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Coping with resettlement: A livelihood adaptation analysis in the Mekong River basin

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ABSTRACT

A major driver of change in the Mekong River basin relates to hydropower development and the consequent changes in landscape and natural resource access regime that it induces. In this paper, we examine how the livelihoods of resettlers evolve following resettlement, and examine the determinants of that process. The study takes place in the context of the Theun Hinboun Expansion Project in Lao PDR. Based on longitudinal household surveys conducted before resettlement as well as 1, 2, and 3 years after resettlement, we identify the process of livelihood adaptation in resettled communities. Results show varying capacity to absorb shocks and cope with change even within a small village with seemingly equal conditions. Our results suggest that a more detailed understanding of this adaptation process is key to improving interventions for rebuilding the livelihoods of those resettled by development projects in rural areas.

1. Introduction

A major driver of change in the Mekong River basin relates to hydropower development and the consequent changes in landscape and access to natural resource access regime that such development induces. Over 130 large-scale hydropower dams[1] are either operational, under construction, or planned in the Lower Mekong Basin alone (Yermoli, 2009).

Hydropower development has historically been and will continue to be a highly contentious issue in the region. While it continues to be a cost-effective mean of producing large amounts of renewable energy for the region, the environmental and social consequences of hydropower development have never ceased to attract attention. As such, it has been a popular research subject for both natural and social scientists, and has generated a rich literature (see for example, Bakker, 1999; Jacobs, 1999; Mitchell, 1998; Molle et al., 2009; Suhardiman et al., 2012). However, after decades of research, the discussion has rarely evolved beyond sounding alarms on the negative consequences of dams on the environment and local populations, and highlighting the flawed processes and power relations in which development decisions are made, including those pertaining to the design and extent of appropriate compensation packages for those adversely impacted by hydropower development.

In an early phase of the debate in the region, the emphasis was placed on the needs for comprehensive social and environmental impact assessments, and for more transparent and informed planning processes (Keskinen, 2008; Baran and Myschowoda, 2009; Kummu and Sarkkula, 2008). More recently, the nature of the argument has shifted to transboundary cost-benefit and trade-off analysis with the "water-energy-food nexus" serving as a conceptual framework (Ziv et al., 2012; Orr et al., 2012; Kuenzer et al., 2013; Keskinen et al., 2016; Winemiller et al., 2016). The key elements of the debate thus gradually shifted from an emphasis on the threat on endangered species and biodiversity (Dudgeon, 2000), to fisheries production and associated economic benefits (Baran and Myschowoda, 2009), and finally to food and nutrition security of the local populations (Orr et al., 2012; IFReDI, 2012).

At the core of this evolution lies a desire to delay hydropower development, if not to stop it entirely. This message culminated in the 2010 *Strategic Environmental Assessment for Hydropower on the Mekong Mainstream*, by the Mekong River Commission, which recommended a moratorium on mainstream hydropower develop-

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[1] Large-scale hydropower refers to those with an installed capacity of 10 megawatt or higher.

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ment for ten years, while key areas of uncertainty are being resolved by scientific and technological innovations to reduce the magnitude of negative impacts (ICEM, 2010).

Meanwhile, hydropower development continues unabated with over 30 large dams either under construction or soon to be completed in the Mekong River system and local populations continue to be impacted by such development. There is thus a crucial and continuing need to better understand the nature and extent of livelihoods development necessary for mitigating the negative impacts and assisting the affected communities to recover and build on the changes brought about by the development (Dugan et al., 2010).

Hydropower dams have already significantly altered the livelihoods of millions of individuals and households around the world.[2] Assessing the impacts of development projects on resettlers has been a fertile ground of research. While a limited number of studies have documented improved living conditions for households involuntarily resettled by hydropower development (Agnes et al., 2009; Galipeau et al., 2013), the bulk of studies have shown that resettled households generally experience a sharp deterioration of living conditions and reduced income.[3]

Researchers seeking to understand the socio-economic impacts of hydropower development on resettled households face a number of methodological challenges when estimating changes in socio-economic and livelihood conditions before and after resettlement (Galipeau et al., 2013). The most common methodology used is a recall method in which targeted households are asked to assess conditions as they are at the time of the study after resettlement, and as they remember them being before resettlement. This approach may be subject to quantitative errors as interviewed participants may not sufficiently remember how conditions were before resettlement. The extent of this challenge intensifies as more time elapse between the timing of resettlement and the timing of the study. Kura et al. (2014) have addressed this significant difficulty with the conduct of data collection both before and after resettlement with an identical group of (yet to be and then of actually) resettled households.

Other researchers have also recognized that the full impact of resettlement on livelihoods can only be understood many years after resettlement has taken place. For example, Sunardi et al. (2013) examines the livelihoods of resettled households in Indonesia 25 years after resettlement. Souksavath and Maekawa (2013) do so in Lao PDR 36–45 years after resettlement took place as a result of the Nam Ngum 1 project.[4]

Notwithstanding the difficulties alluded to above, comparing livelihood conditions at two points in time – before and one or some years after resettlement – offers important insights as to how resettled communities may have been impacted by development projects. However, it does not allow for a quantitative understanding of the dynamic process of change in livelihoods, and of the possible determinants of these changes as livelihood adaptation (rehabilitation) processes may differ across resettlers.

An important limitation in the resettlement literature pertains to its emphasis on documenting negative impacts and inadequacy of compensation for lost assets and livelihoods, rather than understanding coping strategies and adaptation of the resettled households in a new environment. Cernea (1997, 2003) and Scudder (2012) also argue for the need for shifting the emphasis of resettlement programs, from restoring the lost income back to the state before resettlement, to further development of the livelihoods of affected people above the baseline, through additional investments.

This study aims to elucidate heterogeneity of adaptation strategies within a resettled community and identify entry points for facilitating their longer-term livelihood development. While we do not frame the study within the broader hydropower debate, we hope to bring the debate closer to the reality of trade-offs as experienced by affected households and to inform future direction of hydropower governance debate towards solutions and reconciliation.

The study documents the dynamic process of change in livelihood strategies of households in 4 villages previously located along the Nam Gnouang River in Lao PDR. These households were relocated to a single resettlement site constructed adjacent to the new Nam Gnouang Reservoir which took the place of the river. For this purpose, we conducted longitudinal surveys of 100 resettled households before resettlement took place, and then with the same 100 households 1, 2, and 3 years after resettlement. Kura et al. (2014) have documented the impact on livelihoods 1 year after resettlement. In the current paper, the interest lies in the dynamics of livelihood adaptation. To our knowledge, it is the first study of this nature in the existing literature.

A first research question pertains to assessing how livelihood adaptation takes place over time (trajectory of adaptation). A second research question of interest is to assess the determinants of those changes. Given the multiplicity of adaptation trajectories, it is of importance to identify household characteristics and environmental factors which determine the pursuit of any given adaptation trajectory. We believe that the analysis may provide important insights for the design of resettlement compensation mechanisms and livelihood programs.

The background of the study and the methodological approach are discussed in the next section. Results and policy implications are presented in Section 3. Further avenues of research are suggested in Section 4.

2. Background, data, and method

2.1. Study site

The study site is located within the Nam Theun-Nam Kading watershed, a sub-basin of the Mekong River system in the Khammouane and Bolikhamxay provinces of central Lao PDR. The Theun-Hinboun Expansion Project (THXP) implemented by the Theun-Hinboun Power Company (THPC) is located on the Nam Gnouang River. It includes the construction of a dam, the creation of a reservoir, and the resettlement of 12 and 23 villages located upstream and downstream of the dam respectively (Norplan, 2008a; THPC, 2013). Significant investments from the hydropower company have gone into rebuilding the livelihoods of the displaced communities (Norplan, 2008b).

The 4 villages of interest for this study were located upstream of the dam and resettled in late 2011 to a new site known as Keosenkham. The resettlement site is located in proximity to the new reservoir and to the original villages (Fig. 1). This proximity aimed to allow the resettled villagers to access the reservoir for economic activities, and to maintain some level of continuity with the previous lifestyle and livelihoods. However, within the resettlement site, Phonkeo and Sensi villagers were allocated residential

[2] Estimated number of resettled individuals varies between 40 and 80 million (World Commission on Dams, 2000) and is growing.

[3] Bui and Schreinemachers (2011) has estimated a 66% reduction in net household income resettled by the Son La Hydropower Development project in Viet Nam. Other empirical studies reaching conclusions of a similar nature include Bui et al. (2013), Cernea (2003), Kura et al. (2014), Rampisela et al. (2009), Scudder (2005, 2012), Souksavath and Nakayama (2013), Tilt et al. (2009), and Webber and McDonald (2004).

[4] Other papers of this nature include Akca et al. (2013), Karimi and Taifur (2013), Manatunge and Takesada (2013), Matsumoto et al. (2013), Sisinggih et al. (2013), Souksavath and Maekawa (2013), and Yoshida et al. (2013).