

Chapter 1

Introduction: Towards a Discursive Analysis of Indian Water Policy

Vishal Narain

Abstract This chapter presents an overview of the chief contributions of the chapters presented in this book. Over the years, Indian water policy has evolved to take cognisance of new and emerging pressures on water resources. Both local and global actors have had a role to play in this. International discourses of integrated water resource management, gender, neo-liberalism and decentralization have had a bearing on how water resource policies have been framed and water issues problematized. While emerging research has been able to throw some light on the nature of policy processes, the paper makes a more deliberate case for a discursive analysis of public policy to pave the way to understanding the nature and direction of water reforms in the country.

Keywords Public policy • Governance • Reforms • Narratives • Discourses

This book is a collection of chapters that examine critical issues and debates surrounding the governance and management of water resources in India. Recent decades have seen several paradigmatic shifts in the management and governance of water resources in the country. Focus has shifted from predominantly technical and hydrological issues to emphasise the social, economic and managerial. New paradigms such as Integrated Water Resource Management have come to influence how water is viewed as a resource with several dimensions, even as concerns are voiced over the relevance of this paradigm and its operationalization in Indian – and South Asian – contexts. Gender mainstreaming has acquired new emphases, though the gap between rhetoric and practice has tended to persist. The debates on issues of water rights, equity and justice have acquired new dimensions; the imperatives to address these issues seem to have become stronger. Increasingly, water scholars

V. Narain (✉)
Public Policy and Governance, Management Development Institute,
Gurgaon 122001, India
e-mail: vishalnarain@mdi.ac.in

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have sought to explore the relationships between the technological, hydrological and social dimensions of water management.¹

The genesis of new paradigms influencing water resource policy and governance is a process in which both global and local actors have had a role to play (Narain et al. 2014; Narayanan et al. 2014). Donors and funders have played a critical role in influencing the nature and direction of what are popularly called “water reforms”. They have played a key role in propagating new discourses around water resource management. A case in point is the neo-liberal discourse propagated by the World Bank and other international agencies that paved way for a greater role for the free market in the allocation of water resources. The neo-liberal discourse was founded on the narrative of the weak and inefficient state, and the free market was seen as a natural and obvious alternative. While the state was seen as playing a key role in the allocation and management of water resources in the country till the late 1980s, the neo-liberal discourse paved the way for a greater role for the free market in the period after that. Operationally, this created space for new actors in the governance of water resources. This took the form of outright privatization, for instance, and spawned debates regarding its equity and justice dimensions (Urs and Whittel 2009). Autonomous forms of water markets have nevertheless functioned for several decades in the form of water tankers meeting the demand – supply gap for drinking water in cities, as well as groundwater markets meeting the needs of small-holder irrigators. Both these forms of markets have, however, functioned outside any regulatory environment, raising questions about their equity, efficiency and sustainability implications (Shah 1993; Dubaash 2002; Prakash 2005).

Along the continuum of state and market based allocation of water, a distinct space was created for user or community based organizations for water management. This emphasis stemmed from a realization that communities were capable of crafting their own rules for resource appropriation and management (Ostrom 1990, 1992). The positive evidence generated by farmer-managed irrigation systems in India provided the basis for the underlying narratives for policies for decentralization in irrigation management. This narrative was propagated by donors and funders; NGOs played their part in mobilising communities for irrigation management, while lobbying with state governments to put in place appropriate policies (Narain 2003; Shashidharan 2000). Thus, the social engineering paradigm took shape, based on the premise that institutions for collective management of water could be “designed” or “engineered”, often along the lines of models or prototypes.²

In the late 1990s, this culminated in serious efforts at establishing water users associations in irrigation management. The IndianPIM, Indian Network for Participatory Irrigation Management, gave a call for speedy upscaling and replication of water users associations, as if it were a ‘one size fits all’ panacea for the ills of the irrigation sector (Narain 2003). However, by the turn of the millennium, the euphoria surrounding water users’ associations seemed to have considerably died

¹As an example, see Roth and Vincent (2013). See also Narain (2003), Prakash (2005), Mehta (2005) and Dubaash (2002).

²For a discussion on the importance of models for irrigation management transfer in debates on irrigation reform, see Mollinga (2001). See also Parthasarathy (1998).

down. Several factors were found to limit the effectiveness and success of water users' associations, including limited attention to the implications of design or the technology of irrigation systems in irrigation management transfer programmes, the perpetuation of unequal power structures in the functioning of water users' associations, poor consideration of the implications of WUA formation for water rights and entitlements, the influence of local politics, and resistance within the bureaucracy to support WUA formation (Narain 2003, 2004, 2008; Mollinga 2001; Jairath 1999; Parthasarathy 1998).

In more recent years, several new subjects have come up surrounding the question of appropriate forms of water governance. These concern the role of regulatory authorities as well as the functioning of public-private partnerships. Public-Private partnerships are seen as a way of augmenting state resources, providing new technology and expertise as well as a way of overcoming the slack and inefficiency of state enterprises. Public-private partnerships provide a legitimate way of involving private enterprise, especially where outright privatization may not be politically expedient. Critics, however, argue that public-private partnerships provide a form of disguised privatization, or 'privatization by the back-door'.

While there have been experiments both with public-private partnerships as well as with privatization, the latter has met with more explicit resistance. This resistance stems from the inability of the market to deliver a good as basic as water to those who are unable to pay for it (Urs and Whittel 2009; Kulkarni 2014). Water problems are rightly clubbed as "wicked problems", denying clear-cut solutions or outcomes (Gyawali 2014; Mosse 2009). This 'wicked nature' stems from the multi-dimensional nature of the resource – from its possessing economic, social, cultural and political values all at the same time.

While there has been a recent nod of approval from the judiciary on the subject of the inter-linking of India's rivers, this proposal presents a very good example of polarised views on what constitutes the "right way" to solve India's water problems. The proposal for inter-linking of rivers has been founded on the narrative that India's water problems are predominantly of a physical nature and that solutions lie in ameliorating the imbalance in the availability of water, transferring water from surplus to deficit basins. Water scholars have nevertheless challenged this narrative, asserting that the scarcity of water is a social construction as much as a physical one (Mehta 2005). In the context of the inter-linking of rivers, little attention has nevertheless been paid to the rights and equity dimensions of the water transfers envisaged; debates on the justice dimensions have stayed confined to issues of relocation and rehabilitation of displaced communities.

While IWRM, or Integrated Water Resource Management, has been the dominant mantra or buzzword in water management in recent decades, there remains a critical issue of deconstructing its components and depoliticising the discourse, while placing it in the Indian context to study its applicability and relevance. On many other subjects, such as water rights reform, the level of discourse has remained somewhat static. While the rationale for a property rights structure has been built on grounds of equity, efficiency and sustainability, questions are still raised on its practicability. New research – including that presented in this book, however, suggests that recent technological interventions may lower the transaction costs of adminis-

tering a water rights structure, even in Indian conditions where the large number and geographical spread of water users is known to raise the transaction costs of administering such a system (Kumar et al. 2011).

The debate on the efficacy of different approaches to regulate groundwater has continued in the Indian water governance literature. Groundwater irrigation received a big spurt after the green revolution boom of the 1960s. The high-yielding varieties of crops that the green revolution technology demanded required timely application of water. This could not be provided by canal irrigation systems, that operate under state operated irrigation schedules. Besides, canal irrigation systems in India are protective irrigation systems, aiming to supply water thinly over a large number of farmers and a large geographical area (Jurriens et al. 1996). They are designed to meet a fraction of the irrigator's crop water requirements, as against the goal of productive irrigation. This created a stress on groundwater irrigation, that irrigators use for the greater control that it provides on water availability.

However, indiscriminate exploitation of groundwater has created a problem of steadily falling water tables, especially in the context of India's agriculturally important states. This has implications for sustainability of the green revolution itself, but also has wider equity implications, as falling water tables place the resource out of the reach of the smaller and marginal farmers. There has been an on-going debate among scholars of water governance in India on the appropriate ways of arresting the problem of groundwater depletion, and this debate shall likely continue, even as climate change presents additional stresses on the resource.³ Other important subjects of debate in the realm of Indian water policy over recent years have been the limited effectiveness of policies for combating water pollution, the persistence of a gap between the rhetoric and practice of gender mainstreaming and limited attention to issues of equity and social justice in water planning.

1.1 Changing Paradigms and Debates in Indian Water Policy

This book seeks to present the current debates on these and other subjects shaping the governance of water resources in the country. It takes stock of new policy developments in India's water sector, what the experience with their implementation has been, and where important weaknesses still lie. From this perspective, this book seeks to contribute to the growing body of scholarship around water resources policy in India in particular, and water Resources policy in South Asia, more generally.⁴ Authors make an effort to present a road-map for the future, while discussing the potential of alternative approaches to addressing the emerging challenges of India's water sector.

³ See, for instance, Shah (2013).

⁴ As recent contributions to this body of work, see Narain et al. (2014); Prakash et al. (2013); Narayanan et al. (2014). See also Ballabh (2008) and Lahiri-Dutt and Wasson (2008).

1.1.1 The Challenges of Groundwater Management, Water Rights Reform and Other Regulatory Approaches

As noted earlier, groundwater has assumed an increasingly important role in India's irrigation and agricultural development. It provides 50 % of irrigation in India and accounts for about a third of total food crop production in the country (Shah 2009). With growing dependence on the resource, however, groundwater has become at once a critical and threatened resource, with 'competitive deepening' emerging as a major issue in select regions, and climate change acting as a further multiplier (Shah 2009, 2013). There has been a debate spanning over four decades now in the country on appropriate approaches to regulate groundwater extraction. Authors have debated the potency of various measures, ranging from spacing and licensing norms, credit and electricity restrictions to the institution of a property rights structure (Shah 1993; Narain 1998, 2000; Saleth 1996; Kumar et al. 2011). A case has been made for enabling and participatory approaches to address this problem, as against technocratic and engineering-focused control-based approaches (Moench 1994).

Reviewing the current challenges in groundwater management in India and the potential of alternative approaches to tackle them, Nitin Bassi (Chap. 3) advocates the enforcement of private and tradable water rights in groundwater as a means to bring about increase in farm outputs, while reducing aggregate demand for water. This, he suggests needs to be complemented by a pro rata pricing of electricity in the farm sector, and an improvement in the quality and reliability of supplied power.

Maria Saleth (Chap. 9) looks more closely at the subject of a property rights structure for water. While the case for a property rights structure has been made in the Indian water governance and policy debate for several decades, Saleth provides support in favour of the administrative and technical feasibility of instituting such a system, much on lines of the arguments made by Nitin Bassi in this book. He cites evidence in the form of different kinds of water rights systems functioning in the country, while emphasizing the absolute necessity of formalizing such a system in the interest of equity, efficiency and sustainability, especially in a context where expansion of water supply faces major economic, financial and technological constraints. He cites evidence in the form of various systems of water rights functioning under different socio-technical regimes in the country, and suggests that their existence – often for decades and centuries – is evidence that a water rights system is consistent with what may be called an Indian water ethos. It seems then the core issue with regard to the functioning of a water rights system may be understanding the relationship between water rights systems that already exist on the ground and how they may articulate with a new water rights system that may be imposed through conscious policy intervention.

V Ratna Reddy's analysis of the potential of different regulatory instruments and demand management of water (Chap. 10) suggests the limitations of the commonly used instruments like pricing, supply regulation, direct and indirect policy regulation. He argues that these regulations have had a limited impact on account of the complex socioeconomic and resource systems, but also because of a lack of synergy

or mutual complementarity among the different policy instruments. He calls for greater synergy in the use of different policy instruments such that they do not work at objectives counter to each other. He further argues that policies for demand management of water have paid little explicit attention to the equity dimensions of water use and access. While community based approaches to regulate the use of groundwater have had some positive effect, they have remained little more than pilots in the absence of policy support or an enabling environment to scale them up.

1.1.2 Gender and Integrated Water Resource Management in India

IWRM (Integrated Water Resource Management) emerged as a new paradigm challenging the technocratic focus of water management over the previous decades. IWRM emphasizes integration across uses, sectors and disciplines while taking cognizance of gender and equity concerns (Mollinga et al. 2006). The major critique around IWRM has been the lack of political edge in the way it has been conceptualised and implemented (Kulkarni 2014). An overemphasis on River Basin organizations and formal organization structures without an understanding of the local institutional context in which the paradigm of IWRM is to be implemented are known to have severely limited the relevance of the paradigm to the South Asian context (Mollinga et al. 2006).

Tushaar Shah and Barbara van Koppen, critically analysing the relevance of the paradigm to Indian contexts (Chap. 2), note that IWRM, in its present form, presents itself as a package of interventions of a ‘one size fits all’ nature around demand side management; the ‘copybook’ nature of IWRM reforms has been shaped by the global water discourse driven by international organizations. In developing countries in which these reforms have been experimented with, there was little effort to tailor the reform packages to local contexts. Hence, these reforms failed to address the pressing water management challenges that these countries were confronted with. The IWRM package, further, offers no guidance on what to do with the plethora of water institutions in the country. These reforms, they further note, also do not respond to the priorities of the poor in developing countries.

The current paradigm of IWRM, advocating direct demand management, is therefore at odds with the informal nature of water economies characterizing India and other countries at early stages of their development paths. The transformation of an informal water economy into a formal one, further, takes place through a long process of economic growth. Urbanization and occupational diversification are key processes characterising this transition. However, Shah and van Koppen suggest that the IWRM package may still be relevant to formal and urban sectors of India’s water economy.

Gender mainstreaming has been an important component of the global discourse on IWRM. Gender, referring to the socially defined roles of what it constitutes to be

male or female, is a social construction whose meaning is contested and negotiated (Zwarteveen 2013). Gender mainstreaming in water has been understood to be a slow and difficult process (Kulkarni 2014; Joshi 2014; Ahmed 2008). Changes in policy approaches to water management are known to have made little dent on the perverse niches created by the intersection of caste, class, gender and race in which women often find themselves (Joshi 2014). In her analysis of water and gender relations in this book, Seema Kulkarni (Chap. 5) traces the evolution of the gender discourse in the international water and development agenda and looks at the changing trajectory of policy efforts at mainstreaming gender in India. She argues that the rhetoric of gender would remain little more than a rhetoric unless it is located historically and understood as a set of complex relations between the different genders, defined identities and embedded in hegemonic power relations cutting across caste, class and race that serve the interests of state, capital and patriarchy. She notes that while in many cases the creation of formal spaces for women to participate and influence decision-making in water management has facilitated their empowerment, very often the creation of such formal spaces has made little difference, as women continue to be entrenched in unique niches created by the intersection of caste, class and race.

Ahmed (2008) rightly notes that it may not be possible to link all water resource planning in one national or country level IWRM strategy as proposed by advocates of IWRM. IWRM may indeed seem rational for some countries in Africa or Europe to develop; there is too much diversity and the need for context specific approaches is critical for a nation like India. However, IWRM does provide a lens to look at water resources holistically (Ahmed 2008; Shah and Prakash 2014). Gender analysis provides one of the means to do so. It is necessary however, more broadly to understand how water intersects with and transforms gender relations at different institutional levels or social contexts (Ahmed 2008; Kulkarni 2014; Joshi 2014).

1.1.3 Expanding Access to Clean Water and Sanitation

Aidan Cronin, Anjal Prakash, Praveen Sridhar and Sue Coates (Chap. 4) review the progress made in India in the expansion of access to safe water supply and sanitation. They challenge the notion of water scarcity being a predominantly physical phenomenon and emphasize instead the role of institutional factors in shaping water scarcity, much on the lines of Mehta (2005). Though there are important positive recommendations towards expanding the access to water in the 12th Five Year plan, political will and systematic implementation of the proposed reforms, they argue, will be necessary. Recent policy efforts emphasize decentralization; however, on account of paucity of resources and poor devolution of powers to the lower levels, local bodies remain limited in their ability to manage effectively. Though policy initiatives have sought to create a wide variety of institutions at the local level, many of them are not accountable at the community level. Thus, decentralization poses new challenges for power and accountability in local governance.

Prakash Nelliya (Chap. 8) undertakes a comprehensive review of the challenges of water pollution in India and observes that water pollution has not been a major topic of political debate yet, and therefore, political instruments have been scarcely implemented. Emission-based standards have not been very effective so far, since they are rarely monitored and only occasionally enforced. He also argues that it may be incorrect to adopt western water quality objectives that are inappropriate to the level of development and economic state of the adopting country. Though India has attempted to solve the water pollution issues through legislative and policy measures with huge budgets over a period of time, significant progress has not been achieved in this direction. He advocates an overhaul of the policy approach to combating the problem of water pollution, using a mix of strategies such as policy advocacy, governance and enforcement, stakeholders' Initiatives and capacity building, the use of economic instruments and better coordination among line departments.

1.1.4 Technological Solutions and the Inter-linking of Rivers

Perhaps no subject has received as much critical attention, or been the subject of so much debate in the context of India's water governance as the proposal for the linking up of our major rivers. At the heart of these proposals has been the narrative that the transfer of water from India's water surplus basins to her deficit basins provides the key solution to her water problems. The debate on these proposals has been characterized by polarized views among their proponents and opponents. On the one hand has been the technocracy that seems to propagate the narrative that the solution to India's water woes lies in large-scale engineering solutions. This narrative has been challenged by the opponents of large-scale engineering solutions on grounds of the high social, ecological and environmental costs of such projects. On the one hand, the river-linking project in India has been criticised for the reductionist foundations of the paradigm that seeks to assert man's prerogative to control water (D'Souza 2002, 2003). On the other hand, it has been criticised for its failure to consider the systemic nature of the relationships between water, habitat, society and biodiversity (Bandopadhyay and Parveen 2004). This has created space for a balanced and informed debate on the subject.

In this backdrop, Upali Amerasinghe and Tushaar Shah (Chap. 7) take a critical look at this contentious proposal. They draw on a wide range of studies to assess the validity of various claims made with regard to the social, economic, hydrological and environmental facets of these transfers. They conclude that notwithstanding the strong judicial attention that the proposal has received, the idea of a National River Linking Project may have come a decade or two too soon; the underlying assumptions behind the proposal for the inter-linking of rivers have changed since when the proposal was first conceptualized. The project, they conclude, is too large to conduct a holistic analysis leading to a complete assessment of its costs and benefits. There is too little data available in the public domain. They also cite several studies to challenge some of the claims made by the proponents of these proposals. These

relate to the intended impacts of the proposals on water and food security as well as employment generation.

Narayanamoorthy (Chap. 11) reviews the potential of different water saving technologies in India; his analysis suggests that the water saving gains can be substantial through a concerted effort at the adoption of these technologies. While the efficiency gains from the adoption of micro-irrigation are substantial, further research is needed to examine the social and institutional conditions that will facilitate the adoption of these technologies in Indian contexts as well as the social profile of the users of these technologies.

1.1.5 Independent Regulatory Authorities: Balancing Autonomy and Control

The subject of Independent Regulatory Authorities (IRAs) has generated much debate in India, especially with regard to questions of regulation and autonomy in the water sector (Warghade and Wagle 2014; Rao and Badiger 2014). Sachin Warghade (Chap. 6) examines critically the evolution of IRAs in the country. The functioning of IRAs raises important questions regarding both accountability and autonomy in the water sector; however, Warghade raises more basic questions regarding their appropriateness to Indian settings. He proposes that a decentered approach, with a strong knowledge component and backed by a pro-people normative framework may lead to a more effective and comprehensive framework for water regulation in India.

1.2 Indian Water Policy and Governance Research for the Future

As noted earlier in this chapter, South Asian Water Resources scholarship has experienced an upsurge in recent years; given the present pattern of societal developments, water problems will become more severe in the years ahead (Mollinga 2008). In this context, a call is made for a pluralistic and integrated framework for formulating and implementing water policies in South Asia (Prakash et al. 2013). A case is made to listen to the multiple voices that are emerging in understanding water; it is argued that it is necessary to create space for dialogue among civil society and citizens (Lahiri-Dutt 2008). This is necessary particularly in the wake of a greater role for actors other than the state, notably civil society, in influencing water policy, both in terms of content as well as the processes of policy formulation (Narayanan et al. 2014; Narain et al. 2014).

The chapters in this book suggest that the dominant modes of water policy analysis in the country have witnessed a change. This is perhaps in the wake of a call for

more reflective thinking on the types and modes of critique in light of a persistent deadlock in transforming dominant approaches to water resources development and management (Mollinga 2008). As noted earlier in this chapter, water scholars are increasingly turning their attention to the relationships between the hydrological, technological, economic and social dimensions of water management; rather than seeing them in isolation. Issues of gender and equity are gaining prominence in discourses on water management, breaking conventional polarizations that have characterised the debate and discourses on the subject.

Within the broad realm of policy studies, the contributions in this book, speak to the prescriptive dimensions of water policy.⁵ Further research should unpack more explicitly the process dimensions of water policy in India, focusing on a discursive analysis of public policy. There is increasing recognition of the processes of contestation in water policy formulation and implementation (Saravanan and Ip 2013). Further research should capture the role of competing narratives and discourses on the framing of water policies, as well as the role of different interest groups in propagating and perpetuating these. The analysis of the ‘ethnographies of the state’, for instance, provides one entry point (Sangameswaran 2013).

There is growing recognition of increasing stress on water resources. Several writings in the Indian water literature, including some contributions in this book, paint a ‘scare scenario’ with regard to the country’s water future. An important implication of the on-going process of democratization of water governance in the country, however is that coupled with the multiplication of stresses on water, this will create a more visible demand for platforms for negotiation, conflict resolution and dialogue across different categories of users and uses. This could happen at various levels: rural-urban/periurban, regional and transboundary. Research should document the creation of such platforms, as well as the role of power and politics in shaping their functioning. In some contexts, such as those of urbanization shaping rural-urban water flows,⁶ such research should challenge implicit biases in water resources planning and address imbalances in the allocation of water both from equity and sustainability perspectives.

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⁵For a discussion on the prescriptive and process dimensions of public policy, see Hogwood and Gunn (1984).

⁶See, for instance, Narain et al. (2013).

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