Making a ‘Hydropower Nation’: Subjectivity, Mobility, and Work in the Nepalese Hydroscape

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Making a ‘Hydropower Nation’:
Subjectivity, Mobility, and Work in the Hydroscapes of Nepal

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This essay focuses ethnographic attention on changing patterns of subjectivity, livelihood, and agency co-arising within the production of Nepal’s imagined hydropower future. As the projects and processes of hydropower development proliferate across the physical and human geographies of Nepal they produce many different kinds of risk and opportunity, as well as labor, mobility, and ‘project-affected people’. Combining empirical and visual methods, this essay describe how these lived hydroscapes are shaped by shifting concepts of locality, belonging, citizenship, and ‘affectedness’ that are constantly evolving in response to an entanglement of aspirations and future-making projects.

Keywords: Hydropower development, Himalayan water resources, Nepal, resource frontiers, labor, migration studies, visual ethnography.

Introduction

As the production of Nepal’s hydropower future continues to intensify, more and more Nepalis are becoming ayojanale prabhbit manchhe or ‘project-affected people’ within an imagined ‘hydropower nation’. This essay focuses ethnographic attention on changing patterns of subjectivity, livelihood, and agency co-arising within the overlapping hydroscapes of Nepal. Importantly, hydropower projects enter places and economies already in flux—they encounter, complicate, and catalyze patterns of work and mobility that are already in flux due to ubiquitous patterns of outmigration and foreign employment (see Bruslé 2014; Sijapati & Limbu 2012; Adhikari & Hobley 2011). Each hydropower project creates a rebalanced landscape of risk and opportunity, shaped by shifting concepts of locality, belonging, citizenship, and ‘affectedness’ that are constantly evolving in response to an entanglement of aspirations and future-making projects (see Arora 2014; Subba 2014; Shneiderman 2014). And as each project develops, opportunities and patterns for the deployment, exchange, and replacement of local and extra-local labor become increasingly intricate. Other projects follow, the road wends further upstream. Some people wish to go, others wish to stay. Flows of labor, capital, and imagination are coming and going always, rushing into the watershed, churning and eddying for a while, then trickling or rushing away.

Building on past scholarship that has described the social and political contours of hydropower in Nepal (see Pan-dey 1996; Armbrecht 1999; Gyawali 2003; Rai 2005; Dixit & Gyawali 2010; Rest 2012) my ongoing research project³
investigates the emerging processes of social and spatial change that shape the lived experience of hydropower development in Nepal. Focusing on in-progress projects being built in the upper watersheds of the Trishuli and Tamakoshi rivers, this essay uses visual ethnographic methods to empirically and critically evaluate what is seen and not seen within the uncertain and uneven production of Nepal’s hydropower future—to query the making of a hydropower nation.

Massive efforts are being made to secure the hydropower future for the well-being of Nepal’s future citizens; in the name of economic security, energy sovereignty, political stability, and social justice; and in response to a discourse of permanent and interpenetrating crises—“to keep an entire generation from growing up in the dark.”

After decades of failed planning, heated Himalayan hydropolitics, and persistent problems of elite capture and corruption (see Gyawali 2003) a new wave of political, financial, and environmental mobilizations promise to reorient and restructure Nepal’s water resources to create ‘sustainable development.’ And despite popular frustrations and the free-market rhetoric of the Kathmandu polemists, things are very much in motion (see Republica 7 September 2014). Currently, there are twenty-four different hydropower projects in different phases of planning and construction in the Trishuli and Tamakoshi watersheds alone, representing over 2,450 MW of electricity generation capacity—more than three times the current electricity supply for all of Nepal (Nepal Electricity Authority 2014). Yet, there is a recurring problem of optics, where centralized planning, centralizing discourse, and the needs of the center obscure the lived experience of the expanding hydropower frontier.

In Mailung, a small Tamang village in Rasuwa that now hosts three concurrent hydropower projects (one being built by a small Nepali independent power producer, one being built by a Chinese transnational, and one being built by a Korean engineering firm with funding from the International Finance Corporation), one man said, “Just five years ago there was only eight houses here and no road. Now the Koreans have said they will need 1200 workers here. But how many people from Rasuwa? How many people from outside? And after the project is finished what will we do? People will go back to working in Malaysia. The village will become like an empty egg.” Downstream, a Gurung woman expressed a different kind of concern, saying, “We should have gone to the [stakeholder] meeting and asked for work, but we didn’t. We women don’t know anything about these kinds of things. We have to take care of the animals. The project may come, but we are only here rotting in the village [laughing].” The hydropower future is coming, but some have better access to that future than others.

In response to these uncertainties, my research hopes to foreground the ways in which differently implicated ‘project-affected people’ organize meaning within the making of the hydropower future—to build a more complete picture of the production and distribution of the hydropower future, supporting “vigilance against reduction, either to the inert backdrop of physical geography or to the idealism of mental maps” (Chari & Gidwani 2005: 270).

Hydropolitics, Territory, and Imagination

The transition toward an imagined socioeconomic future and a re-imagined state proceeds via an interpenetrating array of material and discursive interventions that imply a broad variety of human and physical geographies and that require multiple overlapping ‘scale-making projects’ (cf. Tsing 2000). As a result of its unique physical and political geography, Nepal is located at the turbulent center of both the ‘water towers of Asia’ discourse and the resurgence of global interest in large-scale hydropower projects in the current era of climate-energy geopolitics and carbon markets (see Bandyopadhyay 2013; Nusser 2014; Erlewein 2014). Meanwhile, the official statistics describing Nepal’s national power crisis are well known—due to population growth, urbanization, and changing consumption patterns Nepal’s demand for electricity has doubled since 2004; only 43% of the population has access to electricity; despite decades of planning and development conflicts Nepal has realized only 705 MW of installed generation capacity; peak demand is expected to exceed 2,000 MW by 2020 (Nepal Electricity Authority 2014). During the dry winter months, the unfulfilled promise of 83,000 MW of power generation capacity hangs like a cloud over Kathmandu, as worsening blackouts consume the rapidly growing city of over three million people for up to sixteen hours per day. Hydropower development is undeniably needed in Nepal, but what kinds of hydropower development and for whom?

As the citizens of an aspiring hydropower nation, Nepalis are represented within multiple frames of subjectivity—as electricity users who collectively shape aggregate demand; as political citizens who will shape Nepal’s nascent democracy; as economic consumers whose needs, desires, and ambitions shape economic growth; as financialized stakeholders with territorial claims to the benefits of hydropower development; as different kinds of ‘project-affected people’ who must bear the costs of future-making. In these ways, Nepal’s hydropower futures are “structured through contested notions of progress, emancipation, and betterment” (Swyngedouw 1999: 449) that empower certain logics, claims, actors and processes to define governance and citizenship within shifting imaginative terrain.

Hydropower development has long been a key technology
Figure 1. Construction of the powerhouse tunnel at the Upper Tamakoshi Hydropower Project (456 MW). Gonggar, Dolakha.
(Austin Lord, 2013)

Figure 2. A man and security forces watching a local boycott of the public hearing for the Trishuli 3B Hydropower Project (37 MW). Shanti Bajaar, Nuwakot.
(Austin Lord, 2013)
Figure 3. Local bus going through the dam site of the Trishuli 3A Project (60 MW), Mailung, Rasuwa.
(Austin Lord, 2013)

Figure 4. Construction of a basin to collect silt at the intake of the Upper Tamakoshi Hydropower Project (456 MW), Lamabagar, Dolakha.
(Austin Lord, 2013)
of government and state-making (Mitchell 2002; Bakker 1999; Worster 1985). In contemporary Nepal, the promise of the hydropower future ensures the economic and political coherence of the state and vice versa—the hydropower nation and the citizens required for that project are being co-produced.

Spatially, hydropower development uses a particular set of calculative logics to arrange and classify Nepal into a fractal network of licensed project sites, ‘project-affected areas’, ‘national priority projects’, and ‘power corridors’—creating new kinds of territories. Socially, this process requires synchronized practices of delineation and classification, stakeholder engagement, compensation and mitigation, and rules that seek to distribute the costs and benefits of making the hydropower future—creating new kinds of subjectivity and agency. The production of hydrologic vision and value is supported by transnational flows of capital, economic partnerships, and development policies that are increasingly co-constitutive and that affect political rationality at all scales.

Following a period of intense political volatility and the national elections of November 2013 (see Thapa & Sijapati 2004; Lecomte-Tilouine 2013; Gellner 2014) the Nepalese state is reforming with the hydropower future in mind and hoping to realize a developmental ‘peace dividend’ by ensuring policy stability (Investment Board of Nepal 2012). In recent years, several unique political initiatives have been undertaken to underwrite, prioritize, subsidize, and guarantee the hydropower future—responding to ‘crisis’ by creating Emergency Action Plans and financialized spaces of exception (cf. Ong 2006). Thus special conditions, extra-ordinary policies, and specific exemptions are made that synchronize with global developmentalist initiatives and neoliberal forms of environmental governance (see Goldman 2001). In no uncertain terms, Nepal’s political hydro-imaginaries seek to attract transnational investment and rapidly capitalize ‘the water towers of Asia’, to market Nepal as the Himalayan hydropower frontier. Thus, as Radhesh Pant, the CEO of the recently created Investment Board of Nepal, has frequently and unequivocally stated: “Nepal is open for business.”

But how do these imagined hydroscape become real? How do the flows and interventions that support hydropower development interact with watersheds, local livelihoods, and other future-making projects?

These photographs provide an aperture onto the expanding hydropower frontier, where men and machines are boring tunnels into the Himalaya and raising massive structures to divert the flow of Nepal’s rivers. They depict Nepalis working in the hydroscape, enlisted in a globalized industry of hydraulic expertise and knowledge production (Mitchell 2002; see also Klingensmith 2007) and ‘cascades of inscription’ (cf. Latour 1987) which turn flowing water into hydrologic data, cash flow statements, political will, and truckloads of concrete. These photographs also capture contemporary shifts in local economies and livelihoods, political rationalities, patterns of circulation and mobility, and socio-environmental practices of place-making—the impacts and effects of which are not yet fully understood. These photographs show the making of an uncertain hydropower nation in real-time, which does not follow the master plans of timeline and maps, but emerges recursively and iteratively through a muddier praxis.

**Hydropower and Manpower**

Importantly, these photographs also show Nepalis who are simultaneously engaged in their own transformative projects and globalist efforts, located within their own frames of meaning and projects of future-making (Shneiderman 2014). Central among these efforts are ubiquitous and intensive trends of outmigration and foreign employment—over three million Nepalis working abroad supporting a remittance economy that represents over 25% of GDP in aggregate, NRs 543.29 billion in the 2013/2014 fiscal year alone (República 7 Sept 2014). As hydropower proliferates across Nepal it encounters everywhere communities and families with people abroad, households emptied in response to lack of economic opportunities, unemployment, marginalization, and socio-environmental change (Bruslé 2014; Sijapati & Limbu 2012; Adhikari & Hobley 2011).

Though labor migration is often talked about as a monolithic or statistical phenomenon (too often simplified by those who praise its potentiality for liberation or deride its very real inequities) it is in fact an extremely heterogeneous assemblage of different kinds of migration (Raghuram 2009) representing divergent trajectories (Bruslé 2009) and a range of divergent outcomes (Wagle 2012). On one hand, many Nepalis working abroad face systemic exploitation and significant risks; while on the other labor migration has increased economic well-being and agency for some. Migration can break or reinforce patterns of social exclusion. There is no ‘push or pull’ model that can explain the reasons people come and go (Gardner & Osella 2003) and people identify with a variety of different kinds of coming and going (Shneiderman 2014). Migration is a double-edged sword: a product of socioeconomic inequity and structural violence, and an alternative to hierarchy and centralized modernities that demonstrates the perfo-
rated quality of hegemony (Gidwani & Sivaramakrishnan 2003). Yet it is undeniably true that some have better access to beneficial migration opportunities than others.

During my fieldwork within current ‘project-affected areas,’ people commonly responded to questions about livelihood and labor migration by saying “harek gharbata ek jana bidesh janchha” (one person from each household goes abroad). While this may not always be statistically correct, this expression is telling of patterns of absence, co-location, and changing identities that accommodate increasingly discontinuous livelihood strategies (see Shneiderman 2014). It is also telling of the everyday concerns of the hydropower nation.

Thus as hydropower proliferates upriver across the country, I found that Nepalis are facing common choices: between working for a hydropower project or migrating, referred to as bahira jana (going outside). In Dolakha district, one Sherpa man who was frustrated that his sons returned to the Gulf after failing to find project work complained: “We have a good project here in our village, but we are weak [politically]. So it is still very difficult to get work and we are all still paying 1-2 lakh to go to Dubai.” Some projects offer better wages or better work than others. Some people have better access to jobs and other project benefits than others.

Firstly, because hydropower development is capital intensive and not labor intensive, it often acts as an extractive industry and (unfortunately) does not directly support local livelihoods in the long term (Pandey 1996). Secondly, the limited resources that do flow to the affected communities are typically absorbed or diverted by those in a position to do so. Systematic corruption is common and people everywhere say paisa khayo or ‘money was eaten’. Thirdly, hydropower enters an extremely hierarchical landscape, stratified in part by uneven cycles of migration and debt, that constrains the efficacy of standardized programs for benefit-sharing. Again, some have better access to the hydropower future than others.

Meanwhile, in the political realm, the scale and intensity of current patterns of labor migration are frequently invoked to support the political necessity of the hydropower future. Polemics in the newspaper routinely present hydropower as a panacea for scarcity and underdevelopment, as a means to stem the massive outflow of migrants and intellectual capital or the pattern of ‘young people dying in the desert’. A recent editorial by Kunda Dixit, editor-in-chief of the Nepali Times, states flatly: “Of the many examples of governance failure we see around us, perhaps the most striking is the way we have mismanaged our two most important resources: manpower and hydropower” (Dixit 2013: 1). Migration is thus a sociopolitical issue and a financial force equal to hydropower; an outpouring of needs and ambition that parallels, catalyzes, and may ultimately reinforce the production of the hydropower future. In short, my research seeks to understand how hydro-imaginaries and migrant imaginaries interrelate, both within material realities of project-affected watersheds and the discursive arena of Nepal’s political-economies.

Rights and Affectedness

Crucially, as the pace of hydropower development and the scale of labor migration continue to rise in parallel, beliefs about development, place, and economic empowerment are changing as people make efforts toward “becoming an agent of bikas (development) rather than one of its targets” (Pigg 1992: 511). Consequently, negotiations between local and extra-local actors concerning rights are growing increasingly complex, as new territorial claims and subjectivities bring new opportunities for agency. Due to a long history of government malfeasance and foreign aid people often directly equate hydropower development and its infrastructure as a means for ‘becoming bikasit (developed)’ (Pigg 1992). Local people desire to be represented, to be consulted, to be heard—and the formalized process of hydropower development can sometimes offer that kind of participation (though extremely unevenly, imperfectly, and inconsistently). In fact, in the majority of communities I have conducted interviews hydropower development and ‘affectedness’ is widely understood as an opportunity for rights, despite concerns over displacement and dislocation.

Thus, at a public hearing for one contentious project, a woman representing the UCPN-Maoist party said: “This project needs to take place. We are not for boycotting this project. But all our demands should be heard. Not just with words but a written commitment. Once the locals have a sense of ownership you will not have to worry about the project.” Another man leading a local bahiskar or boycott of that same project hearing told me: “When we had the last public hearing, we weren’t much aware of these things… they promised facilities and one job for each household and many things, but nothing was written. We made this boycott to remind them of their promises. We are seeing this happen again, and this is an opportunity for rights.” As this new politics of recognition develops, social mitigation programs and stakeholder engagement programs are slowly adapting and improving (Dixit & Gyawali 2010). And people are adapting so as to be included in the hydropower future.
As other critical studies have found, as development projects enter and create new territories “new forms of transnational connection are increasingly enabling ‘local’ actors to challenge the state’s well-established claims to encompassment and vertical superiority in unexpected ways” (Ferguson & Gupta 2002: 988). This precipitates complex processes of bargaining, acts of ‘counter-conduct’ (cf. Foucault 2007), and a variety of strategic positionalities (Shneiderman 2010, Scott 2009). Hydropower development and labor migration mutually engage with longstanding spatial hierarchies and center-periphery relationships—they are both extractive and promising. New structures of capitalization and government are co-evolving alongside new mobilities and patterns of exchange are co-evolving as “people move in and out spaces of bikas” (Pigg 1992: 510).

In this way, relationships of participation and resistance are constantly shifting, selectively within and between multi-scalar regimes of governance along Nepal’s hydropower frontier as intersecting subjectivities are defined, proposed, imposed, desired, contested, ignored, traded, and elaborated. This means that in the Upper Tamakoshi watershed, it is easier for ‘project-affected’ Nepalis to claim rights from the Chinese transnational SinoHydro (the largest global actor in hydropower development, operating in more than seventy-four countries) than it is to approach their own government. This means that at each project site a large percentage of the local population and workforce is working abroad in Abu Dhabi, Qatar, or Malaysia; complicating simplistic definitions of locality and extending each ‘project-affected area’ well beyond the borders of Nepal. This means that in the district of Rasuwa, there are more ‘project-affected persons’ who purchased shares in the initial public offering of stock in the Chilime Hydropower Company Ltd. than people who voted in the national elections of November 2013. These are the citizens of the emerging hydropower nation.

**Seeing the Future**

The hydropower future exists, therefore, not as a monolithic discursive object, but as a disunified discursive framework of ‘improvement’ that proliferates relationally by speaking to a variety of audiences and agendas (see Li 2007; Mitchell 2002; Roseberry 1994). The material and social interventions of hydropower development are being woven into a larger aspirational project, where millions of Nepalis are differently seeking well-being and ways of ‘becoming bikasit’ (Pigg 1992) within alternative futures and imaginaries. Hydropower development is just one manifestation of a ‘will to improve’ (cf. Li 2007) that runs through seemingly distant and disparate lives, connecting the composite citizens of a hydropower nation within a plurality of hydro-imaginaries that are differently formed and variably contested. Thus it is important to understand how the promise of the hydro-future moves upstream, how it is received and challenged, how it entangles with other projects of future making, how it succeeds or fails as it changes and fragments into new pragmatic forms, how it is lived.

In this essay, I have attempted to present a balanced, informed, and grounded analysis of the making of a hydropower nation. And the visual ethnography that complements this text highlights the work involved in this polyvalent effort, documenting local conditions of labor and mobility at a variety of project sites. Just outside the frame are millions of Nepalis who are elsewhere, connected to ‘project-affected areas’ and the concerns of the hydropower future in their own diverse ways, doing their best during a time of considerable social transition and uncertainty. Hydropower development and labor migration are interrelated in a variety of ways and at overlapping scales—connected by common urgencies and wicked problems of social justice, interwoven across landscapes of social imagination. Each hydropower project affects divergent patterns of empowerment and disempowerment, connectedness and fragmentation—yet the making of the hydropower future is itself a site of confluence.
Austin Lord (Master of Environmental Science, Yale University, 2014) is an anthropologist studying the interface of environment and economy. His ongoing research concerns processes of social and spatial change in areas affected by hydropower development in Nepal, with a particular focus on changing livelihoods and shifting patterns of migration and mobility. Austin has conducted nine months of fieldwork in Nepal, and is currently continuing this work with the support of a Fulbright grant. In the past, Austin also studied Hydrology at Portland State University and Economics at Dartmouth College. A broader collection of his photographic work can be found at www.austinlord.com.

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Endnotes


2. Erik Swyngedouw (1999) famously coined the term ‘waterscape’ to discuss the landscape of possibility produced by a group of ‘sociocultural interventions’ focused on water (Swyngedouw 1999). In Nepal, however, the majority of waterscapes are oriented specifically around hydropower potential—as Dipak Gyawali (2003) has said, the Nepalese state sees only ‘falling water’. Nusser (2014) has also recently used the term ‘technological hydroscape’ to discuss the development of large dams across the Himalayan region.

3. Between September 2012 and the time of writing, I have conducted nine months of ethnographic fieldwork in Nepal. At the time of publication I am in Nepal continuing this work as a 2014-2015 Fulbright Research Scholar.

4. A popular phrasing, echoed in Nepali newspapers and repeated several times at Power Summit 2013.

5. The Trishuli River hosts 14 hydropower projects representing 838 MW of power generation capacity; while the Tamakoshi River hosts 10 projects representing 1,617 MW of power generation capacity, including the 456 MW Upper Tamakoshi Hydropower Project (the largest project currently being built in Nepal).

6. In 1966, Nepal’s Dr. Hari Man Shrestha formally estimated that Nepali rivers could theoretically generate about 83,000 MW of electricity based on 88 billion cubic meters of storage potential, of which 43,000 MW was considered economically viable (Gyawali 2003). Due to technological developments and updated calculations, both of these figures are now generally considered to be an underestimate.

7. Referred to as ‘load shedding’ these blackouts are the result of systematized power allocations that change over the course of the year relative to demand and the seasonally available flows for existing hydropower plants, which provide roughly 90% of Nepal’s current power supply.

8. Karen Bakker has argued in her analysis of the political economy of hydropower on the Mekong River that “dams serve as important nodes of control in the interrelated processes of the changing territoriality of the state, the commodification of water, and the increasing penetration of the interests of a largely urban elite into rural areas” (Bakker 1999: 229).

9. As of September 2013, the Ministry of Energy claimed that 70 of 337 permitted hydropower projects representing were under construction or at ‘advanced stages of planning,’ Power Summit 2013.

10. See Braun 2000 for a parallel discussion of the ways in which ‘geologic vision’ changed 19th century British Columbia: “As a set of rules governing what was visible in nature, geology brought a ‘territory’ with its ‘qualities’ into being, and thus opened a space—simultaneously epistemological and geographical—that could be incorporated into forms of political rationality” (Braun 2000: 28).


12. “Social imaginaries can be understood as implicit ‘backgrounds’ that make possible communal practices and a widely shared sense of their legitimacy” (Steger 2009: 12). See also Taylor (2002) or Appadurai (1996) on the production of new social imaginaries.
13. The Asian Development Bank recently reported that Nepali migrants sent home NRs 543.3 billion in remittances (~$540 USD) during the 2013-2014 fiscal year, representing an astounding 33.1% increase from the NRs 408.1 billion of 2012-2013 (Republica 2014). Despite these massive numbers, many critics still claim that such institutionally reported figures routinely underestimate the real total of informal remittance, which may be significantly higher.

14. This discourse references several ongoing controversies concerning unjust working conditions, human rights abuses, and thousands of mortalities among Nepali migrants working in the Gulf States. Several accounts of these trends have emerged in national and global media, the most well-known being Pete Pattison’s exposé of ‘World Cup Slaves’ working in Qatar, published in September 2013.

15. Counter-conduct can be defined as “the will not to be governed thusly, like that, by these people, at this price” (Foucault 2007: 75). See also Death (2010) on the differentiation between counter-conducts and protest.


References


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