

Mapping access to water resources in Brazil and Nigeria: local dynamics and structures of power

Charisma Acey¹, Alberto de Oliveira², Alexandre José Santos Ramos³

¹University of California, Berkeley

charisma.acey@berkeley.edu

²Universidade Federal do Rio de Janeiro - UFRJ

alberto@ippur.ufrj.br

³Universidade Estadual da Paraíba – UEPB

ramos.alexandre888@gmail.com

Efforts to sustain the livelihoods of households living in poverty in rural and urban areas have gained popularity in recent decades, from integrated approaches to resource management to devolving control over resources to local actors and supporting the asset strategies of households. However, some approaches to managing water resources, such as IWRM and WDM, have met resistance due to their prioritization of water efficiency over justice (Syme and Nancarrow 2006). Moreover, studies have found that the various projects and reforms are often plagued by elite capture, corruption, mismanagement on one hand (Dasgupta and Beard 2007), unclear or impossible objectives (Biswas 2004), and the rational actions of actors fighting inevitable losses arising from the new winners and losers that emerge from institutional change (Knight 1992).

In seeking to explain the factors shaping access to natural resources, scholars have argued for a better understanding of dynamic processes of social relations and the variations in local structures that shape those relations (Ribot and Peluso 2003, Boone 2013). This paper seeks to explore this question with respect to water resources. What structures and relationships regulate access to water among households living in poverty? What conflicts arise from competing claims on water resources?

To address these questions, this paper uses two case studies of natural resource conflicts linked to water resources in Brazil and Nigeria to illustrate the

dynamics and structures shaping access to water. Data for each case comes from interviews and observations from field research, public datasets, program documents, and review of secondary literature.

The Brazil case focuses on the project for the São Francisco river transposition, which is located in Northeast region, to show its rationale and whom are the potential beneficiaries. Also the paper will highlight its expected effects in regional economy and especially in Paraíba state. The Nigeria case focuses on a new approach to community-based governance, the Global Memorandum of Understanding (GMOU) introduced in Niger Delta communities where public health and livelihoods have been compromised from ongoing contamination of water resources due to poorly managed oil exploration and resulting oil spills. The case will examine the rationale for the GMOU approach, its effects on households coping with the lack of access to water and its effect on the regional economy.

This will be done by bringing two frameworks together – The first, developed by Boone (2013) in defining land regimes in Africa, seeks to define, for each case, the local institutional structures and the rules they establish for access to water resources -- property rights, authority, citizenship, and territory. Then, we use the categories defined by Ribot and Peluso (2003) to map how these structures shape the ways that impoverished households access and derive benefits from water.

The two countries are chosen both for the large role of natural resources in each economy, the federal structure of government, and the high level of social and spatial inequality. In Brazil, the Northeast region is historically known for its lack of access to land and severe environmental conditions. Despite economic growth occurred in the 2010's and the improvement derived by social policies, the region has remained with high levels of poverty, especially among the population of the semi-arid area who have been suffering the effects of the dry season. The transposition project is surrounded of controversies related to its environmental impacts and effectiveness, although the main reason to investigate it is whether it minimizes (or reinforces) social inequalities through its impacts on the land price and production structure (Brasil 2015, Castro 2011). In Nigeria, oil revenues account for the majority of Nigeria's GDP, yet the nine states that make up the Niger Delta region are among the least developed and

improved regions of Nigeria. Conflict between local ethnic minority groups, foreign oil companies and the federal government accelerated in the 1990s while pollution, ecological destruction, and corruption destroyed the land and water (Ikelegbe 2005, Jike 2004, Watts 2004). Numerous initiatives since the return of electoral democracy in 1999 have done little to improve the situation, with the GMoU emerging as the latest strategy, with controversy over its implementation and whether it will have a positive impact on local development, including access to water and sustainable livelihood activities.

In addition, most studies on water resources and sustainable livelihoods focus on one country or one region. We aim to provide additional insights examining similar questions in different historical, social and cultural contexts.

Research has long documented how more socially vulnerable members of society face the most risk of exposure to environmental hazards and are suffer the most from poor environmental amenities and services (Martine and Guzman 2002). In fact, where inequality is greatest and democracy is absent, environmental quality, including access to clean, unpolluted water is low (Torras and Boyce 1998, Agyeman, Bullard and Evans 2002, Langford and Winkler 2013). Results of this paper show how access or the ability to use water for basic needs and livelihood activities is shaped by social relations and the peculiarities of institutional structures in each context. This paper contributes to the literature on sustainable livelihoods and access with empirical examples that “map” the social relations and structures of access.

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