



Universiteit
Leiden
The Netherlands

Institutional bricolage (re)shaping the different manifestations of state-citizens relations in Mekong hydropower planning

Suhardiman, D.; Manorom, K.; Rigg, J.

Citation

Suhardiman, D., Manorom, K., & Rigg, J. (2022). Institutional bricolage (re)shaping the different manifestations of state-citizens relations in Mekong hydropower planning. *Geoforum*, 134, 118-130. doi:10.1016/j.geoforum.2022.07.001

Version: Publisher's Version

License: [Licensed under Article 25fa Copyright Act/Law \(Amendment Taverne\)](#)

Downloaded from: <https://hdl.handle.net/1887/4301551>

Note: To cite this publication please use the final published version (if applicable).



Institutional bricolage (re)shaping the different manifestations of state-citizens relations in Mekong hydropower planning

Diana Suhardiman^{a,*}, Kanokwan Manorum^b, Jonathan Rigg^c

^a International Water Management Institute, Vientiane, Lao Democratic People's Republic

^b Faculty of Liberal Arts, Ubon Ratchathani University, Thailand

^c School of Geographical Sciences, University of Bristol, United Kingdom

ARTICLE INFO

Keywords:

Hydropower decision making
Local communities
Civil society organizations
Thailand
Laos

ABSTRACT

Concerns over hydropower development in the Mekong River Basin and elsewhere include not only the overall impacts of dams on basin ecology and economy but also more site-specific impacts on affected communities. While hydropower development is impacting the livelihoods of local communities living along the river, the latter's views and concerns are often sidelined by top-down hydropower planning. Nonetheless, local communities create and shape their political spaces of engagements in relation to hydropower decision making across scales, albeit through various means and with different results. Taking the planned Pak Beng hydropower dam as a case study and building on the concept of institutional bricolage, we look at: 1) local communities' responses in Thailand and Laos, including how these are influenced by social movements; 2) how these responses are translated into collective action (or the lack thereof), including in relation to local communities' (in)ability to negotiate better compensation for their to be impacted livelihoods; and 3) how local communities strategies are embedded in the wider political context and different manifestations of state-citizens relations. We argue that while affected farm households can pursue their interests to secure proper compensation through individual means, this leads to sub-optimal outcomes for affected communities collectively.

1. Introduction

Presented as a key means to promote economic growth and reduce poverty, while also supporting regional economic integration through power export for industrialization, hydropower development is occurring at a rapid pace throughout the different countries of mainland Southeast Asia (MRC, 2022; Geheb and Suhardiman, 2019; Geheb, 2018; ADB, 2009; Molle et al. 2009). More specifically, the ADB's regional power plan estimates that hydropower development will increase Laos' export revenues, enable Cambodia to develop its power sector, and support Thailand and Vietnam to diversify their energy sources and meet their energy demands up to 2025 (ADB, 2009). At present, there are 78 dams already commissioned in the Mekong River Basin, with 33 dams under construction, and 89 planned (Soukaphon et al. 2021; WLE, 2018; Hirsch, 2016; Ziv et al. 2012).

Hydropower development is positioned as one of the key means for the Government of Laos (GoL) to achieve the country's transition from

Least Developed Country status by 2026 (Tran and Suhardiman, 2020; OECD, 2017). As outlined in the country's National Socio-Economic Development Strategy (2016–2020), together with mining and agricultural plantations, hydropower dam projects are a key plank in the country's economic growth strategy¹, both through domestic electricity provision and export revenue generation. Official rhetoric in support of this strategy places rural populations as joint beneficiaries of inclusive growth, but experience to date has seen dam-affected communities in Laos often suffering diminished rather than enhanced livelihoods (Shoemaker and Robichaud, 2019; Manorum et al. 2017; Katus et al. 2016; Baird et al. 2015; Blake & Barney, 2018). This has resulted from the social and environmental impacts of hydropower development, ranging from loss of fisheries, agricultural land and communal land for livestock grazing (Sivongxay et al. 2017; Baird, 2011; Molle et al. 2009); loss of other livelihood assets in relation to resettlement (Baird et al. 2015); to the disruption of natural flow regimes and environmental degradation including significant biodiversity loss (Kummu and Sarkkula, 2008).

* Corresponding author.

E-mail addresses: suhardiman@gmail.com, suhardiman@kitlv.nl (D. Suhardiman), kanokwan.m@ubu.ac.th (K. Manorum), jonathan.rigg@bristol.ac.uk (J. Rigg).

¹ See Barney and Souksakoun (2021) on how the country's GDP growth has averaged 7% over the past two decades, while per capita GDP increased over eight-fold, from \$672 in 2000 to \$1,840 in 2019, and how this rapid growth has been accompanied by a steady accumulation of external government debt, with the latter linked to the controversial hydropower sector.

While hydropower development may benefit the country in aggregate economic terms, when attention is paid to social and environmental impacts at the local level, in specific locales and for particular social groups, then the balance of costs and benefits is less certain.

The World Commission on Dams reviewed the development performance of large dams, including their social performance with respect to affected communities (WCD, 2000). In suggesting ways forward, the Commission used its approach from “rights and risks to negotiated agreements” (WCD, 2000: 9) as the means to achieve more equitable development if projects go ahead. Nonetheless, in the context of Laos and the Mekong region, where legal frameworks are open to interpretations and rule of law is often not applied and thinly enforced, the principle of negotiation does not in itself result in more equal development, as the problem of power asymmetry especially related to the question of who is negotiating with whom, and on whose behalf, remains unresolved. In particular, the scope for negotiated compensation and resettlement arrangements to be more collective – or more individualized – has a significant bearing on outcomes.

This paper looks at how local communities respond to top-down hydropower planning in Laos and Thailand. It places local communities’ responses and strategies within the broader context of state-citizen relations with a view to illuminating the different ways states deploy their political power and authority and the manifestation of such deployments. In Laos, this is apparent in the central positioning of hydropower with the state’s national development strategy, enabling the state to use ‘national interest’ to impose its development objectives on local communities. In Thailand, the state can afford to take a more indirect approach to hydropower development, as it strategically navigates the vocal and quite influential anti-dam movement in the country. Hence, while Thailand could still technically build hydropower dams in the country, it chooses to engage with hydropower development in neighboring countries instead (Green and Baird, 2020; Hirsch, 2010; Foran and Manorom, 2009; Glassman, 2002).

Taking the planned Pak Beng hydropower dam as a case study, we look at: 1) local communities’ responses in Thailand and Laos, including how these responses are influenced by social movements; 2) how these responses are translated into collective action (or the lack thereof) including in relation to local communities’ (in)ability to negotiate proper compensation for their lost livelihoods; and 3) how local communities strategies are embedded in the wider political context and different manifestations of state-citizen relations. We argue that while affected farm households can pursue their interest to obtain better compensation through individual means, the latter leads to sub-optimal outcomes for affected communities collectively. More broadly, we also suggest that whether villagers adopt an individual or collective approach is shaped by prevailing power asymmetries, the political space afforded for social movements as intervening actors, and the place of hydropower in the national development ‘mix’.

We take two cases of local communities’ responses to hydropower planning surrounding the Pak Beng Dam, in Laos and Thailand, to take forward these aims. We are interested in answering the following questions: Why do communities affected by the same dam respond so differently? And what shapes communities’ responses? We focus in particular on consultation processes, resettlement and compensation rules and procedures. Our comparative cases illustrate how local communities’ responses are derived from their connection with civil society organization (CSO) networks, their views of the existing power asymmetries in hydropower planning, and their access to information and hydropower decision making processes. This means, we suggest, that understanding community responses lies not so much in the task of determining local level impacts, but in ascertaining national level influences. In other words, our study sites’ responses find their echo in the characteristics of the state, and the broader political context within which hydropower development is situated. CSO networks play a crucial role in shaping local communities’ strategies, but they too are rooted in broader state-citizens relations, the different manifestations of state’s

political power and authority, and how these influence local communities’ (in)ability to pursue their claims for proper compensation as an integral part of social justice (Blake and Barney, 2021). The paper highlights the importance of better understanding localized dynamics (re)shaping power relations and the different power arrangements (Ramadan and Fregonese, 2017) surrounding local communities’ responses to hydropower planning. It focuses on unpacking institutional structures, mechanisms, and processes through which such arrangements are socio-politically and spatially constructed and produced through the (re)shaping of institutional bricolage (Cleaver and de Koning, 2015) (see below).

Many factors shape the nature of communities’ response to specific planned hydropower projects, including in connection with compensation negotiations, resettlement planning, and wider regional consultation processes. In this paper, we focus on the question of collective action versus more individualised strategies, how such strategies are linked to the wider political context and different manifestations of state-citizen relations, both nationally and from the perspective of transboundary water governance (Suhardiman and Geheb, 2022). There are two key dimensions to collective action. The first is the bargaining power that comes with a unified set of claims and solidarity in negotiation, for example as achieved in the case of Pak Mun Dam in Thailand (Foran & Manorom, 2009). While there was a lot of division among villagers, they managed to present their common concerns while also engaging the wider public and society. The second is attention to non-individualised aspects of livelihoods that are impacted and hence need to be compensated, and for which alternative provision needs to be made for effective livelihood restoration. These typically include grazing land, forest-based resources, fisheries, irrigation and other community infrastructure, tenurial arrangements that give informal access to resources such as river-bank land, locally recognised access to fallow land for swidden agriculture, and access to gold panning sites. Importantly, these community accessed resources are more important for poorer groups who sometimes depend on them for their survival, than they are for more prosperous groups.

Local communities’ scope to negotiate for better compensation through either collective action or taking an individualized approach offers an entry point to trace how state-citizen relations operate in the context of top-down hydropower planning. This paper makes two contributions to such efforts. First, it brings to light the role of state political power, or the way it is perceived by its citizens, in (re)shaping local communities’ interactions, responses, and strategies with hydropower developers and local authorities. In Laos, local communities viewed the dam project as a material manifestation of state power, and therefore not open for contestation. This did not mean, however, that they could not negotiate for better compensation on an individual basis, as such negotiations did not challenge the state’s authority to determine development interventions in the nation’s interests. Rather, they were exercising their rights to negotiate with the developers for better compensation. By contrast, local communities in Thailand viewed the dam project itself as an improper imposition by the state into their local territories and affairs. Here, local communities came together to contest the dam project through collective action and in the absence of transboundary water governance rules that would allow them to demand individual compensation from the company, local communities articulated their livelihood impacts collectively. Second, it makes a case for viewing the (re)shaping of institutional bricolage (see below) as central in understanding the dynamic and contested nature of power and authority in hydropower decision-making processes, as they are playing out in local contexts. It shows how the production of authority within spatial fields (e.g. definition of impacted areas for planned hydropower dams, formulation of new compensation rules) is rooted in actors’ and institutions’ (in)ability to push for their respective demands, which in turn is linked with their access to resources (e.g. networks). These include through social mobilization, establishment of alternative inter-scalar platforms for more inclusive decision making, and alliance

formation with the company. These efforts rely both on existing institutional rules and mechanisms and the creation of new ones. Collective action in Thailand, and the absence of it in Laos, are made understandable when viewed against the political economy of development in these two countries, the different spaces of negotiation that exist, and actors' and institutions' endeavours to socially (re)construct these spaces (Lunstrum, 2013; Biersteker and Weber, 1996).

2. State's power and the (re)shaping of institutional bricolage in Mekong hydropower

Critical scholars of sovereignty highlight the need to understand "de facto or effective sovereignty" (Agnew, 2009: 3) and look at a wide range of actors (re)producing different forms of sovereignty (Emel et al. 2011; Lund, 2011; Agnew, 2009; Ong, 2006). Here, sovereignty is presented as socio-political construct shaped by actors' interests, strategies, access to resources and ongoing power struggles (Emel et al. 2011; Lund, 2011; Agnew, 2009; Ong, 2006). Placing this notion of sovereignty within the wider context of state-citizen relations and in relation to critical scholarship on state and state power, the paper highlights the dynamic and contested nature of state power in hydropower development planning and how processes of power creation are rooted in states' and local communities' abilities to (re)construct their political authority and spaces of engagements through the (re)shaping of institutional bricolage (Cleaver and de Koning, 2015; Cleaver, 2002).

States, according to Brenner et al. (2003:11) are "dynamically evolving spatial entities that continually mould and reshape the geographies of the very social relations they aspire to regulate and control". Here, the state is not only an overarching power structure, politically and administratively, but also a set of processes, beyond its apparatus (Trouillot, 2001). Acknowledging that power is "never localized here or there, never in anybody's hands, never appropriated as a commodity or piece of wealth [but] is employed and exercised through a net-like organization" (Foucault, 1980: 98), we examine how local communities' ability to act collectively is shaped by wider state-citizens relations and how these relations reflect the porous nature of states and state power (Goldman, 2008). Thus, rather than positioning state power as something absolute and monolithic, we view it as constantly co-produced and open for contestation, manifested in various forms of state-citizen relations and types of resistance, including within state spaces (Kenney-Lazar et al. 2018). Most importantly, we argue that the shaping of political spaces of engagement occurs in conjunction with the different manifestations of state-citizens relations, and how these are (re)shaped by various actors' and institutions' strategies and access to resources. These spatial fields are the locales where local communities (re)produce their pragmatic notions of political rights and authority (Lund and Rachman, 2018) in hydropower planning, for example through the formulation of new compensation rules or the formation of alternative platforms to highlight the transboundary impacts of the dam. Hence, the importance to better understand the overall processes (re)shaping institutional bricolage.

With this as a starting point, we look at how the different characteristic of the Lao and Thai states influence local communities' responses to hydropower planning and compensation. While both states are broadly authoritarian in nature, state-citizens relations take very different forms. The Lao state's political power is rooted in political legitimacy derived from a history of (successful) socialist revolution (Creak and Barney, 2018). As the country's only political party, the Lao People's Revolutionary Party (LPRP) has a very solid power base to position hydropower development centrally in the national development agenda. But the Lao state is also a weak state in terms of its ability to act, lacking technical, institutional, and financial capacity. In the context of hydropower planning, however, the Lao state's political authority enables the state to deploy foreign loans and technical expertise and private sector support to achieve its development objectives, thus addressing its incapacities (see also Kenney-Lazar, 2019 on transnational plantation). The Thai state, while it shares some of the

characteristics of a developmental state (Leftwich, 1995) – it has been termed a semi-developmental state – and has taken an authoritarian turn in recent years, still actually lacks the authority of the Lao state as it must continuously justify its policies and actions to diverse groups of stakeholders and national and local levels. This is because the country's political landscape is still shaped in important ways by the democratic lineages and institutions that emerged during the mid to late 1990s and in mid 2000s (Connors, 2006; Glassman, 2010; McCargo, 2001; Hewison, 1997). Unlike in Laos where democratic societies and practices are largely absent, the presence of a vibrant CSO network in Thailand, for instance, sets limits on what the state can do (Manorom, 2019). In the context of hydropower development, the Thai state and its agencies tiptoes nationally while engaging enthusiastically in dam construction elsewhere. The capacity of the Thai state – technical, institutional and financial – may be far greater than that of the Lao state (Vo, 2013; Doner et al. 2005) but its scope to deploy that capacity, at least within its national territory, is curtailed, as evidenced by its involvement in hydropower dam planning mostly in neighbouring countries (e.g. Laos, Myanmar). This is not to suggest, however, that the Thai and Lao state are mirror images of each other, but rather to highlight their differences.

Building on critical scholarship on sovereignty (Emel et al. 2011; Lund, 2011; Agnew, 1994) and linking this with relational approaches to space and geography (Harvey, 2006; 1996; Massey, 1998) the paper brings to light the dynamic and contested nature of state power (Kenney-Lazar, 2019) in the context of hydropower planning and the importance of understanding processes of institutional bricolage (Cleaver and de Koning, 2015) in (re)shaping such dynamic contestation. An especially important contribution of critical institutionalists, the concept of institutional bricolage explains processes of institutional change and continuity, while putting processes of institutional emergence and the shaping of political spaces engagement and collective action at the center of institutional analysis (Cleaver, 2002). Cleaver and de Koning (2015: 4) write that:

"Institutional bricolage is a process through which people, consciously and non-consciously, assemble or reshape institutional arrangements, drawing on whatever materials and resources are available, regardless of their original purpose. Adapted configurations of rules, practices, norms, and relationships are attributed meaning and authority. These refurbished arrangements are the necessary responses to everyday challenges and are embedded in daily practice".

Institutional bricolage therefore relies mainly on existing institutions or institutional elements, rather than the creation of new ones. This may be to address a broader crisis (see Carstensen, 2017), or a more limited challenge. A second feature of institutional bricolage is that it is pragmatic and problem-driven: just as an artisan selects the best tools from their toolkit for the task at hand, so those engaged in institutional bricolage draw on the repertoire of principles and practices offered by existing institutions.

In this paper, we apply the concept of institutional bricolage to show how local communities have responded to the Pak Beng hydropower project at household, village and inter-village levels, how these responses are closely interlinked with the presence and absence of social movements, and how villagers' views and strategies are embedded in, and are a reflection of, the wider political contexts in Laos and Thailand. Studies demonstrate the importance of being attentive to these other scales of action. In Nepal, Huber and Joshi (2015) have shown how processes of politicization and democratization "from below", led by local communities, have challenged the state's and private actors' attempts to limit contestation of a planned hydropower project. Through 'scale jumping', Glassman (2002) highlights the scalar politics of social movements related to the anti-dam movement in Thailand. While Green and Baird (2020) bring to light the role of anti-dam activists in challenging the methodologies of project impact assessment. Here, processes of institutional bricolage are embedded in inter-scalar power

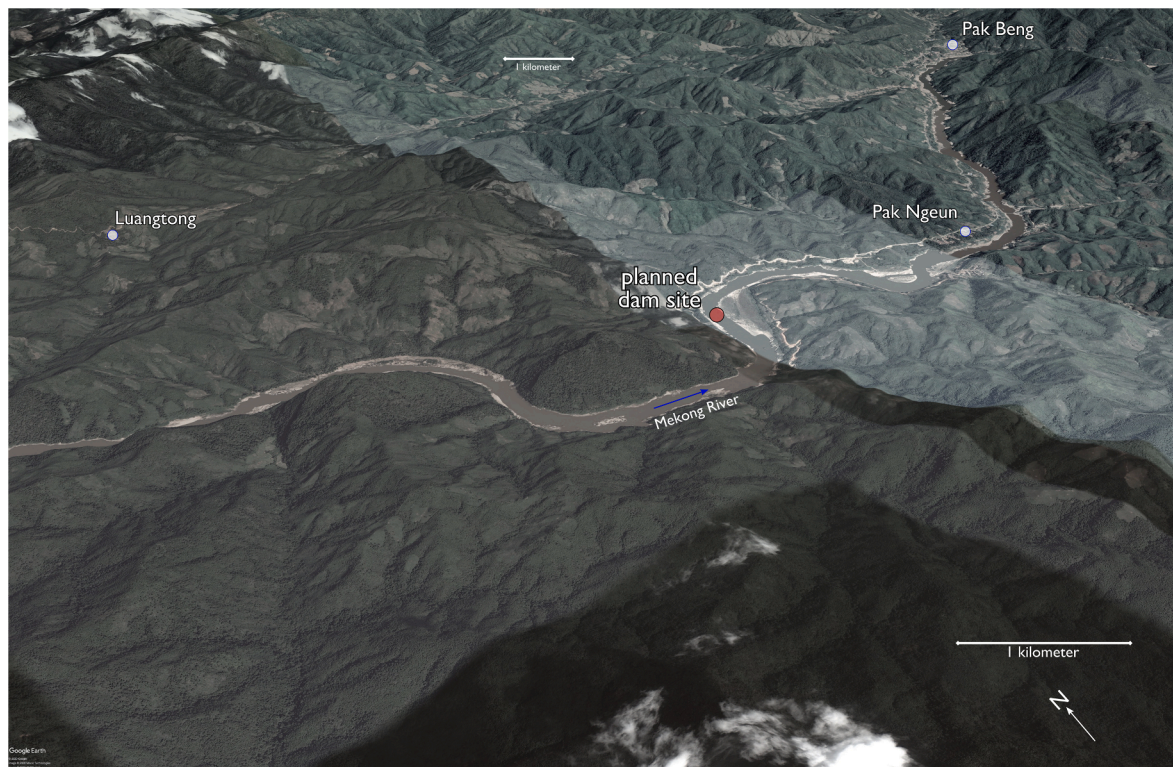


Fig. 1. Study villages, Pak Beng town and the planned dam site. Source: Authors' compilation.

dynamics. The Pak Beng hydropower dam project provides us with a single transboundary development intervention that comes to rest in very different ways in affected communities in Laos and Thailand. This raises several key questions. What are the decisive factors influencing villagers' responses to the planned hydropower project? How are these strategies embedded in the conjunctures of state-citizen relations and as products of local conditions? How do villagers view the state's development authority with regard to hydropower decision making and how does this view (re)shape their strategies to create different notions of political rights and authority? How does this in turn affect local communities' ability to convey, represent and negotiate their needs vis-à-vis the hydropower company within distinct spatial fields?

3. Research methodology

We conducted in-depth case study research (Burawoy, 1991; Yin, 1994) from February to December 2020, looking at hydropower decision making processes in general and consultation processes, compensation rules and procedures in particular. Taking the Pak Beng hydropower project as our case study, we focused on three elements: 1) how affected local communities and farm households strategically responded to the planned hydropower project; 2) how these responses and strategies were linked with the way consultation surrounding compensation were conducted by the company, and the role of civil society organization (CSO) networks, international NGOs and academics in this process; and 3) how these strategies affected, and were affected by, intra- and inter-village relations and networks.

Taking villages along the Mekong River in Thailand ($n = 3$) and Laos ($n = 2$), all of which would be impacted by the planned Pak Beng hydropower dam, we illustrate how local communities in Thailand joined forces with CSO networks and international NGOs and academics to collectively contest the planned hydropower project. This collective effort led to the establishment of the Mekong People's Forum in 2020, that serves as a platform to represent and convey local communities' views and voices. In Laos, on the other hand, the state's authoritarian power prevented local communities from doing the same. Formal state

apparatuses suppressed local communities and wider society's ability to openly voice their concerns on large-scale development projects including hydropower. Vibrant civil society networks are absent, and civil society's role and involvement stunted (Blake and Barney, 2021; 2018; Baird and Barney, 2017). In the context where autonomous collective action at the inter-village level is quickly suppressed by state agencies, affected villagers in Laos are forced to resort to individualized strategies to negotiate for proper compensation rules. While these individualized strategies might work differently depending on everyone's negotiation skills, this has led not only to sub-optimal outcomes for affected communities collectively, but has also reproduced existing power asymmetries, undermining trust within and between affected communities, and compromising the role of local leaders.

For Laos, we selected two villages, Khamkong and Thongngam,² located respectively downstream and upstream of the planned dam site. While Khamkong village will be impacted by the dam project in terms of the expected exacerbation of droughts and floods that will reduce villagers' access to their farmland (riverbank gardens, fruit tree gardens, and lowland paddy fields) following extreme flow variations from the dam operation, Thongngam village will be resettled entirely following dam construction. For Thailand, we selected two villages, Viang Somboon and Ing Doi in Chiang Khong district and one village, Huai Sung, in Wiang Kaen district, Chiang Rai Province. Huai Sung village is the last village before the Mekong River crosses the Thai border and enters Laos territory, 92 km from the planned Pak Beng dam site. Located upstream of the planned dam site, these villages will be impacted by extreme change in river flow regime following the construction and operation of the dam. Referring to inter-village relations of these three villages as our starting point for analysis, we approach them as a network of villages, hydrologically conjoined. Fig. 1 gives an overview of the Pak Beng dam site and the location of our case study villages in Laos and Thailand.

To understand how local community and farm households viewed the planned hydropower project and adjusted their strategies to contest

² All village names are pseudonyms.

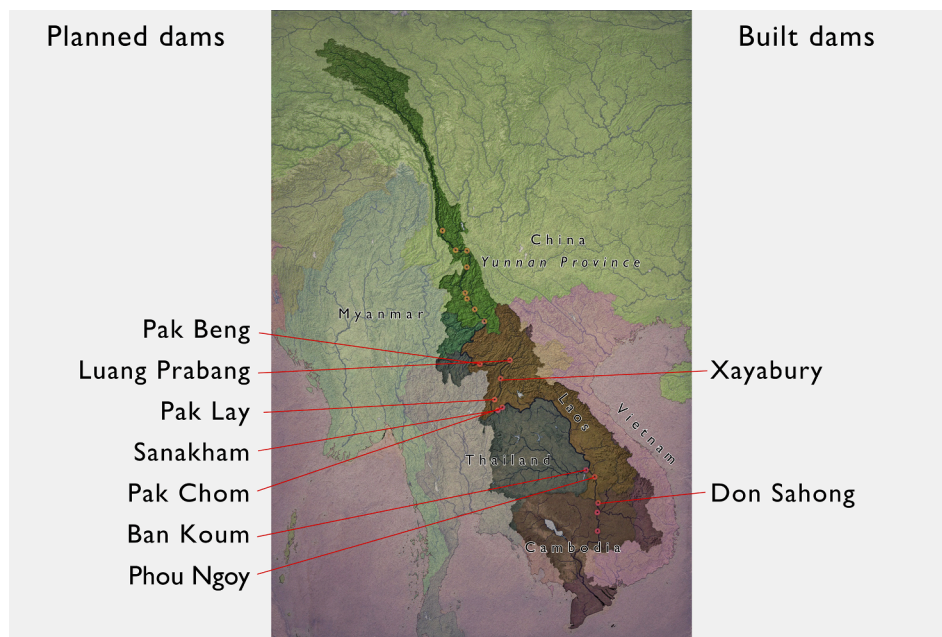


Fig. 2. Pak Beng dam location. Source: Authors' compilation.

the planned project and/or negotiated proper compensation, we conducted a series of focus group discussions, followed by in-depth semi-structured interviews with selected farm households in each village. We use these research methods not only to better understand local communities' and farm households' views and strategies, but also to contextualize the processes (re)shaping institutional bricolage both at household and inter-household level.

In Laos, the first round of the field research was carried out in February 2020 focusing on gathering preliminary information on the history of the village, main sources of livelihood, and farm households' various livelihood supporting activities³. In November 2020, the first author conducted a series of focus group discussions with village authorities, village elders, women, and groups of farm households in each of the two villages. To understand local communities' views and how these views were embedded within the broader context of state-citizen relations, we looked at the way the state formally approached compensation through its national policies and legal frameworks, and how the company and provincial government conducted its consultations and defined compensation rules and procedures. Following these focus group discussions, we undertook in-depth semi-structured interviews with selected farm households in Khamkong (n = 24) and Thongngam (n = 19). These interviews provided a better understanding of how farm households and local communities negotiated proper compensation both individually and collectively, the underpinning reasonings for the strategies they adopted, and how these reasonings were embedded in hydropower decision making processes surrounding compensation.

In Laos, in conjunction with the field research in November 2020, the first author also conducted key informant interviews with officials from the District Agriculture and Forestry Office, the Provincial Energy and Mines office (as the lead agency of the Provincial Resettlement and Compensation Committee or the PRCC), the Provincial Agriculture and Forestry Office, and the Provincial Natural Resources and Environment. These interviews were focused on the PRCC, its roles and responsibilities, and how its membership composition impacted the committee's overall functioning, especially regarding its ability to support and facilitate consultation processes surrounding resettlement and compensation. Formally, and in line with the government's legal

framework on resettlement, compensation, and grievance (2018), the PRCC was set up as an institutional body to define resettlement rules and compensation mechanisms. Legally, the National Assembly reviews these rules and mechanisms. In practice, however, the PRCC focused its role mainly on negotiating resettlement rules and compensation mechanisms with the company, often at the expense of affected communities. The PRCC's functioning is driven by the strong and close alliance between the Provincial Energy and Mines office and the Datang hydropower company, with both sharing a common interest to promote hydropower development and ensure that resettlement and compensation issues do not stand in the way of the planned development.

In Thailand, the second author conducted key informant interviews with village leaders and elders (n = 9) and in-depth semi-structured interviews with 30 farm households from our network villages comprising of 3 villages (10 farm households from each of the three villages). From these interviews, we gathered how local communities' responses to the planned hydropower project are intertwined with their connections to CSO networks. In conjunction with these interviews, the second author also interviewed other key stakeholders from the Department of Water Resources, MRC officials, CSO networks, and Thai academics involved in the social movements. Participatory observation was also done when the second author attended the Mekong People's Forum held during 1–2 December 2020 in Chiang Khong district of Chiang Rai Province.

Placing this field research in the wider context of water governance and hydropower decision making in Laos and Thailand and within the Mekong region more widely, we link our field data with policy and institutional analysis of hydropower decision making at the national and regional levels. For Laos, we focus on policies and legal frameworks in relation to hydropower development and those pertaining to compensation and grievance mechanisms. For Thailand, we look at Transboundary Environmental and Social Impact Assessment of the planned Pak Beng Dam and the consultation processes surrounding the assessment. These different entry points reflect the political spaces for engagement available in Laos and Thailand.

4. The Pak Beng hydropower project

Laos embarked on its first hydropower dam project on the mainstem of the Mekong River with the commissioning of the Xayabury dam in April 2011. The Xayabury Dam entered its first year of operation in early 2020 followed by Don Sahong which started operation in October in the

³ The first and second author conducted field research in respectively Laos and Thailand.

same year. Next to the Xayabury and Don Sahong dams, Laos has proposed a series of seven hydropower dam projects on the Mekong's mainstream: Pak Beng, Pak Lay, Pak Chom, Ban Koum, Luang Prabang, Sanakham and Phou Ngoy. The construction of these mainstream dams will significantly impact national and regional fish migration, change the river's flow regime, affect the river's biodiversity, and force local communities living along the river to transition and adapt their livelihoods (Baird, 2011; Baird et al. 2015; Baran et al. 2006; Kummur and Sarkkula, 2008). Fig. 2 gives an overview of the planned Pak Beng dam location in Laos in relation to other dams on the Mekong mainstream.

As one of the planned hydropower dam projects on the Mekong mainstream, the Pak Beng hydropower dam in Laos will affect local communities living along the river in both Laos and Thailand (International Rivers, 2017a). The Chinese developers, Kunming Engineering Corporation Limited, consider that 26 villages in Laos will be inundated by the reservoir, across the three provinces of Oudomxay, Bokeo, and Xayabury, comprising 923 households and 4,726 people (Power China, 2015). In Thailand, the developers and Thai government consider that seven villages will be impacted by the dam construction. These figures overlook the many villages located below and above the dam, in Laos and Thailand, that will be impacted by the project, but are not included as affected communities. These include the three villages we selected for our network of villages case study. They were overlooked in the environmental and social assessment process from the very start.

The Pak Beng hydropower dam project would have power generation capacity of 912 MW, with most electricity (90 percent) being exported to Thailand and the remaining 10 percent designated to Électricité du Laos (EdL). The GoL and China Datang International Power Generation Company (hereafter the Company) signed a Memorandum of Understanding to investigate the Pak Beng hydropower dam project in August 2007, though construction has been significantly delayed due to a lack of clarity regarding the power purchase agreement with Thailand (Tran and Suhardiman, 2020). Nonetheless, Datang signed a project development agreement with the Ministry of Energy and Mines in 2015 and prepared a series of studies and reports: a Social Impact Assessment, Environmental Impact Assessment, Environmental Management and Monitoring Plan, Social Management and Monitoring Plan, Resettlement Action Plan (RAP), and Ethnic Group Development Plan (Power China, 2015). As a Mekong mainstream project, the Pak Beng hydropower dam project also underwent regional consultation processes, as stipulated as part of the Procedure for Notification Prior Consultation and Agreement (PNPCA) led by the Mekong River Commission (MRC) (Suhardiman and Geheb, 2022; MRC, 2017). Important to note here is that the consultation does not oblige the company to compensate villagers' livelihood impacts from the dam, especially when these villages are not identified as potentially impacted areas in the Resettlement Action Plan prepared by the company. Hence, while discussions between local communities in Laos and the company are focused on compensation and resettlement in Laos, local communities in Thailand are involved mostly in regional/national consultation processes surrounding the dam construction. The PNPCA for Pak Beng started in December 2016 and was followed by a series of meetings, including a regional consultation meeting conducted in February 2017 and a visit to the field site in April 2017. In April 2019, the MRC published the Joint Action Plan for Pak Beng. The plan outlines key steps to be undertaken to monitor the implementation of the hydropower project, while also capturing member countries' feedback and concerns. At the time of writing, it remains unclear as to when and if the company will sign the power purchase agreement.

5. Top-down consultation processes, social movements, and the establishment of the Mekong People's Forum

To understand how local communities living along the river responded to the planned hydropower dam project, we look at how our three study villages not as individual sites but as a network of settlements

collectively negotiating access to hydropower decision-making processes. A key element in this negotiation is local communities' alliance with CSO networks, international NGOs, and academics, which led to the establishment of the Mekong People's Forum (MPF) in December 2020.

5.1. Grassroots responses to top-down hydropower planning in Thailand

Information dissemination about the Pak Beng Dam to our network of villages (and to Thai villages in general) was fairly limited and conducted in a top-down manner. Consultation was focused on the presentation of the results of the Transboundary Environmental Impact Assessment conducted by the Kunming Engineering Corporation Limited (KHIDRI) in mid-2016. As noted, the company identified only seven villages as impacted in its assessment, as against 33 villages identified in the Chiang Khong Conservation Group (CKCG) and Thai Mekong People's Networks from Eight Provinces' (TMNEP) assessment. The geographical scope of the latter study was significantly wider, covering eight provinces in the Northern and the Northeastern regions of Thailand.

Referring to the review⁴ undertaken by International Rivers (International Rivers, 2017b), local communities and CSO networks became aware of several major shortcomings in the KHIDRI impact assessment. These related to inadequate information in relation to sampling on fish migration and proposed measures to mitigate the impacts on fish migration. Local communities argued that the company had not sufficiently assessed the social and livelihood impacts of the planned dam for local communities living along the river. While these impacts are still to be seen because the Pak Beng dam is yet to be built, villagers were anxious based on their experience of other dams on the Mekong mainstream (e.g. Xayabury).⁵ Responding to these concerns, CKCG and TMNEP in collaboration with International Rivers approached the Director General of the Department of Water Resources (DWR) of Thailand to submit a letter to the MRC requesting that a broader consultation process be incorporated as part of the MRC PNPCA consultation on Pak Beng (Save the Mekong 2017). The DWR responded positively to this request because putting the request to higher policy level (transboundary level) would also bring to light and strengthen their institutional importance nationally. Formally, the DWR is the lead government agency representing the Thai National Mekong Committee (TNMC) at the MRC. Nationally, however, DWR's influence in policy formulation and implementation regarding water resources management and energy production in Thailand is sidelined by other more established government bureaucracies, such as the Royal Irrigation Department and Ministry of Energy. In this way, the Pak Beng dam became situated within a wider context of transboundary water governance, in which the weaknesses and shortcoming in the MRC PNPCA became politically visible.

By aligning the information dissemination and consultation processes with the MRC PNPCA, the CSO network in Thailand formalized these processes, improved their bargaining position, and invited, even required the company to respond to local communities' views and concerns. In practice, however, the subsequent consultation meetings in Thailand⁶ did not satisfy CSO networks and local communities. Similarly, the review that showed major shortcomings in the transboundary environmental impact assessment report did not result in any follow-up assessment. To address this issue, the CKCG together with the TMNEP used social media, press releases, campaigns, petitions, and the court as avenues to raise their concerns with the Thai government and public. On 22 May 2017, a letter issued by the CKCG was sent to the Chinese President Xi Jinping to express their concerns about the project's

⁴ This is an independent expert review. For this review International Rivers requested independent expert to review the document prepared by the KHIDRI.

⁵ See also Baird et al. (2020) on impacts on the tributaries.

⁶ Consultation meetings were held in Chiang Saen district on February 9, 2017 and in Wiang Kean district on May 18, 2017, both districts are located in Chiang Rai Province.

impacts on downstream communities in Thailand. The TMNEP also filed a lawsuit in the Thai Administrative Court against the DWR and the Thai National Mekong Committee. Falling within Thai national jurisdiction, the lawsuit could not prevent dam construction on Lao territory. But the lawsuit together with the protest did slow down progress on the dam. In the period following the lawsuit and protest in February 2018 and influenced by unclear market prospects, the Electricity Generating Authority of Thailand (EGAT) postponed the signing of the Power Purchase Agreement until the review of Thailand's Power Development Plan had been completed (Radio Free Asia, 2018).

Local communities responded strongly through various institutional pathways and procedures, formal and informal, to negotiate their access to decision-making processes surrounding the Pak Beng Dam. Their response was rooted in their strategic alliances with CSO networks and international NGOs. Local communities' ability to exercise pressure at and through different decision-making venues was derived from their appreciation of the multi-scale complexities in hydropower decision making and access to information to identify potential entry points for change – local, national, and transboundary. This, importantly, was derived from the strategic alliances they had brokered. Here, local communities, CSO networks and international NGOs demonstrated institutional bricolage as they negotiated access and exercised influence to challenge hydropower decision making. Local communities reconfigured rules, practices, norms and relationships introduced by the company in its transboundary environmental impact assessment report and the way the consultation was conducted, supported by the review from International Rivers. This reconfiguration is most apparent in the way local communities brought national policy makers in Thailand and the MRC into the negotiation processes, thus shifting decision making power from the company to these national and inter-governmental decision-making bodies.

In May 2022, the CSO network sent a petition to Thai government agencies including The Energy Policy and Planning Office under the Ministry of Energy, EGAT, Office of the National Water Resources, and Office of The Permanent Secretary for Ministry of Natural Resources and Environment. The petition asked the Thai government to cancel the power purchase agreement for the planned Pak Beng Dam due to its negative impact on local livelihoods and the ecology of the Mekong (Transborder News, 2022). At time of writing, the Pak Beng Dam plan is once again postponed.

5.2. From top-down consultation to a series of dialogues

Following the campaign, press release, and court filing, two important dialogues took place in 2018. The first dialogue was organized by the CKCG in Chiang Khong and took place on 15 January 2018. During the meeting, the TMNEP issued statements and press release about possible impacts from the dam and urged the company to undertake an integrated assessment of the Mekong dam cascade, including those in China, to ensure sustainable and fair use of the Mekong between upstream and downstream communities (Mekong Butterfly, 2018). This statement was based on a joint study on the dam's transboundary impacts, conducted by the CSO network in collaboration with local communities, the company, and academics from Chiang Mai University.

The second dialogue was organized at Chiang Mai University as a technical consultation meeting. Besides the representatives from Datang, the CSO network and TNMC (Thai National Mekong Committee) staff also joined the meeting. Key concerns raised by the CSO network comprised the need to re-study the overall impact assessment of the Pak Beng Dam, including adjusting the total areas to be impacted by the dam, and greater participation of local people in the studies through the proposed joint study on fishery impacts which involved CSOs network. After the second dialogue, however, the CSO never heard back from the company.

In February 2021, the Thai administrative court rejected an appeal for petition against the planned Pak Beng Dam (Radio Free Asia, 2021). The appeal was turned down because there were no existing Thai laws

that could be used to overrule the regional consultation aspect embodied in the MRC Procedure for Notification Prior Consultation and Agreement (PNPCA) and address transboundary impacts (Radio Free Asia, 2021). After the verdict, a disappointed Mr. Niwat, Chair of Rak Chiang Khong group said: *"The Mekong River is totally "naked" now, having no gears to protect it. That's the reason why we desperately need to create new mechanisms to help protect it. We cannot let it continue like this, thus strongly calling for new legal and mechanisms to be seriously developed and put in place"* (Bangkok Tribune, 2021).

The (re)shaping of these series of dialogues illustrates local communities' ability to shift their influence from informal to formal decision-making spheres, as part of a process of institutional bricolage. Unlike before, when local communities could mobilize protests against the planned hydropower dam projects while also relying on their alliance with CSO networks, the series of dialogues helped local communities' have their claims, views, and concerns recognized by government actors and the company. Local communities' alliance with CSO networks enabled them to broaden their claims vis-à-vis the company, though with little success regarding their ability to influence the actual outcome of the plan. Nonetheless, the series of dialogues create a space in which local communities could exert their political authority to convey their views and concerns, while placing this political spaces of engagement within the broader context of hydropower decision-making.

5.3. From social movements to the establishment of the Mekong People's Forum

In 2020, the CSO network led by CKCG and the TMNEP established the Mekong People's Forum (MPF) as a social movement emerging out of a growing concern for how hydropower dams were significantly changing the river's ecosystems and local livelihoods. Through deliberative processes, the CSO network and local communities agreed on the need for a social and political space to convey their views and voice their concerns, such as through social mobilization and the establishment of alternative inter-scalar platforms to generate more inclusive discussions. Table 1 gives an overview of the timeline that led to the formation of the MPF.

On 1–2 December 2020, the Mekong People's Forum was launched with its first forum attended by more than 100 participants from various backgrounds (the media, international development agencies, local communities, CSO network). During this meeting, all participants agreed to support the forum as a platform for local communities to convey their voices and manage the river more sustainably (Transborder News, 2020). Key ideas that were discussed included: 1) the need to set up the forum as an alternative platform for local communities to better negotiate with states, inter-governmental organizations and key donors influencing development pathways through large-scale infrastructure projects; 2) the need to strengthen and empower local communities' ability to protect the river and bring to light their role in knowledge production processes surrounding river ecosystems in general and with regard to social and environmental impact assessments in particular. A villager from Huai Luek, one of the three villages belonging to our network villages case study, articulated the strengths and attractions of the Forum in the following terms:

"We have a lot of people working together as a network, from the north and the northeast regions, many provinces. We can identify our clear goals, what to achieve, do and act. The forum will be a place where people can communicate ideas, concerns and problems and where we can share information" (Interview, September 2020).

A CKCG leader later explained how the interests of the river and the interests of local people are one and the same:

"The Mekong People's Forum will have a loose and flexible structure. Members of the forum must come from every network. The aim of the forum is to upscale voices of villagers and participate in decision making on Mekong mainstream management. We are the representatives of the

Mekong forum. We are the representatives of the Mekong River” (Interview, December 2020).

The establishment of the Mekong People’s Forum in Thailand exemplifies how a strategic alliance between local communities, CSO networks, Thai academics, and international NGOs has responded to the scalar complexities of hydropower decision making, most apparent in the way they recreated regional consultation processes as their institutional and spatial means to convey their views and concerns and to a certain extent also their authority. The MPF provides an alternative platform for discussion on resettlement and compensation while placing these within the broader political and development context. While this platform is meant to include key stakeholders from different countries in the Mekong region, in practice, due to COVID-19 travel restrictions and national border closures, MPF involvement is still limited to Thai academics, CSOs, and local communities in Thailand. Nonetheless, it creates a space for local communities to convey their views, needs, and concerns openly and outside the formally existing institutional set up and mechanism within the context of the MRC PNPCA (Suhardiman and Geheb, 2022; Shoemaker and Robichaud, 2019), while also filling the gaps of the latter. Most importantly, the MPF is designed to serve as a platform and potential entry point for local communities living along the river to join forces and act collectively. The establishment of the MPF cannot be viewed in isolation from how local communities, Thai academics, and CSO networks view their role and involvement in hydropower decision making as a manifestation of their political rights and authority to (re)shape state-citizens relations in Thailand both nationally and within the context of Mekong transboundary water governance.

6. Compensation, lack of collective action and inter-village compensation

Unlike in Thailand, where villagers came together and acted collectively to represent their views and concerns surrounding the planned hydropower project, affected farm households in Laos embraced strategies to negotiate for better compensation through individual means.

6.1. From social movements to farm households’ individual strategies to negotiate proper compensation

Khamkong village is located downstream of the planned dam site, approximately 11 km from Pak Beng town, bordering Xayabury and Bokeo provinces (Fig. 1). There are 132 households in the village, with a total population of 687 people, comprising ethnic Lao (113 households) and Khmu (19 households) ethnic groups. Villagers’ livelihood options include upland rice, lowland paddy, vegetable gardens (on the riverbanks), cash crop cultivation (e.g. job’s tears, maize, fruit and teak trees), livestock (e.g. pigs, goats, buffaloes, poultry), fishing, and local trade for agricultural and non-timber forest products (NTFPs). Next to farming activities, most farm households also engaged in artisanal gold mining. This livelihood activity, which focuses on panning for gold on the Mekong mainstream will disappear when the dam is constructed. Finally, villagers also had access to communal forest to collect NTFPs (e.g. bamboo, broom grass). While all villagers will lose their access to the riverine ecosystem (e.g. for fishing and artisanal mining), this loss of communal goods was not identified as a compensated loss, because communal goods were neither included in the assets registration process (Green and Baird, 2016) nor recognized in the country’s legal frameworks as assets that can be used individually and hence eligible for compensation.

Local history dates the establishment of Thongngam village to 1764⁷,

⁷ Villagers memorize this year as the year their ancestors came together to settle in the village and establish it as key meeting points for inter-villages trading at that time.

though village elders told us that the village was only incorporated into the country’s administrative system in 1978, following independence in 1975. The village is 40 km upstream from Pak Beng town and classified as a ‘poor’ village, without road access or electricity. It comprises 80 farm households, with 60 Lao-Tai households and 20 Khmu households. Khmu farm households started to join the village in 2010, as growing numbers were voluntarily resettled from nearby Khmu villages, thus affording better access to schools and boat transportation. As in Khamkong village, farm households’ livelihood options included upland rice cultivation, lowland paddy cultivation, cash-crops (e.g. job’s tears, maize, fruit and teak trees), livestock raising, fishing, and artisanal mining, and a small number of households (n = 9) also worked as local traders, as boat operators or in the tourism sector. Next to their agricultural land, villagers had access to 46.5 ha of communal forest⁸ for the collection of NTFPs including local food ingredients (e.g. mushrooms, vegetables, herbs). Villagers’ upland fields were not expected to be directly impacted by the planned hydropower project. However, when resettled to a new location approximately 5 km up the mountain slope from their home village location, they might lose these fields.⁹ To compensate this loss, asset registration and assessment were conducted by the company based on size of the upland fields¹⁰ as well as the number of industrial and cash-crop trees present in these upland fields. Here, the company treated Thongngam village differently from Khamkong village.

Starting from 2015, international NGOs such as International Rivers and other Thai CSOs regularly visited Thongngam and Khamkong villages to inform inhabitants about the planned hydropower dam project and how they must negotiate with the company for proper compensation, including houses, livelihood assets, residential plots and farmlands. They also encouraged villagers to try to gain more information from the company about how much compensation they would receive, based on what criteria, and when. As interviewee in Thongngam said:

Many Thai CSOs visited the village to inform villagers about the planned hydropower project, and how the project would impact villagers’ livelihood options and strategies. They have come regularly to the village since 2015. Sometimes, the village head would organize a meeting so that all villagers could hear the information shared by some people from the Thai CSOs networks. Sometimes, the Thai CSOs would interview individual farm households to gather their views and concerns on the planned hydropower project” (interview, October 2020).

Unlike other villages in Thailand, villagers’ interactions with Thai CSO networks did not result in a social ‘movement’. Villagers were concerned not to be seen as too closely identified with the CSO networks as they feared this might compromise their productive connections with local and district government staff. These reservations were reflected in the way some farm households hid their conversations with CSOs visiting the village.

Farm households in both Thongngam and Khamkong did not view collective action as beneficial in their efforts to pursue proper compensation for their loss of residential land, farmland, and other livelihood assets (e.g. teak trees, fruit trees, river garden). Villagers perceived village leadership as incapable of representing their views, needs, and concerns vis-à-vis the company and district/provincial authorities (Creak and Barney, 2018; Kenney-Lazar et al 2018). This is most apparent in the way village heads and administrative bodies

⁸ The communal forest area is delineated through the government’s Land and Forest Allocation program introduced in the early 1990s.

⁹ See also Baird and Barney (2017) on how resettled villagers could face de facto resource access challenges when they are relocated outside their community territory.

¹⁰ According to the standard compensation valuation defined by the PRCC, upland field’s compensation value equals LAK1,000/m² or LAK 10 million/ha (equivalent to respectively USD0.1/m² and USD1,000/ha).

worked together with the company to ensure all villagers complied with and followed the company's compensation rules and procedures. A farmer in Khamkong village explained: *"The company has befriended village head, village administrative bodies, and village elders to gain their full support regardless of whether or not affected villagers will be properly compensated. Hence, many villagers follow this strategy to build good relationship with the company, hoping that they could get proper compensation too"* (interview, November 2020).

In Thongngam, some villagers believed that the company and district/provincial government made certain that a weak village head was appointed to ensure villagers' compliance on resettlement and compensation rules and procedures defined by the company. District government would intervene in the village head candidate's selection through their role in approving the selected candidates. In general, villagers would select the candidates and the Deputy Village Head would send this list to the district government for approval. In this case, district government eliminated independently minded candidates in favor of more malleable candidates. One farmer said: *"The current village head is 'appointed' by the district/provincial government because he would do everything as told. Even when he knows that villagers' livelihoods are to be impacted by the planned hydropower project, he never raised any question to the company or district/provincial government during the meeting. Instead, he would just follow whatever instructions he received"* (interview, November 2020). In Khamkong village, the company allied with strong men (pu sai mee idthiphon ຜູ້ລາຍມືອິດທິພົນ [or 'men with influence'] in Lao language) and made sure they received direct benefits from the company (Harms, 2013). These strong men included some village elders, local businessmen with close connections to the company, and those with good connections to district and provincial governments. The benefits ranged from generous lunch provisions¹¹ when the company staff visited the village to conduct consultation meetings, hiring these men to work as the company's guards to watch over the company's equipment, and training some to supervise the overall road construction work. A villager in Khamkong village told us: *"The company has befriended A and his friends and relatives to make sure that they would always back up the company's decisions and ideas, even when this means they have to put aside and silence villagers' concerns about the planned dam project, including by sidelining the role of the village head and village elders"* (interview, November 2020).

Lacking any institutional support to back up their claims (Suhardiman and Rigg, 2021), villagers shape their strategies to negotiate for proper compensation individually, while relying on their negotiation skills and connections with the company and PRCC. In Thongngam village, some farmers managed to winkle out from the company or PRCC the compensation rates for their lost farmland, houses, and other livelihood assets (e.g. fruit and teak trees): *"The company or PRCC have not shared any information about the compensation payment we will receive but through my connections with some of the PRCC members I gathered that they have valued my house at LAK65 million, which I found quite reasonable, because the company will also build a new house for me in the new resettlement site"* (interview, November 2020). In Khamkong village some farmers had already negotiated with the company and PRCC staff a compensation value for their upland fields that was above the standard LAK10 million/ha: *"I do not know [can't be sure] whether the company would in the end give me the promised price for land compensation (LAK25 million/ha), but they have agreed on the price because my farmland is already leveled"* (interview, November 2020).

Lacking any clear information about how the company defined compensation values, villagers were forced to find out through their individual interactions and connections with the company and/or PRCC. One Khamkong villager said: *"Initially I heard that the company would use my mango garden for the road construction to the planned dam site. I tried to*

find out how much the company would compensate for that, but nobody shared the information about the compensation rate during the consultation meeting. Later, I decided to ask my connection at DEM and only then I heard that the company would pay only LAK20,000 for each mango tree. Relying on my connection at DEM, I negotiated with the company and explained why the defined compensation rate is too low, bearing in mind that I can sell 1 kg of mango for LAK16,000 already. Finally, the company agreed to shift the location of the road construction a bit, so as to not affect my mango garden" (interview, November 2020).

While farm households' strategies to negotiate for proper compensation might work on an individual basis, they did not work as a means to represent local communities' interests at large. When local communities' ability to convey, represent and negotiate their views, concerns and development needs are reduced to farm households' individual negotiation skills and strategies, this results in local communities losing their bargaining power. Furthermore, it also further marginalizes the most vulnerable groups, widening inequalities in the process. This is because these groups lacked assets to be compensated in the first place, and if they did have assets, they were not able to access the key networks that might be able to convey their voices and concerns. Furthermore, they were characteristically even more dependent on collective goods (e.g. river bank gardens, communal fishing grounds, artisanal mining areas along the river, and communal river weed gardens) for their livelihoods (Blake and Barney, 2018; Baird and Barney, 2017). One woman from Thongngam village explained her predicament in the following manner: *"When we move to the new resettlement site, villagers will lose not only their individual farmland, but also the communal fishing ground, river weeds¹² garden we depend on so much for our home consumption. We might be able to continue our fishing and find new river weed gardens along the river. But in case we do not, we will lose our source of income and livelihoods without the company having to give anything back. Villagers should discuss this with the company, but nobody took the leadership role and everyone is too busy securing compensation for their individual households, regardless of what we lose as a community"* (interview, November 2020). This brings to light the key limitation of farm households' strategy to individually negotiate with the company: such negotiations cannot represent villagers' loss of their collective assets.

The Lao case highlights the important role played by village heads and administrative bodies in supporting villagers' claim to proper compensation while also enabling local communities to initiate social action. Unlike the Thai case where processes of institutional bricolage resulted in strategic alliance formation involving a wide set of actors and key stakeholders across scales, institutional bricolage in the Lao case was centered on individual farm households' needs and their desire to get proper compensation from the company, regardless of how the company might compensate the wider community. Individual farm households resorted to this strategy because they viewed the planned hydropower project as a manifestation of the Lao state's political power, which they could not question or contest, at least not collectively or openly. Consequently, farm households fought for compensation for things that were defined as being impacted by the company at an individual household level and not for things of collective and communal value (for example, the riverine ecosystem for fishing), which were not regarded as compensable assets by the company (Green and Baird, 2016). Here, villagers' pragmatic notion of rights and authority are (re)produced through different spatial fields (e.g. compensation rules and agreements) and manifested in different strategies and institutional arrangements, as the latter are (re)shaped through institutional bricolage.

¹¹ In this case the company would ask the family of the strong men to prepare the lunch and pay generously.

¹² River weeds or 'khai' usually grow on pebbles in river shallows, with sufficient sediment and sunlight. Khai is an important source of nutrients for local communities and some species of fish, including the giant catfish.

6.2. (Inter) village competition undermining a key foundation for collective action

In this final section, we are interested in exploring how farm households' individual strategies to negotiate for proper compensation are translated into inter-village competition, further blocking any possibility for collective action at both intra- and inter-village level.

As noted, many farm households in both Khamkong and Thongngam villages stood to lose their upland fields and other livelihood assets following the construction of the hydropower dam. While they knew that the company was bound to compensate these losses, most lacked any information about how the company would define and calculate the compensation value and payment. Even so, households did not join forces to push for more information sharing. Similarly, while villagers from neighboring villages were aware of the circumstances, they, too, lacked information about compensation but even so did not see this as a reason to act collectively. On the contrary, farm households kept any information to themselves, believing that sharing this with others might reduce their chances of compensation.

The same was true between neighboring villages. Villagers did not view inter-village relations as something important or relevant in their efforts to negotiate for proper compensation. Indeed, quite the reverse was the case, with villagers seeing themselves as in competition, one village with another, in an effort to access the limited largesse of the company. As one farmer in Khamkong village explained: *"We do not communicate with other villagers from Thongngam village or other affected villages because to negotiate for proper compensation we depend only on the company's willingness to support us, not any other villagers from any other villages"* (interview, November 2020). Similarly, a farmer in Thongngam village said: *"We know the company is the one who can support us in our livelihood transition. Hence, we need to have good relationship with the company. How other villagers in neighboring villages think about the dam project and how much compensation they will get is not important for us"* (interview, November 2020).

Interestingly, the company only informed Thongngam villagers about how they would benefit from the planned hydropower dam project (e.g. access to electricity, construction of a new school building and health facilities, and a market place in the new village). Villagers in Khamkong were left in the dark and did not know how they would benefit. We argue that this different treatment was because the company depended on Thongngam villagers' agreement to be resettled. In Khamkong, most of the residential area will not be inundated. By promising one thing to one village, and keeping other villages uninformed, the company won villagers' support and significantly reduced the likelihood that an inter-village alliance might be forged. Such alliances are inherently risky, threatening arrest by a state that links its legitimacy to hydropower-driven development and which assumes its authority reaches into every village and each household. In Laos, only rarely do village leaders have the status and political connections to build alliances that challenge the directionality of state development in such a context (Baird and LeBillon, 2012). For Thongngam villagers, such political connections are not only absent, they have never been present. As shared by one of the village leaders: *"Our village is very remotely located and until now we still have no road access. This is because we do not have political connection with higher up political leaders"* (interview November 2020).

Arising from this, and following the introduction of the planned hydropower project by the company and local authorities, villagers came to view their fellow and neighboring villagers as competitors rather than potential allies. This is not how it used to be, when inter-village contact and cooperation was quite common and social interaction, including marriages, regular. As shared by one of the villagers: *"In the past, or prior to the project arrival, neighboring villagers would see each other and participate together in an inter-village marketplace, where everyone could come to sell and buy products from other villages"* (interview November 2020). The company's role as de facto decision makers, on

issues pertaining to compensation, how information on the latter was shared in non-transparent ways, and how the company strategically shaped its relationship separately with each village to be affected, all contributed to the maintenance and reproduction of the existing power asymmetries in hydropower decision making. Unlike the Thai case where CSO networks played an important role in mobilizing local communities' and forging an effective social movement, the company has by design or default broken down the potential of such alliances taking shape at the inter-village level in Laos. Here, rather, a strategic alliance between the company and some households worked as a double-edged sword limiting the emergence of more transparent and inclusive hydropower decision making.¹³ We argue that the way villagers viewed their fellow and neighboring villagers as potential competitors rather than as allies is rooted not only in the nature of top-down hydropower planning, but also embedded within the wider context of state-citizens relations, as the latter is reflected in their pragmatic notions of rights and authority.

7. Conclusion

We opened this paper asking why local communities affected by the same dam responded so differently, and what shaped these responses. Of course, all villages are different, but we were interested in placing these questions within the broader political context within which hydropower development is situated in Laos and Thailand.

Our comparative analysis of local communities' responses to top-down hydropower planning in Laos and Thailand illustrates the dynamic and contested nature of state power and state-citizen relations. It highlights the importance of unpacking processes of rule shaping and institutional arrangements as strategies to "extend and institutionalize control and authority within a spatial field" (Agnew, 2009: 3). This occurs day-to-day through institutional bricolage as actors and institutions (re)shape their views and pragmatic notions of political rights and authority. This is illustrated in the formation of the Mekong People's Forum as an inter-scalar decision-making platform for more inclusive transboundary water governance. Rules are adjusted to achieve actors' objectives, while relying on political connections and social networks to institutionalize such rules. Revealing these processes through the lens of institutional bricolage is key to understanding how state power is socio-politically and spatially constructed. Moreover, it brings to light how political spaces of engagement are created, sustained, and reproduced in particular localities.

In Thailand, local communities formed inter-village alliances with the support of CSO networks and pushed back at top-down hydropower planning approaches, albeit with limited leverage to influence the project's actual outcome, as their means to push for more open and inclusive regional consultations regarding the Pak Beng dam construction. By contrast, centered on getting better individual compensation, local communities and households in Laos pursued strategies that relied on their individual skills of negotiation as they sought to extract concessions from the company, and actively avoided working with other villages, even other households. Our case studies reveal that these patterns of response are rooted less in differences between villages as differences in state-citizen relations, the status and authority of the state in the village, and the different relations between villagers and the company.

Through protests, lawsuits, dialogues, and the formation of the Mekong People's Forum, local communities in Thailand created a political spaces of engagement and contestation through collective action and social movements. Focusing mostly on discussion on compensation and resettlement, local communities and households in Laos embarked individually with the company. We interpret these different approaches

¹³ See also Blake and Barney (2018) on how rising resentment and social tensions undermine inter-village relations between two close knit communities of the Tai Bor ethnic group.

as outcomes of the ways in which the Pak Beng project is situated within a distinct political economy of hydropower in each country and the authority that this bestows on the project. The Pak Beng hydropower project in Laos is a projection of the state's ambition and therefore carries the imprimatur of the state; in Thailand, it is a transboundary project that needs to be assessed and justified on its merits, and therefore open and subject to contestation from below.

7From the perspective of institutional bricolage (Cleaver and de Koning, 2015), our comparative analysis shows how the creation of political spaces of engagement and processes of institutional emergence are not only closely linked with a community's ability to act collectively, but most importantly also by how they view challenges and opportunities for such collective action (Baird, 2016). The Thai case shows how local communities' responses were strongly rooted in their strategic alliance with CSO networks. Local communities perceived the network as their means to contest existing power asymmetries and top-down hydropower decision making, even if they were not able to contest the power of the state altogether. Local communities acted collectively because they viewed the alliance as an effective way to negotiate and convey their views and concerns to the company and policy makers. The Lao case, on the other hand, illustrates how local communities viewed collective action as unfeasible, as it might invite repercussions from the state. Here, local communities did not attempt to challenge existing power asymmetries in hydropower decision making because in so doing they would be challenging the state's authority to direct development in the nation's interest. In both instances we see institutional bricolage at work, but in different ways. In Thailand, communities drew on a repertoire that drew on neighboring settlements, networks of civil society organizations, national and international; in Laos, institutional bricolage involved village and household-based 'institutions', less visible and more informal. The way local communities and individual farm households adapted their responses and strategies in Laos and Thailand illustrates that

development projects like the Pak Beng dam generate patterns of institutional bricolage that are not just tactical responses to local, short-term challenges but reflective of broader political histories and realities.

CRediT authorship contribution statement

The first author has written the original draft, designed the overall research conceptualization, conducted field work, reviewed the literature, and revised the paper. The second author has contributed to writing the original draft, conducted field work, and revised the paper. The third author has contributed to writing the original draft and revised the paper.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgement

This work was undertaken as part of, and funded by the Stockholm Environmental Institute (SEI) SUMERNET research project on "Strengthening pathways for rights-based approaches in Mekong hydropower" led by the International Water Management Institute (IWMI). The opinion expressed here belong to the authors and do not necessarily reflect those of SEI or IWMI. The authors would like to thank Teerapong Pomun for his support in field data collection in three villages in Thailand.

Appendix

Table 1

Table 1
Series of events in chronological order towards the establishment of the MPF.

2015–2016	Feasibility studies of the Pak Beng dam was approved by the Lao government. The Electricity Generating Public Company Limited or EGCO Group, a subsidiary of EGAT (Electricity Generating Authority of Thailand) agreed to co-invest on the project
November 2016	The Lao National Mekong Committee Secretariat submitted the detailed description of the planned project to the MRC Secretariat for its review and further action to inform the other member countries about the project's scope and other requirements under the PNPCA
December 2016	CKCG and NTPEMP expressed their demands to get more elaborate information about the dam Director General of Thai Department of Water Resources submitted a letter to the MRC CEO, as part of the MRC's preparation for the PNPCA process ¹ Vice President of CCCC Second Harbor Consultancy Company (the company that did EIA of Pak Beng dam) went to meet with the CKCG to explain the project's environmental impact assessment study that was conducted on the Mekong along the Thai-Lao border ²
January 2017	CKCG and its partners including the Thai Mekong People's Networks from the NTPEMP started to campaign against the project's study and participated in a public hearing The MRC Joint Committee Working Group had a meeting to inform and discuss key issues needed prior to conduct the PNPCA.
8 March 2017	EGCO held a press conference announcing to hold 30% of the share while CDTO and Électricité du Laos (EDL) hold 51 and 19% respectively ³
February - May 2017	Pak Beng dam project entered the PNPCA consultation process in February 2017 Mekong Butterfly published a report stating how MRC studies on transboundary impacts from the dam is inadequate. See also Summary of the 2nd Draft Technical Review Report on PNPCA process for the Pak Beng Hydropower Project, dated 21 April 2017. A letter issued by the CKCG was sent to the Chinese President Xi Jinping in May to express their concerns about the project's impacts on downstream people.
8 June 2017	The RCKC Group and the NTPEMP filed a petition before the lower Administrative Court
16 June 2017	Press release through the group called "Save the Mekong" to extend PNPCA and EIA report International Rivers summarized several major shortcomings of the impact assessment (International Rivers, 2016)
15 January 2018	The first dialogue between the representatives from Datang (Lao) Pak Beng Hydropower Co. Ltd. and representatives from Mekong Communities took place at Chiang Khong, Chiang Rai, Thailand (Mymekong, 2016) The NTPEMP issued press release about possible impacts
14 November 2018	The second dialogue was organized at Chiang Mai University as a "Technical Consultation Meeting" on the joint study
November 2018	EGAT decided to defer to sign the Power Purchase Agreement (PPA) for the Pak Beng dam until the completion of the ongoing review of Thailand's Power Development Plan (PDP) (Prachathai, 2018)
1–2 December 2020	Official establishment of the Mekong People's Forum (MPF)

¹ The Mekong Butterfly. <https://themekongbutterfly.wordpress.com/2017/12/22/circumventing-states-responsibility-in-transboundary-investment-the-case-of-pa-k-beng-hydropower-project-in-laos-pdr/>. Circumventing State's Responsibility in Transboundary Investment: the case of Pak Beng Hydropower Project in Laos PDR. Accessed June 11, 2021.

² Transborder News, <https://transbordernews.in.th/home/?p=15446>.

³ The Mekong Butterfly. <https://themekongbutterfly.wordpress.com/2017/12/22/circumventing-states-responsibility-in-transboundary-investment-the-case-of-pa-k-beng-hydropower-project-in-laos-pdr/>. Circumventing State's Responsibility in Transboundary Investment: the case of Pak Beng Hydropower Project in Laos PDR. Accessed June 11, 2021.

References

- ADB, 2009. Building a sustainable energy future. Asian Development Bank, Manila.
- Agnew, J., 1994. The territorial trap: The geographical assumptions of international relations theory. *Rev. Int. Polit. Econ.* 1, 53–80.
- Agnew, J., 2009. Globalization and sovereignty: Beyond the territorial trap. Rowman and Littlefield, London.
- Baird, I.G., 2011. The Don Sahong dam: Potential impacts on regional fish migration, livelihoods and human health. *Crit. Asian Stud.* 43 (2), 211–235.
- Baird, I.G., 2016. Non-governmental organizations, villagers, political culture and the Lower Sesan 2 dam in Northeastern Cambodia. *Crit. Asian Stud.* 48 (2), 257–277.
- Baird, I.G., Barney, K., 2017. The political ecology of cross-sectoral cumulative impacts: Modern landscapes, large hydropower dams and industrial tree plantations in Laos and Cambodia. *J. Peasant Stud.* 44 (4), 769–795.
- Baird, I.G., LeBillon, P., 2012. Landscapes of political memories: War legacies and land negotiations in Laos. *Polit. Geogr.* 31, 290–300.
- Baird, I.G., Shoemaker, B., Manorum, K., 2015. The people and their river, the World Bank and its dam: Revisiting the Xe Bang Fai River in Laos. *Dev. Change* 46 (5), 1080–1105.
- Baird, I.G., Manorum, K., Phenow, A., Gaja-Svasti, S., 2020. What about the tributaries of the tributaries? Fish migrations, fisheries, dams and fishers' knowledge in North Eastern Thailand. *Int. J. Water Resour. Dev.* 36 (1), 170–199.
- Bangkok Tribune, 2021. New legal mechanisms demanded to cope with transboundary impacts on the Mekong after Pak Beng dam complaint dismissed. <https://bkktribune.com/>.
- Baran, E., Jantunen, T., Chong, C.K., 2006. Values of inland fisheries in the Mekong river basin. WorldFish Centre, Phnom Penh.
- Barney, K., Souksakoun, K., 2021. Credit crunch: Chinese infrastructure lending and Lao sovereign debt. *Asia Pacific Policy Studies*.
- Biersteker, T.J., Weber, C., 1996. The social construction of sovereignty. In: Biersteker, T. J., Weber, C. (Eds.), *State sovereignty as social construct*. Cambridge University Press, Cambridge, pp. 1–21.
- Blake, D.J.H., Barney, K., 2018. Structural injustice, slow violence? The political ecology of a 'best practice' hydropower dam in Lao PDR. *J. Contemporary Asia* 48 (5), 808–834.
- Blake, D.J.H., Barney, K., 2021. Impounded rivers, compounded injustice: Contesting the social impacts of hydraulic development in Laos. *Int. J. Water Resour. Dev.* 38 (1), 130–151.
- Brenner, N., Jessop, B., Jones, M., McLeod, G., 2003. *State/Space: A Reader*. Blackwell Publishing, Oxford.
- Burawoy, M., 1991. The extended case method. In: Burawoy, M. (Ed.), *Ethnography unbound: Power and resistance in the modern metropolies*. University of California Press, Los Angeles, pp. 271–287.
- Carstensen, M.B., 2017. Institutional bricolage in times of crisis. *Europ. Polit. Sci. Rev.* 9 (1), 139–160. <https://doi.org/10.1017/S1755773915000338>.
- China, P., 2015. Pakbeng hydropower project. Social Impact Assessment Report. Kunming Engineering Corporation Limited, Kunming.
- Cleaver, F., 2002. Reinventing institutions: Bricolage and the social embeddedness of natural resource management. *Europ. J. Dev. Res.* 14 (2), 11–30.
- Cleaver, F., de Koning, J., 2015. Furthering critical institutionalism. *Int. J. Commons* 9 (1), 1–18.
- Connors, M.K., 2006. *Democracy and national identity in Thailand*. NIAS Series in Contemporary Asian History. NIAS, Copenhagen.
- Creak, S., Barney, K., 2018. Conceptualising party state governance and rule in Laos. *J. Contemp. Asia* 48 (5), 693–716.
- Doner, R.F., Ritchie, B.K., Slater, D., 2005. Systemic Vulnerability and the Origins of Developmental States: Northeast and Southeast Asia in Comparative Perspective. *Int. Org.* 59 (2), 327–361.
- Emel, J., Huber, M.T., Makene, M.H., 2011. Extracting sovereignty: Capital, territory, and gold mining in Tanzania. *Polit. Geogr.* 30, 70–79.
- Foran, T., Manorum, K., 2009. Pak Mun dam: Perpetually contested? In: Molle, F., Foran, T., Kakonen, M. (Eds.), *Contested waterscapes in the Mekong region: Hydropower, livelihoods and governance*. Earthscan, London, pp. 23–54.
- Foucault, M., 1980. *Power/Knowledge*. Selected interviews and other writings: 1972–1977. Vintage books, New York.
- Geheb, K., Suhardiman, D., 2019. The political ecology of hydropower in the Mekong River Basin. *Current Opinion Environ. Sustain.* 37, 8–13.
- Geheb, K., 2018. *Greater Mekong River Basin: Dams, data and decisions*. Available at: <http://wle-mekong.cgiar.org/dams-data-and-decisions/>.
- Glassman, J., 2002. From Seattle (and Ubon) to Bangkok: The scales of resistance to corporate globalization. *Environ. Plann. D: Soc. Space* 20 (5), 513–533.
- Glassman, J., 2010. The provinces elect governments, Bangkok overthrows them: Urbanity, class and post-democracy in Thailand. *Urban Stud.* 47 (6), 1301–1323.
- Goldman, M., 2008. Eco-governmentality and the making of an environmental state. In: Goldman, M. (Ed.), *Imperial Nature*. Yale University Press, Goldman, pp. 181–220.
- Green, N., Baird, I. 2020. The contentious politics of hydropower dam impact assessment in the Mekong River basin. *Polit. Geogr.* 83 Online first: <https://doi.org/10.1016/j.polgeo.2020.102272>.
- Green, N., Baird, I., 2016. Capitalizing on Compensation: Hydropower Resettlement and the Commodification and De-commodification of Nature-Society Relations in Southern Laos. *Ann. Assoc. Am. Geogr.* 106 (4), 853–873.
- Harms, E., 2013. The boss: Conspicuous invisibility in Ho Chi Minh city. *City Soc.* 25 (2), 195–215.
- Harvey, D., 1996. *Justice, nature and the geography of difference*. Blackwell Publishing, Malden.
- Harvey, D., 2006. *The limits of capital*. Verso, London.
- Hewison, K., 1997. The Monarchy and Democratization. In: Hewison, K. (Ed.), *Political Change in Thailand: Democracy and Participation*. Routledge, London, pp. 58–74.
- Hirsch, P., 2010. The changing political dynamics of dam building on the Mekong. *Water Alternatives* 3 (2), 312–323.
- Hirsch, P., 2016. The shifting regional geopolitics of Mekong dams. *Polit. Geogr.* 51, 63–74.
- Huber, A., Joshi, D., 2015. Hydropower, anti-politics and the opening of new political spaces in the Eastern Himalaya. *World Dev.* 76, 13–25.
- International Rivers, 2017a. Submission regarding the Pak Beng dam PNPCA. <https://www.internationalrivers.org/resources/independent-expert-review-of-the-pak-beng-dam-eia-1648>.
- International Rivers, 2017b. Independent expert review of the Pak Beng dam EIA. <https://archive.internationalrivers.org/resources/independent-expert-review-of-the-pak-beng-dam-eia-16488>.
- Katus, S., Suhardiman, D., Sellamuttu, S., 2016. When local power meets hydropower: Reconceptualizing resettlement along the Nam Gnouang River in Laos. *Geoforum* 72, 6–15.
- Kenney-Lazar, M., 2019. Relations of sovereignty: The uneven production of transnational plantation territories in Laos. *Trans. Ins. Brit. Geogr.* 45, 331–344.
- Kenney-Lazar, M., Suhardiman, D., Dwyer, M., 2018. State spaces of resistance: Industrial tree plantations and the struggle for land in Laos. *Antipode* 50 (5), 1290–1310.
- Kummu, M., Sarkkula, J., 2008. Impact of the Mekong river flow alteration on the Tonle Sap flood pulse. *Ambio* 37 (3), 185–192.
- Leftwich, A., 1995. Bringing politics back in: Towards a model of the developmental state. *J. Dev. Stud.* 31(3), 400–427.
- Lund, C., 2011. Fragmented sovereignty: Land reform and dispossession in Laos. *J. Peasant Stud.* 38, 885–905.
- Lund, C., Rachman, N.F., 2018. Indirect recognition: Frontiers and territorialization around Mount Halimun-Salak National Park, Indonesia. *World Dev.* 101, 417–428.
- Lunstrum, E., 2013. Articulated sovereignty: Extending Mozambican state power through the Great Limpopo Transfrontier Park. *Polit. Geogr.* 36, 1–11.
- Manorum, K., 2019. NGOs and civil society in Thailand. In: Chachavalpongp, P. (Ed.), *Handbook of Contemporary Thailand*. Routledge, pp. XX–XX, London.
- Manorum, K., Baird, I., Shoemaker, B., 2017. The World Bank, hydropower-based poverty alleviation and indigenous peoples: On the ground realities in the Xe Bang Fai River basin of Laos. *Forum Dev. Stud.* 44 (2), 275–300.
- Massey, D., 1998. *Power geometries and the politics of space time*. Hettner-Lecture. University of Heidelberg, Heidelberg.
- McCargo, D., 2001. Populism and reformism in contemporary Southeast Asia. *Southeast Asia Res.* 9 (1), 89–107.
- Mekong Butterfly, 2018. Statement by the Thai Mekong People's Network in Eight Provinces from the 1st Dialogue with Datang (Lao) Pak Beng Hydropower Co. Ltd. on 17 January 2018, Chiang Khong, Thailand. <https://themekongbutterfly.wordpress.com/2018/01/18/1138/>.
- Molle, F., Foran, T., Kakonen, M. (Eds.), *Contested waterscapes in the Mekong region: Hydropower, livelihoods and governance*. London: Earthscan.
- MRC, 2017. Official Prior Consultation Process of the Pak Beng hydropower project kicked off. <http://www.mrcmekong.org/news-and-events/news/official-prior-consultation-process-of-the-pak-beng-hydropower-project-kicked-off>.
- MRC, 2022. Hydropower. <https://www.mrcmekong.org/our-work/topics/hydropower/>.
- OECD, 2017. *Economic outlook for Southeast Asia, China and India: Addressing energy challenges*. Organization for Economic Cooperation and Development, Paris.
- Ong, A., 2006. *Neoliberalism as exception: Mutations in citizenship and sovereignty*. Duke University Press, Durham.
- Radio Free Asia, 2018. Thailand's Delay on Buying Lao Dam Electricity Could Trigger Rethink. <https://www.rfa.org/english/commentaries/laos-dam-03162018154503.html>.
- Radio Free Asia, 2021. Thailand Court Rejects Appeal for Petition Against Laos' Pak Beng Dam. <https://www.rfa.org/english/news/laos/pakbeng-02252021145302.html>.
- Ramadan, A., Fregonese, S., 2017. Hybrid sovereignty and the state of exception in the Palestinian refugee camps in Lebanon. *Ann. Am. Assoc. Geogr.* 107, 949–963.
- Save the Mekong, 2017. Press Release: Prior Consultation for Pak Beng Dam Must be Extended. <https://savethemekong.net/2017/06/16/248/>.
- Shoemaker, B., Robichaud, W., 2019. *Dead in the water: Global lessons from the World Bank's model hydropower project in Laos*. University of Wisconsin Press, Wisconsin.
- Sivongxay, A., Greiner, R., Garnett, S.T., 2017. Livelihood impacts of hydropower projects on downstream communities in central Laos and mitigation measures. *Water Resour. Rural Dev.* 9, 46–55.
- Soukhaphon, A., Baird, I.G., Hogan, Z.S., 2021. The impacts of hydropower dams in the Mekong River Basin: A Review. *Water* 13, 265.
- Suhardiman, D., Geheb, K., 2022. Participation and politics in transboundary hydropower development: The case of the Pak Beng dam in Laos. *Environmental Policy and Governance*.
- Suhardiman, D., Rigg, J., 2021. Aspirations undone: Hydropower and the (re)shaping of livelihood pathways in Northern Laos. *Agric. Human Values*. Online first: <https://doi.org/10.1007/s10460-021-10203-3>.
- Tran, T.A., Suhardiman, D., 2020. Laos' hydropower development and cross-border power trade in the Lower Mekong Basin: A discourse analysis. *Asia Pacific Viewpoint* 61 (2), 219–235.
- Transborder News, 2020. Australia and America support to set up Mekong People's Council. <https://transbordernews.in.th/home/>.
- Transborder News, 2022. Opposing the power purchasing agreement on the Pak Beng dam, listing to local voices. https://transbordernews.in.th/home/?p=31470&fbclid=IwAR1gnlOvk90SXJdp6wp2lmrhL_fvd1XikUAUjor1g0MU454DD5S3lm7D9E.

- Trouillot, M.R., 2001. The anthropology of the state in the age of globalization: Close encounters of the deceptive kind. *Current Anthropol.* 42 (1), 125–138.
- Vo, L., 2013. An overview of development state in Thailand: Formation and implementation of state capacity. *New Zealand Rev. Econ. Finance* 3, 20–39.
- WCD, 2000. Dams and development: A new framework for decision-making. Overview of the report by the World Commission on Dams. Earthscan, London.
- WLE, 2018. Dataset on the dams of the Irrawaddy, Mekong, Red and Salween River basins. CGIAR Research Program on Water Land and Ecosystem, Colombo.
- Yin, R.K., 1994. *Case study research: Designs and methods*. Applied social science research methods series 5. Thousand Oaks, California.
- Ziv, G., Baran, E., Nam, S., Levin, S., 2012. Trading-off fish biodiversity, food security, and hydropower in the Mekong River Basin. *Environ. Sci.* 109 (15), 5609–5614.