

Book Review

Mustafa, Daanish. *Contested Waters: Sub-national Scale Water and Conflict in Pakistan*. 128pp. I.B. Tauris, 2021.

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Published: July 2021

Given the importance of the Indus, one of the world's largest rivers, to the political imagination of Pakistan, contemporary water issues in the country have received limited scholarly attention. Much work on water in Pakistan has been historical, although there is an exciting, and growing, range of contemporary research. Professor Daanish Mustafa has been a pre-eminent contributor to the field and this book revisits and reframes material from over two decades of enquiry that spans disputes between Punjab and Sindh, irrigation in Punjab, groundwater in Balochistan, and urban water use in Karachi.

Contested Waters explores water tensions in Pakistan in a range of settings to ask how we can think about water better. In response, the work offers an incisive, detailed and theoretically engaged account of water issues and their relationship to ideas of nation and place, with important things to say about water, scale and power. A strength is the focus on water across multiple forms: national infrastructure, irrigation, flooding, pollution, and domestic drinking water. Suggesting that tensions over water in these different settings are inevitable, and maybe even preferable to "coercive cooperation", the book's core concern is how conflicts might generate more "emancipatory outcomes" (p. 103).

To this end, the book develops three related conceptual frameworks, outlined in the first chapter. First, the research moves beyond the methodological nationalism of much work on water conflict to examine relationships between conflicts at multiple scales, from nation to household. Questions of the appropriate scale for analysis and intervention have been a major theme in scholarly and policy discussions of water and the author draws on work from geography to reframe this debate. Understanding scale as the imperfectly naturalised

outcome of contested social and material processes, the book shows that scale is not simply important for thinking about or acting on water, but instead argues that water management is used to *produce* ideas of geographic scale in support of political projects such as national development or regional autonomy. Debate over such major infrastructural projects as big dams acquires its intensity from contestation over the appropriate geographic frame or scale within which to evaluate these projects. A technical matter becomes freighted with competing meanings of the nation as ideas of Pakistan or India are put into tension with processes and ideas operating at more provincial and local sites such as Sindh or Karachi. The second conceptual theme of the book is the interaction of power and knowledge in expert planning. Technical abstractions are used to construct a national scale and exclude the human impacts of water management decisions. At the same time, water supply is also determined through power geographies that display "fractal" self-similarity at multiple scales. The final theme is a view of water distributions as "hazardscapes", reframing the literature on landscape and 'waterscapes' around questions of inequality and harm. This conceptual shift towards risk and vulnerability requires a move beyond technocratic planning for average growth, a shift that climate change renders increasingly unavoidable.

In the second chapter, the book focuses on sub-national scale conflict between provinces. The first section addresses (mis)allocation issues. Flows from upper to lower riparians are diverted and figures fudged, while unwanted surplus water is released to meet quotas for average water transfer. These dynamics occur across sites and scales; between Punjab and Sindh, as well as Sindh and Balochistan. The author finds that conflicts between provinces stem less from animosity, than the

political importance of agriculture, facts of geography, and conceptual models of water management (p. 39). In the second section, analysis of debates over the Kala Bagh Dam (KBD) shows how water infrastructure is used to construct a national scale. The KBD was planned as part of Indus Water Treaty infrastructure development, but long-delayed due to objections from Sindh at the end of One Unit in 1970, a greater focus on Tarbela dam, and changes in international financial institution priorities. The provinces of Sindh, Balochistan and Khyber Pakhtunkwa are all described as opposed to KBD. If water allocations are disputes between provinces, the need for national infrastructure like KBD becomes a national question, reframing the dispute from, for example, Sindh-Punjab to Sindh-Pakistan. Pro-dam construction rhetoric associates KBD with military operations against the Tehrik-i-Taliban Pakistan and India's 'hydro-offensive' (p. 35). The conflation and contestation between (inter-)national and provincial scales is reflected in the positions taken by political parties. Right-wing and major parties are pro-national, while smaller ethno-nationalist parties, are characterised as more conscious of social equity, opposed to dams and the centre (p. 27). The author argues that projects like KBD or the Diamer Bhasha dam are a material and discursive exercise in producing a national scale, while at the same time undermining ethno-nationalism and unevenly reallocating the hazards of inadequate water, flooding and power availability across the four provinces. Paralleling research on nationalism, international relations and modernity in Pakistan, the author frames the larger conflict as between visions of the future in Pakistan: modernist Western-style development engineering or more locally rooted "issues of identity, ecology and equity" (p. 37).

Chapter three takes the reader from national tensions to micro-level issues, addressing traditional *karez* irrigation in Balochistan and canal irrigation in Punjab. Both topics show how thinking at one scale produces hazards at another. In a welcome addition to the relatively slim sociology of groundwater use in South Asia, the first section offers a discussion of *karez*, a system of underground tunnels used in many parts of the world to passively tap groundwater. *Karez* are governed by village-level social structures aimed at equitable water timings and field locations. *Karez* began to be replaced by individually owned tubewells in the late 70s as part of green revolution strategies by international donors like USAID (p. 46), changes which led to an increase in conflicts around water. Tubewells, using the same groundwater sources, began to compete with *karez*, transferring water and income to larger farmers. The

author argues that this infrastructural change to tubewell use aimed at the production of a national and international scale agricultural economy increased local social conflicts in Balochistan. This is an important contribution to work on 'tubewell capitalism' from a particularly interesting site. The second part of the chapter deals with the topic of irrigation in Punjab. Here water is found to be more a tool of conflict than a cause, but the dominance of a technocratic bureaucracy and socially powerful large farmers cause significant challenges for small farmers, ultimately leading to migration and urbanisation rates that are among the highest in South Asia.

The chapter on floods and pollution revisits the themes of scale, hazards, and fractal power geographies. Two geographical facts are important to understand flooding here. The Indus has some of the highest silt loads in the world and rivers naturally move; features that are incompatible with fixed infrastructure and fixed property in land. As rivers channelled with levees silt up, frequent low and medium intensity flood events are traded for static agriculture and low frequency, high intensity flood events. In line with historical research in other parts of the subcontinent, the author finds that "In a highly regulated system like the Indus basin, there is nothing natural left about the timing, location and intensity of floods" (p. 57). Here too, water conflicts are framed through the inequality both between local and national visions of development and the distribution of hazards between provinces and countries. At a local scale, to protect dams and barrages, when capacity (based on historical averages) is exceeded, upstream levees are breached at predetermined locations. In an echo of the work on irrigation, engineers are subject to lobbying over flooding, particularly from powerful farmers and politicians attempting to avoid inundation in their area. At a national scale, the dominant story in conservative Urdu media is that floods are caused by India. The author argues that flood hazards become an exercise in enacting international-scale hydro-politics and solidifying the national scale through flood management emphasising big infrastructure to the neglect of local geographies of vulnerability.

A real highlight of the book is the final empirical chapter on water in Karachi, which explores the intersection of local power geographies of class, political affiliation, ethnicity, religion and gender. Ethnic politics originating at the national and international scale capture the energy of Karachi's different communities. These tensions, along with divisions of class and gender, are elided by the production of city scale through networked water

supply and megaprojects. Locally, subaltern groups attempt to negotiate the politics of patronage while linking water to larger themes of identity, citizenship and rights. These conflicts reveal the gap between modernist technocratic ideas of water governance, and everyday realities in an urban context. Water managers present a narrative of scarcity—a demand-supply shortfall of 50%—requiring big infrastructural fixes. However, piped distribution is highly unequal and distribution is fragmented across organisations (in particular the Defence Housing Authority and the Cantonment Board) which primarily cater to the upper class. In this setting, the “state’s abdication of its responsibility to provide domestic water” has led to a de facto privatisation of water through tankers, valve manipulation, and suction pumps (p. 83). Indeed, Karachi hosts a massive, flourishing, and politically affiliated tanker water economy associated with credible threats of violence. Introduced in the early 1990s as a stop gap, tankers have come to almost replace the official system, reselling water to households at 10-100 times the wholesale price. Despite collective action at community level, the “market mechanism then undermines the community scale by rescaling water supply to the household level” (p86). However, the rich empirical accounts in this chapter make it clear that ability to pay is far from the only factor influencing water access. The water markets the author describes are heavily embedded in political affiliation, ethnicity and religion. While valve manipulation and suction pumps favour those with greater ability to pay (for bribes, pumps and electricity), neighbourhood and household location in the infrastructural network are also important factors (p. 88).

This volume provides a valuable contribution to contemporary scholarship on water in South and Central Asia. The book allows its empirical material and conceptual arguments to shine rather than drag the reader through academic debates. Readers familiar with the author’s work will find interest in new framings and material for topics on which the author has published a series of important papers. At times it might be interesting to see more exploration of the tensions and complementarities between technocratic management, nationalism, and social power, but space limitations perhaps required these to be left implicit. The manuscript is well illustrated with some excellent photographs, but the text could have benefited from closer copy-editing. Overall, the ability to move between and connect scales and sites with such facility offers inspiration, and challenge, for a new generation of Pakistan’s water scholars. How does one think, write, or influence, the multi-scalar water geographies of a nation, its constituents,

and wider relations in a way that recentres human and ecological sustainability? *Contested Waters* offers a finely crafted, thoughtful response to this question, one that provides directions for readers and researchers interested in power, space and water around the world.
