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## Scarcity and the State in the Midst of Climate and Economic Crises: Governing Water in India

Leela Fernandes



Henry M. Jackson School of International Studies, University of Washington, Seattle, WA, USA

My talk today draws on my new book, *Governing Water in India*.<sup>1</sup> Intensifying droughts and competing pressures on water resources foreground water scarcity as one of the most urgent concerns of the global climate change crisis. In the Global South, the impact of climate change weaves together structures of inequality, developmental pressures, and stresses on water resources. The increasing intensity of cycles of droughts and floods places strains on the governance of water and intensifies the vulnerability of local communities. Global policies seeking to address climate change, inequality, and economic development must grapple with the local democratic institutions that respond to such crises. In India, industrial, and agricultural water demands (in addition to people's everyday needs) exacerbate inequities of access and unveil critical challenges of state governance over water resources. My research covers the period from colonialism to the contemporary era and analyzes how different waves of state formation from the British colonial state to the twentieth-century developmental state to the postliberalization state have shaped the unequal distribution of water resources.

My presentation will pull a few pieces out of this book and use them as illustrations of the wider challenges of governance in the context of climate change and policies of economic liberalization. Let me begin by situating my work in the contemporary moment in which we live – with a focus on three sets of crises that provide the backdrop of my research. The first is the accelerating crisis of climate change. The second is the deep crisis of global inequality both within countries and between the Global South and Global North. The third is a crisis in democratic governance that includes a lack of responsiveness to the needs of citizens, barriers to inclusive and equitable citizenship and incipient forms of authoritarianism. Such examples can be seen in states that are formal democratic polities, such as India, Brazil, and the United States

While *Governing Water in India* is not specifically focused on climate change, it holds implications for how we think about contemporary environmental issues. One of the trends that shapes public discourses and policies around climate change is the use of frames that present it as both an overwhelming spectacle and an issue that is bound as a silo. For instance, we are inundated by media narratives because of the scale of the different kinds of intense weather events gripping the world and the human suffering that

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**CONTACT** Leela Fernandes  [leelaf@uw.edu](mailto:leelaf@uw.edu)  The Henry M. Jackson School of International Studies, University of Washington, Box 353650, Seattle WA, 98195-3650

<sup>1</sup>All examples and quotes in this talk are from *Governing Water in India: Inequality, Reform and the State* (University of Washington Press, 2022) (published as an open access book). This essay is a condensed transcript of the keynote address recorded via zoom.

we see through the displacement of people various forms of forced migration in different parts of the world. Consider, for example, this image of the devastating floods in 2015 that deluged the city of Chennai, one of India's largest metropolitan cities.

The global press was saturated with coverage linking the devastating floods to the impact of climate change. Four years later, in 2019, Chennai was hit by an intense drought. The international media was once again filled with narratives preoccupied with the spectacle of one of India's largest cities going dry. All the water reservoirs in the city were depleted, there was no water for citizens or industry, and the local state government had to transport water resources on trains.

The coverage, overtly shaped by the spectacle of floods and droughts, was also based on an underlying policy silo – one that tends to separate our discussions of climate change from global models of economic reform. The intensification of droughts and floods in Chennai, for instance, is directly linked to policies of economic liberalization that have been implemented in India since the 1990s. Unplanned urbanization and policies of economic reforms are the hidden context of the spectacle of weather-related droughts and floods. Let us return to the images I showed you of Chennai. The backdrop of the historic floods and drought was the expansion of industrial and urban development. Consider the example of Chennai's information technology sector. A great deal of such urban development basically took place on waterbodies and wetlands, and also produced increasing demands on scarce water resources. One of the critical reasons for the flooding was not just the intensification of the impact of climate change but also because of the environmental impact of urbanization. So, the global narrative of climate change producing these kinds of weather events is not wrong, but it is siloed from the policies of economic reform that produce the kinds of unplanned urbanization and environmental damage that I am describing. Similarly, returning to the example of Chennai going dry – this event is directly connected to expanded urbanization, the competing demands on water resources from water-intensive industries, and expanding consumer needs of the city layered onto the longstanding needs of agriculture. As with the spectacle-driven frame of media narratives, an analysis of climate change abstracted from these effects of economic policies of reform gives us a misleading understanding of both the crisis and the solutions that are needed.

My talk is thus based on two premises: (1) that there is a need to relink analyses of environmental crises with a focus on policies of economic reform and (2) that both the problems and solutions for the challenges of climate change require a deeper qualitative understanding of mechanics of local state bureaucracies in countries like India. There is a need for more qualitative research to understand what is happening on the ground – the ways in which bureaucrats and the state are actually managing resources. One of the implications of my research is that if we are going to tackle questions of climate change, we have to really understand how bureaucracies are operating and what their role is given the broader crises of governance which we see across the world.

I am going to focus on two main themes today. The first is the question of water scarcity – one of the main issues I address in *Governing Water in India*. In the first global survey of water sources for large cities, McDonald et al. estimated that “one in four cities, containing \$4.8 ± 0.7 trillion in economic activity” are water stressed.<sup>2</sup> Processes of urbanization and the impacts of climate change have continued to deepen these pressures over the past decade. The second is the question of the state – specifically the need to move beyond the conventional narratives of “neoliberalism”<sup>3</sup> which tend to focus more on the privatization of water resources. For instance, if you look at the period in the 1990s, the World Bank did attempt to push as its global model of reform the expansion of the privatization of water supplies. Thus, a key trend in existing scholarship is a focus on that narrative of privatization. While the post-Washington Consensus model of the World Bank has still continued in theory to focus on privatization and decentralization, the Bank has in fact focused on shoring up the role of the state. For instance, the World Bank has shifted its focus from the direct support for infrastructural projects (such as dams) to institutional reforms. This has also reflected its view that state institutional frameworks should serve as the central foundation for the implementation of these normative principles and models of reform. Such a shift was sparked by the Bank’s own assessment of its failures with infrastructural projects and with the first generation of public private models in the 1990s. The reason I focus on the World Bank is that it is the leading global player in the water sector and its model of reforms has been central to shaping water reforms and water management in the Global South.

I will elaborate on this discussion of water scarcity and the state based on fieldwork, which I did in 2016 and 2017 in the southern part of India and in the city of Chennai in particular. The backdrop of this work is the economic change that started in the 1990s when India began to accelerate the liberalization of its economy. This brought increased and unplanned urbanization as local state governments and the central government were competing for private investment. This in turn produced increased water conflicts as there were competing demands for water from industry, agriculture and citizens. One of the reasons I focus on the city of Chennai in Tamil Nadu is that Tamil Nadu was one of the first states in India to adopt the World Bank model of water reforms. The state thus served as a forerunner for water reforms that have been expanded to other parts of the country.

Let me take the liberty of giving you the context of my broader research on these themes. The overall argument that I make in my book is that the processes of reform have intensified state centralization despite both the global and national rhetoric on decentralization and privatization. Such processes have built on and reworked the institutional legacies of the colonial and developmental state. As I argue,

Institutional reforms designed to scale back the role of the state through processes of decentralization and the participation of private sector actors in fact produce a redistribution of centralized institutional power. This rethinking of processes of state centralization deepens our understanding of two key debates on the post-liberalization

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<sup>2</sup>Robert I. McDonald, Katherine Weber, Julie Padowski, Martina Florke, Christof Schneider, Pamela A. Green, Thomas Gleeson, Stephanie Eckman, Bernhard Lehner, Deborah Balk, Timothy Boucher, Gunther Grill, and Mark Montgomery, “Water on an urban planet: Urbanization and the reach of urban water infrastructure,” *Global Environmental Change* 27 (2014): 96.

<sup>3</sup>Leela Fernandes (ed.), *Feminists Rethink the Neoliberal State* (NY: New York University Press, 2018).

state. First, processes of centralization cannot be understood purely as a product of a monolithic and recalcitrant bureaucracy. While bureaucrats often, unsurprisingly, attempt to retain their power and authority over resources, those who do attempt to perform effective regulatory functions are often constrained by structural conditions of the political economy of their institutions. More significantly, processes of state centralization are intrinsic to processes of economic reform that have been unfolding in late-twentieth and twenty-first century India. The dynamics of institutional reform and processes of centralization are significant factors in the reproduction of socio-economic inequality. A focus on such institutional dynamics moves us away from conventional accounts of neoliberalism that often identify privatization as the sole or determinant factor shaping inequality.<sup>4</sup>

This is particularly important because a trend in the political science literature is to view the failures of the state in India as a product of state corruption or state failure. What I am arguing is that these processes of centralization are actually inherent within the economic reforms themselves. Even, while the reforms claim to push for decentralization, they actually intensify centralized state authority. Furthermore, this deepened centralized state authority, while claiming to promote democratic and inclusive participatory decentralization, both produce and reproduce inequality. In particular, institutional water reforms provide the mechanisms for an extractive state that distributes water resources based on social economic inequalities and inequalities between urban and rural areas in contemporary India.

Let me provide two examples to help flesh out what I mean by this. If you were to go to the city of Chennai, one of the familiar sights that you would see are water tankers regularly traveling on city streets. This water tanker traffic is not limited to periods of extreme drought but is an essential part of the city's water supply – one that is reliant on the transfer of groundwater in rural and peri-urban areas to Chennai. The water supplies everything from industries to hotels to residential consumers and the market involves both private water companies and the state water utility (Metrowater). Consider how this extraction is linked to institutional reforms. Drawing on models of global reform, the state enacted regulatory reforms designed to manage groundwater extraction and prevent the over-extraction of water resources. The excessive extraction of groundwater was having serious environmental impacts on groundwater resources in the state. This is reflective of a broader trend in India with the over-extraction leaving water tables in critically depleted states and in the case of Chennai allowing for the saltwater contamination of groundwater resources. In this context, regulatory norms would in theory be an environmentally worthwhile policy. In 1987, in accordance with UNDP guidelines, groundwater regulatory legislation was enacted for the city of Chennai. While this legislation did have a positive impact on groundwater in the city, it also expanded the power of the state water utility. While the 1987 bill was reworked for the Chennai metropolitan area in 2002, the remainder of the State's groundwater resources were placed under the purview of separate legislation. The legislation also gave the local state government (and the water utility) increased power over the state's water resources. The regulations were never implemented for the rest of the state. What this meant was that it opened the door for continued groundwater extraction in the rural areas of the state and gave the city and its water utility more power to extract rural water resources to serve the city. The institutional reforms encoded this process of extraction in through the regulatory reforms. This example is

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<sup>4</sup>Leela Fernandes, *Governing Water in India: Inequality, Reform and the State* (University of Washington Press, 2022).

meant to illustrate how institutions like the water bureaucracy provide the institutional infrastructure for the mechanisms that are producing and intensifying social inequality in this case, between urban and rural areas.

Let us turn to a second example by moving from a focus on water scarcity to the scarcity of the state.<sup>5</sup> When I went to one of the water reservoirs with a group of engineers and water bureaucrats during my field work, we were in a location populated by semi-urbanized communities. I was standing with one of the engineers and she pointed to the surrounding areas, and she said “you know the government said – let this all be urbanized.” I asked her what she meant by that and how the government could intentionally urbanize specific communities. She replied that the government had gradually withdrawn agricultural subsidies so that farming became unsustainable and the communities became a semi-urbanized area on the periphery of the city. The withdrawal of the state – whether by a lack of enforcing groundwater pumping or making state subsidies “scarce” is an intentional set of interventions that allow the metropolitan water bureaucracies to access rural water supplies that would otherwise be used for agriculture. The state intervenes through the withdrawal of resources in order to produce private water markets for the industrial and city needs. Farmers with access to groundwater supplies then become reliant on selling water rather than crops. The scarcity of the state is an intentional state policy.

These brief examples provide you with a sense of the broader research that I have conducted that shows how extractive mechanisms and inequities are encoded into institutions, such as the water bureaucracy. Let me provide you with one last brief example that shows how these inequities are encoded in the shift of power between organizations in the water bureaucracy in Chennai and the state of Tamil Nadu. The Public Works Department in Chennai (known then as Madras) has a deep historical legacy as a colonial British institution that became the foundation of a modern water bureaucracy not just in Chennai/Madras but for India as a whole. This used to be the predominant state bureaucracy that governed water resources and water infrastructure in the state. In recent years, mirroring the shift from the older colonial and developmental state to the post-liberalization state, the new water utility in the city of Chennai Metro water has increasingly grown much more powerful than the Public Works Department. Metrowater is a public utility that now represents a very strong arm of the state. Consider some of its more coercive powers in producing the kinds of extractive relationships that I have talked about. When I interviewed bureaucrats from Metrowater, they described how they ship in water from different parts of the state. Describing cases of farmer resistance, one bureaucrat euphemistically noted that “sometimes you have to convince them to sign the agreement.”<sup>6</sup> Finally, a third example of an organization within the water bureaucracy is TWAD (the Tamil Nadu Water Supply and Drainage Board). This bureaucratic organization, which oversees drinking water for the rural part of the state, has relatively little power within the state and has suffered significant financial losses in the post-liberalization period.

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<sup>5</sup>Stuart Corbridge, Glyn Williams, Manoj Srivastava, and René Véron, *Seeing the State: Governance and Governmentality in India, Vol. 10* (Cambridge: Cambridge University Press, 2005).

<sup>6</sup>Leela Fernandes, *Governing Water in India: Inequality, Reform and the State* (University of Washington Press, 2022).

Institutions in effect are shaped by a restructuring of state power, which is consistent with the new goals of the post-liberalization state in contemporary India. Institutional reforms take the form of a kind of redistribution of institutional power. As I argue in *Governing Water in India*,

Institutional reforms, in this context, are both shaped by and are the means for the production of underlying reconfigurations of power and inequality. Further work is needed to develop integrated institutional analyses in comparative contexts that can grapple with the relational power-laden dynamics of institutions tasked with the governance of water. Such a relational understanding is particularly crucial for scholars and practitioners who are concerned with questions of inequality and the water needs of poorer urban and rural communities.<sup>7</sup>

While I have focused on local trends within India, these examples have broader comparative implications. Despite the extensive rhetoric on privatization of water (by both proponents and critics), by the early twenty-first century only about five percent of the world's population was being served by the formal private sector.<sup>8</sup> Comparative cases illustrate that the key principles of privatization and decentralization have not unfolded according to the idealized norms of the global model. As I have summarized in the book,

In Cape Town, South Africa, a decentralized policy for water provision was shaped by the power of city-level policy makers and bureaucrats that intensified the top-down approach of the city.<sup>9</sup> These subtle centralizing trends are evident in a range of cases where policies of decentralization have produced new forms of concentrated authority over water resources by local elites, bureaucrats and government officials. In the Sao Francisco River Basin in Brazil, water reforms reinforced elite control over water resources through an underlying pattern of the elite capture of regional bureaucratic power.<sup>10</sup> Similar patterns of continued state and elite control have been documented in a wide array of national contexts ranging from Columbia, Peru, Kenya to Turkey. In the case of Columbia, "administrative decentralization took place through the devolution of authority to municipalities. This new authority, however, was rapidly withdrawn from smaller localities, semi-'recentralizing' it to departments and regional bodies."<sup>11</sup> Such fine-grained comparative work underlines the significance of adequately understanding how such processes of centralization play out in the context of water reforms.<sup>12</sup>

The underlying theoretical point is that often when models of institutional reform are discussed, the assumption is that decentralization is associated with spatial scale. So, we assume that the centralization takes place at the highest spatial scale and that the devolution of power to local state authorities is decentralized. I am instead showing how centralization takes place through local, state governments and local bureaucratic institutions.

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<sup>7</sup>Leela Fernandes, *Governing Water in India: Inequality, Reform and the State* (University of Washington Press, 2022).

<sup>8</sup>Jessica Budds and Gordon McGranahan, "Are the Debates on water Privatization Missing the point? Experiences from Africa, Asia and Latin America," *Environment and Urbanization* 15, no. 2 (2003): 88.

<sup>9</sup>Julian S. Yates and Leila M. Harris, "Hybrid regulatory landscapes: The human right to water, variegated neoliberal water governance, and policy transfer in Cape Town, South Africa, and Accra, Ghana," *World Development* 110 (2018): 78.

<sup>10</sup>Corin de Freitas, "Old Chico's new tricks: Neoliberalization and water sector reform in Brazil's São Francisco River Basin," *Geoforum* 64 (2015): 298.

<sup>11</sup>Tatiana Acevedo Guerrero, Kathryn Furlong, and Jeimy Arias, "Complicating neoliberalization and decentralization: the non-linear experience of Colombian water supply, 1909–2012," *International Journal of Water Resources Development* 32, no. 2 (2015): 173.

<sup>12</sup>Leela Fernandes, *Governing Water in India: Inequality, Reform and the State* (University of Washington Press, 2022).

Let me conclude this presentation by noting that the scale and potentially catastrophic effects of climate change paradoxically require us to turn away from the spectacle of such effects to the everyday mundane practices of such bureaucratic organizations and institutions that implement policies on the ground. This entails an analysis of such institutional practices steeped in the weight of historical, political, and social context of particular places. This also cautions us to move away from global policy models and modular social sciences science approaches that are too often dissociated from the everyday realities of governance – in this case, the challenges of governing water. It calls on us to think about the kinds of located effective institutional responses that will be critical in these times of change and crisis.

### **Disclosure Statement**

No potential conflict of interest was reported by the author(s).

### **Notes on contributor**

*Leela Fernandes* is the Glenda Dickerson Collegiate Professor in Women's Studies at the University of Michigan. She previously taught at Rutgers University, New Brunswick and Oberlin College and is currently the South Asia Editor of the journal *Critical Asian Studies*.