities and panchayats where most of the water usage occurs – is almost entirely missing from the country's water governance architecture. While their involvement in the management of water is vital, the vertical dimension is important because local governments are only responsible for local water infrastructure; it is the state that must integrate the local water infrastructure with the needs of agriculture and other necessities, especially at the Panchayat level.

The state and citizens must together share the responsibilities and costs. These challenges can be addressed only through effective horizontal and vertical coordination among governments in a true spirit of cooperative federalism.

Emerging Framework for Federal Water Governance

The existing constitutional, legal, policy and administrative architecture for water governance is inadequate and outdated, and requires a comprehensive review to address many vital issues, including a constitutional assertion that water is a national resource fundamental to life. This will make it implicit that this resource should be shared equitably and used responsibly, with heavy penalties imposed for wastage or negligent preservation and conservation.

A major hurdle to efficiency is the extreme over-bureaucratization of India's water governance set-up. Arguing for a paradigm shift, the 2016 report by a high-level committee constituted by the central government, 'A 21st century institutional architecture for India's water reforms', recommended the setting up of a National Water Commission as the apex body for water policy, data and governance by subsuming both the existing bodies of CWC and CGWB; the latter are highly bureaucratized, with narrow views of responsibilities as against the 'new age, progressive, agile, and compact organisation' needed to meet the 21st century challenges with a holistic approach (EPW Engage, 2020). However, this has not been implemented so far.

To address some of the existing shortcomings, two Bills were introduced in Parliament in 2019: the River Water Disputes Bill and the Dam Safety Authority Bill. A draft National Water Framework Bill 2016 and a draft River Basin Management Bill 2018 were also circulated by the Union to the states/UTs for their comments.

The Inter-State River Water Disputes (Amendment) Bill 2019, which was passed by the Lok Sabha on 31 July 2019, provides for a Permanent Tribunal for adjudication of interstate river water disputes with the support of a Disputes Resolution Committee (DRC).

The Dam Safety Bill 2019, passed by the Lok Sabha on 2 August 2019, aims to address the emerging challenges of ageing dams. The country has 5,745 reservoirs, of which 293 are more than 100 years old. The age of 25 per cent of the dams is between 50 and 100 years, and 80 per cent are over 25 years old. Forty dams have collapsed since Independence; the worst such case was in Gujarat in 1979 leading to the loss of thousands of lives (The Economic Times, 2019). The Dam Safety Bill provides for the surveillance, inspection, operation and maintenance of specified dams across the country through two national bodies: the National Committee on Dam Safety (NCDS) for policy and regulation, and the National Dam Safety Authority (NDSA) for implementation of the policies. The Bill effectively transfers the states' rights and authorities over rivers to the Centre, since decisions of the NDSA would be final and binding on the states without any appeal. Since the Bill applies to both inter- and intra-state rivers, and since states can make laws on water (including relating to water storage and hydropower generation), there is potential for conflict between the Centre and the states. Given that the NDSA is to be headed by an Additional Secretary (or Secretary) with a wide range of powers to decide on dam safety and related issues, the states may perceive it as an encroachment on their autonomy, thereby creating another avenue for potential conflict (Acharyulu, 2020).

The River Basin Management Bill, which would replace the River Board Act 1956, seeks to manage all the 13 river basins in

India by setting up exclusive umbrella authorities for each of them. Treating water as 'a common pool community resource', the Bill provides for the development of individual master plans for all these river basins, for integrated flood management, irrigation, navigation, water conservation and distribution through a two-tier system: (i) a Governing Council comprising the chief ministers of the concerned states, to be assisted by an Advisory Council; and (ii) an Executive Board with powers to formulate river basin master plans, conduct comprehensive scientific surveys, maintain relevant databases and lay down the operation rules for reservoirs. The recommendations of the River Basin Authorities will be final and binding on the states.

In 2016, the Union Government had released the draft of the National Water Framework Bill for public comments and suggestions. Probably the most ambitious and comprehensive of all water governance Acts so far, it sought to de-bureaucratize the system of water governance in the country, and perhaps for that very reason has been all but buried. It proposed an overarching national legal framework with principles for protection, conservation, regulation and management of water as a vital and stressed natural resource, recognizing the 'Right to Water for Life'. It provided for river rejuvenation, protection of water-dependent ecosystems, people-centric water management, integrated river basin development with the active participation and involvement of states, water security, management of wastewater, groundwater, floods and droughts, establishment of information systems for water resources, settling of interstate river water disputes, etc. The three Bills discussed earlier have incorporated many features from it.

The Way Forward

A poorly conceived and defective framework only engenders a defective implementation apparatus that cannot deliver. As we have seen, the hitherto existing framework of water governance is saddled with an outdated legal and institutional architecture that is grossly inadequate to address the challenges of 21st century India. Nor is the new framework that is being set up, which seeks to address these inadequacies and overcome the structural hurdles by usurping the states' powers, a satisfactory one. An arrangement that assigns overwhelming power and authority to the Centre is likely to be ineffective; besides, it is likely to exacerbate conflicts. The challenges are formidable and cannot be addressed except through cooperative federalism, by bringing the Centre and the states on a common consultative platform. Some centralization of powers may perhaps be unavoidable, but for transforming the current environment of conflicts into one of cooperation, we would need an inclusive approach, perhaps through the creation of a federal interstate body – something like the Goods and Services Tax (GST) Council (set up to implement GST reforms through consensus) but with an appropriate structure and authority to decide even on the most contentious interstate issues (such as the linking of rivers across states or regions) through consensus. That will herald the era of true water federalism in the country.

References

- Acharyulu, M. S. (2020, 19 August). The great Indian river question: Three Bills threatening federalism. <https://www.downtoearth.org.in/news/water/the-great-indian-river-question-three-bills-threatening-federalism-72913>
- Chokkakula, S. (2017). Why do inter-state water disputes emerge and recur? Anatomy of ambiguities, antagonisms and asymmetries. CEISS Monograph 45. Centre for Economic and Social Studies.

- EPW Engage. (2020). De-bureaucratising water governance policy: Mihir Shah Committee Report 2016 and the way forward. <https://www.epw.in/node/156668/pdf>
- Ghosh, N. (2020). Three stressors of inter-state water conflicts in India. <https://www.orfonline.org/expert-speak/three-stressors-of-inter-state-water-conflicts-in-india/>
- Iyer, R. R. (1994, 26 March). Federalism and water resources. *Economic and Political Weekly*, 29(13), 733–736.
- Singh, N. (2010). Federalism and water management in India. Federalism and Reform in Asia Project & 2010 Conference, Australian National University, Canberra, and National Institute of Public Finance and Policy, New Delhi, 1–2 December. http://www.mumbai24seven.in/reference/federalism_and_water_management_in_india.pdf
- The Economic Times. (2019, 2 August). Lok Sabha passes Dam Safety Bill. <https://economictimes.indiatimes.com/news/politics-and-nation/lok-sabha-passes-dam-safety-bill/articleshow/70502693.cms?from=mdr>

Govinda Bhattacharjee retired as Director General from the Office of the Comptroller & Auditor General of India, New Delhi, and is currently a Professor of Practice at the Arun Jaitley National Institute of Financial Management, Faridabad, and also Visiting Senior Fellow at the Centre for Multilevel Federalism, New Delhi. During his service career spanning more than three decades, he has served in various capacities in India and abroad including a four-year tenure as tax advisor to a foreign government. He also worked as a professor of applied economics at the Indian Institute of Public Administration, New Delhi, and as a professor at the Centre for Economic Policy and Public Finance, Patna.

A prolific writer and a columnist with versatile interests in diverse areas, Govinda has so far published ten books and numerous research articles in various national newspapers and academic journals. His publications include *Public Sector Enterprises: Evolution, Privatisation and Reforms* (Sage 2020), *Special Category States of India* (Oxford, 2016), *GST and its Aftermath* (Sage, 2018, with a co-author), etc. He is also a science popularizer and has authored a popular science trilogy on evolution published by Vigyan Prasar, Department of Science and Technology, Government of India.

3

Water Federalism: Encased in Environmental Lawmaking

Rakshita Goyal, Arkaja Singh and
Srinivas Chokkakula

Abstract: The legal discussions about federal water governance have primarily focused on the resolution of interstate river water disputes and the mechanism for their resolution. This paper presents a case of federal water governance as one encased in the larger frame of environmental lawmaking in India. This siting offers a new perspective and account of the structural and institutional relations enabling federal water governance. These are discussed using the legal instruments for controlling water pollution: environmental impact assessment and public interest litigation. We conclude that water governance has benefitted from the exceptional history of environmental lawmaking in India. Further, the structural relations and institutional processes enabled by environmental lawmaking need to be considered and accounted for in analysing water federalism in India. This expands the contours of federal water governance to an exploration of ways of making the Centre and the states work towards progressive outcomes.

Keywords: water federalism, federal water governance, environmental lawmaking, Centre–state working relations

Introduction

The literature on federal water governance is scanty, and is often focused on interstate river water disputes resolution and federal division of powers over water governance. Further, much of this work is focused on law – primarily the efficacy

of the Interstate River Water Disputes Act 1956. There is however an emerging stream of literature that calls for conceptualizing a broader frame of federal water governance to improve the efficacy of interstate river water disputes resolution and enable cooperation (Chokkakula et al., 2020; Chokkakula, 2019). This paper responds to the call and seeks to advance the contours of federal water governance beyond the legal framework for interstate river water disputes. It aims to provide a deeper and textured understanding of the legal frameworks and structures buttressing water federalism.

It does so by locating federal water governance within the broader evolution of environmental law. This framing helps in several ways. One, it allows a more comprehensive assessment of the Centre's ability to work with the states for broader water governance reforms. Two, it offers the possibilities and potentials of using the structural and institutional relations enabled by environmental lawmaking. Environmental laws cover water resources in the larger frame of ecological and social systems with direct bearing on water resources development. Three, it highlights the structural relations enabled by the vibrant public interest litigation (PILs) case law, through which a range of stakeholders are brought into active engagement in shaping and advancing water governance objectives. This offers an opportunity to unravel a nuanced means of empowering local governments and at the same time making them accountable – enabling the workings of multilevel federalism (see Mukarji & Arora, 1992).

Indian Environmental Law: The Beginnings

The 1960s and 70s saw the genesis of a global environmental movement. The Stockholm Conference organized by the United Nations in 1972 urged nations to evaluate and contemplate the

state of their environment. India's legislative environmental 'awakening' coincided with this moment and was also propelled by it to a certain degree. Beginning with the Wildlife Protection Act in 1972, the decades that followed saw a spate of environmental legislation being enacted.

A strong central government then headed led by Prime Minister Indira Gandhi is credited with being the driving force behind this. India's Constitution, as originally adopted, did not make any specific provisions for the environment. Instead, individual subjects constituting the environment were distributed between the Centre and the states, often with the latter having a more predominant role. Thus forests, wildlife, water, mineral resources, fisheries and agriculture were some of the subjects over which the states had jurisdiction. The Centre's powers extended to aspects of these subjects, such as interstate river water and valleys, regulation of mines and mineral development. In the 1970s, the central government took on an active role in enacting environmental laws, with direct bearing on the subjects in the domain of the states.

A variety of unprecedented routes were adopted for this, primarily Articles 252 and 253 of the Constitution. This has been characterized as the centralization of environmental management in India (Chakrabarti, 2015; TERI, 2014; Gupta, 2014). Yet the processes behind the formulation of these laws and the provisions contained therein offer an interesting study of federal consensus making between the Centre and the states, and also the role of civil society, interest groups, other experts and the judiciary in enabling such measures.

Evolution of Water Law as a Part of Environmental Law

In 1971, the then Prime Minister Indira Gandhi initiated

conversations about the need for protecting wildlife and a national law for the purpose (Ramesh, 2017). Mrs Gandhi proactively pursued this and, since wildlife was a state subject, wrote to the chief ministers of all states in April 1972 seeking their support for the law. The presence of Congress party governments in most states helped, as did the fact that Mrs Gandhi took a keen personal interest in driving the legislation. By the end of July, legislatures in 11 states had passed resolutions under Article 252 of the Constitution asking the Parliament to legislate for the protection of wildlife (Lok Sabha, 1972). The law received the President's assent in September 1972 and most states adopted it by the end of 1973.

Water, similarly, is a state subject. The process leading up to the passage of the Water (Prevention and Control of Pollution) Act 1974, however, was a more long-winded and institutionalized one in comparison. In October 1962, due to the rampant and exigent nature of the problem of water pollution, the Ministry of Health appointed an Expert Committee to prepare a draft legislation, which recommended the enactment of both central and state laws (Khator, 1991; Lok Sabha, 1974). This draft was circulated among the state governments in December 1965, requesting resolutions under Article 252. The response was not very enthusiastic. It took a while for resolutions from the states to come through. By 1969, four states passed resolutions and a Bill was introduced in the Rajya Sabha. By the time the Bill came up for debate in the Lok Sabha in 1974, six additional states had passed resolutions under Article 252. The Bill was passed without much debate (Lok Sabha, 1974).

The Water Act 1974 is an enabling law. It provides for the establishment of pollution control boards and gives them wide powers. The Central Pollution Control Board (CPCB) is

charged with advising the central government on relevant issues, coordinating the activities of State Pollution Control Boards (SPCBs), giving them directions, providing them with technical assistance, etc. The state boards have the responsibility of planning comprehensive programmes for prevention and control of pollution in the states, advising state governments and collaborating with the CPCB in organizing training programmes, and so on. The Act, it can be said, provided for the Centre and states to work together to address the problem of water pollution, setting up an enabling structural relationship for water governance.

The 42nd Amendment to the Constitution in 1976, in a way, provided for an *ex post* consolidation of some of these measures. It shifted 'Forests' and 'Protection of Wild Animals and Birds' to the Concurrent List and inserted Article 48A, added to the Directive Principles of State Policy, which imposed on 'the State' the responsibility to protect the environment: 'The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country.' The Amendment paved the way for a greater role for the Centre in managing the country's environment while also stressing the importance of doing so for both the states and the Centre through Article 48A. In the next decade, the wide-ranging Environment Protection Act 1986 was passed which laid down a broad framework for environmental regulation in India, discussed in the next section.

Role of Environmental Impact Assessment in Shaping Water Resources Development

Mrs Gandhi's speech at the Stockholm Conference in 1972, with her insistence on addressing poverty as a priority in pursuing the goals of environmental conservation, proved influential. Development

and environmental conservation need not be antithetical to each other, she emphasized (Gandhi, 1972). The 1970s and 80s were also the time of several major development projects. These were of crucial importance for India's developmental goals of addressing poverty and improving quality of life. Yet projects like the Tehri dam, the Silent Valley project and the Lalpur dam raised environmental concerns and triggered resistance from environmental groups. These movements eventually led to the stalling of the Tehri dam and the cancellation of the Silent Valley project (Werner, 2015). The Silent Valley was declared a national park in 1986.

The long-drawn resistance against the Narmada dam, which began in 1980s raised environmental consciousness and discourse to another level. The words of the dissenting judge, Justice Bharucha, in *Narmada Bachao Andolan v Union of India* (2000) reflect this awareness: 'While river valley projects were a basic necessity to a country whose economy was largely based on agriculture, over the years the realisation had dawned that river valley projects had their due quota of positive and adverse impacts which had to be carefully assessed and balanced for achieving sustained benefits.'

The Department of Environment (DoE), set up in 1980, produced guidelines and checklists for environmental impact assessments (EIAs) of various development projects, such as the 1985 Guidelines for Environmental Assessment of river valley projects (Valappil et al., 1994; Dwivedi, 1997). The Bhopal gas leak tragedy in 1984 further stimulated these developments. After the incident, as public outrage mounted, the DoE came under considerable pressure to frame a comprehensive legislation for controlling toxic and hazardous substances (Agarwal, 2019). The Environment Protection Act 1986 was passed under Article 253 of the Constitution, citing the obligations of the Stockholm

Conference, 1972; it creatively carved out the Centre's role of engaging with the states on issues of collective interest. When the Bill was introduced in the Lok Sabha, concerns were raised about the states' appreciation of the legislation's importance and willingness to comply. There was a proposal for a conference with the states and their relevant agencies to promote their involvement and commitment, as they would be the main implementing agencies (Lok Sabha, 1986). However, the Act faced no major obstacle and was passed unanimously.

The Environment and Water Acts together enable the Centre to work with states in addressing the challenges of pollution control and environmental conservation. These Acts provide the legal basis for the CPCB and SPCBs, to regulate the discharge of effluents and dumping of materials into rivers and other water bodies, among other things. The institutions set standards for pollution control. The Acts allow the Centre to make rules for environmental protection including protection of biodiversity, wildlife and marine and coastal environments.

The social movement around the Narmada dam also spotlighted the issue of the granting of environmental clearances. The Rio de Janeiro Earth Summit in 1992 strongly emphasized the importance of EIAs in the quest for sustainable development. The Indian government's shift towards formalizing the framework for EIAs was revealed through the Statement on Industrial Policy 1991, the Policy Statement on Environment and Development 1992, and the Policy Statement for Abatement of Pollution 1992, all of which stressed the need to temper industrial and other objectives with environmental concerns and hinted at the role of impact assessments in doing so. Finally, in 1994, a notification in January 1994 issued under the Environment Protection Act brought large

water resources projects involving hydel power and irrigation benefits under its purview; these would now require mandatory clearance from the central government. The EIA as an instrument shaping development projects has evolved since then. A further notification in 2006 classified activities requiring environment clearance into Categories A and B. Category A projects required environment clearance from the Ministry of Environment and Forests (now the Ministry of Environment, Forest and Climate Change). For Category B projects, a State Level Environment Impact Assessment Agency (SEIAA) is to be constituted by the central government, but with all all of its members nominated by the state governments.

Public Interest Litigation: Expanding the Scope of Civic Society Engagement

Subsequently, other environmental concerns, such as the depletion of groundwater, began to acquire attention. Public interest litigation, evolved since the 1970s and characterized by its relaxed rules of *locus standi*, provided the higher judiciary an avenue to engage directly on environmental issues with a range of state and non-state actors. This engagement sparked further developments in environmental law.

The case of *M. C. Mehta v Union of India* was reframed by the Supreme Court as a platform in which the court could engage with miscellaneous environmental matters. In one such instance, the petitioner brought a news item, 'Falling groundwater levels threatens city', to the Supreme Court's attention, which paved the way for the Centre's role in groundwater regulation. The apex court recommended the establishment of a Central Groundwater Management Authority (CGWA) under Section 3(3) of the Environment (Protection) Act 1986 after examining various

submissions about depleting groundwater levels all over the nation (*M. C. Mehta v Union of India*, 1997). The legitimacy of the Centre's role was established by reference to Entry 13 of the Union List and Article 253, which deal with the enforcement of India's international obligations. It was ruled that that such an authority be established under the aegis of the existing Central Groundwater Board (CGWB) – a national apex agency with the mandate and capacity to provide knowledge inputs for exploration and monitoring of groundwater resources. The CGWA was subsequently established with the mandate to regulate and control the development of groundwater in the country, and to issue approvals, licenses, and regulatory directions for the purpose. In this way, the Centre acquired a direct role in groundwater regulation that was well beyond what was envisaged in the original constitutional scheme.

Several years subsequent to this, a group of writ petitions and PILs arose before the Bombay High Court in relation to inter-regional water allocation decisions of the Maharashtra Water Resources Regulatory Authority (MWRRA). These petitions challenged the authority of the MWRRA to take these decisions and the decisions themselves. The court in this case declined to interfere with the merit of the allocation decisions, and ruled that both the state government and the MWRRA had acted in accordance with the law (*Marathawada Janta Vikas Parishad v The State of Maharashtra*, 2016). These instances reveal an alternative dimension of the PIL case law – that of reaffirming state governments and empowering state institutions in regulating and redistributing water use.

The PIL case law has also helped to strengthen and reinforce doctrines like public trust and principles like 'polluter pays' to improve water governance in numerous cases relating to water pollution. For instance, in the *Indian Council for Enviro-Legal*

Action & Ors. v Union of India (1996), an environmentalist organization highlighted the dangers faced by people living in the vicinity of chemical industrial plants due to percolation of highly toxic substances into the surrounding groundwater resources and the nearby river. The court relied on the 'polluter pays' principle to impose a fine of Rs 38.385 crores towards remediation of the affected lands. In the Ganga pollution cases, state governments and other agencies have been made to take actions to reduce the flow of pollutants into the river (*M. C. Mehta v Union of India*, 1987; *M. C. Mehta v Union of India*, 1988).

Conclusion

In this paper, we have attempted to provide a nuanced narrative of water federalism from the vantage point of environmental lawmaking in India. India's early beginnings with environmental law have accompanied often unacknowledged structural and institutional relationships for federal water governance. This exploration of the relationships aiding the cause of federal water governance has pursued three lines of inquiry: one, the emergence of environmental law to create an overarching structural relationships for the Centre and states to work together; two, EIA as a prominent instrument for both state and non-state actors to pursue sustainable development goals, especially in water resources development; and three, the PIL as an avenue for the higher judiciary to engage in environmental issues across scales. The narrative offers the following useful insights for conceptualizing and understanding Indian water federalism.

First, the debates and discourse about federal water governance are narrowly delineated, primarily focusing on interstate river water disputes and their resolution. It is vital to locate the federal

water governance discourse in the larger frame of structural and institutional relationships enabling Centre–state and interstate coordination for addressing environmental concerns and challenges. An analysis of water federalism must take these relationships into account.

Second, the exceptional history of environmental lawmaking in India accompanied discernible developments for federal water governance. Water resources management is a crucial part of laws governing the environment, and the structural ecosystem constituting CPCB and the SPCBs was conceived as part of the Water Act 1974. Similar is the case with other evolutionary streams of environmental law as well. The EIA has had significant influence in influencing the river valley development projects. The PILs and their case law for protecting and conserving groundwater resources have contributed to key structural and institutional relationships. These processes have also accommodated active participation of the state and non-state actors. At the same time, these have provided decentralized avenues for enabling and empowering local regulatory regimes and processes for groundwater governance – in other words, enlarging the possibilities for federalizing water governance.

Third, the trajectory of environmental lawmaking also showcases the indirect and unconventional ways of pursuing sustainable development goals – within an otherwise outdated federal distribution of powers that fails to address the new challenges of security and sustainability (Chokkakula, 2020). The deployment of provisions under the Articles 252 and 253 demonstrates the possibility of promoting and facilitating the necessary partnership building between the Centre and the states to address the emerging water governance challenges (like river pollution) and emerging risks (like those linked to climate change).

Finally, the narrative offers a counter-perspective to other assessments of federal water governance in India. Unravelling these structural and institutional avenues and processes – albeit as part of environmental lawmaking – expands the avenues and means through which the Centre and states can work towards progressive outcomes in water governance. This is in contrast to earlier assessments focusing solely on water governance: the Centre's 'willful abdication of its role' (Iyer, 1994), or its 'lost ground' (Chokkakula et al., 2020). The contrasting narrative of the paper expands the contours for exploring ways of regaining the 'lost ground'.

Endnotes

- ¹ Principle 17 of the Rio Declaration on Environment and Development stated that EIA would be taken up as a national instrument for proposed activities likely to have a significant adverse impact on the environment. The Agenda 21 action, too, refers to EIAs in several different chapters.
- ² We must caution here, however, against an uncritical celebration of the form of the environmental PIL, as there are serious concerns of equity, competence and sustainability in relation to these cases (Rajamani, 2007; Bhuwania, 2016). Our point here is merely that by allowing for wider civic engagement, PILs provide a connecting space that brings social-environmental activism in dialogue with environmental law and policy.
- ³ Writ Petition (Civil) No. 4677 of 1985.
- ⁴ The CGWB was created in 1970 by renaming the Exploratory Tubewells Organisation, an agency set up in 1954 with the mandate of promoting groundwater irrigation. Later, in 1972, the groundwater wing of the Geographical Survey of India was merged with it.

- ⁵ Incidentally, the CGWA has also been associated with the development of ‘model’ groundwater laws that are recommended to the states. Some of the emerging groundwater regulatory regimes in the states can be attributed to this policy advisory function of CGWA. The advisory role, however, does not need a specific legal mandate from the Supreme Court; it could have been exercised by the Centre in any case.

References

- Agarwal, A. (2019). *Bhopal gas tragedy after 30 years*. Centre for Science and Environment.
- Bhuwania, A. (2016). *Courting the People: Public Interest Litigation in Post-Emergency India*. Cambridge University Press.
- Chokkakula, S. (2019). Interstate river water governance: Shift focus from conflict resolution to enabling cooperation. In *Policy challenges 2019–2024: The big policy questions for the new government and possible pathways*. Centre for Policy Research.
- Chokkakula, S. (2020, 18 September). India’s response to Covid-19 reflects the power, problems, potential of federalism. *The Indian Express*. <https://indianexpress.com/article/opinion/columns/coronavirus-covid-19-pandemic-and-federalism-6600329/>
- Chokkakula, S., Kapur, A., & Singh, A. (2020). Water and federalism: Working with states for water security. Final report. Unpublished, prepared for the World Bank, New Delhi.
- Dhar Chakrabarti, P. G. (2015). Federalism and environmental policy in India. In P.G. Dhar Chakrabarti & N. Srivastava (Eds.), *Green federalism: Experiences and practices* (pp. 61–71). The Energy & Resources Institute, Forum of Federations.
- Dwivedi, O. P. (1997). *India’s environmental policies, programmes and stewardship*. Macmillan.

- Gandhi, I. (1972, 14 June). *Man and environment*. Plenary Session of the United Nations Conference on Human Environment, Stockholm, 5–16 June.
- Gupta, S. (2014). Environmental policy and governance in a federal framework: Perspectives from India. In J. Huang & S. Gupta (Eds.), *Environmental policies in South Asia: Perspectives from seven Asian countries* (pp. 15–142). World Scientific Publishing Co. *Indian Council for Enviro-Legal Action & Ors. v Union of India*. AIR 1996 SC 1446.
- Iyer, R. (1994). Federalism and water resources. *Economic and Political Weekly*, 29(13), 733–736.
- Khator, R. (1991). *Environment, development and politics in India*. University Press of America
- Lok Sabha. (1972). *21 August Debate (Fifth Series, Vol. XVIII, No. 15)*.
- Lok Sabha. (1974). *21 February Debate (Fifth Series, Vol. XXXV, No. 3)*.
- Lok Sabha. (1986). *8 May Debate (Eighth Series, No. 48)*.
- Lok Sabha. (1994). *23 August Debate (Tenth Series, Vol. XXXV, No. 21)*.
- Marathawada Janta Vikas Parishad v The State of Maharashtra*. (2016). SCC OnLine Bom 8475.
- M. C. Mehta v Union of India*. (1987) 4 SCC 463.
- M. C. Mehta v Union of India*. AIR 1988 SC 1115.
- M. C. Mehta v Union of India*. (1997) 11 SCC 312.
- Mukarji, N., & Arora, B. (Eds.). (1992). *Federalism in India: Origins and development*. Centre for Policy Research.
- Narmada Bachao Andolan v Union of India*. (2000) 10 SCC 664.
- Rajamani, L. (2007). Public interest environmental litigation in India: Exploring issues of access, participation, equity, effectiveness and sustainability. *Journal of Environmental Law*, 19(3), 293–321.
- Ramesh, J. (2017). *Indira Gandhi: A life in nature*. Simon & Schuster.
- The Energy and Resources Institute. (2014). *Environmental federalism in India: Forests and compensatory afforestation*. TERI.

Valappil, M., Devuyt, D., & Hens, L. (1994). Evaluation of the environmental impact assessment procedure in India. *Impact Assessment*, 12(1), 75–88.

Werner, H. (2015). *The politics of dams: Developmental perspectives and social critique in modern India*. Oxford University Press.

Rakshita Goyal is a Research Associate at the Centre for Policy Research (CPR) with the Ministry of Jal Shakti Research Chair – Water Conflicts and Governance. Her research interests include interstate water governance, Constitutional law, and the interface of law and policy. She graduated with a law degree from National Law University, Jodhpur.

Arkaja Singh is a Fellow at CPR and a part of the State Capacity Initiative at the institute. Her areas of interest include municipal government, informal settlements, land, water and sanitation (and especially the issues around sanitation labour and manual scavenging), and the interface of law and the Indian administrative state. Arkaja studied law at the National Law School of India University, Bengaluru, and has an LLM from the School of Oriental and African Studies, London.



4

Federalism and Sovereignty-Centric International Law

Mohan V. Katarki

Abstract: To what extent are international transboundary water law and federal river water sharing mirror images for each other? The paper argues that the evolution of international transboundary water law has been sovereignty-centric where the parties are nation-states with sovereign status and no superior authority to bind them. This sets limits on international law. In contrast, water federalism, which is characterized by federal river water sharing or disputes resolution, is bound by a higher law or a constitution. The sovereignty-centric international law thus has limitations for its application for federal law for water sharing. The paper discusses this using interstate river water disputes resolution in the USA and India.

Keywords: International transboundary water law, federal river water sharing, sovereignty

Introduction

The utilisation of transboundary water among sovereign States is an international affair governed by international law whereas, utilisation of transboundary water among federal States is a domestic or national affair governed by constitutional law. Both have features which appear similar and common. However, federal States, unlike sovereign States, are under the shadow of constitutionalised federal authority, which

may have national policies and system of compulsory adjudication. In this context, this article proposes to examine the proposition whether international law is a mirror for sharing of transboundary water between federal States in a federation.

Sovereignty-centric International law

International law has been famously termed law at the vanishing point (Fichtelberg, 2008). The reason is that there is neither a legislative body to make international law nor a court of compulsory jurisdiction to adjudicate and enforce its decisions; therefore, it does not meet the test of law. However, international law is said to be proper law by those who disagree with the positivist approach to law. It has been said that international law is not 'above States but law between the States' (Crawford, 2012). But the underlying juristic principle is that nations are sovereign and therefore not subordinate to any superior authority. The absence of a supreme authority to declare law has, by implication, imposed limitations on international law. Countries retain freedom of action, unlike federal states which are bound by a higher law or a constitution.

The rights and obligations of riparian nations in the utilization of non-navigational uses of transboundary water have evolved on the premise that they are sovereign and are not subject to any compulsory adjudication if disputes arise. International law is, therefore, sovereignty-centric. The 19th century saw a seesaw between the Harmon Doctrine and the riparian theory based on sovereignty before settling in favour of the doctrine of equitable utilization or apportionment which apparently reflects state responsibility and the need for cooperation. Judson Harmon, who was the US Attorney General in the late 1800s, propounded that the USA as a sovereign state was free to deal with the water of Rio

Grande river available within its territory regardless of any injury to downstream Mexico. The riparian theory, which is the reverse of Harmon's theory, propounds that a river must flow down in a state of nature to protect the sovereign rights of the downstream state. Upon reconciliation of these rival theories based on sovereignty and in light of the doctrine of state responsibility towards neighbours, the restricted sovereignty theory emerged: 'Restricted sovereignty has become the customary rule of international law as evidenced by international judicial and arbitrary awards' (Dellapenna, 1994).

The delimitation of the sovereign rights of riparian states in transboundary water under the restricted sovereignty theory is determined by applying the considerations which support equity. This is also known as equitable apportionment or utilization. These considerations of equity are codified in the Helsinki Rules of 1966 and Berlin Rules of 2004 framed by the International Law Association. The United Nations (UN) Convention on Non-Navigational Uses of International Water Courses 1997 (UN Convention of 1997) is a similar codification effort by the UN General Assembly. However, the international law has evolved under the constraint that the international law is sovereignty-centric.

Interestingly, while remaining steadfastly sovereignty-centric, international law has borrowed from the federal practices. The federal practices are indeed source of law in international law but are classified as secondary source under Section 38 of the statute of the International Court of Justice. The juristic writings which are considered the subsidiary sources for international law are replete with references to federal practices and decisions concerning the utilization of water by states within a federation (VanAlstyne, 1960). An often-quoted federal judicial authority is the Indus Commission

Report of 1842 penned by Sir Benegal Rau (who later became a judge of the International Court of Justice). The Commission was constituted under the Government of India Act of 1935 to resolve the water dispute between Punjab and Sind Provinces of erstwhile British India. The influential works of Charles Bourne (1965, 1969) frequently refer to the Indus Commission Report and the US Supreme Court decisions on interstate water disputes. However, references to federal authorities by international jurists do not detract from the point that international law on the sharing of transboundary water is sovereignty-centric.

The sovereignty-centricity of international law on transboundary water is also apparent from the rule in international law that permits states to opt out or enter into agreements or treaties as they wish. The UN Convention of 1997 is not a binding rule of conduct even for the states which have ratified it; the disputing riparian nations may opt out and/or agree on different considerations. It is only when the riparian states have ratified the Convention and when they have not opted out that they are bound by the Convention and the statement of law.

Constitutionalized Federal States

States in the federal system or a federation, unlike states in the international order, are not sovereign. They do not possess the freedom that sovereign nation-states have. The federal normative structure is constitutionalized by a written constitution, laws made by the federal legislature, and the economic plans or schemes devised by the federal executive or agencies. If differences arise, they are resolved by applying constitutional norms and rules or practices not inconsistent with constitutional norms. A significant factor that sets apart federal states from international order is the system of compulsory adjudication of disputes in the federal system. This

compulsoriness in adjudication by the federal judiciary conditions the federal approach. Compulsory adjudication promotes judge-made law under the doctrine of *stare decisis*. If we examine the federal systems or federations which have addressed the issue of sharing of transboundary water, the subtle differences can be better appreciated.

Water federalism in the USA

The states that make up the United States of America enjoy true autonomy. Transboundary water is not a federal or central subject in the USA. However, the Congress, under Article 1 (Section 8) of the US Constitution (USC) has asserted its powers to regulate the utilization of transboundary water under the famous Commerce Clause. It has, more importantly, power to spend on 'general welfare' under the same Article 1 (Section 8). The Congress enacted the Boulder Canyon Project Act of 1928 to develop and apportion transboundary water of the Colorado among the lower basin states. The historic Act provided for the construction of the All-American Canal. The Act was upheld by the Supreme Court (*Arizona v. California*, 1963). However, in the absence of congressional apportionment, if a federal state exceeds its rights and acts unlawfully, the Supreme Court can exercise compulsory jurisdiction to adjudicate and impose its verdict on the riparian states under Article 2 of the USC. While asserting this power, the Court reasoned that states in the federal system cannot go to war for redressing their grievances as sovereign states are entitled to do in international law. In another ruling, Chief Justice Fuller of the US Supreme Court observed: 'But when one of our States complains of the infliction of such wrong or the deprivation of such rights by another State, how shall the existence of cause of complaint be ascertained, and be accommodated if well founded? The States of

this Union cannot make war upon each other. They cannot grant letters of marque and reprisal. They cannot make reprisal on each other by embargo. They cannot enter upon diplomatic relations and make treaties' (*Kansas v Colorado*, 1902).

Chief Justice Fuller also referred to what Justice Baldwin had remarked in *Rhode Island v Massachusetts*: 'Bound hand and foot by the prohibitions of the Constitution, a complaining State can neither treat, agree, nor fight with its adversary, without the consent of Congress; a resort to the judicial power is the only means left for legally adjusting, or persuading a State which has possession of disputed territory, to enter into an agreement or compact, relating to a controverted boundary (*Rhode Island v Massachusetts*, 1838).

On the question which norms should be applied in resolving the conflicts between riparian states, Chief Justice Fuller in the above case did not approve of applying international law in its totality. He summed it up thus: 'Sitting, as it were, as an international, as well as a domestic, tribunal, we apply Federal law, state law, and international law, as the exigencies of the particular case may demand' (*Kansas v Colorado*, 1902).

The Supreme Court declared equitable apportionment as the basis for adjudication of water disputes of transboundary water in the subsequent round of litigation in the matter. The doctrine of equality of states guided it in reaching this conclusion. Justice Roberts observed:

The lower state is not entitled to have the stream flow as it would in nature regardless of need or use. If, then, the upper state is devoting the water to a beneficial use, the question to be decided, in the light of existing conditions in both states, is whether, and to what extent, her action injures the lower state and her citizens by depriving them of a like, or an equally valuable, beneficial use ...

And in determining whether one state is using, or threatening to use, more than its equitable share of the benefits of a stream, all the factors which create equities in favor of one state or the other must be weighed as of the date when the controversy is mooted (*Colorado v Kansas*, 1907).

Water federalism in India

Indian federalism is unique. The states do not have independent existence and have no right to secede. The states are made and unmade by the Parliament under Article 3 of the Constitution of India (CoI). However, the CoI guarantees autonomy to the states with regard to subjects listed in the State List of the Seventh Schedule, unless it is specifically subordinated to Parliamentary legislation of the Centre. Water is a state subject in India (Entry 17), including water in a transboundary or interstate river. However, it is made subject to Entry 56 of the Union List of the Seventh Schedule about regulation and development of interstate rivers. 'Economic and social planning' is a part of the Concurrent List and the Centre can spend on state subjects under Article 282 of the CoI. In case a riparian state by virtue of its authority derived from the State List, plans or threatens to plan excess utilization of a transboundary river, the co-riparian state has a cause action to complain. While ruling against the action of the State of Karnataka in issuing an Ordinance in 1991, the Supreme Court in the Cauvery Water Disputes Tribunal matter between Karnataka and Tamil Nadu laid down that no injury shall be caused by a state to co-riparian state in utilizing transboundary water (*Cauvery Water Disputes Tribunal*, 1993).

India has adopted a system of compulsory adjudication for resolution of transboundary water disputes. In fact, this is an essential feature of federalism. The jurisdiction is vested in

the Supreme Court as part of 'Original Jurisdiction' under Article 131 of the CoI. However, Article 262 of the Constitution empowers the Parliament to set up a separate machinery for adjudication of transboundary water disputes and oust the jurisdiction of the Supreme Court. The Parliament has accordingly enacted the Inter State River Water Disputes Act of 1956. However, a tribunal for an interstate water dispute established under the Act is not a parallel Supreme Court. In *State of Tamil Nadu v State of Karnataka* (1991), reiterated in *State of Karnataka v State of Tamil Nadu* (2017), it is held that the Supreme Court has the power to hear and decide appeals by way of the Special Leave Petition under Article 136 of the CoI. The ouster clause, accordingly, has been limited to the original adjudication of a dispute. However, by such an interpretation, the interstate tribunal has been turned into a subordinate body and judicial power has been unified in the Supreme Court as single judicial agency under the CoI.

While enunciating the doctrine of equitable apportionment or utilization as the federal common law to govern the relationship between the riparian states in transboundary water, Justice Deepak Misra of the Supreme Court of India has extensively referred to international law, summing up the doctrine in the federal context as:

The national policies of the country [as above, therefore,] evidently supplement and consolidate the prescriptions of the Helsinki Rules, Campione Rules and Berlin Rules in the matter of ascertainment of reasonable and equitable share of water in an inter-state river. To reiterate, the Helsinki Rules and the other Rules envisage a basin state on the issue of equitable apportionment of an inter-State river. Though the Rules predicate that in determining the share of one basin state, the other co-basin states would not be subjected to substantial injury, yet the clear emphasis is to fulfil the economic and social needs of the

population of the State and in the sphere of irrigation, its farmer community. Indubitably, the principle of apportionment would apply uniformly to all river basins in a State (*State of Karnataka v State of Tamil Nadu* [2018]).

The Indus Commission in 1942, the Krishna Water Disputes Tribunal in 1973, and the Narmada Water Disputes Tribunal in 1979 have also referred to international law. However, the doctrine of equitable apportionment does not operate as freely in the federal scenario as it operates in the international context. The federal adjudication is constrained by overriding considerations of federal interest. Therefore, international law is applied with great caution in India.

Conclusion

The doctrine of equitable utilization or apportionment is the governing law in both international and federal transboundary waters. International law evolved on the premise that riparian states are sovereign but are bound to cooperate as a state responsibility. Federal common law evolved on the foundation of equality of states in a constitutionalized federal system under a compulsory adjudicatory system. The rules developed in international law are in the nature of self-governing norms to avoid enforcement by any external agency. The outcome of the federal system and international order cannot be the same even on the same facts. Which equitable considerations are to be applied while reaching a decision on the question of equitable shares could be different in an international dispute and a federal dispute. The considerations have to be identified and applied from the perspective of federal socio-economic policies and other development factors. International law, therefore, is not a mirror image for federal common law in the apportionment or utilization of transboundary water.

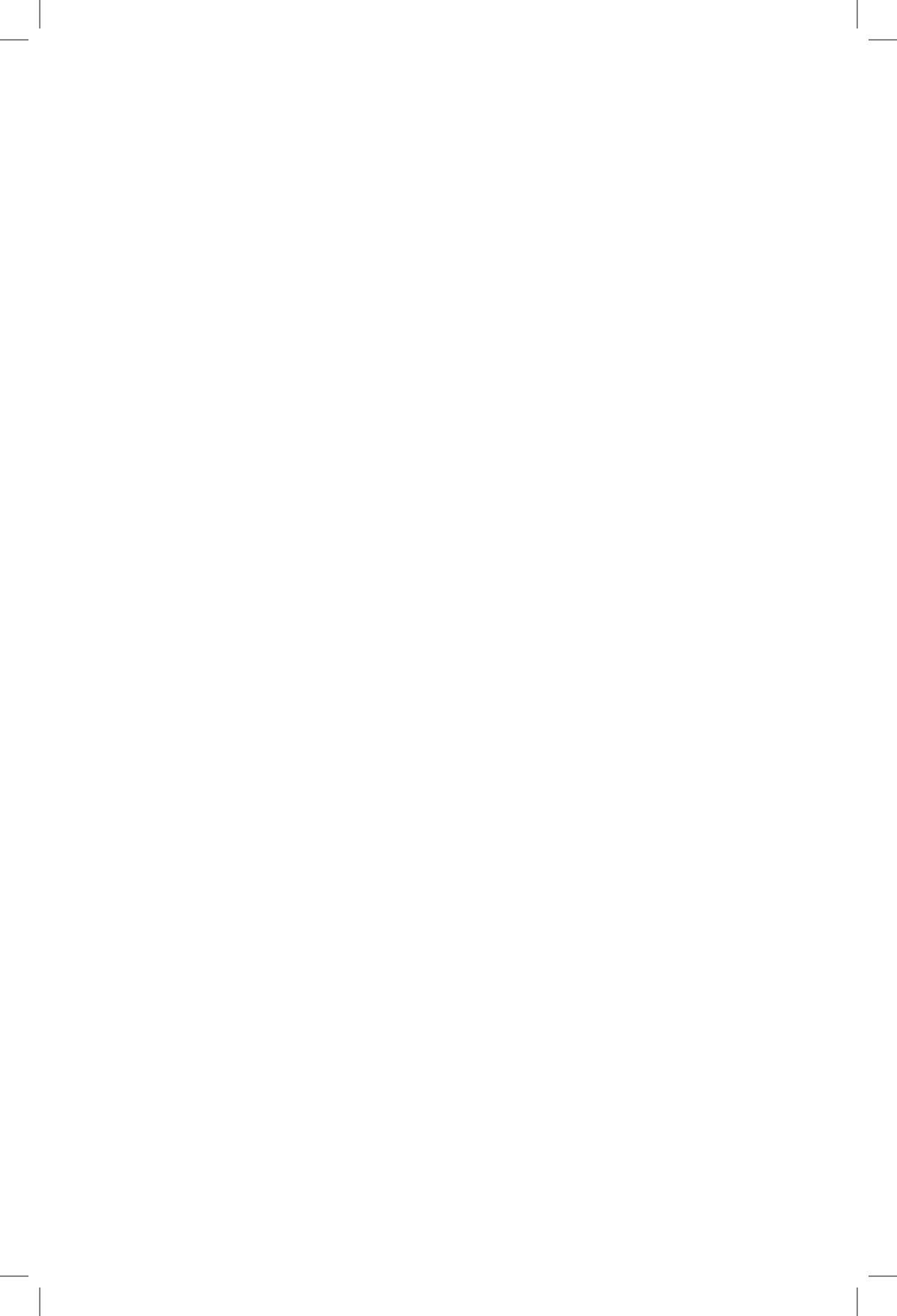
References

- Arizona v California. (1963). 373 US 546.
- Bourne, C. B. (1965). The right to utilize the waters of international rivers. *The Canadian Yearbook of International Law*, 3, 187-264.
- Bourne, C. B. (1969). The development of international water resources: The drainage basin approach. *The Canadian Bar Review*, XLVII, 62-87.
- Crawford, James. (2012). *Brownlie's principles of public international law*. Oxford University Press.
- Cauvery Water Disputes Tribunal. (1993). Supp (1) SCC 96(II).
- Dellapenna, J. (1994). Treaties as instruments for managing internationally-shared water resources: Sovereignty vs community of property. *Case Western Reserve Journal of International Law*, 26(1), 27-56.
- Fichtelberg, A. (2008). *Review of law at the vanishing point: A philosophical analysis of international law*. Routledge.
- Kansas v Colorado. (1902). 185 US 125.
- Kansas v Colorado. (1907). 206 US 46.
- Rhode Island v Massachusetts. (1838). 22 Pet 657.
- State of Karnataka v State of Tamil Nadu. (2017). 3 SCC 362.
- State of Karnataka v State of Tamil Nadu. (2018) 4 SCC 1.
- State of Tamil Nadu v State of Karnataka. (1991). Suppl (1) SCC 240.
- Van Alstyne, W. (1960). International law and inter state river disputes. *California Law Review*, 48(4), 596-622.

Mohan V. Katarki is a Senior Advocate designated by the Supreme Court of India. He is a part of Distinguished Visiting Faculty at Bangalore University's Law College. A well-known expert in transboundary water law on sharing of federal and international river water resources, Mohan has represented several states before

the Supreme Court and Inter State Water Dispute Tribunals in water disputes concerning the rivers Cauvery, Krishna, Ravi Beas, Mahadayi, etc. At present, he is representing the states of Karnataka and Odisha and National Capital Territory of Delhi.

Mohan has published several papers on transboundary water law and the Constitution. He has also presented papers in national and international conferences and seminars. He has served as a member of the Academic Council of National Law School of India University, Bengaluru. At present, Mohan is the vice president of the Bar Association of India, member of the Board of Management and Planning, Karnataka State Law University (KSLU), and member of the KSLU's *Student Law Review* and Bangalore University's *Law College Journal*.



5

Sectionalism, Identity and Water Governance in Federal Political Systems

Scott Moore

Abstract: Despite growing interest in the implications of federalism for water governance, the diversity of federal systems complicates comparative analysis. Yet one near-universal feature of federalism has so far eluded serious scholarly attention: the institutionalization of sectional cleavages along ethnic, linguistic and other social group lines. This feature can nonetheless seriously exacerbate conflicts and disputes over water within federal systems. Such an effect is not universal, however, and is dependent on the specific institutional arrangements of the federal system in question.

Keywords: Federalism; water; India; civil society

Introduction

Over the past decade, a distinct sub-literature on the study of water politics has emerged that addresses the interplay of water governance and federal political systems. Scholars concerned with aspects of federalism and decentralization have long devoted passing attention to the challenges of water governance, and those concerned with water governance have long acknowledged that these challenges may be in more decentralized political systems. But attempts to focus seriously and specifically on the issues involved in federal water governance appear to date

only to a 2008 conference on the subject co-sponsored by the intergovernmental Forum on Federations in Zaragoza, Spain (Anderson, 2009). Since then, however, a number of comparative studies have documented common challenges and approaches to water governance across many federal systems (Briscoe, 2014; Garrick et al., 2014; Moore, 2018). Moreover, the nexus between the federal arrangement and water governance is highlighted by the fact that over 300 major rivers, including half the world's international rivers, are located at least partly in federal political systems (Garrick et al., 2013).

Despite this relationship, some caution is warranted in attempting to examine water governance specifically in federations. Countries as starkly diverse as Austria, Argentina, Ethiopia, Mexico, Pakistan and Russia employ federal systems of government, each with vastly different institutional structures, and socio-political and political-economic dynamics that influence water governance (Riker, 1964; Tsebelis, 2002; Watts, 2008). Nor is the distinction between federal and more decentralized unitary systems entirely straightforward; many decentralized unitary states share institutional design features commonly associated with federalism (Moninola et al., 1995; Leeke et al., 2003). It is also important to recognize that federalism is a highly endogenous phenomenon. It is, for example, often adopted to govern diverse, heterogeneous polities; as such, it can be misleading to seek sharp differences between federal and unitary political systems. Perhaps even more importantly, it can be hazardous to ascribe qualitative judgements to federalism.¹ It is not my intent to render such judgements, but simply to describe some ways in which federalism might influence and shape water governance.

In this essay, I suggest that one of the most significant such influences is the tendency of federal systems to institutionalize sectional cleavages, that is, geographic divides between social groups differentiated by ethnicity, language, religion or other identities. As I elaborate below, water governance can be thought of as a three-dimensional collective action problem: it requires cooperation and coordination between different parts of government responsible for functions like water supply and pollution control, different water user groups such as farmers and city dwellers, and different political jurisdictions like states or provinces.

Federalism bears on each of these dimensions, but especially the spatial one. When, as in most federal systems, water resources are shared between multiple sub-national jurisdictions whose boundaries at least in part reflect different historical, cultural, religious, ethnic, linguistic or other identities, the challenge of cooperative governance is likely to be more marked, and disputes more intractable. Even so, it is important to emphasize that there is nothing predictive or deterministic about the relationship between federalism and water conflict. There are plenty of examples of both cooperative and conflictual water governance across federal systems; the differentiating factors are often institutional design, capacity and, even more important, political leadership (Moore, 2018).

Federalism, Collective Action and Water Governance

Federalism is an exceptionally complex form of political organization. At its most fundamental, it represents a compromise between collective action and autonomy for sub-units, and is often adopted because complete union is politically unacceptable while independence is economically or geopolitically untenable

(Duchacek, 1970; Feeley & Rubin, 2008; Rector, 2009). The core institutional design problem of federal systems is therefore to create a central government powerful enough to realize the benefits of collective action while guaranteeing substantial autonomy to its constituent states and provinces. In practice, this means that the division of powers and responsibilities between central and sub-national levels of government is complex and dynamic as both seek to balance these concerns in light of constantly shifting public policy priorities. In the field of water governance, this sometimes creates considerable coordination problems in matters like water pollution control and water infrastructure financing. In parliamentary federations, however, intergovernmental bodies like the Council of Australian Governments have played a key role in overcoming these challenges (Moore, 2018).

Inter-jurisdictional coordination problems can present even greater challenges for federations. A central problem in water governance in all countries, both federal and unitary, is that water resources are almost universally shared between multiple political jurisdictions, including both countries and sub-national jurisdictions like states and provinces (Moore, 2018). While inter-jurisdictional coordination problems are common to nearly all countries, federal systems are distinctive in the extent to which they organize political power around territorial sub-units (Hooghe & Marks, 2010). Arend Lijphart, for instance, defines federalism as 'a spatial or territorial division of power in which the component units are geographically defined', in contrast to unitary states in which political power is more apt to be organized around corporatist or other non-spatial structures (Lijphart, 1999, p. 187). The spatial structure of federal systems can exacerbate the fact that political boundaries rarely match those of resources

or ecosystems. Political economist Wallace Oates, for example, famously lamented the fact that America's states are 'quite poorly designed to deal with the provision of certain important public goods, notably environmental resources,' and that 'a much more rational map would probably entail some fairly sizeable regional governments that extend over watersheds, air-sheds, and other environmental resources' (Oates, 1999, p. 1131).

As such laments suggest, the institutionalization of political power in federations among territorial sub-units tends, though not inevitably, to discourage inter-jurisdictional collective action in favour of sectional interests, that is, those that pertain to specific regions rather than the nation or polity as a whole. Federalism scholar Daniel Elazar observes, for example, that 'the existence of the federal system forces most sectional problems into the framework provided by the existence of the states, where they are shaped into matters of state concern,' even though 'most of the physiographic, socioeconomic, and cultural features distinguishing one section from another do not follow state lines precisely'. More comprehensive regional action is inhibited by the fact that 'The states are protected to the extent that no regional problems can be handled governmentally without making use of those formal [state] institutions. Thus the representatives of the states use the formal institutional structure to influence federal action to handle problems in such a way as to allow the states a role' (Elazar, 1987, p. 162). A related point is made by Joseph Zimmerman when he writes that 'The modus operandi of most states does not encourage extensive interstate joint ventures because states, as semiautonomous entities, naturally are reluctant to engage in such ventures due to the loss of exclusive control accompanying them' (Zimmerman, 2011, p. 201).

The predominance of sectional interests is often enhanced through an institution known as legislative mal-apportionment, meaning that some regions are over-represented on the basis of population while others are under-represented. The imperative in most federal bargains that each sub-unit have meaningful political power at the national level means that federal systems almost universally award legislative representation in at least one house on an equal, rather than *per capita*, basis (Swenden, 2010). Such mal-apportionment has the natural consequence of exaggerating certain regional interests. As Erik Wibbels notes, 'Whereas unitary systems encourage the formulation of national platforms and policies, federal systems explicitly give voice to geographically concentrated interests' (Wibbels, 2006, p. 173). Mal-apportionment in turn offers federal politicians the opportunity to build coalitions based on 'cheap' support from over-represented rural constituencies (Macey, 1990; Gibson & Calvo, 2000; Samuels & Snyder, 2001). These constituencies, finally, tend to rely disproportionately on water-intensive economic activities, especially irrigated agriculture. In attempting to seek the support of irrigation-dependent agricultural constituencies, federal politicians may be tempted to secure federal financing for water-intensive irrigation schemes, or to attempt to secure more water for their constituents in a given state or province at the expense of neighbouring regions. Such behaviour gave rise to the long-running dispute between the riparian states of America's Colorado river basin for much of the 20th century, and remains endemic across India (Moore, 2018).

Federalism, Sectional Identity and Water Governance

Where these institutional features of federal political systems present the gravest challenge for water governance, however, is when they intersect with shared water resources that are laden

with sectional identities, such as ethnicity, language or religion. Humans, like all creatures, have an intimate connection with water that is at once physiological and emotional. When water is lacking either in availability or in quality, human mental and physical health noticeably suffers, even if basic survival is not threatened (de Arajo et al., 2003; Workman & Ureksoy, 2017; Rosinger & Brewis, 2019). For these reasons, conflicts and disputes over water are not simply material struggles, but emotional ones as well (Sultana, 2011). Water is equally significant at higher levels of human social organization, weighted as it often is with cultural and spiritual meaning – especially for indigenous peoples and inhabitants of regions with water bodies, like the Nile or the Ganges – that are fundamental to entire socio-cultural constructs (Strang, 2016). When individual and group identities are embodied in shared water resources, as is often the case under these circumstances, disputes or conflicts over them become all the more acrimonious.

India provides perhaps the best example of this nexus. Following Independence, India's leaders became convinced that it would be impractical to administer states that encompassed multiple ethno-linguistic groups, causing them to ignore geographic and economic factors in favour of drawing state boundaries largely on linguistic lines (Singh, 2007). Although the political impetus to do so was compelling and perhaps irresistible, the formalization of ethno-linguistic cleavages through delineation of state boundaries has produced a strong brand of regionalism in Indian politics that tends to favour sectional, rather than national, interests and policy priorities (Mawdsley, 2002). To add to this, India's historical geography, so heavily influenced by political, economic and infrastructural inequities during the colonial period, evinces marked power asymmetries between states, which further reinforces sectional divides (Chokkakula, 2017).

The influence of sectionalism has been marked on India's many long-running interstate water disputes, which for the most part arose as technical matters but have since become intensely politicized, in particular by becoming embroiled in sectional identity politics. Referring to the protracted conflict between the states of Karnataka and Tamil Nadu, for example, *The Hindu* has editorialized that 'The Cauvery water dispute is turning out to be less about water and irrigation and more about linguistic chauvinism and regional identity ... No party or state government appears to believe it can afford to be seen as taking even so much as a conciliatory step toward defusing the crisis' (The Hindu, 2016). In other cases, as in that of the water-sharing dispute between Punjab and its neighbours, the issue of shared water resources has been capitalized on by opportunistic politicians who argue that rival political parties are responsible for allowing their constituents' rightful claims to precious water to be unjustly appropriated by other groups – who, notably, often represent different ethno-linguistic, as well as partisan, groups (Moore, 2018).

Civil Society, Adaptive Governance and Federal Water Management

Yet if federalism in some respects exacerbates water conflict, in others it provides a salve. Another feature of the organization of political power around sub-national governments is that it provides multiple points of access to the political process for activists and civil society organizations. Because federal sub-national governments tend to enjoy considerable powers and responsibilities, the ability to lobby or influence decision-making at the sub-national level can provide considerable payoffs for non-governmental actors (Van der Heijden, 1997; Brannstrom, 2004; Bednar, 2009). In the case of water governance, such actors play

a critical role in forging consensus between different water user groups, in sharing information between different bureaucratic units and jurisdictions, and in advocating for the interests of the natural environment, indigenous peoples and other constituencies that are often marginalized in decision-making and management (Keck & Sikkink, 1998; Paavola, 2006; Moore, 2018). Perhaps just as important, non-governmental actors, especially civil society organizations, can help legitimize water resource management decisions – a key capability given that decisions over water resource allocation, water infrastructure construction and other water governance matters are often highly contentious (Abers & Keck, 2013).

The involvement of civil society groups has been critical to the success of cooperation in regions like America's Colorado river basin, which reversed decades of interstate conflicts in favour of a much more constructive approach to restoring environmental flows and reducing water consumption under conditions of growing water scarcity. Notably, however, federal systems vary considerably in the extent to which they provide non-governmental actors with a meaningful role in water governance. This variation is closely linked to institutional capacity and reform. Brazil's embrace of civil society in water governance, for example, was linked to comprehensive water sector reforms as well as broader processes of democratization (Abers & Keck, 2013).

Institutional design can also play an important role in facilitating civil society participation where, for example, decision-making bodies consciously allocate seats for civil society actors, or legislation mandates that such actors can comment on major policy reforms. Social movement scholars refer to the influence of institutional design features, alongside cultural norms and other relevant factors, as the political opportunity structure Van

der Heijden 1997). Federal systems can enhance the political opportunity structure for water governance via their notable diversity of institutional arrangements for collective water governance. These include water districts, commissions and other forms of institutional collective action, many of which operate on very local levels. In addition to creating a favourable political opportunity structure, these institutional arrangements can, because they tend to be highly flexible in form and function, help facilitate adaptive governance. This last characteristic is especially important in helping countries respond to environmental and water governance challenges like climate adaptation (Hooghe & Marks, 2003; Schlager & Blomquist, 2008; Mullin, 2009).

These divergent, and contingent, implications of federalism for water governance reinforce the point that while water is likely to be managed differently in federal political systems as compared to their unitary counterparts, these differences are neither sharp nor uniform. Among the most important features of federalism for water governance, however, is its tendency to institutionalize sectional cleavages. Where these intersect with, or are used to amplify, disputes and conflicts over shared water resources, federalism may exacerbate the challenges of cooperation and collective action. On the other hand, where federal systems encourage the role of non-governmental actors in water governance, they provide a powerful tool to prevent and resolve conflicts over water (Moore, 2018).

The above exploration of sectionalism and identity under federalism lends itself to several recommendations for federal political systems seeking to better manage their water resources. First, despite the attraction of powerful regional water governance institutions like the Tennessee Valley Authority, more flexible inter-jurisdictional commissions like the US Delaware River

Basin Commission are likely to be better suited to federal institutional design. Second, federal systems, even more than their unitary counterparts, should strive to create a favourable political opportunity structure for non-governmental actors in water governance. Such a structure might include designated civil society seats on water governance decision-making commissions, legal mandates for civil society consultation, and review of major water governance decisions. Third, and perhaps most surprisingly, the potency of water as a catalyst for political mobilization makes it critical for politicians to approach water governance responsibly. National political leaders have historically often viewed water as a matter of mostly local or regional concern, especially when it is disputed (Moore, 2018). But the involvement of high-level leaders is often critical to overcoming the tendency for shared water resources to become embroiled in the fraught issues of sectional identity that are a hallmark of federalism the world over.

Endnote

- ¹ I thank Professor Balveer Arora, Centre for Multi-Level Federalism, for this observation.

References

- Abers, R., & Keck, M. (2013). *Practical authority: Agency and institutional change in Brazilian water politics*. Oxford University Press.
- Anderson, G. (2009). Managing water in federations: Notes for an address to the World Water Forum. Forum on Federations. <http://www.forumfed.org/libdocs/2009/2009-03-17-Anderson-Istanbul.pdf>
- Bednar, J. (2009). *The robust federation: Principles of design*. Cambridge University Press.

- Brannstrom, C. (2004). Decentralising water resources management in Brazil. *European Journal of Development Research* 16, 214-234.
- Briscoe, J. (2014, March). The Harvard Water Federalism Project: process and substance. *Water Policy*, 16(S1), 1–10. doi:<https://doi.org/10.2166/wp.2014.001>
- Chokkakula, S. (2017). *Why do interstate water disputes emerge and recur? An anatomy of ambiguities, antagonisms, and asymmetries*. Centre for Economic and Social Studies. <https://www.cprindia.org/research/books/why-do-interstate-water-disputes-emerge-and-recur-0>
- de Arajo, I., Kringelbac, M., Rolls, E., & McGlone, F. (2003, September). Human cortical responses to water in the mouth, and the effects of thirst. *Journal of Neurophysiology* 90(3), 1865–1876. doi:<https://doi.org/10.1152/jn.00297.2003>
- Duchacek, I. (1970). *Comparative federalism: The territorial dimension of politics*. Holt, Rinehart and Winston.
- Elazar, D. (1987). *Exploring federalism*. University of Alabama Press.
- Feeley, M., & Rubin, E. (2008). *Federalism: Political identity and tragic compromise*. University of Michigan Press.
- Garrick, D., Anderson, G., Connell, D., & Pittock, J. (2014). Federal rivers: A critical overview of water governance challenges in federal systems. In D. Garrick, G. Anderson, D. Connell, & J. Pittock (Eds.), *Federal rivers: Managing water in multi-layered political systems* (pp. 3–19). Edward Elgar.
- Garrick, D., De Stefano, L., Fung, F., Pittock, J., Schlager, E., New, M., & Connell, D. (2013). Managing hydroclimatic risks in federal rivers: A diagnostic assessment. *Philosophical Transactions of the Royal Society A*, 371, 1–16.
- Gibson, E., & Calvo, E. (2000). Federalism and low-maintenance constituencies: Territorial dimensions of economic reform in Argentina. *Studies in Comparative International Development*, 35, 32–55.

- Hooghe, L., & Marks, G. (2003). Unraveling the central state, but how? Types of multi-level governance. *American Political Science Review* 97(2), 233–243.
- Hooghe, L., & Marks, G. (2010). Types of multi-level governance. In H. Enderlein, S. Walti, & M. Zurn (Eds.), *Handbook on multi-level governance* (pp. 17–31). Edward Elgar.
- Keck, M., & Sikkink, K. (1998). *Activists beyond borders: Advocacy networks in international politics*. Cornell University Press.
- Leeke, M., Sear, C., & Gay, O. (2003). An introduction to devolution in the UK. House of Commons Library. <http://www.parliament.uk/documents/commons/lib/research/rp2003/rp03-084.pdf>
- Lijphart, A. (1999). *Patterns of democracy: Government forms and performance in thirty-six countries*. Yale University Press.
- Macey, J. (1990, March). Federal deference to local regulators and the economic theory of regulation: Toward a public-choice explanation of federalism. *Virginia Law Review*, 76, 265–292.
- Mawdsley, E. (2002). Redrawing the body politic: Federalism, regionalism, and the creation of new states in India. *Commonwealth and Comparative Politics* 40(3), 34–54.
- Moninola, G., Qian, Y., & Weingast, B. (1995). Federalism, Chinese style: The political basis for economic success in China. *World Politics*, 48(1), 50–81.
- Moore, S. (2018). *Subnational hydropolitics: Conflict, cooperation, and institution-building in shared river basins*. Oxford University Press.
- Mullin, M. (2009). *Governing the tap: special district governance and the new local politics of water*. MIT Press.
- Oates, W. (1999). An essay on fiscal federalism. *Journal on Economic Literature* 37(3), 1120–1149.
- Paavola, J. (2006). Interstate water pollution problems and elusive federal water pollution policy in the United States, 1900–1948. *Environment and History*, 12(4), 435–465.

- Rector, C. (2009). *Federations: The political dynamics of cooperation*. Cornell University Press.
- Riker, W. (1964). *Federalism: origin, operation, significance*. Little, Brown and Company.
- Rosinger, A., & Brewis, A. (2019). Life and death: Toward a human biology of water. *American Journal of Human Biology*, 32, 1–8. <https://par.nsf.gov/servlets/purl/10177654>
- Samuels, D., & Snyder, R. (2001). The value of a vote: Malapportionment in comparative perspective. *British Journal of Political Science*, 31, 651–671.
- Schlager, E., & Blomquist, W. (2008). *Embracing watershed politics*. University Press of Colorado.
- Singh, M. (2007). A borderless internal federal space? Reorganization of states in India. *India Review* 6(4), 233–250.
- Strang, V. (2016). The social construction of water. In B. David, & J. Thomas (Eds.), *Handbook of landscape archaeology* (pp. 123–130). Routledge.
- Sultana, F. (2011, March). Suffering for water, suffering from water: Emotional geographies of resource access, control and conflict. *Geoforum*, 42(2), 163–172. doi:<https://doi.org/10.1016/j.geoforum.2010.12.002>
- Swenden, W. (2010). Subnational participation in national decisions: the role of second chambers. In H. Enderlein, S. Walti, & M. Zurn (Eds.), *Handbook on multi-level Governance*. Cheltenham, UK: Edward Elgar.
- The Hindu. (2016, September 14). Sharing without caring. Retrieved September 20, 2016, from The Hindu: <http://www.thehindu.com/opinion/editorial/editorial-on-cauvery-issue-and-the-dispute/article9104515.ece>
- Tsebelis, G. (2002). *Veto Players: How political institutions work*. Princeton, NJ: Princeton University Press.

- Van der Heijden, H.-A. (1997). Political opportunity structure and the institutionalization of the environmental movement. *Environmental Politics*, 6(4), 25-50.
- Watts, R. (2008). *Comparing federal systems*. Montreal: McGill-Queen's University Press.
- Wibbels, E. (2006). Madison in Baghdad? Decentralization and federalism in comparative politics. *Annual Reviews in Political Science*, 9, 165-188.
- Workman, C., & Ureksoy, H. (2017, April). Water insecurity in a syndemic context: Understanding the psycho-emotional stress of water insecurity in Lesotho, Africa. *Social Science & Medicine*, 179, 52-60. doi:<https://doi.org/10.1016/j.socscimed.2017.02.026>
- Zimmerman, J. (2011). *Horizontal Federalism: Interstate Relations*. Albany, NY: State University of New York Press.

Scott Moore is currently Director of China Programs and Strategic Initiatives; lecturer in political science; and Senior Fellow at The Water Center at Penn, all at the University of Pennsylvania. A water specialist, Scott's first book, *Subnational Hydropolitics: Conflict, Cooperation, and Institution-Building in Shared River Basins* (Oxford University Press, 2018), examines how climate change and other pressures affect the likelihood of conflict over water within countries. His research and commentary on a wide range of environmental and international affairs issues have appeared in leading scholarly journals and media outlets, including *Nature*, *The China Quarterly*, *Foreign Affairs* and *The New York Times*.

Previously, Scott was a Young Professional and Water Resources Management Specialist with the World Bank Group's Water Global Practice, and Environment, Science, Technology, and Health Officer for China at the US Department of State, where

he worked extensively on the Paris Agreement on climate change. Before entering public service, Scott was Giorgio Ruffolo Post-Doctoral Research Fellow with the Belfer Center for Science and International Affairs at Harvard University.

Scott holds doctoral and master's degrees from Oxford University and an undergraduate degree from Princeton University

6

Conflicts over Water and Central Intervention: Why Politics Matters

K. K. Kailash

Abstract: Water disputes are among the more contentious issues in Indian federalism. The Constitution anticipates that inter-state water disputes could threaten federal harmony and gives the central government enough space to intervene. However, despite the numerous conflicts over water the centre has selectively exercised this option. This paper argues that the central intervention in water disputes or for that matter any issue is determined by the political interests and ideas of the ruling party or coalition at the Centre. The paper highlights the role of the central government under two different political regimes and time periods. In the case of the Telugu Ganga project as well as the three pieces of legislation – the River Basin Management Bill 2018, Dam Safety Bill 2019, and the Inter-State River Water Disputes (Amendment) Bill 2019 – currently under discussion in Parliament, it is the party interest that guides central action.

Keywords: Political Parties, Party System, Telugu-Ganga Project, Federalism

Introduction

Conflict over the use of water and sharing of water has been among the more litigious, abiding and contentious issues in Indian federalism. Water disputes, however, stand out not because of their protracted nature and sheer numbers but

because it is not the vertical dimension that is at play here, as in most other federal conflicts, but the horizontal dimension. This is odd given that the Constitution is preloaded with provisions anticipating that interstate water disputes could threaten federal harmony.

What thickens the plot is the fact that despite adequate provisions in the Constitution giving the Centre the scope to intervene, the central government has rarely worked to put things back on an even keel. Franda (1968), for instance, notes that the central government did almost nothing in the Damodar Valley Corporation (DVC) dispute between Bihar and West Bengal immediately after Independence despite the reports of commissions appointed by it. Ramaswamy Iyer (1994), one of the foremost authorities on the subject of water in India, thought that the Centre had not used the provisions in the Constitution adequately. This is puzzling. How do we explain this behaviour of the central government, especially when the Centre has rarely missed an opportunity to reduce the autonomy of the states?

However, it is not that water disputes have not seen central intervention. The Centre has intervened in the case of water shortage in Tamil Nadu in the 1970s by facilitating what was called the Telugu Ganga Canal, which brought Krishna water to Madras (now Chennai). Similarly, more recently, we have three pieces of water legislation being actively pursued by the Centre that are aimed at ending fractious disputes between states. How can we explain this selective intervention by the central government? The limitations of constitutional provisions cannot provide an answer since the provisions apply to all disputes. What pushes the Centre to act in some cases? The answer, I argue, may lie in the political interests and ideas of the ruling party or coalition at the Centre.

Which case will be seen as fit for central intervention is not self-apparent, but parties appear to construct an interpretation of an issue and then rationalize their actions accordingly.

This paper is organized in three sections. The first part spells out the analytical framework for this study after reviewing two streams of studies that have a bearing on water disputes in India. This framework will guide the empirical discussion in the second section, which looks more closely at two cases of central intervention in water disputes. The two cases examined are the Telugu Ganga project and the three pieces of legislation – the River Basin Management Bill 2018, Dam Safety Bill 2019, and the Inter-State River Water Disputes (Amendment) Bill 2019 – currently under discussion in Parliament. The analytical framework is ambitious and should be able to explain not only the particular instances of central intervention in water disputes discussed here but all forms of central intervention in a federation with a multi-party competition. The final part summarizes and concludes the discussion.

Explaining Water Disputes

Current explanations for the logjam in water disputes approach the issue primarily from two angles. One argument, relying on a legal and technical reading, finds that the existing constitutional framework is weak and does not allow for greater action by the Centre, leading to an impasse (Iyer, 1994). On similar lines, Richards and Singh (1996, 612) argue that the existing institutional framework for dispute settlement is ‘ambiguous and opaque’.

The second explanation underscores the political factor, going beyond the formal arrangements and the legal–institutional framework. Chokkakula (2012, 2014, 2018) has time and again

underlined the limitations of the legal–technical approach and consistently makes the point that we should bring politics to the core of our explanatory framework. For instance, on the prolonged nature of water disputes in India, Chokkakula (2012) does not dispute the fact that the elaborate procedures and judicial proceedings could be hurdles but notes that examining the role of political actors and their interests may give us a better vantage point to make sense of the disputes. Similarly, Moore (2018), who studies water disputes in the contemporary era, argues that the Centre's hands are tied because state-based parties play an important role in coalitions. Likewise, Wood (2007) notes that despite the arsenal of constitutional provisions, the Centre is constrained by contingent factors such as single-party/coalition rule, minority/majority status of the government, congruence/incongruence of parties at the Centre and the states, and horizontal party differences. If we account for the political dimension, we get a more nuanced picture of water disputes in a federal polity.

The legal–institutional reading is useful but inadequate as it underplays or even ignores the political actors. In the case of water disputes in India, it is unable to tell us why the central government has intervened on some occasions but not others. While there may be a weak constitutional or institutional framework, this does not explain why some central governments push hard to resolve such issues while others do not attempt to do so. The political costs and benefits explanation we are advancing here does not deny the legal–institutional set-up. However, it makes the point that political actors are not prisoners of a given institutional framework but actively make and unmake them.

I propose to enhance the analytical potential of the political costs and benefits explanation by adding two dimensions: the nature of

political parties and the issue of timing. Moore (2018) throws the spotlight on political parties and convincingly explains why there could not be cooperation between states or why the Centre does not intervene in some cases. There are costs and benefits which constrain political parties or push them to act in a particular direction. Moore focuses primarily on the state-based parties. The focus on state-based parties is not surprising given the prominence that such parties acquired in the era of multi-party competition (Yadav & Palshikar, 2008). However, we need to enlarge the party dimension. I argue that we also need to bring polity-wide parties into the picture, and they too can vary from each other.

On the one hand, we could have federalized parties where the units of the polity-wide party enjoy a great deal of autonomy – so much so that they may function like state-based parties. On the other hand, there could be unitary polity-wide parties where the state units sing the same tune as the central unit irrespective of the demands and needs of the territorial location in which they are placed. In reality, most polity-wide parties fall between the two ends of a continuum between fully federalized and almost unitary. This distinction not only helps us distinguish amongst polity-wide parties but may also help predict how they would behave. Using this distinction, I propose that the greater the federal character of a polity-wide party in central government, the more difficult it is for the Centre to intervene, and the more unitary the party, the higher the chances of central intervention.

In the literature on party systems and federal dynamics, Riker (1964) makes the point that centralization and decentralization within a federal system is dependent on the structure of the party system. In a centralized party system, you are therefore likely to have greater centralization, whereas when party units have greater

autonomy, we are likely to have a more federalised system. Indian federalism is in a constant and complicated process of continuity and change. Bringing political parties and party systems into our explanatory framework may equip us to capture the federal dynamics more effectively.

Further, I argue that while the costs and benefits of political intervention are important, we cannot ignore the fact that strategic choices are also determined by timing. Parties choose to intervene at a time when it furthers other goals they are pursuing. For instance, our study of party movement in coalitions (Kailash & Arora, 2016) found that the electoral calendar accounted for the timing of party exits from federal coalitions. Similarly, central intervention in water disputes will occur only when it takes forward other goals of the party in power. Besides electoral calculations, there could also be ideological and programmatic goals involved.

Central Intervention

In this study, I discuss two examples to underline how the federal–unitary character of the party and the timing of an intervention may help explain central intervention in water disputes. The first is the Telugu Ganga project which began in the mid-1970s. This project aimed to bring water from the Krishna river to the city of Madras, the capital of Tamil Nadu. As the city expanded both in terms of population and geographical area, existing water resources proved inadequate. Consequently, Tamil Nadu was on the lookout to augment water supply to its capital city since the time of Independence. The idea of bringing Krishna water to Madras has a long history that predates the State Reorganisation Act of 1956. Tamil Nadu continued to push this request even after the linguistic reorganization of states. The 1973 Award of the Krishna Waters Tribunal did not allocate any water to Tamil Nadu.

However, three years down the line, Tamil Nadu became a beneficiary, thanks to a political turn of events. In February 1976 the Dravida Munnetra Kazhagam (DMK) government headed by K. Karunanidhi was dismissed, and the state of Tamil Nadu was brought under President's Rule. A couple of days later, Mrs Gandhi, the then Prime Minister, made a public announcement that Tamil Nadu would soon be able to enjoy the benefits of the Krishna river. She noted that the three riparian states, Andhra Pradesh, Maharashtra and Karnataka, had mutually agreed to give up 5 TMC each from their share of Krishna water, which could then be used to meet the needs of the city of Madras.

Although the water reached Madras only in 1996, the project could take off in the 1970s because of the role played by Mrs Gandhi (Chokkakula, 2018) and the Congress party. During that time, all three riparian states were ruled by the Congress, and this helped the Centre facilitate a consensus. More importantly, at that point of time, the Congress was more unitary than it had been in the past. There was a time when the Congress was more federalized. Franda (1968), for instance, showed how the West Bengal unit of the Congress was not constrained to accept the plans and programmes of the central government; it had the freedom to reject or negate them and formulate policies taking into account regional considerations. Similarly, the failure of the Centre to intervene in the DVC project was also a result of the powerful state units of the party expressing displeasure. In sharp contrast to the period immediately after Independence, during Mrs Gandhi's reign, state units followed central instructions. This centralized character of the Congress helped Mrs Gandhi get the three contending states on the same page as the Congress was in power in all of them. This agreement during the high tide of centralism within the Congress helped pushed the Telugu Ganga project.

The Congress had been slipping in Tamil Nadu since 1962, and it lost the 1967 Assembly elections to the DMK. The DMK had successfully used the official language issue to make a case for itself and portray the Congress as the primary villain. At the same time, the food shortages in the state did not also help the case of the Congress. The announcement of the deal with the other three states was dramatic. It occurred at the Congress Unity Conference organized by the Tamil Nadu units of the Congress and Congress (O), which was meant to mark their merger. The two units had been able to mobilize a large crowd for the meeting (India Today, 1976). Mrs Gandhi's announcement of the deal at the public rally was, therefore, a strategic choice to extract the maximum political capital. The Telugu Ganga project was an attempt to make the Congress party look good and demonstrate the advantages of a polity-wide party vis-à-vis a state-based party.

The second example of central intervention in water disputes is the three pieces of legislation including the River Basin Management Bill 2018, Dam Safety Bill 2019, and the Inter-State River Water Disputes (Amendment) Bill 2019, currently under discussion in Parliament. All three could reduce the autonomy that states currently enjoy when it comes to the subject of water and 'upset the balance of power between the Centre and the states' (Acharyulu, 2020). It is not surprising that the central government is contemplating these laws now. The party system is churning, and there is a new hegemon in place (Palshikar, 2018). The Bharatiya Janata Party (BJP), like the Congress under Mrs Gandhi, has been attempting to redraw the federal order. The party has also moved from a relatively federalized set-up to a more unitary one with the central office calling the shots (Sinha, 2018). If past experiences are anything to go by, the BJP party governments in the states are unlikely to make any noise.

Taking political party and party system characteristics into account may therefore help understand when the central government is likely to intervene in water disputes. It must be noted that the Dam Safety Bill has been in the making for nearly a decade. The Standing Committee on Water Resources had submitted its report on the issue in the 15th Lok Sabha, and it was presented to Parliament in 2011. By 2019, the tables had turned, and now the BJP not only has a clear majority in the Lok Sabha but also controls numerous states across the country. Despite two allies, the Shiromani Akali Dal (Badal) and the All India Anna Dravida Munnetra Kazhagam (AIADMK), objecting to the Inter-State River Water Disputes (Amendment) Bill 2019 (Nibber, 2019) and the Dam Safety Bill (Government of Tamil Nadu, 2019), respectively, the BJP was able to get them passed in the Lok Sabha.

For the BJP, this centralization is in sync with its 'nationalist' agenda, which is in sharp conflict with the agenda of preserving diversity that is the *raison d'être* of many of the regionalist parties. This nationalist vision, while acknowledging the existence of diverse beliefs, cultures and practices, believes they need to be in sync with the ideals of a 'Bharatiya ethos'. The regionalist vision, on the contrary, celebrates its particular diversities, claims equal recognition for them, and believes that the differentiated beliefs and practices can coexist with the so-called nation (Kailash, 2017). These pieces of legislation fit in with the 'One Nation' plank the party has been pushing since 2014.

Politics Matters

The legal–institutional explanation is useful, but it overlooks the role of political agency and seems to imply that parties are prisoners of particular circumstances. It does not account for what political

parties do, the positions they take, the choices they make and so on. Bringing political parties to the centre of the explanatory framework helps us understand why governments act or do not act, not only in water conflict situations but also in a range of other situations. In both our examples, we see that institutional mechanisms and procedures are used when it serves a political interest for the party or coalition at the Centre.

In the case of the Telegu Ganga project, the intervention was guided by the Congress party's attempt to underscore the advantages of a polity-wide party over those of a state-based party. The main opposition to the Congress was from state-based parties who were pushing the idea of the need to protect state interests from central intervention. The announcement of the project demonstrated that a long-standing concern of the state of Tamil Nadu – solving the drinking water issue – was possible because the same political party was in power at different levels at the same time, and leveraged that advantage.

The three pieces of water legislation dovetail with the BJP's overall programmatic agenda of so-called 'national' consolidation and strengthening. The BJP like the Congress is a 'reluctant federalist', but unlike the Congress there is a definitive programmatic agenda behind its reluctance. For the BJP all forms of centralization in a federal polity consolidate its long-standing 'one nation' position. Its majority in Parliament has enabled the party to carry forward its agenda of building what it considers a 'stronger, safer and prosperous nation' (BJP Election Manifesto, 2019, 3). It has been critical of all parties, including the state-based parties, for espousing what it views as limited and partisan interests that are detrimental for the country as a whole. In this vision, autonomy-reducing moves are not a concern and suit its agenda.

The two cases discussed here show how recognizing the agency of political parties and underlying party interests gives us a better handle to make sense of central intervention. We saw that centralized parties are likely to prefer solutions that consolidate the central office of the party. We found that parties frame the problem in such a manner that their preferred solution comes to be seen as the best possible way of resolving the issue and use the legal-institutional framework only in circumstances that suit them.

References

- Acharyulu, Sridhar, M. (2020, 19 August). The great Indian river question: Three Bills threatening federalism. Down to Earth. <https://www.downtoearth.org.in/news/water/the-great-indian-river-question-three-bills-threatening-federalism-72913>
- Bharatiya Janata Party (2019). Sankalp Patra: Lok Sabha 2019, <https://www.bjp.org/en/manifesto2019> (accessed December 10, 2020)
- Chokkakula, S. (2012). Disputes, (de) politicisation, and democracy: Interstate water disputes in India. Working Paper No. 108, RULNR Working Paper No. 13. Research Unit for Livelihoods and Natural Resources, Centre for Economic and Social Studies.
- Chokkakula, S. (2014). Interstate water disputes: Perils and prospects of democratisation. *Economic and Political Weekly*, 49 (9): 75-81.
- Chokkakula, S. (2018). Transboundary politics of cooperation: Telugu Ganga project, India. *Regional Environmental Change*, 18(6), 1645–1654.
- Kailash, K. K. (2017). The last posts: The BJP in ‘non-BJP’ states. In *Electoral Politics in India* (pp. 69–89). Routledge India.
- Kailash, K. K., & Arora, B. (2016). Federal coalitions in India: Strategic calculations and revolving-door partners. *Studies in Indian Politics*, 4(1), 63–76.

- Government of Tamil Nadu. (2019). Memorandum presented to Shri Narendra Modi, Hon'ble Prime Minister of India by Thiru Edappadi K. Palaniswami, Hon'ble Chief Minister of Tamil Nadu on 27.01.2019, Press Release No. 070 dt. 27.01.2019.
- India Today. (1976). Over one million people throng Marina Beach in Madras to hear PM Indira Gandhi. <https://www.indiatoday.in/magazine/cover-story/story/19760229-over-one-million-people-throng-marina-beach-in-madras-to-hear-pm-indira-gandhi-819061-2015-03-13>
- Iyer, R. R. (1994). Indian federalism and water resources. *International Journal of Water Resources Development*, 10(2):191-202
- Franda, M. F. (1968). *West Bengal and the federalizing process in India*. Princeton, N.J: Princeton University Press.
- Moore, S. M. (2018). *Subnational hydropolitics: Conflict, cooperation, and institution-building in shared river basins*. Oxford University Press.
- Nibber, G. S. (2019, 9 August). River water disputes bill: Why SAD wants the bill to be dropped permanently? *The Hindustan Times*. <https://www.hindustantimes.com/punjab/river-water-disputes-bill-why-sad-wants-the-bill-to-be-dropped-permanently/story-xclzna7oOCiuTh7m3BSPcP.html>
- Palshikar, S. (2018). BJP beyond electoral dominance: Towards hegemony. *Economic and Political Weekly*, 55(33), 36-42.
- Richards, A., & Singh, N. (2002). Interstate water disputes in India: Institutions and policies. *International Journal of Water Resources Development*, 18(4), 611–625.
- Riker, W. H. (1964). *Federalism: Origin, operation, significance*. Boston: Little, Brown.
- Yadav, Y., & Palshikar, S. (2008, November). Ten theses on state politics in India. *Seminar*, 591, 14–22.

Sinha, Y. (2018, 17 April). Dear friend, speak up. *The Indian Express*.
<https://indianexpress.com/article/opinion/columns/narendra-modi-budget-economy-rapes-foreign-policies-yashwant-sinha-5139969/>

Wood, J. R. (2007). *The politics of water resource development in India: the case of Narmada*. SAGE Publications India.

K. K. Kailash is with the Department of Political Science, University of Hyderabad. His research interests include political parties and elections, coalition politics and processes, and issues of federalism in contemporary India. He has published in the *Economic and Political Weekly*, *Contemporary South Asia*, *India Reviews* and *Asian Survey*, and has also contributed to numerous edited volumes. He is a member of the Lokniti network – the nationwide network of scholars which conceptualises, operationalises and executes the major studies for the Lokniti Programme for Comparative Democracy – and Honorary Fellow at the Centre for Multilevel Federalism, Institute of Social Sciences, New Delhi.



Water Federalism, Economic Drivers and Fragmented Governance of Interstate Waters

Nilanjan Ghosh

Abstract: This paper asserts the existence of three prime stressors/drivers causing interstate water conflicts in India. These three stressors are: a) water being a state subject in the Constitution often resulting in differential property rights definitions by the states; b) wrong delineation of the food security policy leading to dominance of high water-consuming crops like rice and wheat in production and procurement; and c) lack of an integrated ecosystems approach in understanding the land-water-food nexus in the water policy of the nation. While the first two stressors or drivers feed into the third, all the three factors point to lack of holism in water governance paradigm in India. The existence and interplay of these forces have been explained with the case of the Cauvery water conflicts between the states of Karnataka and Tamil Nadu. The paper therefore prescribes an integrated multi-pronged strategy for interstate water governance. While the problems are essentially economic and institutional, the solutions lie in an integrated approach emerging from the spheres of economic instruments, institutional thinking and an ecosystem-based approach.

Keywords: Conflictual Federalism, Water Disputes, Food Security, Cauvery water Conflicts, Property rights, Minimum Support Prices, IRBM, Multidisciplinary approach.

Introduction

This paper posits that there are three drivers of interstate water conflicts in India: (a) water being a state subject in the Constitution, which often results in differential

definitions of rights assumed by the states; (b) a convoluted and myopic food security policy that creates biases towards production and procurement of high water-consuming crops like rice and wheat; and (c) lack of an integrated ecosystems approach in river governance. Essentially, the first two also feed into the third, resulting in a fragmented and reductionist approach to water management in India. I will explain this in the context of the Cauvery water conflicts.

Conflictual Federalism over Interstate Waters

The Lok Sabha passed an amendment to the archaic Interstate River Water Disputes Act 1956 on 31 July 2019. While the amendment sought to give more teeth to the tribunals, it hardly addresses the core reasons for the interstate water conflicts. Essentially, interstate water conflict is a result of the way 'water federalism' is presently envisaged, which creates a sense of fragmentation in the governance of waters that cross state boundaries. This is because the Seventh Schedule of the Indian Constitution confers power on the states to decide on the use of water for various purposes, such as water supply, irrigation and canals, drainage and embankments, water storage and water power (Entry 17 of List II – State List), subject to the provisions of Entry 56 of List I (Union List). Given this, the Union government has generally confined its role to exigency-driven contingent responses, rather than taking up a proactive role in basin governance.

Due to states' delineations of rights as per their own convenience and needs, interstate water conflicts are the result of differential and conflicting property rights over interstate waters due to the existing constitutional provision. This can be termed 'conflictual federalism of interstate water', and it impedes the adoption of an

integrated river basin management (IRBM) approach in India (Ghosh & Bandyopadhyay, 2016). The issue is best explained through the case of the Cauvery water conflicts between Karnataka and Tamil Nadu.

History, Harmon and Hobbes: The Cauvery case

Axiomatically, the three extreme principles for the delineation of property and user rights over water can be classified as Harmon, History and Hobbes. The Harmon doctrine, based on the anachronistic thinking ‘if water falls on my roof, it is mine’, bestows the primary rights on those who are at the source of the water. In that sense, it is skewed towards the upstream users. The History doctrine is akin to the ‘prior appropriation’ principle and awards primary water rights to the users who are the first appropriators of the resource over time, irrespective of location. The Hobbesian principle acknowledges rights arrived at through a process of negotiation between co-riparians.

In the Cauvery case, upstream Karnataka’s position can be interpreted as aligned to the Harmon principle. According to the state, the expiry of the 1924 agreement¹ implies the cessation of applicable clauses of water allocation between the two entities (stated in the agreement) for the present states. Essentially, as per the 1924 agreement, the upstream Princely State of Mysore had to obtain consent from downstream Madras Presidency for any supply-side interventions in Cauvery waters within their own territory (D’Souza, 2006; Chokkakula, 2017). With the agreement expiring in 1974, Karnataka contends that any form of water redistribution mechanism over the Cauvery system cannot afford to ignore the unequal distribution of rainfall in the two states (Tamil Nadu receives two monsoons, summer and winter)

and the resulting runoff. Karnataka further asserts that claims over Cauvery waters must also consider the needs of the drought-prone area in the basin (Anand, 2004). Therefore, the state claims the right to discharge waters to Tamil Nadu only if there is an adequate quantity of water to meet its own needs.

On the other hand, Tamil Nadu's official position is based on the prescriptive rights of the 1924 agreement that align with the prior appropriation principle or the *historical use* doctrine (D'Souza, 2006; Iyer, 2009). The state feels threatened as inadequate flows from upstream endanger its long-established irrigated agriculture (from the days of the Chola dynasty of the 11th century) in the Cauvery delta (Iyer, 2003). Viewing an interstate river as a common property and not the private property of the upstream state, Tamil Nadu refutes Karnataka's position of releasing only the excess waters after meeting its own needs (D'Souza, 2006). The state further maintains that the basin area contribution to river flow and other factors need to be applied to the distribution of water, beyond that needed to meet the prescriptive rights of downstream farmers. Detailed accounts of the negotiation processes and consequent hostilities associated with the hydropolitics of the Cauvery can be found in Guhan (1993), D'Souza (2006), Iyer (2009) and Chokkakula (2014), some of whom have highlighted the generic power asymmetries in the negotiations between the Presidencies and the Princely States. The 1924 agreement is not an exception to this phenomenon.

Clearly, the conflict between the two states over allocation of water rights has emerged due to water being a state subject without any specific user right guideline. Unfortunately, Hobbesian negotiations have largely failed despite various attempts to bring about a definitive resolution (Ghosh and Bandyopadhyay, 2009).

Food Security Delineation

The second stressor is the flawed delineation of India's food security, which has been delimited to the production and procurement of high water-consuming paddy and wheat. It all began with the Green Revolution in the late 1960s, and has continued with the introduction of the minimum support price (MSP) mechanism in the late 1970s, and of governmental procurement policies through the Food Corporation of India (FCI) and state procurement agencies. The Green Revolution was not only successful in increasing the yield and production of foodgrains, but also helped in bringing more areas under irrigated paddy and wheat. This largely happened at the cost of lower water-consuming millets like ragi and sorghum, which were displaced in many areas.

Even as the Green Revolution led to a rise in yield levels, attempts to promote production and procurement of these two staples included their MSPs being increased at a rate much faster than those for millets. The MSP is supposed to act like the financial derivative instrument, 'put option': if prices fall below the MSP, there is the option of selling rice/wheat at the MSP to the FCI. This cushion against falling prices led to a ready market even under conditions of overproduction. Over time, the MSP became the 'floor' price setter for rice and wheat: whenever MSPs for rice and wheat were increased by the Commission for Agricultural Costs and Prices (CACP), the traders put across a higher bid thereby increasing the market prices of the two foodgrains.

The governmental procurement mechanism at the MSP, therefore, helped in moving the terms-of-trade (defined as the ratio of prices of two competing crops, for example, rice and millets) substantially in favour of rice and wheat. Farmers started to make acreage decisions in favour of water-consuming staples, displacing

drier crops like ragi and sorghum, both of which require barely 10–20 per cent of the water required by paddy.

Incidentally, the MSP ratios (paddy to ragi) that increased during the 1990s, compared to the 1980s, witnessed a decline in the current decade (Table 1). The changes in the 'means of the MSP ratios' in each of the four periods are also statistically significant at 1 per cent level.

Table 1: Annual Average MSP Ratio (Paddy to Ragi)

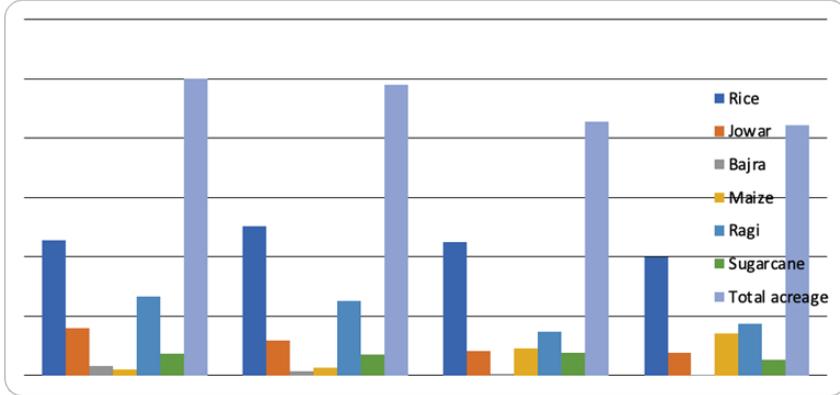
Year	Average Annual MSP Ratio (Paddy to Ragi)
1975–76 to 1990–91	1.0536
1991–92 to 1999–2000	1.1687
2001–02 to 2011–12	1.0997
2012–13 to 2017–18	0.9907

Source: Author's estimates with data from Commission on Agricultural Costs and Prices (<https://cacp.dacnet.nic.in/>).

Acreage in the Cauvery basin

While the terms-of-trade were changing, the Cauvery basin witnessed an upsurge in agricultural acreage during the 1990s (Ghosh & Bandyopadhyay, 2009). The increase occurred mostly in the Karnataka part of the basin, though there were marginal increases in the Tamil Nadu portions as well. The acreage, however, decreased in the late 1990s and 2000s (Ghosh et al., 2018). Historically, irrigation development brought more land under agriculture (Guhan, 1993); the same seems to be true for the 1990s, when the terms-of-trade movement in favour of paddy became the main driver of increasing acreage of paddy, the most water-consuming crop produced in the basin (see Figure 1).

Figure 1: Changing acreage (hectares) of major crops in the Cauvery basin (1991–92 to 2012–13)



Source: Estimated from: www.karnatakastat.com; *Season and Crop Reports* various issues, Government of Tamil Nadu; district-based agricultural data from data.gov.in, 2017.

Figure 1 shows an increase in paddy acreage between 1991–92 and 1997–98 along with a concomitant decline in all other crops. Again, there is a late decline in acreage of paddy cultivation in the Cauvery basin in the 2000s. It should also be noted here that the second most important crop in the region, ragi – which declined initially – witnessed a late increase in acreage. The decline in the overall gross sown area in the region in the new millennium suggests two possible inferences. One, the declining overall water productivity in the basin, and the agricultural water demand management partially compelled by policy interventions like awareness programmes and better soil and crop management practices (e.g. system of rice intensification). This exactly coincides with the changing terms-of-trade of paddy vis-à-vis ragi exhibited in Table 1. Two, the MSP regime has largely determined acreage movements.

The disputes over the Cauvery waters have erupted primarily during the month of June, when the Kuruvai paddy in Tamil Nadu needs irrigation. However, this coincides with the period of the

cultivation of summer paddy in Karnataka, the cropping season of which continues till July. The crop therefore needs water during June, and whenever rainfall is low that month in the Karnataka parts of the basin, the demand for Cauvery waters goes up. Peak demands in upstream Karnataka and downstream Tamil Nadu have coincided very often, resulting in competing demands for irrigation. This is the crux of the conflict (Ghosh & Bandyopadhyay, 2009).

Tables 2 and 3 show the season-wise paddy acreage in the two states over the 1980s till the recent decade.

Table 2: Period-wise annual average acreage of paddy in Karnataka (1980-81 to 2013-14)

Time Period	Kharif (000 Hectare)	Rabi (000 Hectare)	Summer (000 Hectare)
1980-81 to 90-91	258.40	3.39	39.80
1991-92 to 98-99	284.18	6.79	67.35
1999-00 to 05-06	265.36	3.15	46.32
2006-07 to 2009-10	282.90	4.59	55.98
2010-11 to 2013-14	246.79	1.54	23.58

Source: www.karnatakastat.com

Table 3: Season-wise paddy acreage in Tamil Nadu (1980-81 to 2012-13)

Time Period	Samba/ Thaladi/ Pishnam (000 Hectare)	Navarai/ Kodai (000 Hectare)	Kar/Kuruvai/ Sornavari (000 Hectare)
1980-81 to 86-87	730.960	158.875	2.955
1987-88 to 93-94	649.980	43.995	63.465
1994-95 To 00-01	766.215	37.775	115.185
2004-05 To 12-13	647.740	25.275	101.435

Source: Computed from *Season and Crop Report*, Government of Tamil Nadu, various issues.

The tremendous increase in the acreage of summer paddy in Karnataka throughout the 1980s and 90s is followed by a pattern of decline from 2000 onwards conforming to the trend prevailing in the basin and the course of the terms-of-trade given in Table 1. While the pricing (market prices or the administered ones) mechanism of the agricultural produce plays an important role in acreage decisions, this goes on to imply that critical economic decisions have to take into consideration a more holistic approach by incorporating the impacts on natural resource use. Unless the same is done, in the medium and long run, the cost of conflict needs to be borne by the society at large, as has been exhibited in the Cauvery water imbroglio.

Lack of an Integrated Approach

The two issues analysed in the preceding two sections essentially point to a fragmented approach to water governance in India. When states use and govern waters in their territories in terms of their own definitions of property rights, there is an obvious tendency to lose out on an integrated basin approach. The basin ecosystem is an integrated continuum – a vision that gets blurred with interstate waters left to the federal states to govern. This is clearly against the global practices and norms of IRBM. On the other hand, as discussed in the last section, the MSP of water-consuming paddy was increased to incentivise their large-scale production. This is because ‘food security’ in India was largely viewed through the lens of production and creation of buffer stocks of adequate amount rice and wheat till recently. This clearly missed out on the dynamics of the land–water–food nexus.

The case of the Cauvery therefore shows that the water governance architecture in India is based on a fragmented,

piecemeal approach, rather than an integrated basin approach with the basin being considered a critical ecosystem that offers multifarious ecosystem services (Ghosh et al., 2018). The 'conflictual federalism' and the pricing mechanism that promotes the production of water-consuming crops with little concern for the ecosystem services associated with organic hydrological flow regimes² are symptomatic of this fragmented approach to water governance.

In place of an integrated and holistic approach, water governance in India relies on a few stand-alone numerical measures of the physical state of the resource – a paradigm aptly described as 'arithmetic hydrology'. One critical example of such thinking is the interlinking of Indian rivers. The entire project is contingent upon the premise of transferring water from 'surplus' to 'deficit' river basins – something that goes against the fundamental tenets of the ecosystem processes associated with river basins. Such 'arithmetic hydrology' can also be witnessed in the 2007 award of the Cauvery Water Disputes Tribunal (CWDT) (Table 4). However, the Supreme Court judgment of February 2018 brought about some changes in this allocation between the states by acknowledging urban water use. The Supreme Court reduced the allocation of Cauvery waters for Tamil Nadu from 192 TMC, as allocated by the CWDT award in 2007, to 177.25 TMC annually by providing the 14.75 TMC to Karnataka for its burgeoning urban water use for the city of Bengaluru. Although this judgment sends a signal to the agricultural economy to efficiently use water and practice crop diversification and recognizes a bigger global phenomenon of intersectoral water conflicts (agriculture versus urban water demand), it does not change the basic structure of the award of the CWDT in terms of its lack of holistic approach.

**Table 4: Water allocation from the final award of the CWDT
(figures in TMC)**

	States				Total
	Kerala	Karnataka	Tamil Nadu	UT of Pondicherry	
Irrigation requirement	27.90	250.62	390.85	6.35	675.72
Domestic and industrial water requirement in 2011	0.35	1.85	2.73	0.27	5.20
Water requirement for environmental protection	-	-	-	-	10.00
Inevitable escapages to the sea	-	-	-	-	4.00
Share in balance water	1.51	17.64	25.71	0.22	740

Source: CWDT (2007)

As such, in the CWT award, the arithmetic that resulted in 50 per cent dependability of flows (based on which 740 TMC was arrived at) is vague and has hardly any scientific basis (Ghosh et al., 2018). The award failed to consider the changing precipitation in South Asia that affects the seasonality and quantity of the Cauvery basin flows (Ghosh et al., 2018). The sustainability of the proposed schedule recommending greater releases during the period July–September remains questionable, given the possibility of greater variability in the precipitation pattern.

The award has not really helped in setting up any statute or precedence of allocation that may be replicated in other disputes.

Importantly, it has failed to create any mechanism to reward water use efficiency. Given the increasing propensity of water use in the basin especially for irrigated paddy, the CWDT was expected to recommend some mechanisms for improving the efficiency –for instance, through water pricing. Unfortunately, the award seems to be going the other way.

Even more disturbing are the ‘quantity reserved for environmental protection’ (10 TMC) and ‘quantity determined for inevitable escapages to the sea’ (4 TMC). Both these allocations do not seem to adhere to any scientific assessment of the ecosystem-based water uses in the basin. They are ad hoc allocations, treating water merely as a stock of resource to be used for human consumption as per convenience. Such short-run perspectives fail to acknowledge the impacts of the human’s unbridled wasteful water use on the social-ecological system of the basin. Quite evidently, they turn a blind eye to the globally emerging literature on ‘environmental flows’ and benefits of ‘free-flowing rivers’ that are becoming important pillars of integrated basin governance (Arthington, 2018). Such a reductionist perspective of ‘arithmetic hydrology’ has exacerbated the Cauvery conflict to the extent that exists today.

The Supreme Court judgment of 2018

In the judgment of February 2018, departing from the existing view of water being a state subject, the Supreme Court observed that water of the Cauvery river is a ‘national asset and no single state could claim ownership over it’ (Ghosh et al., 2018; Supreme Court of India, 2018). While the verdict is a benchmark in Indian water governance, recognizing the diversity and multi-dimensionality of water use, it does not incorporate the cause of the ecosystem within its scope. For a more holistic water governance approach, it is critical that the literature of ‘environmental flows’ is brought into the debate; at present there is hardly any stakeholder to speak

for the ecosystem in contested claims for shared waters (Ghosh et al., 2018).

The Supreme Court verdict also directed the Government of India to set up the Cauvery Water Management Authority/Board (CWMA) in line with the CWDT's 'final order'. However, the design of the CWMA, as stated in the CWDT award of 2007, misses out on two vital elements: acknowledgement of multidimensionality of the basin system; and constitution of a multidisciplinary team with both disciplinary expertise and interdisciplinary understanding of a river basin.

According to the CWDT award, the full-time chairman should be an irrigation engineer of the rank of Chief Engineer, while the two members of CWMA need to be from the fields of engineering and agronomy, nominated from the respective ministries, water resources and agriculture. The representatives of the central government and the riparian states, and the Secretary of the Board are proposed to be irrigation engineers in different capacities. Such a mono-track and mono-disciplinary board composition, confined to engineers and agronomists – even for the Cauvery Water Regulation Committee (a Committee to be constituted by the Authority) – creates the perception that this complex imbroglio can be resolved only by traditional engineering and agricultural solutions. This clearly goes against ongoing global best practices and knowledge frontiers of IRBM that acknowledge the multidimensionality of the basin ecosystem in terms of its socioeconomic, political and ecological criticality (Bandyopadhyay, 2009). Thus the top-down bureaucracy-driven approach proposed by the CWDT seems exclusionary. It is imperative that the board include many more stakeholders at various levels, including those for the ecosystems, so as to follow a bottom-up approach, as in the case of the Mekong River Commission (Alagh, 2018).

Conclusion: A Way Out of the Impasse?

There needs to be an integrated multi-pronged strategy for interstate water governance. While the problems are essentially economic and institutional, the solutions lie in an integrated approach emerging from the spheres of economic instruments (support pricing mechanisms to promote crops that consume less water, cost pricing of water, etc.), institutional thinking and an ecosystem-based approach. It is important that the water–food–ecosystem interconnection is acknowledged in the governance of interstate waters keeping in view the integrity of the basin ecosystem. Therefore, there is an utmost need to constitute an autonomous river basin authority with representatives of various stakeholder groups consisting of state and non-state actors. Importantly, a multidisciplinary team should replace a mono-disciplinary technocracy by combining professionals from natural sciences, fluvial geomorphology, engineering, ecological economics, law, politics and other social sciences. As pointed out through the three interlinked stressors of the Cauvery water conflicts examined in this paper, the problem is multidimensional and multidisciplinary, and an integrated approach to resolve the complex issue is enabled through a trans-disciplinary framework.

Endnotes

- ¹ The *Final Agreement between Mysore and the Madras Governments in regard to the construction of a dam and reservoir at Krishnarajasagara* was signed in 1924 (between Madras Presidency and Princely State of Mysore). The 'Rules of Regulation' annexed to the agreement provided a schedule of release of water from the Krishnarajasagara reservoir for upstream Mysore to comply with and regulate. The 50-year agreement formed the basis of Cauvery water allocation between the two entities, even after reorganization and formation of the Indian states of Karnataka and Tamil Nadu post Independence.

- ² A river system provides many benefits to the human community through its natural flow regimes (fisheries, sediments, drinking water, agricultural use, soil formation, supporting downstream ecosystem, etc). With human interventions (diversion for agricultural purposes, large dams, etc), the rivers' organic ecosystem functioning gets impeded thereby affecting the ecosystem service provisions. Therefore, any form of human intervention over river flows (or hydrological regimes) needs to take into consideration the impacts on the ecosystem.

References

- Alagh, Y. K. (2018). *Economic policy in a liberalising economy*. Springer. <https://doi.org/10.1007/978-981-13-2817-6>
- Anand, P. B. (2004). *Water and identity: An analysis of the Cauvery river water dispute*. University of Bradford.
- Arthington, A. (2018). 'Environmental Flow Concepts and Holistic Applications in River Basin Governance', *Ecology, Economy, and Society*, 1(2), 73-76.
- Bandyopadhyay, J. (2009). *Water, ecosystems and society: Aa confluence of disciplines*. Sage Publications, New Delhi.
- Chokkakula, S. (2014). 'Interstate water disputes: perils and prospects of democratisation', *Economic and Political Weekly*, 49 (9), 75-81.
- Chokkakula, S. (2017). *Why do interstate water disputes emerge and recur?: An anatomy of ambiguities, antagonisms, and asymmetries*. Centre for Policy Research, New Delhi.
- CWDT (2007). *The Report of The Cauvery Water Disputes Tribunal With The Decision*. 5 volumes. Ministry of Water Resources, New Delhi, India.
- D'souza, R. (2006). *Interstate disputes over Krishna waters: law, science and imperialism*. Orient Longman, New Delhi.

- Ghosh, N. and Bandyopadhyay, J. (2009). A scarcity value based explanation of trans-boundary water disputes: The case of the Cauvery Basin in India. *Water Policy*, 11 (2), 141-67. <https://doi.org/10.2166/wp.2009.017>
- Ghosh, N. and Bandyopadhyay, J. (2016). 'Sustaining the liquid mosaic: longer steps needed', *Economic and Political Weekly*, 51 (52), 20-24.
- Ghosh, N., Bandyopadhyay, J., & Thakur, J. (2018). *Conflict over Cauvery Waters: Imperatives for innovative policy options*. Observer Research Foundation, New Delhi.
- Guhan, S. (1993). *The Cauvery Disputes: Towards Conciliation*. Frontline, Madras.
- Iyer, R.R. (2003). *Water: Perspectives, Issues and Concerns*. Sage Publications, New Delhi.
- Iyer, R.R. (2009 ed.). *Water and the Laws in India*. Sage Publications, New Delhi.
- Supreme Court of India. (2018). *In the Supreme Court of India: Civil appellate jurisdiction, civil appeal no. 2453 of 2007*. New Delhi, India.

Nilanjan Ghosh is Director at the Observer Research Foundation (ORF), India. In that capacity, he heads two centres at the Foundation: the Centre for New Economic Diplomacy and ORF's Kolkata Centre. His previous positions at various points in time include Senior Fellow at ORF, Senior Vice President and Chief Economist at the Multi Commodity Exchange of India Limited, Mumbai, and Professor of Econometrics at the TERI School of Advanced Studies, New Delhi.

Nilanjan has been nominated by the Supreme Court of India as a member of the expert committee for formulating scientific and policy guidelines with respect to cutting trees for developmental

projects. He was Visiting Fellow at the Linnaeus University, Sweden, in 2008 and 2015, and has also visited Uppsala University (Sweden), Massachusetts Institute of Technology (USA), and Stanford University (USA).

A leading ecological economist and development analyst of South Asia, Nilanjan is considered a pioneer in the application of neoclassical and heterodox economics in water governance. A natural resource economist and econometrician by training, he obtained his PhD from the Indian Institute of Management (IIM), Calcutta. Till recently, he advised WWF India in setting up their ecological economics practice. He has conducted a large number of consultancy/advisory assignments for organizations like IUCN, FORMAS-The Swedish Research Council, UNCTAD-India, Chinese Consulate in Kolkata, WWF-UK, IWMI-WLE, World Bank and many others. Nilanjan was the vice president of the Indian Society for Ecological Economics (INSEE) during 2012–14, and delivered the presidential address at the Seventh Biennial Conference of INSEE in December 2013.

His publications include eight books and monographs (authored and/or edited), more than 75 peer-reviewed research papers in esteemed journals and as chapters in edited volumes, and occasional papers.



8

Federalizing Waters: How are the Stakes Changing between the Centre and the States?

Prakriti Prajapati
Srinivas Chokkakula

Abstract: The Indian state's transformation has been described as that from 'a strong Centre–weak states' to 'a weak Centre–strong states'. This is the usual frame of reference for analysing federal relations in India, more so for water governance. The assessments often rely on the experiences of interstate river water disputes resolution and the non-compliance of states. The work presented here builds on an ongoing research about changing federal relations defined by budgetary allocations and expenditures. It investigates the changing stakes of the Centre and the states in water resources management. The analysis concludes that the 'fiscal power' of the Centre has diminished over time. It presents a case for greater contribution from the Centre to enable it to work with the states to address new governance challenges and emerging risks.

Keywords: water budgetary allocations, fiscal power, Centre–state roles

The debates around federal water governance in India often present water as a state subject, and water governance as the exclusive domain of states. This is despite the constitutional division of powers stipulating that states' powers are subject to that of the Union over interstate river water regulation and

development.¹ It has been argued that the assumptions of states' exclusive control over water are not only because of the manner these powers have been put to use by states, but also due to the Centre's own negligence in exercising its powers (Chokkakula et al., 2019). Ramaswamy Iyer (2002) drew attention to this by arguing that there has been a 'wilful abdication of its role' by the Centre. Associating it with the Indian state's historical transformation, Chokkakula (2019) characterized it as the Centre's 'lost ground'.

It is true that the Centre has largely restricted its role to the resolution of interstate river water disputes so far. This role conforms with the constitutional provisions under Article 262.² The Centre's responsibilities under Entry 56 of the Union List have been translated through the enactment of the River Boards Act 1956. The Act, however, has remained in 'disuse'. Not a single river board has been constituted using the provisions under the Act (Doabia, 2012).

On the other hand, in the realm of interstate and federal water governance, India's development and sustainability goals in the water sector are increasingly evolving (Chokkakula, 2019; Chokkakula et al., 2019). The national development programmes for river rejuvenation, inland navigation or inter-basin transfers need robust interstate coordination. The long-term water security concerns, along with new risks linked to water pollution and climate change, require effective federal responses with resilient Centre–states working mechanisms in place (Chokkakula et al., 2019).

Assessments of the Centre's diminished role and the vacuum in federal governance are thus becoming critical, for these factors have serious implications for India's long-term development and

sustainability goals. It is important to probe this further and explain the federal governance 'vacuum' in more empirical ways to inform policy thinking. This paper makes a modest effort by looking at the manner in which the spending of the Centre and states in water resources development and management has changed over time.

The paper presents key findings from an ongoing research involving analysis of budgetary allocations in the water sector by the Centre and select states historically.³ This analysis, by implication, looks into intergovernmental fiscal transfers (IGFTs), that is, specific-purpose IGFTs in the water sector.

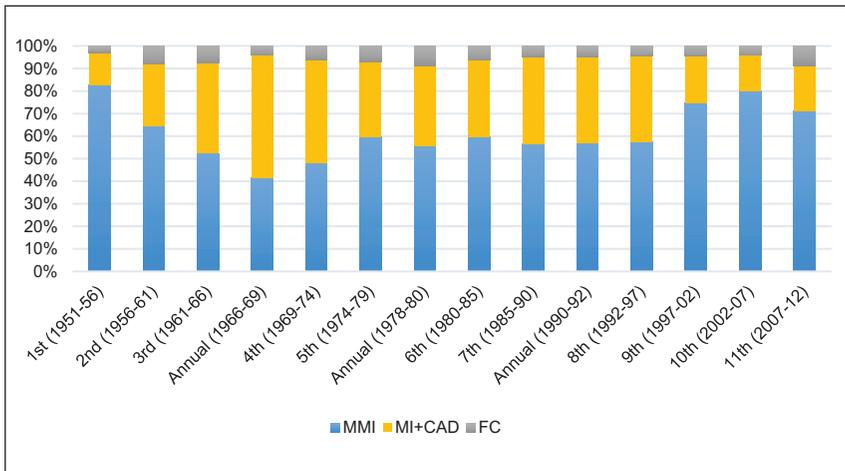
This is unexplored terrain. The body of work on fiscal federalism is primarily focused on horizontal and vertical imbalances. It is concerned essentially with general-purpose IGFTs.⁴ The analysis presented here marks two distinct departures from the earlier body of work. One, the paper looks at budgetary allocations of the Centre and the states in a specific sector – water – to discuss shifting stakes of Centre–states financing and the changing course of federal relations in water governance. Two, it focuses on specific-purpose IGFTs in the water sector to explore the Centre's leverage with the States to work towards effective federal water governance.

The water sector poses particular challenges for such an analysis. The budget documents are not particularly intelligible for the purpose, and it is not easy to pinpoint what can be considered water budgetary expenditure. Further, budgetary documents differ in the manner they are organized across states: budget heads, levels of disaggregation, categorizations across departments and federal levels, etc. The inquiry also suffered from the absence of a proven analytical framework to carry out such an analysis. Notwithstanding these challenges and limitations, the analysis offers useful insights.

How Do the Centre and States Spend on Water?

India's primary strategy since Independence has involved large-scale investments in infrastructure for supply augmentation. From the beginning of the country's development planning, the Centre has provided financial assistance to the states for implementing important development schemes (Kletzer & Singh, 1997). Several large multipurpose projects were taken up in the first few plan periods, resulting in expenditure on major and medium irrigation (MMI) dominating India's total water budget, followed by expenditure on minor irrigation (MI), command area development (CAD), and flood control (FC) (see Figure 1).

Figure 1: Composition of total expenditure on the water sector since 1951



Source: Ministry of Water Resources (2011, p. 22).

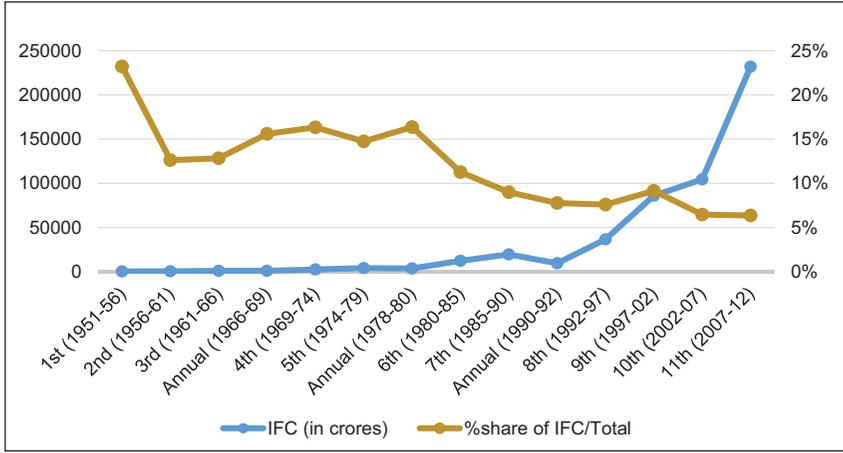
For the development of irrigation and power, a national-level perspective was considered necessary for several reasons in the first Five Year Plan (FYP). The varying potential and conditions of irrigation and power across the country had to be strategically aligned with the interests of food security; construction of large

projects required the pooling of the best of engineering knowledge and skills; nearly all river valleys extended beyond individual states' boundaries demanding coordinated effort between states; and these interstate projects commanded financial outlays that lay beyond the capacity of individual states (Planning Commission, 1951). The Centre, thus, played an anchor's as well as driver's role in these projects. This involved offering financial assistance for major irrigation and power schemes and for refugee rehabilitation, in addition to loans and grants to the states for development expenditure in the first FYP. This kind of central support was intended to 'secure maximum progress possible' at the earliest, and kick-start agricultural and industrial development through irrigation and power generated by the MMI schemes (Planning Commission, 1951, p. 122). In the initial years, these were conceived through mega river valley development projects on interstate rivers such as Mahanadi, Krishna, Sutlej–Beas, Kosi, Chambal, Koyna, Rihand, Cauvery and Sone, along the lines of successful earlier projects such as the Damodar Valley Corporation, Tungabhadra project and Bhakra Nangal dam. Due to the difficulty involved in foreseeing the loan responsibility of each state at the time, the expenditure to be borne by the states was also shown as part of the Centre's spend.

In the total plan outlay of the first FYP, the Centre's share of irrigation and flood control (IFC) was as high as 60 per cent, with almost a fifth of this spent on river valley projects 'on behalf of the States' as loans to be repaid later (Planning Commission, 1951, 41). The share of the states expanded from 40 per cent in the first FYP to 96 per cent by 2017, with a corresponding decline of the Centre's share from 60 per cent to 4 per cent.⁵ The share of IFC in total plan outlay (expenditure incurred by both the Centre and

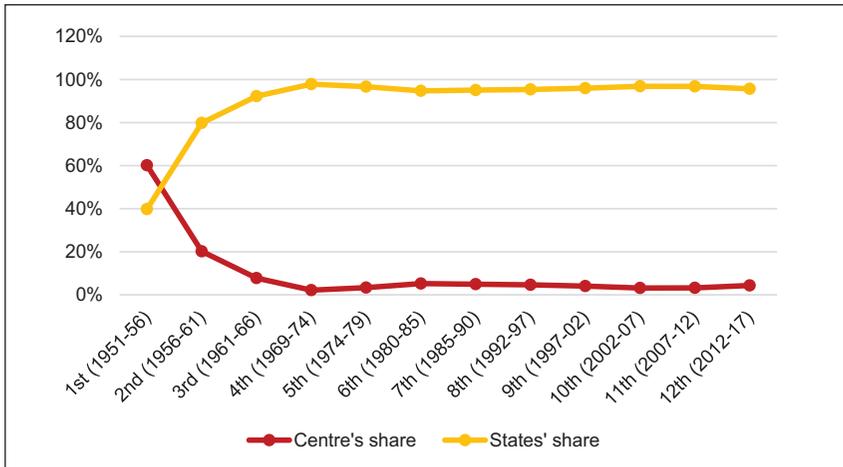
states) has declined since the first FYP, from 23 per cent to 7 per cent by the end of the 11th FYP.

Figure 2: Share of IFC in total plan expenditure (Centre and states combined)



Source: Adapted from Ministry of Water Resources (2011, p. 22).

Figure 3: Centre and states' share in total plan outlay on IFC



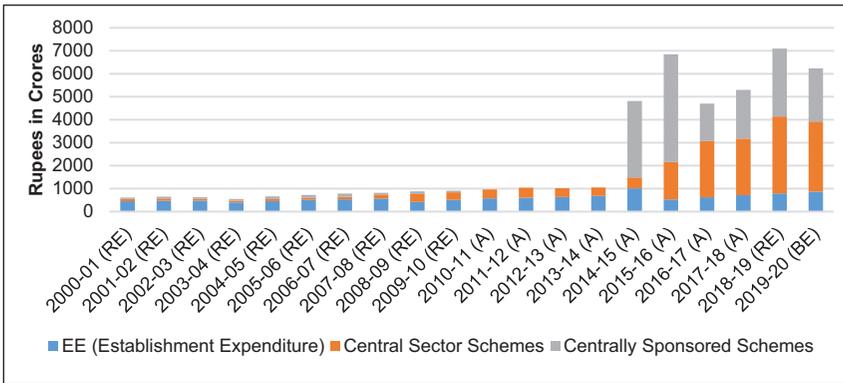
Source: Adapted from NITI Aayog (1951-2012); Ministry of Water Resources (2002-20)

Centre's Contributions to States' Water Budgets

As we have seen, the Centre's contributions to IFC fell sharply after the first and second FYPs (Figure 3). In later years, the states' relative investments rose sharply and significantly. Even the Accelerated Irrigation Benefit Programme (AIBP) in later years (1996 onwards) – constituting financial assistance for MMI projects – could not elevate the Centre's share. A more recent Centrally Sponsored Scheme (CSS) (2015 onwards), the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), is substantially large as well, but has had negligible impact on the Centre's share (see Figure 3). While the quantum of contribution under Central Sector Schemes is also rising, the Centre's total share remains low in comparison to states' cumulative contributions (Figures 3 and 4).

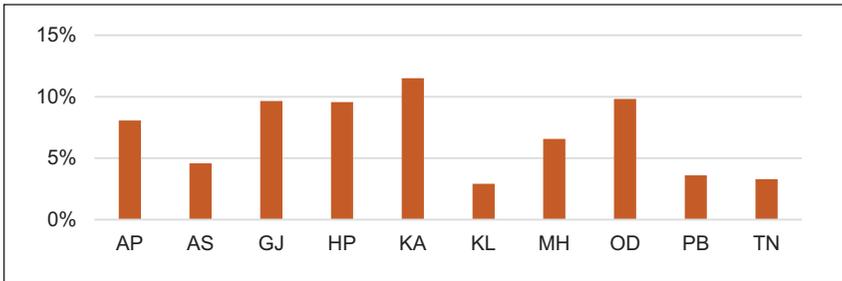
These declining central contributions must be further located within states' own contexts. Water allocations of the states themselves are not very large when seen as part of overall budgetary outlays (Figure 5). For a set of ten states,⁶ water budgetary expenditures varied between 2.9 and 11.5 per cent of the overall budgets. Gujarat, Odisha and Himachal Pradesh allocated nearly 10 per cent of their total budgetary allocations to the sector, with Karnataka recording the highest share. Other states, including Andhra Pradesh, Maharashtra, Assam and Tamil Nadu – show similar patterns of allocation, although Tamil Nadu is on the lower side. The smaller states of Punjab, Assam and Kerala are at the lower end of the spectrum – perhaps indicating limits in their potential for water resources development, but this might not hold for Assam, characterised by abundant water resources.

Figure 4: Composition of central outlay on IFC



Source: Ministry of Water Resources (2000–20)

Figure 5: States and their water resources budgets (2015–16 actual expenditure)

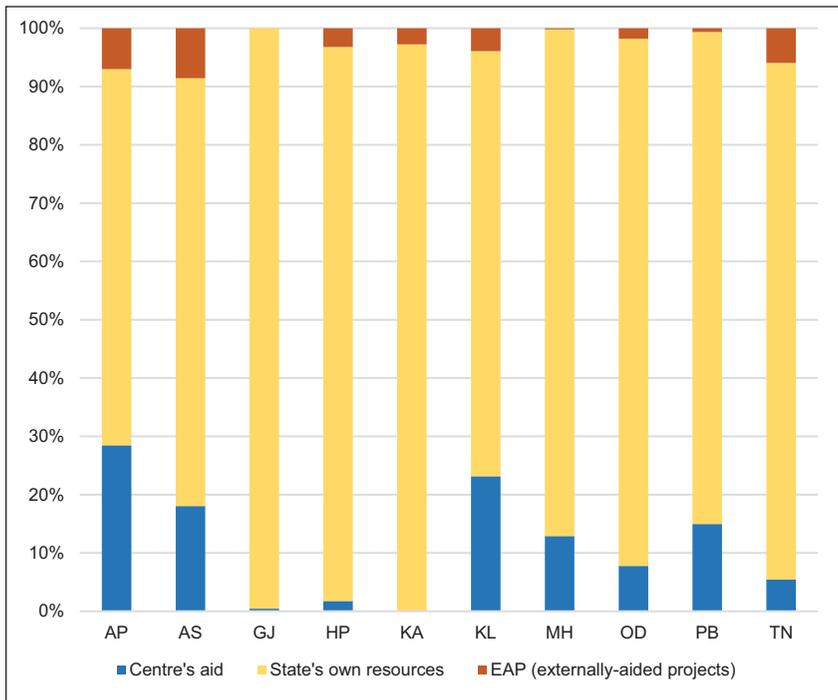


Source: Created using data acquired from 'Detailed demands for grants (department-wise)' published by respective state governments, 2017

The average central transfers in states' water budgets amounted to 11 per cent. The highest received is by Andhra Pradesh, and lowest by Gujarat and Karnataka (Figure 6). Andhra Pradesh's high percentage can be attributed to additional transfers after its bifurcation in 2014. The smaller states of Punjab, Kerala and Assam (comparable in expenditure) have significant contributions from the Centre. Himachal Pradesh (2 per cent) is an exception; contrary to the general trend of central contributions accounting for a significant proportion in the smaller states, the percentage

for Himachal Pradesh is exceptionally low. This could be an outlier year. Given that other smaller states have significant central contributions in their budgets, the Centre perhaps has reasonable influence in shaping their strategic choices for water resources management. However, for the larger states, the Centre's contributions are not that significant – varying between none to 13 per cent. Are these enough to influence states' water resources management strategies? There may not be a clear answer here. The Centre's contributions, at as much as 20 per cent of water budgets, may be important for some states. But for others, often the larger states, the Centre's share may not be significant enough to affect any change in their preferences.

Figure 6: States' water budgets dependency (2015–16 actuals)



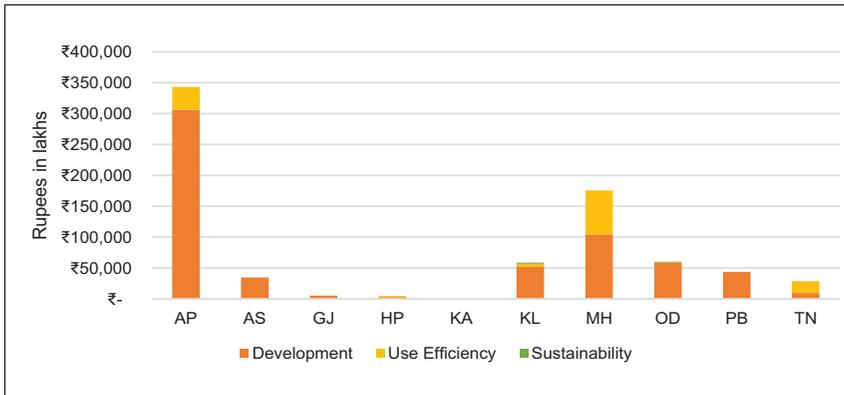
Source: Created using data acquired from 'Detailed demands for grants (department-wise)' published by respective state governments, 2017

Nature and Influence of the Centre's Contributions

The Centre's financial assistance to states in the water sector has been consolidated into a single scheme: PMKSY. The implementation of this flagship programme is shared by the Ministry of Jal Shakti and the Ministry of Agriculture and Farmers' Welfare. Besides this, there are other CSSs such as the Ganga Action Plan (GAP) – extended as the National River Conservation Plan to include other rivers – to promote water and river conservation.⁷

The transfers under these schemes largely continue to support supply augmentation strategies. Figure 7 presents the break-up of central transfers disaggregated in three categories: development (expenditure promoting supply augmentation); use efficiency (improving agricultural water use efficiency); and sustainability (institutional reforms towards sustainable management of resources).

Figure 7: Central transfers – disaggregated analysis



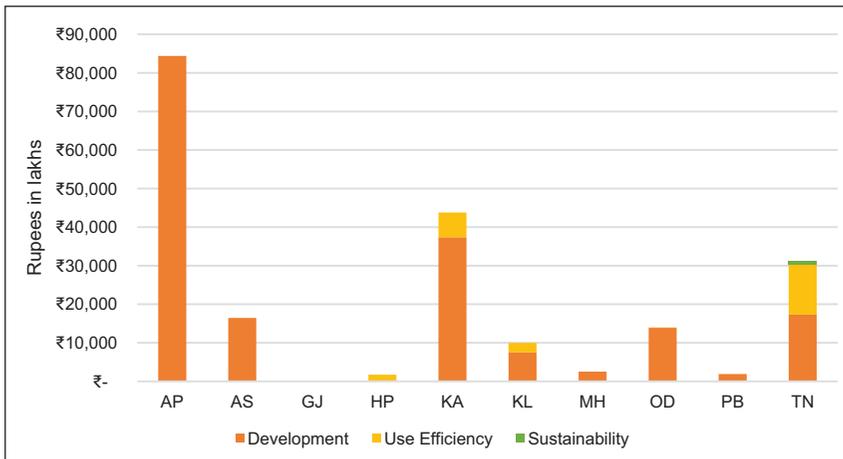
Source: Created using data acquired from 'Detailed demands for grants (department-wise)' published by respective state governments, 2017

This analysis suggests that the schemes continue to favour supply augmentation strategy. There is, however, a perceptible increase in

allocations to use efficiency projects (or programmes) in larger states like Maharashtra, Tamil Nadu and Andhra Pradesh. These are spent on activities that fall under on-farm water management. Expenditure on supply augmentation projects or programmes is incurred mostly on major irrigation projects in Andhra Pradesh and Assam; CAD in Punjab and Odisha; and FC in Himachal Pradesh and Kerala.

A similar disaggregated analysis of external aid from international development agencies (IDAs) shows an allied pattern of continued support to supply augmentation projects or programmes (see Figure 8). The IDAs' financial assistance has been used in the following manner by the states: modernization of the Nagarjuna Sagar project in Andhra Pradesh (a total of Rs 674 crores); augmenting water supply for Bengaluru under Stage IV of the Cauvery Water Supply Scheme in Karnataka (Rs 302 crores); and capital outlay on medium irrigation projects in Odisha (Rs 139 crores).

Figure 8: External aid – disaggregated analysis

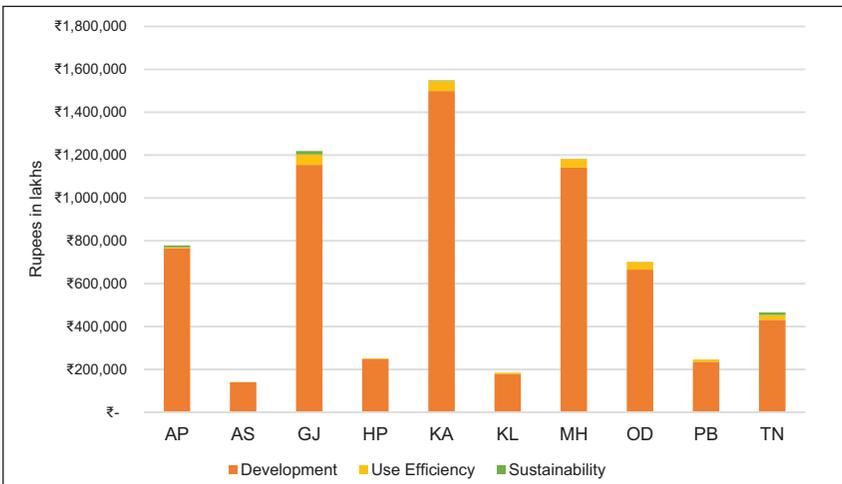


Source: Created using data acquired from 'Detailed demands for grants (department-wise)' published by respective state governments, 2017

States' Priorities and Preferences

The disaggregated analysis of the states' own budgetary allocations (excluding central and IDAs' contributions) shows the continued focus on supply augmentation strategies (Figure 9). The development category of expenditure allocations dominates, reflecting the true preferences of the states.

Figure 9: State's expenditure preferences – disaggregated analysis



Source: Created using data acquired from 'Detailed demands for grants (department-wise)' published by respective state governments, 2017

Conclusions

The analysis and findings presented above remove some of the ambiguity about the diminished role of Centre, at least in terms of its 'fiscal power'. The Centre's allocations have declined over the years, and states' allocations have risen relatively to a point that the former cannot claim significant influence over the latter's preferences and choices regarding water resources management. This may be the key underlying factor contributing to the Centre's

'lost ground' or 'abdication of its role.' States' dominant executive power combined with their increasing investments in water resources development projects may be allowing them to set their own priorities and strategic choices. Their territorialized choices and preferences in water resources development may be leading to a collective action problem, and the absence of a coherent federal response. Further, the disaggregated analysis of the transfers by the Centre and IDAs to the states do not show that the Centre (or the IDAs) are causing any significant course shift towards progressive policies. The dominant paradigm still appears to be favouring supply augmentation strategies.

The Centre's contributions may be significant when the entire range of specific-purpose IGFTs is considered together. But from individual states' perspective, such IGFTs are not of great consequence. The Centre may not be in a position to use the IGFTs as a leverage to make states shift towards more progressive policies, fashion a collective response in pursuing national development and sustainability goals, or respond to collective risks such as climate change. Even the visible rise in the Centre's contributions in recent years is neither adequate, nor effective. This conclusion comes with the caveat that the Centre's contributions are still significant for the smaller states.

One way to strengthen this leverage is to increase the Centre's contributions. It is unlikely that it can match or outweigh the states' contributions in the sector considering the large investments that the states make in water resources management. Yet there is clearly a case for increasing the Centre's contributions to some degree to enable it to work effectively with the states to pursue national development and long-term security goals.

Endnotes

- ¹ Entry 17 of the State List: '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'; Entry 56 of the Union List: 'Regulation and development of inter-State rivers and river valleys to the extent to which such regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest.'
- ² 'Article 262. Adjudication of disputes relating to waters of inter-State rivers or river valleys:
 - (1) Parliament may by law provide for the adjudication of any dispute or complaint with respect to the use, distribution or control of the waters of, or in, any inter-State river or river valley.'
 - (2) Notwithstanding anything in this Constitution, Parliament may by law provide that neither the Supreme Court nor any other court shall exercise jurisdiction in respect of any such dispute or complaint as is referred to in clause (1).'
- ³ A preliminary set of findings, with a smaller number of states included in the analysis, was presented in an earlier paper (see Chokkakula and Prajapati, in press).
- ⁴ IGFTs are of two types. General-purpose IGFTs provide general budgetary support to states: unconditional and mandated by law to offset the fiscal disadvantages arising from a lower revenue capacity and a higher unit cost of providing public services. Specific-purpose IGFTs provide purpose-specific budgetary support, usually conditional and to incentivize undertaking of certain programmes or projects. They often involve matching contributions from states (see Rao & Singh, 1998).
- ⁵ Throughout the analysis in this section, the category 'states' includes India's 28 states and 8 union territories.

- ⁶ Sample of Andhra Pradesh (AP), Assam (AS), Gujarat (GJ), Himachal Pradesh (HP), Karnataka (KA), Kerala (KL), Maharashtra (MH), Odisha (OD), Punjab (PB) and Tamil Nadu (TN).
- ⁷ Another recent programme with significant budget outlay, the Jal Jeevan Mission, focuses on drinking water security in rural areas. This was launched in 2019 and not captured in this analysis.

References

- Chokkakula, S., & Prajapati, P. (in press). Whither India's federal water governance for long-term water security? In G. Chadha and A. B. Pandya (Eds.), *Water governance and management in India: Issues and Perspectives*, Volume 2. Springer Singapore.
- Chokkakula, S. (2019). Interstate river water governance: Shifting the focus from conflict resolution to enabling cooperation. In *Policy challenges 2019–2020: Charting a new course for India and navigating policy challenges in the 21st century*. Centre for Policy Research. https://www.cprindia.org/sites/default/files/Interstate%20River%20Water%20Governance_Shifting%20the%20Focus%20from%20Conflict%20Resolution%20to%20Enabling%20Cooperation%20by%20Srinivas%20Chokkakula.pdf
- Chokkakula, S., Kapur, A., & Singh, A. (2019). *Water and federalism: Working with states for water security – Final Report*. Unpublished, prepared for the World Bank.
- Doabia, T. S. (2012). Report of the committee to study the activities that are required for optimal development of a river basin and changes required in existing River Boards Act, 1956 for achievement of the same. Ministry of Water Resources, Government of India.
- Government of Andhra Pradesh. (2017). Detailed demands for grants (department-wise). <https://openbudgetsindia.org/organization/andhra-pradesh-budget-2017-18>

- Government of Assam. (2017). Detailed demands for grants (department-wise). <https://openbudgetsindia.org/organization/assam-budget-2017-18>
- Government of Gujarat. (2017). Detailed demands for grants (department-wise). <https://openbudgetsindia.org/organization/gujarat-budget-2017-18>
- Government of Himachal Pradesh. (2017). Detailed demands for grants (department-wise). <https://openbudgetsindia.org/organization/himachal-pradesh-budget-2017-18>
- Government of India. (2010–20). Demands for grants of central government (ministry-wise). https://www.indiabudget.gov.in/previous_union_budget.php; https://www.indiabudget.gov.in/demands_grants_central_government.php
- Government of Karnataka. (2017). Detailed demands for grants (department-wise). <https://openbudgetsindia.org/organization/karnataka-budget-2017-18>
- Government of Kerala. (2017). Detailed demands for grants (department-wise). <https://openbudgetsindia.org/organization/kerala-budget-2017-18>
- Government of Maharashtra. (2017). Detailed demands for grants (department-wise). https://openbudgetsindia.org/organization/maharashtra-budget-2017-18?_groups_limit=0
- Government of Odisha. (2017). Detailed demands for grants (department-wise). <https://openbudgetsindia.org/organization/odisha-budget-2017-18>
- Government of Punjab. (2017). Detailed demands for grants (department-wise). <https://openbudgetsindia.org/organization/punjab-budget-2017-18>
- Government of Tamil Nadu. (2017). Detailed demands for grants (department-wise). <https://openbudgetsindia.org/organization/tamil-nadu-budget-2017-18>

- Iyer, R. R. (2002). Inter-state Water Disputes Act 1956: Difficulties and solutions. *Economic and Political Weekly*, Vol. 37, Issue No. 28, 13 July, 2907–2910.
- Kletzer, K., & Singh, N. (1997). The political economy of Indian fiscal federalism. In S. Mundle (Ed.), *Public finance: Policy issues for India* (pp. 259–298). Oxford University Press.
- Ministry of Water Resources (2002–20). Ministry of Water Resources Outcome Budgets (2002–20). Government of India. <http://jalshakti-dowr.gov.in/finance/budget/outcome-budget>
- Ministry of Water Resources. (2011). Report of the Working Group on Major & Medium Irrigation and Command Area Development for the XII Five Year Plan (2012–2017). Government of India <http://www.cwc.gov.in/sites/default/files/report-working-group-major-medium-irrigation-and-command-area-development-xii-five-year-plan-2012.pdf>
- NITI Aayog (1951-2012). (Respective FYP documents). <https://niti.gov.in/planningcommission.gov.in/docs/plans/planrel/index.php?state=planbody.htm>
- Planning Commission. (1951). First five year plan: A draft outline. Planning Commission, Government of India.
- Rao, M. G., & Singh, N. (1999). Intergovernmental transfers: Rationale, design and Indian experience. Department of Economics, University of California, Santa Cruz.

Prakriti Prajapati is a Research Associate with the MoJS Research Chair – Water Conflicts and Governance at the Centre for Policy Research, New Delhi. Her work focuses on the political, institutional and financial aspects of federal river water governance in India. She is interested broadly in the politics of water infrastructure, environmental governance and critical theory.

Aside from this, Prakriti is passionate about ethics education in engineering and public policy. She has been a guest faculty in engineering ethics at the Indian Institute of Technology (IIT), Delhi since 2017, and has co-authored the book *The Ethics of Governance: Moral Limits of Policy Decisions* (Springer Nature, 2021). She holds a BA (Honours) in economics from Lady Shri Ram College for Women, University of Delhi, and an interdisciplinary MSc in environmental economics from the TERI School of Advanced Studies, Delhi, specializing in ecological economics, and normative ethics and public policy.

9

Flows and Flaws: Questioning River Hierarchies of the Brahmaputra

Nimmi Kurian

Abstract: The paper argues that the dominant framing of the Brahmaputra as a national security issue has led to a highly centralizing narrative that remains fixated on the strategic geopolitical notion of the river. These have produced a set of hierarchies that have problematic implications for federal river governance. The paper argues that privileging the notion of the Brahmaputra as a site and source of conflict shuts out valuable dialogic space and compounds the risk of a misalignment of interests between the Centre and the states on key questions of benefit sharing, risk allocation and trade-offs. One of the gravest consequences of a unidimensional view of the Brahmaputra is that it invisibilizes a range of critical issues and actors that has today resulted in a missing river agenda. The paper examines to what extent emerging communities of practice in the borderlands can produce imaginative counterpoints to desecuritize the Brahmaputra.

Keywords: Brahmaputra, securitization, border states, northeast India

Flows and Flaws

For a river historically known to change its course, India's official narrative on the Brahmaputra has been a frustratingly unchanging one. Framed within a fraught securitized narrative, Brahmaputra emerges as the quintessential metaphor of

conflict. It is no coincidence that India's water wars thesis borrows heavily from the securitization discourse of existential threats, conferring what Ole Wæver terms 'a special right to use whatever means are necessary' (Wæver, 1995, p. 55). The securitization discourse turns on an acute sense of urgency and fear that elevates an issue from a low to a high priority concern. Critical to this is the language in which such a threat gets communicated to the public (Huysmans, 2002). Securitization, as the Copenhagen School argues, entails a 'speech act' whereby an issue is pronounced to be under existential threat. A certain taken-for-grantedness of a water wars scenario builds on an existential fear of the state's loss of control over freshwater resources and the urgent need to safeguard continued supplies. It is this framing that shunts an issue 'beyond normal politics' into the realm of emergency politics (Balzacq, 2005; Schmitt, 1985). One of the most critical consequences of a unidimensional view of the Brahmaputra is that it invisibilizes a range of critical issues and actors that has today resulted in a missing river agenda. This has to do with the fact that the securitization discourse remains, at the end of the day, a theory of elite politics. As Ralf Emmers notes, it 'excludes the wider population and consists solely of political elites' (Emmers, 2013, p. 134). These securitizing practices have functioned as 'discourses of deflection,' as Britt Crow-Miller argues, by diverting attention away from critical governance issues and serving to 'present a potentially controversial issue or project in such a way that alternative pathways are effectively pushed outside of the bounds of consideration' (Crow-Miller, 2015, p. 174).

What is most striking about India's discourse on the Brahmaputra is the conspicuous absence of the subnational scale. India's national narrative on the Brahmaputra has been unambiguously top-down and firmly steered by New Delhi. It has, by all accounts, been a

conversation between New Delhi and Beijing as far as agenda setting is concerned. For instance, the Expert-Level Mechanism established in 2006 between water resource ministries of both countries has a narrow remit on 'continued cooperation on provision of hydrological information' and data utilization reports by India (Embassy of India, Beijing, 2018). Lack of subnational consultation with reference to upstream hydropower projects on the Brahmaputra (both in Arunachal Pradesh in India, and in China) has been a long-standing concern that Assam has repeatedly raised with the Centre. The inability of the state government to directly take up the issue with China was underlined by the then Assam water resources minister, Rajib Lochan Pegu (Borah, 2014). In a memorandum submitted to convey its concerns, the Assam government urged the Centre in its dialogue with China 'to ensure that the flow of water in the river Brahmaputra is not altered in any manner detrimental to Assam.' There is also no subnational representation in the Implementation Plan drawn up by India and China for the Memoranda of Understanding (MOUs). Interestingly, while the Central Water Commission is designated as the implementing agency on the Indian side, the Chinese side is represented by the subnational level: the Bureau of Hydrology and Water Resources, Tibet Autonomous Region of China (Embassy of India, Beijing, 2014).

A transactional bargain with China on the Brahmaputra has undercut its water security in far-reaching ways (Kurian, 2017). Under the 2008, 2010 and 2013 MOUs signed with China, India pays Rs 82 lakhs annually to receive hydrological data during the flood season from three stations in Tibet. This instrumentalist approach has entailed clear costs for India. The resulting weak institutionalization was more than evident in China's data denial during the Doklam standoff in 2017. Citing technical issues,

China chose to stop sharing hydrological data on the Brahmaputra but went ahead and shared the same data on the same river with Bangladesh. The securitization of India's discourse on the Brahmaputra forcefully underscores the water–security linkage and plays on the fear of water denial by China. China's dam-building activities have raised the spectre of acute water scarcity exacerbated by climate change-induced glacier melt. This is evident in the expression of Delhi's low confidence levels in China's assurance that its dam projects will have no downstream impact. The Commissioner, Brahmaputra & Barak, T. S. Mehra's response was, 'They have given an assurance, but we don't know how long their assurance will last' (Arora & Ghoshal, 2020). China's announcement of a plan in December 2020 to construct a 'super dam' on the lower reaches of the Yarlung Tsangpo has further stoked fears of acute water scarcity. Arguing that 'the panic of the people can't be brushed aside', Nabam Tuki, political advisor to the Arunachal Pradesh Chief Minister, raised the spectre of the Siang river drying up due to China's water diversion projects (Press Trust of India, 2012). India has leveraged the 'naturalization of water scarcity' to fast-track dam-building projects in Northeast India as the only solution to safeguard India's water security. Justifying this T. S. Mehra argued, 'The need of the hour is to have a big dam in Arunachal Pradesh to mitigate the adverse impact of the Chinese dam projects' (Arora & Ghoshal, 2020).

A Missing Water Agenda

One of the gravest consequences of a unidimensional view of the Brahmaputra is that it invisibilizes a range of critical issues and actors that has today resulted in a missing river agenda. A range of subnational issues get blindsided and do not find a place on the agenda in the official discourse with China on the Brahmaputra.

There is growing consternation in Northeast India at what is widely perceived as the Centre's lack of resolve in raising the issue with China. For instance, Assam's Chief Minister Tarun Gogoi had tersely noted, 'Construction of big dams will adversely affect downstream areas of Assam and the north-east region and I fail to comprehend why the Centre is not taking the matter seriously despite knowing this fact' (*Economic Times*, 2015). The extraordinary insularity of India's discourse on the Brahmaputra has meant that it has little, or at any rate, little useful to say about challenges faced by riverine communities. The abdication on the part of the state to raise critical issues that are germane to securing lives and livelihoods of border communities has produced a series of governance gaps. Critical issues such as water quality have not been part of transboundary dialogues yet. Studies by Chinese scientists have pointed to the possibility of a high content of heavy metals in the stream sediments and tailings in Tibet's Gyama Valley that could pose a potential threat to downstream water users (Huang, 2010). The urgency of transboundary pollution as a serious concern was brought home forcefully in 2017 when the waters of the Brahmaputra turned black, which was traced to landslides in Tibet. The waters were found to be severely polluted, containing 1249 NTU, which is 250 times more than the safe limit (Choudhury 2017). What is worrying is that this has not resulted in any bilateral agreements to jointly address such emergencies.

A possible template in this regard could be the 2006 Sino-Russian agreement and the 2008 Transboundary Water Use and Protection Cooperation Agreement, which established an emergency notification system in the wake of severe pollution of the Songhua river in Russia due to a chemical plant explosion in China's Jilin province (Chen, 2019, p. 64). The agreement can be seen as an interesting instance of an accommodation of subnational

concerns with reference to a transboundary river. The issue of river pollution was taken up directly by the Khabarovsk city governor Viktor Ishayev in a meeting with his Chinese counterpart, the Heilongjiang provincial governor Zhang Zuoji, in July 2006 during which he demanded that China take responsibility for cleaning up the river. Chinese seismologists have brought out disturbing evidence of the heightened risk of dam-induced earthquakes in the region. Several studies have traced the Sichuan earthquake of 2008, which claimed 80,000 lives, to the Zipingpu dam (Kerr & Stone, 2009). These also get heightened due to the considerable uncertainty and poor state of knowledge regarding hydro-geomorphic processes of the Himalayan ecologies (Ruiz-Villanueva et al., 2017). A water discourse framework that shuts out valuable deliberative dialogic space would only heighten the potential for a misalignment of interests between the Centre and the states on key questions of benefit sharing, risk allocation and trade-offs. It is time to make a fresh set of discursive choices and fundamentally rethink the way we understand and think of federal river futures.

Different Scales, Different Meanings

There are emerging communities of practice that are resulting in a less deterministic imagination of the Brahmaputra, one that recognizes how different scales produce different meanings of the river. These offer several interesting takeaways. For instance, its relatively low hierarchical position vis-à-vis the big river could offer the tributary the scope to be a source and site of transboundary innovation. A case in point is an interesting example of flood risk governance from the Saralbhanga, one of the tributaries of the Brahmaputra flowing from Bhutan to India. Villages on both sides

of the border recently put in place an early warning system using social media to share real-time flood alerts.

The value of such transboundary collective action becomes even more evident in light of projections of heightened flood risk in the Brahmaputra basin. A recent study has examined 700 years of river data to estimate that the flood hazard in the Brahmaputra basin has been underestimated by 24–38 per cent (Rao et al., 2020). Instead of a ‘last mile’ approach that places frontline communities at the end of disaster risk reduction strategies, a people-centred early warning system would be a ‘first mile’ approach that places border communities front and square of the design process (Kelman & Glantz, 2014). A subnational rescaling also opens up the scope for new benefit-sharing models. Bottom-up market-driven processes of economic integration are today leading to the rise of a new set of border stakeholders with stakes in increasing transborder trade. States of the northeast India have been lobbying the Centre for the resumption of border trade points with neighbouring countries. An interesting example of lobbying is the recent agreement between India and Bangladesh to commence river trade on the Brahmaputra in 2019. The impetus for this was provided by Assam’s strong interest in tapping increased river trade opportunities with Bangladesh. The border state has taken the lead in holding stakeholder meetings between ministries and regulatory bodies on both sides with Bangladesh to strengthen inter-agency coordination. There is potential to reconnect economic geographies within the region by also bringing in Nepal and Bhutan, which will open up valuable opportunities for small and marginal riverine communities within South Asia.

The role of subnational policy innovation has clearly remained an understudied aspect of federal river governance (Holmatov,

Lautze & Kazbekov, 2016; Heinmiller, 2018; Kurian, 2019). What these fledgling instances tell us is that securitization is not necessarily the default mode for transboundary river governance it is often made out to be. These innovations showcase the diversity of demands and nature of responses at lower scales beyond the securitization discourse. The transboundary negotiations could strengthen and support these innovations towards more credible and enduring solutions for transboundary governance.

Conclusion

The paper has argued that subnational subjectivities are germane to understanding the ebb and flow of transboundary water politics as well as changing its course in potentially innovative ways. That said, the subnational is hardly a homogeneous space. Subnational water discourses can themselves have centralizing features as is evident in the dire warning issued by Arunachal Pradesh Chief Minister Pema Khandu in 2020 that opposition to the state government's decision to resume dam-building projects will be seen as 'anti-national'. Similarly, the subnational–desecuritization link is also not a given. For instance, Arunachal Pradesh has strong stakes in the securitization discourse, which results in a powerful alignment between federal and state interests. Further, the subnational can also conceal hierarchies of its own as can be seen in Assam's recurring concern about the lack of consultation with reference to upstream hydropower projects on the Brahmaputra in Arunachal Pradesh.

While this is not an attempt to read a larger-than-life role for the subnational actor, it is a cue to acknowledge that it is the border stakeholder who has the highest stakes in a shift in the grammar of securitization. Many of these questions will require developing

effective inter-agency coordination mechanisms among federal, state and local agencies. Since border regions are at the receiving end of a whole host of environmental challenges, it is imperative that capacity-building efforts engage with and build on the experiential knowledge and coping systems specific to a region. Such a practice-based template has the potential to incorporate a rich and hitherto untapped corpus of domain and field knowledge that national-level policymakers have no means of acquiring on their own. Building multi-scalar synergies can broaden the discursive bandwidth to debate a spectrum of possible futures on the Brahmaputra that do not foreclose cooperation. It is only by rescaling the discourse on the Brahmaputra that one can incorporate a missing water agenda and actors that tend to get invisibilized in the national imagination of the river. One cannot think of a more fitting way for the Indian state to signal that it has the best interests of its border citizens at heart than by giving voice and agency to this missing water agenda.

Endnotes

- ¹ China's dam-building activities have brought in its wake a virtual paranoia over its likely downstream impact. China is witnessing a virtual dam-building boom and much of this expansion is based on augmenting capacity in its western region; Tibet is emerging as a focal point of hydropower expansion with a series of dams being planned on major international rivers such as the Salween, Mekong and Yarlung Tsangpo. As the headwaters of many of Asia's rivers, the Tibetan 'water bank' in every sense becomes Asia's water bank and many of these rivers flow into some of the most populous regions of South and Southeast Asia.
- ² For its part, China has repeatedly assured India that it will not divert waters and that its dams will not pose a flood risk to downstream countries. It has asserted that it has 'always held a

responsible attitude towards the development and utilization of cross-border rivers' and that 'there is no need to read too much into it' (Ministry of Foreign Affairs, The People's Republic of China, Beijing, 2020).

- ³ Arunachal Pradesh announced plans in 2020 to resume construction of hydropower projects, including the 2,000 MW Subansiri Lower Hydroelectric Project.
- ⁴ Chief Minister Pema Khandu has been vocal in critiquing China's proposed dam projects and has reiterated that 'those upstream 'cannot violate the rights of those downstream' (Northeast Now, 2020).

References

- Alcántara-Ayala, I., & Oliver-Smith, A. (2019). Early warning systems: Lost in translation or late by definition? A FORIN approach. *International Journal of Disaster Risk Science*, 10, 317–331.
- Arora, N., & Ghoshal, D. (2020, 1 December). India plans dam on Brahmaputra to offset Chinese construction upstream. Reuters. <https://www.reuters.com/article/india-china-hydropower/india-plans-dam-on-brahmaputra-to-offset-chinese-construction-upstream-idUSKBN28B4RB>
- Balzacq T. (2005). The three faces of securitization: Political agency, audience and context. *European Journal of International Relations*, 11(2), 171–201.
- Borah, A. (2014, 8 December). China dams on Brahmaputra: Assam asks Centre to intervene. *Down to Earth*. <https://www.downtoearth.org.in/news/china-dams-on-brahmaputra-assam-asks-centre-to-intervene-47730>
- Chen, Q. (2019). Sino-Russian environmental cooperation: Past, present, and future. *R-Economy*, 5(2). <https://journals.urfu.ru/index.php/r-economy/article/view/3970>

- Chatterjee, B., Vidyadharan, V., & Patra, J. (2020, 4 July). India-Bangladesh expanded river trade opens up opportunities for locals. *The Third Pole*. <https://www.thethirdpole.net/2020/07/04/india-bangladesh-expanded-river-trade-opens-up-opportunities-for-locals/>
- Choudhury, R. (2017, 20 December). 'Black Brahmaputra': As river turns muddy, Assam leader blames China. <https://www.ndtv.com/india-news/brahmaputra-river-now-muddy-and-black-could-be-poisonous-says-iit-guwahati-study-1789898>
- Crow-Miller, B. (2015). Discourses of deflection: The politics of framing China's South-North Water Transfer project. *Water Alternatives*, 8, 173–192.
- Emmers, R. (2013). Securitization. In Alan Collins (Ed.), *Contemporary security studies* (pp. 131-144), Oxford University Press.
- Embassy of India, Beijing. (2014, 30 June). Implementation plan: Provision of hydrological information of the Yarlung Zangbu/Brahmaputra river in flood season by China to India. <https://www.eoibeijing.gov.in/implementation-plan.php>
- Heinmiller, B. T. (2016). Canadian federalism and the governance of water scarcity in the South Saskatchewan river basin. *Regional environmental change*, 18(6), 1667–1677.
- Holmatov, B., Lautze, J., & Kazbekov, J. (2016). Tributary-level transboundary water law in the Syr Darya: Overlooked stories of practical water cooperation. *International Environmental Agreements: Politics, Law and Economics*, Springer, 16(6), 873–907.
- Huang, X., et al. (2010). Environmental impact of mining activities on the surface water quality in Tibet: Gyama valley. *Science of the Total Environment*, 408 (19), 4177-4184.
- Huysmans, J. (2002). Defining social constructivism in security studies: The normative dilemma of writing security. *Alternatives: Global, Local, Political*, 27(1_suppl), 41–62.

- Kelman, I., & Glantz, M. (2014). Early warning systems defined. In *Reducing disaster: Early warning systems for climate change*. Springer Netherlands.
- Kerr, R and Stone, R. (2009, 16 January). A Human Trigger for the Great Quake of Sichuan?, *Science* 323 (5912), 322.
- Kurian, N. (2017, 24 October). Addressing the drought of ideas on the Brahmaputra. *China-India Brief*. Lee Kuan Yew School of Public Policy, National University of Singapore.
- Kurian, N. (2019). The future is federal: Why Indian foreign policy needs to leverage its border states. In *Policy challenges 2019–2024: The key policy questions for the new government and possible pathways* (pp. 122-124). Centre for Policy Research.
- Ministry of Foreign Affairs of the People's Republic of China (2020, 3 December). Foreign Ministry Spokesperson Hua Chunying's Regular Press Conference. https://www.fmprc.gov.cn/mfa_eng/xwfw_665399/s2510_665401/t1837636.shtml
- Northeast Now. (2020, 11 December). China encroaching on right to water usage of people downstream: Arunachal Pradesh Chief Minister Pema Khandu. 11. <https://nenow.in/north-east-news/arunachal-pradesh/china-encroaching-on-right-to-water-usage-of-people-downstream-arunachal-pradesh-chief-minister-pema-khandu.html>
- Press Trust of India. (2012, 1 March). Brahmaputra dries up in Arunachal Pradesh town! Is China responsible? *Economic Times*.
- Rao, M. P. et al. (2020). Seven centuries of reconstructed Brahmaputra river discharge demonstrate underestimated high discharge and flood hazard frequency. *Nature Communications*, 11(6017). <https://www.nature.com/articles/s41467-020-19795-6>
- Rose, A. (2018). Distributional considerations for transboundary risk governance of environmental threats. *International Journal of Disaster Risk Science*, 9, 445–453.

- Ruiz-Villanueva, V. et al. (2017). Recent catastrophic landslide lake outburst floods in the Himalayan mountain range. *Progress in Physical Geography, Earth and Environment*, 41(1), 3–28.
- Schmitt, C. (1985). *Political theology: Four chapters on the concept of sovereignty*. MIT Press.
- Wæver, O. (1995). Securitization and desecuritization. In R. D. Lipchutz (Ed.), *On security* (pp. 46-86). Columbia University Press.

Nimmi Kurian is a professor at the Centre for Policy Research, New Delhi. Her research focuses on the border regions between South Asia and Southeast Asia, India's neighbourhood policy, federalism and foreign policy, transboundary water politics and comparative regionalism. Nimmi serves on the External Advisory Board of the India China Institute, The New School, New York, and the Fellowship Committee of the China Studies Postdoctoral Fellowship Program, Centre for China Studies, Ashoka University. She has held fellowships from the India China Institute, The New School and the Charles Wallace India Trust. She holds an MA, MPhil and PhD in international relations from the Jawaharlal Nehru University, New Delhi.

Nimmi has written and published widely on alternative spatial imaginations of South Asia, a theme that is explored in detail in her two books, *India China Borderlands: Conversations Beyond the Centre* (Sage, 2014) and *India and China: Rethinking Borders and Security* (co-author) (University of Michigan Press, 2016). She is one of the authors of the *India Country Report* (BCIM Joint Study Group, 2016) constituted by the Ministry of External Affairs, Government of India, that offers policy pathways for transforming economic geographies in South Asia.

Her recent publications include 'When Practice Meets Policy: How Border Regions are Localising India's Neighbourhood Policy', *Global Policy* (Durham University, May 2022, *forthcoming*); 'Victorious Outliers: India's Border Regions and the Contested Memory Politics of the Burma Campaign' (co-authored), *India Review* (University of Wisconsin-Madison 2021); 'In Sickness and in Health: Why Border Regions Will be Central to Post-Pandemic Southasia', *Himal Southasian*, 21 December (Colombo, 2020); 'Re-engaging the 'International: A Social History of the Trans-Himalayan Borderlands', *Journal of Borderlands Studies* (Joensuu, Finland, 2020); 'India as the Engine of Recovery for South Asia: A Multi-Sectoral Plan for India's COVID-19 Diplomacy' (co-authored), Centre for Policy Research, 2020 ; 'Beyond Theoretical Navel-Gazing: India's Discourse on Borders and the Making of a Research Periphery' in G. Chakraborty and S. Banerjee, eds., *Negotiating Borders and Borderlands: The Indian Experience* (Orient Blackswan, 2022, *forthcoming*).

Case Studies



10

Customary Rights and Water Governance in Northeastern India

Shawahiq Siddiqui

Abstract: In the Northeastern states of India, water governance is shaped by customary rights regimes over natural resources that are recognized under special provisions of the Indian Constitution. These customary laws based on socio-ecological interactions define communities' outlook to water as divine and beyond absolute ownership, thus guarding against and resisting privatization and government control over water resources. Following national initiatives, state governments in northeast (NE) India have adopted water policies that reflect and replicate the principles, approaches and strategies envisaged by the National Water Policy of 2012. As a result, water policies in the NE make little allowance for the context-specific water management that has been the core strength of the tribal communities for centuries. When the state-level water policies do not accommodate constitutionally recognized autonomous bodies, water governance may suffer. The paper delves into the recently adopted water policies in the NE states to discuss how far they integrate the constitutionally recognized customary regimes and the implications for water governance.

Keywords: water governance, Northeastern region, state water policies, customary institutions,

Customary Rights over Resources in Northeastern India

India's North Eastern Region (NER), endowed with rich water and natural resources, comprises eight states – Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland,

Tripura and Sikkim – that constitute 8 per cent of the country's geographical area and are strategically located in proximity to the neighbouring countries of China, Bangladesh and Myanmar (MDoNER 2015). Two large rivers – the Brahmaputra and the Meghna – are responsible for a large network of rivers that serve the region and sustain its unique culture; there are also numerous smaller rivers not part of the large river systems. Despite their rich water endowment, the states in NER show very weak performance in water resources management as per the Composite Water Management Index (CWMI) of the National Institution for Transforming India (NITI) Aayog (2019). The reasons for such poor performance of the NE states need to be understood in the context of the special governance regimes in these states.

The constitutional safeguards provided for tribal people and their culture are distinct for each state in NER. Primarily there are two regimes that apply: the Sixth Schedule and the Temporary, Transitional and Special Provisions for the North East. The Sixth Schedule is applicable to the hill areas of Assam, Tripura and Mizoram and the whole of Meghalaya. It provides for the rule of area-based Autonomous District Councils (ADCs) as decentralized institutions with legislative, executive and certain judicial powers over a wide range of subjects including water, land, soil, local customs and culture. The states of Nagaland, Manipur, Arunachal Pradesh and Sikkim are governed under Temporary, Transitional and Special Provisions that bar the application of central laws in these states. Thus, for example, Article 371A for Nagaland states: 'Notwithstanding anything in this constitution – no Act of Parliament in respect of (i) religious or social practices of the Nagas; (ii) Naga customary law procedure; (iii) administration of civil and criminal justice; and (iv) ownership of land and its resources shall apply to the state of Nagaland.'

Similar provisions have been made for Manipur and Mizoram. The state of Arunachal Pradesh has opted for the Panchayati Raj system and runs its civil affairs under customary laws, which have absolute authority on land and its resources without constitutional recognition. The states of Nagaland and Mizoram have the system of Village Councils and in Manipur the local tribal institutions are called Village Authorities. As the powers vested with the ADCs, Village Councils and Village Authorities as local self-governments far exceed the powers vested with Panchayats in the rest of the country under the 73rd constitutional amendment, the autonomous tribal administrative structure present in the NE states has significant implications for the governance of water, land and forest ecosystems.

In certain areas the implications may be even more significant – for instance, where the ADCs and Regional Councils have been vested with additional powers to make laws on a variety of subjects, including critical ones like water, fisheries, flood control, agriculture and minor irrigation. For instance, Paragraph 3 of the Sixth Schedule amended in 2003 in its application to the state of Assam provides that the North Cachar Hills Autonomous Council and the Karbi Anglong Autonomous Council are empowered to make laws on water – that is, water supplies, irrigation and canals, drainage and embankments, water storage and water power – subject to the provisions of Entry 56 of List I of the Seventh Schedule. Another provision empowers the ADCs in Assam to make laws on ferries and inland waterways. Importantly, the powers provided to the ADCs are equivalent to those provided to the state governments under the Seventh Schedule.

The provisions of the Sixth Schedule recognize and empower the customary tribal institutions to control and manage natural

resources. For example, in Meghalaya, a traditional institution known as Hima (a political unit of several autonomous villages) has the customary power to control and manage the territory. The Hima Mawphlang, a traditional institution of the Khasi-Jaintia and under the administrative control of the Khasi Hills ADC, has the power to determine rights to access forests and water sources. It also has the power to regulate access to water for drinking and washing for non-permanent residents. Premised on these customary powers to regulate access to forests, protect catchments and water sources, the Hima Mawphlang regulates various special categories of forests or Khlaws. The Khlaws serving as sources of water supply, catchments or springs within the territorial boundaries of the Hima Mawphlang are known as the Ka Khlaw-Kor-Um Kharai-Masi. They are demarcated as such and rules of access and use are laid out with stringent restrictions on human and cattle entry.

Mapping National and NE Policy Regimes

Water is a state subject in India. The state governments have the power to regulate water supply, irrigation and canals, drainage and embankments, water storage and water power. However, these functions of the state governments are subject to the powers of the central government to regulate the development of interstate rivers and river valleys. The Centre also provides a mechanism for the resolution of interstate water disputes which is being revised by way of a new national law, the Interstate River Water Disputes (Amendment) Bill 2019. Basin-level planning is also evolving as a River Basin Management Bill 2018 – for the establishment of river basin authorities and for the regulation and development of interstate rivers and river basins – is underway. A National Water Framework Bill 2016 (Ministry of Jal Shakti,) and the Model Ground Water Bill 2016 (Ministry of Water Resources, 2016) that

are aimed at providing a governance template for states have been under consideration for a long time, but have seen limited progress (Cullet, 2019). Recently, more than 100 rivers including those in the North East have been designated as National Waterways under the National Waterways Act, 2016.

The central government has been promulgating national water policy, missions and programs to mainstream uniformity in approaches and strategies towards achieving the goal of Integrated Water Resources Management (IWRM). The National Water Policy (NWP) 2012 takes cognizance of the existing situation and propose a framework for the creation of a system of laws and institutions with a unified national perspective. NWP 2012 further states that water sharing and distribution among states should be guided by the national perspective with due regard to water availability and needs within a river basin.

The aforementioned central legislations and the NWP 2012 are applicable in the NE states subject to the special constitutional safeguards in place. Additionally, the North Eastern Council Act 1971 is a central legislation that established an institutional mechanism in the form of the North Eastern Council (NEC) for coordination among all the NE states at the regional level. The NEC functions as a regional planning body for the NE states with the very large mandate to formulate, plan, execute and review projects and schemes related to socioeconomic development, power or flood control projects of common interest which will benefit two or more NE states. Importantly, the NEC has the mandate to recommend projects to the central government intended to benefit two or more states including how the benefits from such projects may be shared. With this broad mandate, the NEC has formulated the North Eastern Council Regional Plan (NECRP) 2019–20 and the North Eastern Region Vision (NERV) 2020. NECRP focuses

on irrigation, flood control and watershed management for the socioeconomic development of the region as a whole. The NERV 2020, in addition to emphasizing coordinated development of water resources in the NER, identifies critical areas for improving water governance, natural resources management and benefit sharing from the transboundary perspectives.

Simultaneously, the NE states have been formulating their own water policies and plans suited to their water needs and socioeconomic developmental aspirations. The water policies formulated by the NE states reflect principles and approaches outlined in NWP 2012. The states' water policies generally acknowledge the hitherto poor water management practices, and lack of a unified perspective in planning, management and use of water resources (for example, see Government of Meghalaya, 2019). These state water policies also recognize that the state planning, development and management of water resources need to be done with a national perspective and in view of general directions in NWP 2012.

The water policies of Assam, Meghalaya, Manipur, Mizoram and Nagaland have the overarching objectives of promoting IWRM, environmental sustainability, conservation, social inclusion and equity. The Nagaland Water Policy 2016 also aims to launch a state-wide campaign to spread 'conservation consciousness' and mainstream basin and sub-basin level planning with the involvement of traditional and customary institutions, a policy objective unique to Nagaland and in complete synergy with NWP 2012. The water policies of Assam, Meghalaya and Nagaland also seek to promote water use efficiency which is one of the stated objectives of NWP 2012 and the National Water Mission 2009. Nagaland is perhaps the only state in NER to have a dedicated policy

initiative on mainstreaming the role of women in water resources management and conservation by ensuring their participation in decision-making process by way of a legal measure. The Manipur Water Policy 2015 is also a good example of a gender-sensitive and inclusive water policy as it acknowledges the direct impacts of water scarcity on women and girls, especially amongst the poor, and seeks to implement the policy with active involvement of women along with other stakeholders including NGOs. The Meghalaya State Water Policy 2019, the most recent one of the NE water policies, includes Participatory Water Resource Management as a key approach; however, it falls short of acknowledging the direct impacts of water management on women and girls, especially given the hardships involved in fetching water from far-off springs, and their role in improving the local water availability scenario and revival of springs (Government of Meghalaya, 2019, Provision 5).

Concluding Remarks

The NE states are unique in India in their customary governance of natural resources; they continue to be governed by customs and tribal institutions with administrative support from the constitutionally recognized, area-based ADCs and Village Councils. The rights of access and use are controlled by local heads within the territorial ADCs. State water policies make very limited efforts to accommodate these customary institutions and practices in alignment with NWP 2012. But the tendency is to prioritize top-down institutional mechanisms even though they align with the doctrine of public trust and principles of ecological integrity, equity and social justice in NWP 2012. The challenge of establishing the necessary institutional linkages between the state policies and the customary regimes remains.

The ADCs and the Village Councils have very little role to play in planning and implementation of water supply schemes, irrigation and maintenance of waterways. They are not involved by the state or national institutions in practice. On the other hand, the amendments to the Sixth Schedule in 2003 provide the ADCs in Assam, for example, with powers equivalent to that of a state government to make laws on water, waterways, water power, minor irrigation and water supply. This may become contentious in future due to the large-scale developments being planned by the central and state governments, such as the designation and development of National Waterway 2 over the Brahmaputra river.

A more recent development concerning a central legislation with regional implications for NER is the North East Water Management Authority (NEWMA) Bill 2020 which is under consideration. The Bill seeks to establish the NEWMA, as an exclusive water management authority for NE India. Once set up after the proposed Bill is passed, NEWMA will be involved in the implementation and monitoring of all projects related to hydropower, biodiversity conservation, irrigation, flood control, inland waterways, forestry, fisheries and ecotourism in all the NE states.

The draft of the NEWMA Bill is not available in the public domain. It is not clear as to how the NEWMA will work through the complex regime of tribal self-rule laws and institutions in the NER. Its linkages with other regional mechanisms having similar mandate such as the North Eastern Council and the Brahmaputra Board are also not clear at this stage. Whether NEWMA provides adequate role for customary institutions in pursuing the constitutional imperatives of mainstreaming cooperation-based water resources development in the region remains to be seen.

Endnotes

1. The Constitution of India, 1950, Sixth Schedule, read with Article 244(2) and Article 275(1), Provisions as to the Administration of Tribal Areas in the States of Assam, Meghalaya, Tripura and Mizoram.
2. The Constitution of India, 1950, Part XXI, Article 371A, Article 371B, Article 371C, Article 371F, Article 371H.
3. The Constitution of India, 1950, Article 371A, Special provision with respect to the State of Nagaland.
4. The Constitution (Seventy-third Amendment) Act 1992.
5. The Constitution of India, 1950, 3. Powers of the District Councils and Regional Councils to make laws. Paragraph 3 has been amended in its application to the State of Assam by the Sixth Schedule to the Constitution (Amendment) Act, 2003 (44 of 2003), s. 2, so as to substitute sub-paragraph (3), the Sixth Schedule, Paragraph 3A (b),(e),(f),(g), (i), (k), (l).
6. Ibid.
7. Ibid.
8. The Constitution of India, 1950, Seventh Schedule, Entry 17, List II.
9. The Constitution of India, 1950, Entry 56 of List I of Seventh Schedule, <http://jalshakti-dowr.gov.in/entry-56-list-i-seventh-schedule>
10. The Constitution of India, 1950, Article 262, and the Interstate River Water Disputes Act 1956.
11. <https://www.prsindia.org/billtrack/inter-state-river-water-disputes-amendment-bill-2019>
12. The Bill is available at http://jalshakti-dowr.gov.in/sites/default/files/RBM_DraftBill.pdf; https://www.prsindia.org/sites/default/files/bill_files/Draft%20River%20Basin%20Management%20Bill%2C%202018.pdf

13. The National Water Policy 2012, Preamble 1.1
14. The National Water Policy 2012, Clause 20
15. Section 4, the North Eastern Council (Amendment) Act 2002.
16. Section 4(3)(b)(i), the North Eastern Council Act 1971, http://necouncil.gov.in/sites/default/files/about-us/NEC%20Act%201971_0.pdf
17. <http://megplanning.gov.in/circular/NEC%20Regional%20Plan%202017-18%20to%202019-20.pdf>
18. http://necouncil.gov.in/sites/default/files/about-us/Vision_2020.pdf
19. For example, see water policies of Assam, Meghalaya and Nagaland; <https://mbda.gov.in/sites/default/files/meghalaya-state-water-policy-2019-updated.pdf>
20. See 4(iii) the Objectives of the Nagaland Water Policy, 2016; https://www.nagaland.gov.in/Nagaland/UsefulLinks/IELO_Nagaland%20water%20policy_final%20version_jan%202016.pdf (Q: this link doesn't work)
21. Policy Initiative 6.24, Nagaland Water Policy, 2016.
22. This is based on information from various web sources: https://manipur.gov.in/?page_id=704, <http://www.e-pao.net/GP.asp?src=19..011115.nov15>, http://moef.gov.in/wp-content/uploads/2018/04/manipur-SoE_0.pdf. The original text of the policy is not available in the public domain as on December 2020.

References

- Cullet, J. (2019). Model Groundwater (Sustainable Management) Bill, 2017: A new paradigm for groundwater regulation.. <https://doi.org/10.1080/24730580.2019.1565567>

- Government of Meghalaya. (2019). Meghalaya Water Policy, 2019. <https://mbda.gov.in/sites/default/files/meghalaya-state-water-policy-2019-updated.pdf>
- MDoNER. (2015). Basic statistics of north eastern region 2015. Ministry of Development of North Eastern Region. <http://necouncil.gov.in/sites/default/files/uploadfiles/BasicStatistic2015-min.pdf>
- Ministry of Jal Shakti. (n.d.). Draft National Water Framework Bill, 2016. <http://mowr.gov.in/policies-guideline/policies/draft-national-water-framework-bill-2016>
- Ministry of Water Resources. (2016). Model Bill for the Conservation, Protection, Regulation and Management of Groundwater, 2016. . http://mowr.gov.in/sites/default/files/Model_Bill_Groundwater_May_2016_0.pdf
- NITI Aayog. (2019, August). Composite water management index. http://social.niti.gov.in/uploads/sample/water_index_report2.pdf

Shawahiq Siddiqui is a people's lawyer deeply involved with the government and non-government actors towards improving water governance in South Asia.



11

Confluence of National and Transboundary Federalism: The Case of the Brahmaputra

Chandan Mahanta

Abstract: The water resources management of the river Brahmaputra calls for a consolidated perspective of transboundary and federal governance, as it is an important interstate river between Assam and Arunachal Pradesh (AP) and involves four nations: Bangladesh, Bhutan, China and India. A basin-scale integrated river management system may help in interstate and transboundary coordination. There are several parameters involved. The water sharing between Assam and AP depends on the inflow water available in AP from upstream China. Water resources development projects in AP will impact both water quantity and quality and other ecological aspects in downstream Assam. Therefore, an integrated federal protocol is imperative to address undesirable consequences in future. Consequently, discourse about the Brahmaputra has several dimensions. The paper engages with some of these dimensions linked to transboundary and federal governance challenges of the river.

Keywords: Brahmaputra, North-East, Transboundary river water governance

Introduction

A major federal objective in water management is to achieve hydrological equity, growth and prosperity with a proper governance system. Several measures have been taken by the Government of India to solve diverse problems related to

the country's rivers, such as water quality control, flood control measures, pollution control measures, interstate water disputes, etc. However, in the case of the Brahmaputra, there have hardly been any action plans other than emergency measures undertaken during floods. Despite being a river with such a huge quantity of water, nothing much in terms of water governance has been devised for it over the past few decades. The true benefits from the Brahmaputra in terms of harnessing of resources while reducing the disaster risk for the people living on its banks have not been availed so far. With proper institutional mechanisms for regulation and development of the river, it is possible to evolve a healthy federal approach to manage the river.

The Brahmaputra basin poses a complex set of transboundary and federal governance challenges. It extends over parts of four politically separated nations: China, India, Bangladesh and Bhutan. Over 50 per cent of the Brahmaputra catchment is located in China. In addition, there are potentially challenging interstate coordination issues between Assam and AP, including interstate water sharing among the riparian states, and Centre–state coordination challenges. The transboundary and interstate issues involved in the Brahmaputra's water are discussed in the following sections.

Interstate Coordination Challenges

Although there is no major friction between Assam and AP about the water flowing down the Brahmaputra, there are simmering issues that may lead to a degree of water conflict in the future. As the two key riparian states of the Brahmaputra, these issues between Assam and AP need careful consideration. A few rivers from Nagaland and Manipur also join the Brahmaputra in Assam

but the water footprints of these rivers are very small and thus there is a low risk of disputes among these states.

For instance, following the construction of the lower Subansiri hydel project in the main channel of the Brahmaputra and the proposed multipurpose Dibang hydel project, certain aspects can cause conflict to flare up between Assam and AP. The agreement for free power sharing of the lower Subansiri dam is allegedly not uniform between the two states. Out of the 12 per cent free power, Assam will get 1.25 per cent (25 MW) while AP will get 10.75 per cent (240 MW); the additional 1.1 per cent of free power is for local area development (The Economic Times, 2014). Since the dam is located in Earthquake Zone V, a failure in the dam will lead to a disaster in Assam's downstream districts of Dhemaji and Lakhimpur. Sediment trapping by the upstream reservoirs may lead to enhanced scouring and erosion in the downstream of the river in Assam. Further, nutrient-rich sediments that enrich the soil would be held back in the reservoir instead of flowing downstream to Assam (Mahapatra & Ratha, 2016).

These factors have the potential to ignite mistrust and misunderstanding between the states. To avoid such water disputes both Assam and AP need to frame efficient, transparent and coordinated regulation of water resources development. Some of the following approaches may help.

- **Water allocation between states:** From pre-Independence times, interstate water conflicts among India's provinces have been common. While tensions between Assam and AP have not escalated to the point of formal conflict, proper water allocation between the states as soon as possible will stem the chances of any conflict that may arise as a result of dams in the Brahmaputra's upstream.

- **State Specific Action Plan (SSAP) for water resources:** SSAP is an initiative of the Government of India with the main objective of 'Conservation of water, minimizing wastage and ensuring its more equitable distribution both across and within the state through integrated water resource development and management' (National Water Mission, Government of India). SSAP, which is under finalization, will ultimately lead to budgeting of water. The water budget will allocate water to different states and sectors within them according to their demand.

Centre–State Coordination Challenges

Centre–state coordination – or more broadly, federal governance mechanisms – over the Brahmaputra faces the following challenges.

- **The trust issue:** Several projects in the past on the Brahmaputra have failed to serve their purpose. One example is that of dredging the river. Back in 1977–78, the Water Resources Department undertook dredging operations near Dharapur, Guwahati. But in subsequent waves of floods, the dredged channels were silted up more than the previous years. Again, crores have been spent for the construction and repairing of embankments along the river but every year most of these embankments are washed away by the river and the flood woes of the people continue.
- **Central funding lacks adequate space for states and indigenous populations:** Almost all the projects in the river Brahmaputra being centrally funded, with limited or no role for state governments to shape the projects or interventions.

Transboundary Governance Challenges

While there is undoubtedly potential for interstate friction over

the Brahmaputra, it is important to look at the whole picture, that is, the management of the entire basin. More than 50 per cent of the Brahmaputra watershed lies in China and the rest is shared by India, Bangladesh and Bhutan. There are differences of opinion over water sharing of the Brahmaputra among the stakeholders. Conflicts between India and China over this started long ago – in the 1950s.

India takes issue with China over various aspects related to the Brahmaputra. One is that India was not informed by the Chinese authorities about the construction of the Zangmu dam in the main channel of the Brahmaputra (Mahapatra & Ratha, 2016). Second, there are also apprehensions about China's plans to divert water of the Brahmaputra to its major cities like Beijing and Tianjin.

There is no definitive information about these plans of China. China assert that they have no plan to divert the waters of the Brahmaputra to the Yellow River due to technological difficulties (Wang, 2019). They accuse India of using the water war narrative to justify the construction of its own dams in the Brahmaputra's main channel in AP (Ghandhari & Moghaddam, 2011).

In 1954, India and China signed an MoU about sharing hydrological data. But its progress was halted after the Indo-China war broke out in 1962. These engagements over hydrological data resumed in 2002. In 2018, MoU an MoU was signed between the two countries under which China agreed to share hydrological data of Brahmaputra with India at a cost to address flood risk in the NE (NDTV, 2018).

The Bangladesh, Bhutan, India, Nepal (BBIN) Initiative is an existing multilateral collaboration in the areas of water resources management, connectivity of power, transport and infrastructure. It may be useful to expand the scope of BBIN to pursue improved

Brahmaputra river water governance, including disaster risk reduction.

The NEWMA Initiative

India has decided to set up a North-East Water Management Authority (NEWMA) to formulate a consolidated strategy for water resources management of the NE region. NEWMA will include projects related to hydropower, agriculture, biodiversity conservation, flood control, inland water transport, forestry, fisheries and eco-tourism. NEWMA is also expected to bring fresh impetus to water resources development in the NE region.

Summary

India has witnessed a number of interstate disputes in these past years. Brahmaputra river basin scenario will pose greater challenges with the multiple dimensions of interstate and transboundary challenges.

The proposed NEWMA sounds promising but appears inward looking. It may not be adequate to address the transboundary governance dimension between India and China. Considering Brahmaputra as a single unit will help in optimum utilization of its water. Efforts are needed in the entire Brahmaputra basin to understand hydrological, ecological, structural and geological changes in the basin. A weak link here is the absence of sustained research to inform policy thinking.

References

Ghandhari, A., & Moghaddam, S. M. R. A. (2011). Water balance principles: A review of studies on five watersheds in Iran. *Journal of Environmental Science and Technology*, 4(5), 465–479.

- Mahapatra, S. K., & Ratha, K. C. (2016). Brahmaputra river: A bone of contention between India and China. *Water Utility Journal*, 13. <http://www.tibet.net/en/pdf/>
- NDTV. (2018, 10 June). India, China settle Brahmaputra dispute in sign of improving ties. <https://www.ndtv.com/india-news/at-shanghai-cooperation-summit-india-and-china-settle-brahmaputra-dispute-strike-rice-deal-1865049>
- The Economic Times. (2014, 23 May). Lower Subansiri project incurring daily loss of Rs 10 crore. <https://economictimes.indiatimes.com/industry/energy/power/lower-subansiri-project-incurring-daily-loss-of-rs-10-crore/articleshow/37065099.cms>
- Wang, B. (2019, 2 August). Bangladesh, China and India could have conflicts over the Brahmaputra river. NextBigFuture.com.

Chandan Mahanta is a professor and Head of the Civil Engineering Department, Indian Institute of Technology (IIT), Guwahati.



12

Multilevel Federalism for Groundwater Governance in Uttar Pradesh

Venkatesh Dutta

Abstract: Multilevel governance in water has been crafted – perhaps for the first time in India – in the recently passed Uttar Pradesh Groundwater (Management and Regulation) Act (UPGWA) 2019 with various levels of decentralized power structures and schemes of power sharing for groundwater governance. Other important shifts marked by the Act are, among others, the introduction of a water security plan, setting extraction limits, registration of all users and drilling agencies, the requirement for ‘self-regulation’, and the incorporation of recharge and environmental quality standards. However, the implementation aspects of various policy strategies are yet to be tested. Conflicts between policies, policy priorities and conceptual ambiguity in the demarcation of aquifer-based common pool resources, along with institutional inertia, could limit the success of the policy outcomes. This paper makes a case for UPGWA showcasing the integration of multilevel federalism for groundwater governance.

Keywords: multilevel federalism, groundwater governance, Uttar Pradesh Groundwater (Management and Regulation) Act 2019

Introduction

Uttar Pradesh (UP) is a large agrarian state of India where groundwater resource is a major source of irrigation. About 70 per cent of irrigated agriculture, 80 per cent of

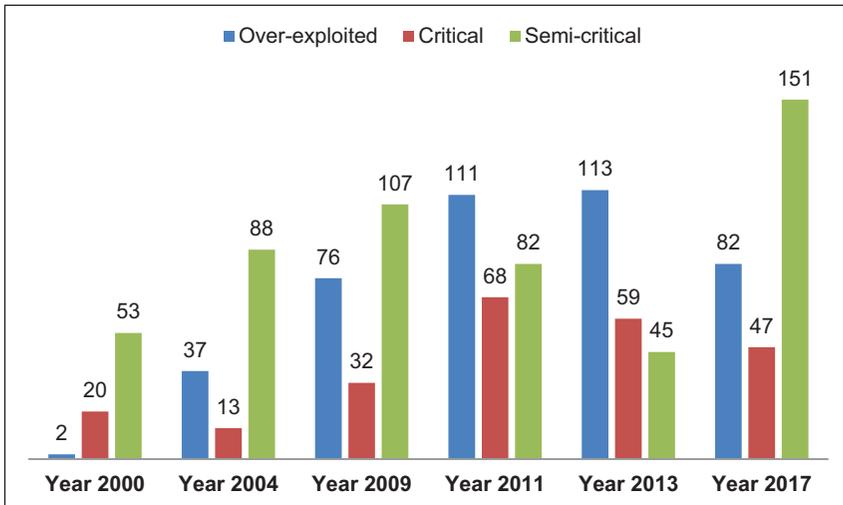
drinking water needs, and 85 per cent of industrial water demand are met by groundwater resources (UPGWD, 2020). As a result of excessive withdrawal of groundwater in rural and urban areas, many blocks have come under the overexploited and stressed categories, leading to severe crises of pollution and ecological imbalance.¹ The 'whole of the system' approach is missing in the water policy of the state, as groundwater and surface water are treated separately with separate institutions to manage them.

The state accounts for around 16.50 per cent of India's population in just 7.33 per cent of the country's land area. There are nine agro-climatic zones, each reflecting distinctive climatic diversity with a wide spectrum of rainfall and temperature. Increasing climate variability and groundwater exploitation pose a serious twin challenge to the state's water resources planning and management. UP is the largest extractor of groundwater in India accounting for 18.4 per cent of the total national and 4.5 per cent of the total global groundwater extraction.

During the last four decades, the extraction of groundwater rose exponentially, resulting in unsystematic utilization of the resource. This has led to progressive lowering of water tables and consequent decline in the yields of wells. The maximum withdrawal of groundwater is from the western region that covers around 30 districts. Currently, about 572 blocks out of 820 blocks in the state are witnessing water table decline. According to official statistics, 82 blocks are over-exploited, where withdrawal of groundwater is more than the recharge. These 82 blocks along with 47 critical blocks are designated as highly stressed, where annually replenishable dynamic groundwater resource has either exhausted or is near exhaustion due to over-exploitation. Apart from this, 151 blocks are categorized as "semi-critical", where

groundwater exploitation has reached alarming levels (Figure 1) (UPGWD, 2020). A separate assessment was done for urban areas in the state having a population of a million-plus. It was found that all the ten million-plus cities were severely stressed with nine cities categorized as over-exploited (Aligarh, Bareilly, Ghaziabad, Kanpur, Lucknow, Meerut, Moradabad, Prayagraj and Varanasi) and one city (Agra) categorized as critical (UPGWD, 2017).

Figure 1: Number of over-exploited, critical and semi-critical blocks in UP (2000–2017)



Source: UPGWD, 2020

Proposed Groundwater Governance in Uttar Pradesh: UPGWA 2019

The UP State Water Policy of 1999 is being revised in view of the mandate of the national water policies and large flagship programmes like Namami Gange, Atal Bhujal Yojana, Jal Jeevan Mission and Jal Shakthi Abhiyan. For groundwater governance, the state government had earlier issued a ‘Comprehensive Policy for

Ground Water Management, Rain Water Harvesting and Ground Water Recharge in the State' vide Government Order dated 18 February 2013. The state Legislative Assembly passed the Uttar Pradesh Ground Water (Management and Regulation) Act 2019 in August 2019 to protect, conserve and regulate uncontrolled and rapid extraction groundwater. The Act is also intended to reduce the pressure on the stressed rural and urban aquifers of the state. The Act only covers industrial, commercial, infrastructural and bulk users of groundwater; the two largest users of groundwater – agriculture and domestic users – have been kept out of the regulatory domain of this Act.²

Under Section 7 of this Act, the governor established the UP Ground Water Management and Regulatory Authority in November 2019. It was asked to form a 15-member District Ground Water Management Council for each district of the state. Under Section 49 of the Act, the Uttar Pradesh Ground Water (Management and Regulation) Rules 2020 were notified on 25 February 2020. Through the provisions of this Act, industrial, commercial, infrastructural and bulk users of groundwater were asked to register their wells within 90 days of the Act's notification. The users have been asked to get a No Objection Certificate (NOC) from either the Central Ground Water Authority (CGWA) or the state's Ground Water Department.

Extraction, sale and supply of raw/unprocessed/untreated groundwater in 'notified areas' by commercial, industrial, infrastructural and bulk users are not allowed. There is an exception for construction of borings/tube wells under government schemes for drinking water supplies and tree plantations. In rural areas, over-exploited and critical blocks have been demarcated as notified areas. In urban areas, notified areas are stressed areas where groundwater

levels have depleted by more than 20 cm per year during the last five years.

The other categories of users, including domestic and agriculture sectors, were directed to register their wells with the Block Panchayat Ground Water Committee or Municipal Water Management Committee, as the case may be, within six months of the notification of the Act. The deadline was further extended to 18 months through a notification on 6 October 2020. These users have been asked to get prior consent from this committee for drilling a well. The registration details are also required to be placed on the UP Groundwater Department website at <http://upgwdonline.in/>. The grant of authorization will be valid for five years.

The District Ground Water Management Council has been asked to prohibit drilling in the notified areas or groundwater quality sensitive zones. The council will also keep a register of approved drilling agencies, while the drilling agencies will provide data of executed drilling work every three months. The council can also physically verify the wastewater treatment plants installed by the bulk users of groundwater to ensure that effluents do not pollute surface or groundwater resources.

The Gram Panchayat Groundwater Sub Committee is to be constituted with the Gram Pradhan as the chairperson, Gram Panchayat secretary as the member-secretary, and members of the Water Users' Association (WUA), Bhujal Sena (groundwater force) or Pani Panchayat (water council). This committee will prepare the Gram Panchayat groundwater security plan.

A Block Panchayat Ground Water Committee with the Block Pramukh as the chairperson and Block Development Officer as the member-secretary is recommended. This committee will prepare

the overall block-level groundwater security plan and also monitor the implementation of the Gram Panchayat groundwater security plan. The Municipal Water Management Committee is the lowest-level public unit for managing water in urban areas. This committee is required to determine the sources of surface and groundwater, prepare the overall municipal groundwater security plan, and work in coordination with water-related institutions within the municipality.

The District Ground Water Management Council is intended to be the overall unit for the management of groundwater resources at the district level. The committee is to be chaired by the district magistrate. This committee is expected to consolidate block, Panchayat and municipal groundwater security plans into a district-level groundwater security plan, using the macro-watershed approach. The committee is also expected to implement the district groundwater security plan.

Groundwater quality sensitive zones with their GPS locations are to be prepared using quality data and technical consultation with Central Pollution Control Board (CPCB), Central Ground Water Board (CGWB), UP Jal Nigam, Indian Institute of Technology (IITs), National Institute of Hydrology (NIH) and other institutions who have conducted the quality assessment studies. Poor groundwater quality regions with risk of pollution hazards will be mapped as sensitive zones.

The state government has also created a fund known as the Groundwater Fund to which all penalties, registration fees, fee on groundwater extraction etc. will be credited (Government of Uttar Pradesh, 2020:). The fund will be used for carrying out various groundwater conservation and management activities and for increasing efficiency of groundwater usage through demand and supply side interventions.

UPGWA is an attempt to transform the groundwater management regime from authoritarian, with centralized planning, to a more flexible and liberal governance with a certain level of decentralization. This puts existing institutions in a certain amount of difficulty in restructuring their role as well as scale in order to meet the provisions of the Act. The experience with earlier reforms related to water sector restructuring in the state has not been very promising due to the authoritarian centralized regime and lack of participation of non-state actors. There is some space for the involvement of non-state actors in the policy process (preparing groundwater security plans) in UPGWA. The systematic participation of non-state actors (civil society organizations, water user associations, cooperatives, Bhujal Sena, etc.) could help to promote self-regulation of groundwater extraction and in better dissemination of awareness and recharge strategies. UPGWA could also facilitate coordination between the multiple governments/quasi-government organizations in the state for better outcomes.

This model of developing institutions at various levels builds a roadmap for decentralizing groundwater management at different scales. However, it requires giving them more than the customary legal position, in terms of enabling participatory and cooperative social arrangements for community-based decisions and actions. Social norms require community acceptance, inclusion and participation. They appear to be challenging in the beginning, 'but given some of the constitutional decentralization processes, *Gram Sabha* – special meetings of all adults in a village that provide oversight to gram panchayats or local governance bodies – resolutions are currently the strongest instrument of a legal ratification of such norms developed at community levels' (Kulkarni et al., 2015, p. 185).

Multilevel Federalism for Improved Groundwater Governance

There is a great need for a multilevel federal system for the realization of integrated policies to facilitate the appropriate institutional directives, financial plans and instruments, and to avoid further institutional fragmentation (von Lüpke and Well, 2020). Multilevel federalism is a system in which power is spread vertically between many levels of governments, and horizontally across multiple government and quasi-government institutions, non-governmental organizations, agencies and actors. Every level of government has an independent power regime, authority and freedom, without being subjected to external control. The proposed groundwater governance under UPGWA, along the lines of multilevel federalism, integrates governance, distributes power across scales and promotes wider stakeholder participation. This is done by distributing the functional responsibilities for developing a groundwater security plan, monitoring of over-extraction, analysis of declining/recharge trends and decision-making.

The idea of policy coherence has been used in the literature by various experts to illustrate possible synergies and integration between various policy domains, where shared benefits are realized and agencies do not conflict with each other (Collier, 1994; Van Bommel & Kuindersma, 2008; Brouwer et al., 2013; Walker et al., 2018). The water sector can typically have both horizontal and vertical integration with the environment and climate sectors. Vertical integration is implicit: it is the extent to which the governance of water adopts and implements (through appropriate action plans, targets and schemes) procedures that facilitate the acceptance of ecology and climate concerns in water

policy goals. Horizontal integration refers to the extent to which water institutions are able to network and act together across environment and climate sectors, through a well-defined cross-sectoral strategy.

The policy is expected fare in the following manner on various key aspects.

Non-state actors' participation

- Decentralized self-governance could help avoid all litigations and competitive drillings.
- Better groundwater management in terms of aquifers may be possible through a improved participatory practices.
- Strengthened role of the Gram Panchayat Water Committee accommodates farmers' feedback to improve farm level water use efficiency.
- Improved space for non-state actors in agenda setting, decision-making, implementation of groundwater security plans as well as enforcement of self-regulation of extraction.
- The state groundwater authority may adopt a functional efficiency approach, where it allows civil society participation when it suits its interest and in particular during the agenda-setting stage, while restricting and ignoring them in the more sensitive decision-making stages.
- The district and state authorities can actively lobby non-state actors to strengthen their own political/policy preferences.

Coordination between the multiple government/ quasi-government organizations

- Improved coordination across departments to enhance transparency, regulatory compliance.

- Greater decentralized groundwater governance with reduced political and institutional influence from higher levels.
- Appropriate programmes may be designed at the Gram Panchayat level for improved groundwater management.

Vertical and horizontal integration

- Opportunities for integrating key national programmes like Har Ghar Jal
- Continuing farming electricity subsidies deter potential integration.

Conclusion

UPGWA pursues multilevel federalism in its true sense through policy integration, distribution of power across scales, and accommodation of non-state actors' participation in groundwater governance. Policy integration, functional role differentiation between central and state groundwater agencies, and shared rule making are critical for its success. Internalization of these ideas within the existing governance structures will be a challenge.

The Act's exemption of the agriculture sector's use of groundwater is a missed opportunity, for this is where great potential exists for improving groundwater governance. UPGWA may, however, have a visible impact in urban areas which are witnessing the most significant damage of water resources.

Adaptive self-regulation involves monitoring of community response to a particular policy goal over a long period of time and making suitable incremental adjustments against anomalies. It is early days and UPGAW is still to be tested. Hopefully, the policy will take *lessons* from the ground as specific interventions succeed or fail, and translate them into robust policy strategies.

Endnotes

- ¹ Large-scale exploitation of groundwater is being done through 48 million small irrigation shallow tube wells, 49,480 medium tube wells, 33,510 deep tube wells and 30,917 government tube wells. Under drinking water projects, nearly 5,200 million litres per day of groundwater in 630 urban areas and nearly 7,800 million litres per day in rural areas are being over-exploited (UPGWD, 2013).
- ² The Act will not have any impact on groundwater usage in agriculture, which is currently excluded from the Act.

References

- Brouwer, S., Rayner, T., & Huitema, D. (2013). Mainstreaming climate policy: The case of climate adaptation and the implementation of EU water policy. *Environment and Planning C: Government and Policy*, 31(1), 134–153.
- Carreras, Y. I. (2019). Problem-solving across literatures: Comparative federalism and multi-level governance in climate change action. *European Policy Analysis*, 5(1), 117–134.
- Collier, U. (1994). *Energy and environment in the European Union: the challenge of integration*. Ashgate Publishing.
- Cosens, B. A., & Williams, M. K. (2012). Resilience and water governance: Adaptive governance in the Columbia river basin. *Ecology and Society*, 17(4), 3-16.
- Government of Uttar Pradesh. (2019). Uttar Pradesh Ground Water (Management & Regulation) Act. <http://upgwdonline.in/images/GWDact2019En.pdf>
- Government of Uttar Pradesh. (2020). Uttar Pradesh Ground Water (Management & Regulation) Rules, 25 February. <http://upgwdonline.in/images/GWRules2020Eng.pdf>
- Klein, R. J. T., Huq, S., Denton, F., Downing, T. E., Richels, R. G., Robinson, J. B., & Toth, F. L. (2007). Inter-relationships between

- adaptation and mitigation. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). In M. L. Parry, O. F. Canziani, J. P. Palutikof, P. J. van der Linden & C. E. Hanson (Eds.), *Climate change 2007: Impacts, adaptation and vulnerability* (pp. 745–777). Cambridge University Press.
- Kulkarni, H., Shah, M., & Shankar, P. V. (2015). Shaping the contours of groundwater governance in India. *Journal of Hydrology: Regional Studies*, 4, 172–192.
- Levi, L. (2010, November). Multi-level governance and federalism. *The Federalist Debate*, (3), 4–6.
- Landauer, M., Juhola, S., & Klein, J. (2019). The role of scale in integrating climate change adaptation and mitigation in cities. *Journal of Environmental Planning and Management*, 62(5), 741–765.
- Thomann, E., Trein, P., & Maggetti, M. (2019). What's the problem? Multilevel governance and problem-solving. *European Policy Analysis*, 5(1), 37–57.
- UPGWD (2013). Policy for sustainable ground water management in Uttar Pradesh. Issued by Government Order no. 280/62-1-2013-7WP-2004, TC-III, dated 18 February 2013. *Uttar Pradesh Extraordinary Gazette*, 2013. Uttar Pradesh Ground Water Department. http://upgwdonline.in/groundwater_policy.html
- UPGWD (2017). Ground water stress: City Agra – An overview of urban aquifers and ground water crises. Uttar Pradesh Ground Water Department.
- UPGWD (2020). Ground water and landscape resources in brief. Uttar Pradesh Ground Water Department. http://upgwd.gov.in/StaticPages/Bhoojal_Paridrishya.aspx
- Van Bommel, S., & Kuindersma, W. (2008). *Policy integration, coherence and governance in Dutch climate policy: a multi-level analysis of mitigation and adoption policy* (No. 1799). Alterra.

- von Lüpke, H., & Well, M. (2020). Analyzing climate and energy policy integration: The case of the Mexican energy transition. *Climate Policy*, 20(7), 832–845.
- Walker, B. J., Kurz, T., & Russel, D. (2018). Towards an understanding of when non-climate frames can generate public support for climate change policy. *Environment and Behavior*, 50(7), 781–806.

Venkatesh Dutta served as an expert member in the drafting committee of the State Water Policy 2020 of Uttar Pradesh. He was instrumental in various consultative workshops that led to the drafting of the state's groundwater Bill. Venkatesh is a member of the District Environment Committee set up on the directions of the National Green Tribunal (NGT) and earlier contributed to the STI Policy Framework 2020 of the Department of Science and Technology, New Delhi, as a member of the group . He has about twenty years of professional experience in the areas of land use, catchment planning, river restoration and eco-hydrology.

Venkatesh is currently working as a professor at the DST-Centre for Policy Research, School of Earth and Environmental Sciences (SEES), Babasaheb Bhimrao Ambedkar University (BBAU), Lucknow.

Asian Confluence

Asian Confluence initiates, stimulates and accelerates revival of the shared civilizational values between the peoples of India and South East and East Asia in order to strengthen our ecological, intellectual, economic, technological, political and security ties, and thus ensure that we become dependable and involved partners for the growth of all countries in emerging Asia.

Hanns Seidel Foundation India

The Hanns Seidel Foundation, founded in 1967, is a German political foundation, working “in the Service of Democracy, Peace and Development”. It has been active for more than 40 years in the field of political development cooperation and is currently taking an active part in 80 projects in 60 countries worldwide.

These projects are on the themes of *inter alia* promotion of rule of law, strengthening civil society participation in political decision-making, and protecting the environment. Most of these projects have been implemented in close collaboration with government and non-government partners at national, state and local jurisdictions.

In India, the Foundation started its work in the year 1996 and has undertaken projects to support India’s federal democratic structure, improve access to justice and water governance, strengthen geopolitical relations and women empowerment. With increased systemic efficiency, the Foundation seeks to contribute to India’s sustainable development by strengthening peace, democracy and rule of law. More information on the Work of Hanns Seidel Foundation India can be found at india.hss.de



Conflicts over water utilization and allocation are increasing, leading to political tension amongst subnational entities and, consequently, an overburdened judiciary. The mechanisms utilized by the present governance structure to handle these challenges have reached their limits. Accelerated climate change puts additional pressure on the Indian system through natural disasters.

If effectively used, the country's federal structure provides options for preventing political water conflicts and facilitating efficient water governance. This volume, bringing together the viewpoints of several noted specialists in the field, offers examples to consider for improved cooperative federalism and perspectives for different areas of public policy reforms in water administration. As the first holistic volume on India's water federalism, it provides pathways towards sustainable resolution of the conflicts of the future over water.



The Asian Confluence Centre
Lady Veronica Lane,
Laitumkhrah, Shillong,
Meghalaya, India- 793003
Email: info@asianconfluence.org
Website: www.asianconfluence.org



Hanns Seidel Foundation India
4/6, Siri Fort Institutional Area,
New Delhi-110049, Tel. +91 11-41680402
Email: delhi@hss.de
Webiste: www.hss.de/india

ISBN: 978-93-93172-00-6



9 789393 172006