



Spatial justice and the land politics of renewables: Dispossessing vulnerable communities through solar energy mega-projects



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ABSTRACT

This paper considers aspects of spatial justice in the processes of land acquisition for large-scale solar energy projects in the developmentalist context of India. It explores the case of one of the world's largest solar park projects in Charanka, Gujarat. While the official rhetoric suggests an inclusive project for globally benign renewable energy production, the research reveals a more controversial land and power politics of renewable energy. It is argued, in particular, that the project increases the precariousness of vulnerable communities, who are exposed to the loss of livelihoods due to the enclosure of common land and extra-legal mechanisms through which land acquisitions for the project have reportedly taken place. This case exemplifies how solar mega-projects may manifest a regime of accumulation whereby low-carbon coalitions of interests can maximize their gains by dispossessing vulnerable social groups of their life-sustaining assets.

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1. Introduction

Social justice concerns may be overlooked in the drive for renewable energy in the developing world. Renewable sources of energy, such as solar energy, are generally perceived to be a clean, environment-friendly technology. In India, solar energy is planned to be deployed on a large scale, often through installations in 'waste' lands, where it is considered immune from the production of environmental and social hazards. Despite their oft-massive scale, solar projects are even exempt from environmental or social impact assessment requirements in India. Justice concerns in land acquisitions for large development projects have been raised before in India - for example, with regard to large dam projects and special economic zones (Levien, 2013; Nilsen, 2010; Sampat, 2008). However, with the advent of mega-solar-projects, it is essential that justice issues are re-examined in this new arena that will increasingly affect the livelihood of thousands of people, especially in such a densely populated and socio-economically unequal country.

India's national solar policy, released in 2010 as the Jawaharlal Nehru National Solar Mission (JNNSM), set the ambitious target for

the country of generating 20 GW of grid-connected solar photovoltaic (PV) and 2 GW of off-grid solar PV energy by 2022 (MNRE, 2010; Yenneti, 2013; Yenneti, 2016b). In 2014, the Government raised the JNNSM's target five times to 100 GW by 2022. Prior to the 2015 Paris climate summit, the Government also pledged to develop the country's renewable energy programme as the world's largest programme within five to seven years (Ghosh et al., 2015; NITI, 2015).

While the dominant academic literature on renewable energy in India tends to follow the celebratory rhetoric of the solar promise to address the country's needs with clean, affordable and reliable energy (Bambawale and Sovacool, 2011; Bhattacharyya, 2010), there is an acute need for a critical analysis of the potential social and spatial impacts beyond merely technological and financial aspects. In this contribution, we aim at a better understanding of the relationship between renewable energy development and its spatial context by interrogating in detail the land acquisition processes of the Charanka solar park in Gujarat.

Aiming to lead India in clean energy development, in 2009 India's western state of Gujarat adopted the Gujarat Solar Power Policy (GSPP, 2009), the first of such state level policies in the country. The GSPP in fact pre-empted the national solar policy, JNNSM. By the end of 2013, Gujarat had already contributed more than 40% (850 MW) of the total 2GW of grid-connected solar

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energy installed in India at that point (Yenneti, 2016a). Along with introducing feed-in-tariffs (FiT) for solar power projects, it had done this by enabling a series of large-scale solar parks built as public-private partnerships, whereby the state acquires and designates land and expedites planning procedures for solar developers to develop sections within the parks.

The first of Gujarat's solar parks was built in the remote village of Charanka, close to the saline desert of the Rann of Kutch and the border with Pakistan. The largest solar park in Asia at the time it went on-grid in April 2012, the 216 MW solar park covered more than 2000 ha of land and cost US\$280 million to build (Yenneti and Day, 2015; Yenneti and Day, 2016). It is widely acclaimed as a success story and was given awards by institutions such as the Confederation of Indian Industry (CII) and Wartsila India Ltd., for being the country's most innovative and environment-friendly project (Ganguly, 2012; GPCL, 2013).

However, as we are going to demonstrate in this article, this large-scale solar development has laid bare the negative social implications of such mega-projects. Most importantly, it has deprived local vulnerable communities of access to the land that they for years relied on for their livelihood. The project was built largely on government land, which was previously used for grazing by the Rabari pastoral community during their four-month-in-a-year stay in the Charanka Village, as well as on land previously cultivated by subsistence farmers. These communities, already disadvantaged both by their social and political status and by climate change impacts in arid areas, have effectively become the victims of low-carbon transitions, suffering the loss of their livelihoods and curtailment of practices key to their survival.

We use the conceptual lens of spatial justice to explore the place-based operations of power in the assemblage of this solar energy project. We particularly operationalize ideas around 'accumulation by dispossession' to critically interrogate struggles over land entitlement and place transformation. We organize our discussions as follows. In the next section, we provide a review of the notion of spatial justice to orient our theoretical position. This is then followed by a discussion of the geographical context of our case study, Charanka village, which epitomizes the maltreatment of the vulnerable under the aegis of low carbon energy transitions. The paper then discusses the empirical results of our research with regard to the following key aspects: the dispossession of people from livelihoods through the enclosure of government 'waste land'; the extra-legal land transactions; and the influences of legal and institutional powers. The conclusions summarize the contribution of this research and discuss its implications in the light of India's new Land Acquisition Act that came into force in 2014.

2. Spatial justice and renewable energy projects

The concept of spatial justice provides a useful framework for understanding the experiences analysed in our case. The conceptualisations of the relationships between geographical distributions of resources and social justice implications have been influenced by the works of, among others, Davies (1968), Lefebvre (1991), Harvey (1973, 1992, 1996), Pirie (1983), Smith (1994), Bullard (1990, 1993) and Johnston et al. (1994). Harvey's (1973) theorizations on this topic – including territorial social justice – owe much to John Rawls' (1971) normative formulation of social justice. Harvey recasts the subject with respect to spatialities rather than to individuals, but reaffirms Rawls' principle that unequal distributions can only be tolerated if they generally work to the advantage of the least favoured, thus precluding the utilitarian acceptance of the possibility of oppressing minorities to the majority's benefit. Soja's (2000, 2009, 2010) expositions on spatial justice embrace

more explicitly both distributive and processual aspects. According to Soja (2009), spatial justice refers to:

an intentional and focused emphasis on the spatial or geographical aspects of justice and injustice [and] involves the fair and equitable distribution in space of socially valued resources and the opportunities to use them... [It] can be seen as both outcome and process, as geographies or distributional patterns that are in themselves just/unjust and as the processes that produce these outcomes.

Critical scholars' concerns over both processes and outcomes, procedural and distributional aspects of justice and the spatial character of injustices as often manifested under capitalist *modus operandi* are captured vividly in Harvey's (2004) concept of 'accumulation by dispossession' (ABD). It encapsulates the coercive processes of asset accumulation – such as of land and property – in the hands of the powerful at the expense of the less favoured. Harvey (2005) provides a set of examples of how access to land can be implicated in ABD:

commodification and privatization of land and the forceful expulsion of peasant populations...; conversion of various forms of property rights (common, collective, state, etc.) into exclusive private property rights...; suppression of rights to the commons...; colonial, neo-colonial, and imperial processes of accumulation of assets (including natural resources); monetization of exchange and taxation, particularly of land...

The spread of coercive practices of enclosure of, or restrictions of rights to, key life-sustaining assets has been explored in many different contexts globally, such as in studies of conservation (Whitehead, 2010), large dam construction (Nilsen, 2010), mining (Bury, 2005; Holden et al., 2011), and land commodification in the interests of industrial and urban growth (Grajales, 2013; Oliveira, 2013; Wolford et al., 2013). The adoption of an 'industrialise or perish' philosophy in India (Baviskar, 1995, p. 22) and resultant political struggles generated by this 'rush for industrialisation' has prompted scholars to apply the concept of ABD to contemporary forms of enclosure and dispossession in India, including by interrogating the role of the state (Banerjee-Guha, 2009; Kothari, 1996; Vasudevan, 2008). The work of Gidwani (2002, 2013) and Levien (2011, 2013) illustrates how land commodification and land grab ultimately impacts land-based livelihoods and amplifies inequalities. Levien (2013), through his study of Special Economic Zones in India, emphasises the role of the state as a coercive power in carrying out land dispossession. He argues that in India it is the regional (subnational) state that is primarily responsible for the forcible transfer of productive agrarian land to land zoned for economic development – he calls this the 'land broker state'. Further, drawing on Locke's (1988 [1681]) moral-political theory, Gidwani and Reddy (2011) explore the appropriation of 'wastelands' – labelled by the state as unoccupied or unused, uncultivated or unproductive, idle land – for state-led development, and argue that the labour that individuals had exerted to cultivate and improve such 'wasteland' should be recognised in defining communities' entitlement.

This theoretically significant work can inform the analysis of energy-related developments too (McCarthy and Cramb, 2009; Thondhlana, 2015). Indeed, the constructs and principles of spatial justice have recently been widely applied with respect to energy policy, governance and practices in both theory-driven and policy-oriented discourses (Golubchikov and Deda, 2012; Hall et al., 2013; Sovacool and Dworkin, 2014; Walker and Day, 2012). Associated work in the Global South has addressed, for example, conventional energy (Grovgoui and Leonard, 2007; Murrey, 2015) and biofuel projects (Baka, 2013, 2014; Exner

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