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# Mapping the Social Impacts of 'Damocles Projects': The Case of Thailand's (as yet Unbuilt) Kaeng Suea Ten Dam

Academic research on dams' social impacts traditionally focuses on ex-post resettlement impacts. We explore a specific subset of ex-ante resettlement impacts in this paper: 'Damocles projects', whose implementation is still uncertain. Our case study is Thailand's Kaeng Suea Ten Dam whose implementation has been uncertain for 36 years. We find the cultural life of the communities studied has been significantly shaped by the looming construction of the dam. Furthermore, most villagers report extreme anxiety induced by the threat of the project. As a consequence, many have postponed private investments. The government has also withheld public infrastructure investments, further hampering the villages' economic development. Our research highlights the negative impacts induced by projects whose implementation is still uncertain.

Keywords: Thailand; Kaeng Suea Ten Dam; large dams; social impacts; protests

## 1. Introduction

Dams are back on the infrastructure development agenda, with at least 3,700 dams (capacity: > one MW) either planned or under construction (Zarfl et al. 2014, p.161). These are expected to increase global hydropower production by 73% to about 1,700 GW (Zarfl et al. 2014, p.161). Asia (even excluding China) is a particular hotspot of dam construction, with capacity additions of almost seven GW in 2014, more than in any other region of the world (IHA 2015, p.7).

Yet many of these dam projects are extremely controversial due to their myriad negative environmental and social impacts. Prominent examples of controversial projects in Southeast Asia are Laos' Don Sahong Dam (Baird 2011), Laos' Nam Theun 2 Dam (Baird & Quastel 2015), Laos' Theun Hinboun Dam (Sparkes 2014; Whitington 2012), Laos' Xayaburi Dam (Yasuda 2015), Myanmar's Myitsone Dam (Kiik 2016), Myanmar's Mong Ton Dam (Kirchherr et al. 2016) or Cambodia's Lower Sesan 2 Dam (Baird 2016). Fifty years ago the main challenges to large infrastructure projects such as dams were mostly technical; nowadays public protests are seen by project advocates as a prime concern and cause of delays (McAdam et al. 2010, p.401; Plummer 2013b).

Delays and the associated uncertainty regarding a project's continuation cause significant negative impacts for communities that would be displaced because of these projects. This is the key message of this paper. We chose Thailand's Kaeng Suea Ten Dam, a project delayed for 36 years already, as our case study, researching the project's cultural, social and economic impacts on the communities fearing displacement. We call the Kaeng Suea Ten Dam a 'Damocles project', a term inspired by Delang & Toro (2011, p.589) who found (when researching looming dam-induced displacement in Laos) that "a constant threat [was] hanging over the villages like the sword of Damocles". The 'Sword of Damocles' phrase usually means to imply a threat of doom that could strike without warning (Koberlein 2014) (in our case: the construction of the dam) and we find that the term 'Damocles projects' accurately captures the situation of the villagers researched.[1]

The remainder of this paper is organized as follows. In section 2, we outline scholarly writings on this topic and our theoretical framing. In section 3, we discuss methods. In section 4, we summarize dam development in Thailand and present our case study. The next section maps key impacts of the proposed Kaeng Suea Ten Dam on the communities fearing displacement because of it. Our findings are summarized in section 6.

[1] We acknowledge that today's popular usage of the phrase has strayed from its original meaning since the original moral anecdote on the sword of Damocles is a narrative about the burden of responsibility (Dhankhar et al. 2012, p.3 ff.).

## 2. Theoretical Framing

Our research on the impacts of project delays builds upon the literature analysing large dams' planning phase impacts on to be resettled communities. These ex-ante resettlement impacts have been studied since the early 1960s. Probably the most notable study to date (set up as a longitudinal 'before-and-after-study') is Colson (1960), with the author analysing the lives of the Gwembe Tonga to be resettled due to the Kariba Dam straddling the border between Zambia and Zimbabwe. A second early example of scholarly analysis of dams' ex-ante resettlement impacts is Fernea & Kennedy (1966), documenting the experiences of Egyptian Nubians to be resettled because of the High Aswan Dam. More recent studies on dams' planning phase impacts are International Rivers Network (1999), Thabane (2000), Baird (2009), BankTrack et al. (2009), Baird (2011), Delang & Toro (2011) and Plummer Braeckman & Guthrie (2015).

Bartolome et al. (2000, p. 5) note that "actual physical relocation [regarding a dam project] comes a long time after the initial notifications". Scudder (1993, p.130) argues that planning may start ten years prior to resettlement for large dam projects, while for extremely large projects (such as the China Three Gorges Dam) planning may even take several generations. Yet he also states that "to date [practitioners'] resettlement planning […] continues to pay insufficient attention to the communities targeted for resettlement". Plummer (2013a, p.7) claims this also holds true for scholarly research on the topic, a claim corroborated by a recent meta-synthesis of the literature on the topic (Kirchherr et al. 2016) with the authors finding that the planning phase is least studied with only 19%-22% of articles in their set of 217 articles investigating this phase, compared to 65%-67% of articles analysing operation phase impacts.

Our research addresses this gap in the scholarly literature and further builds upon previous scholarly work via the study of an extreme case. The extreme case method (on this method: Seawright & Gerring (2008, p.297)) can be particularly helpful if researchers hope to develop a more nuanced and comprehensive understanding of a phenomenon (Nishishiba et al. 2014, p.84), in our case the impacts of uncertainty in the planning phase of a dam project. Our case is extreme for two reasons. First the independent variable we study (project delay) is a significant outlier within a larger set of cases, according to our reading. Indeed, the dam project studied has been delayed for

36 years already – we are aware of only a very few dam project worldwide with a longer delay (e. g. the plans for the Mekong Dams date back to the 1950s (Hirsch 2016, p.64)). Second, our case is extreme because the implementation of the dam studied is *still* uncertain. We consider such a 'Damocles project' to be part of a subset of dam projects at the planning phase. Most of the literature on planning phase impacts considers cases whose implementation is certain (with Fernea & Kennedy (1966, p.350) stating, for instance, that "there was no alternative to resettlement" for the Egyptian Nubians studied). This uncertainty may help to particularly reveal dams' planning phase impacts.

The planning phase only marks the very first stage of a dam project and the associated resettlement process. Scudder & Colson (1982) have suggested a four-stage conceptual framework, the most notable framework on the topic until today (Wilmsen et al. 2011, p. 357), for the analysis of dislocated people. While Scudder (2005b, p.31 ff.) combined this framework with the Impoverishment Risks and Reconstruction (IRR) Model by Cernea (1990) and further broadened it to offset weaknesses of the original framework (e. g. the framework's negligence of the wider political economy or gender issues), we find that the original framework remains a helpful conceptualization since it contextualizes planning phase impacts within the overall resettlement process. Scudder & Colson (1982) particularly highlight that a decline in living standards for those to be resettled can already occur during the first stage (planning and recruitment), yet living standards are expected to further worsen in the second stage (adjustment and coping) which starts with the resettlement. Only once stage three (community formation and economic development) is reached (with resettlers undertaking investment again), do living standards start to increase.

The framework by Scudder & Colson (1982) outlines directional expectations regarding overall impacts on to be dislocated communities during the resettlement process. Yet we find that it lacks a detailed conceptualization of the various impacts (including those impacts occurring during the planning phase). Hence, we developed an initial set of hypotheses regarding planning phase impacts based upon a novel framework on the social impacts of dams developed by Kirchherr & Charles (2016) which aggregates 27 different frameworks on the social impacts of dams (including the framework by Scudder & Colson (1982)). This framework facilitated the analysis of

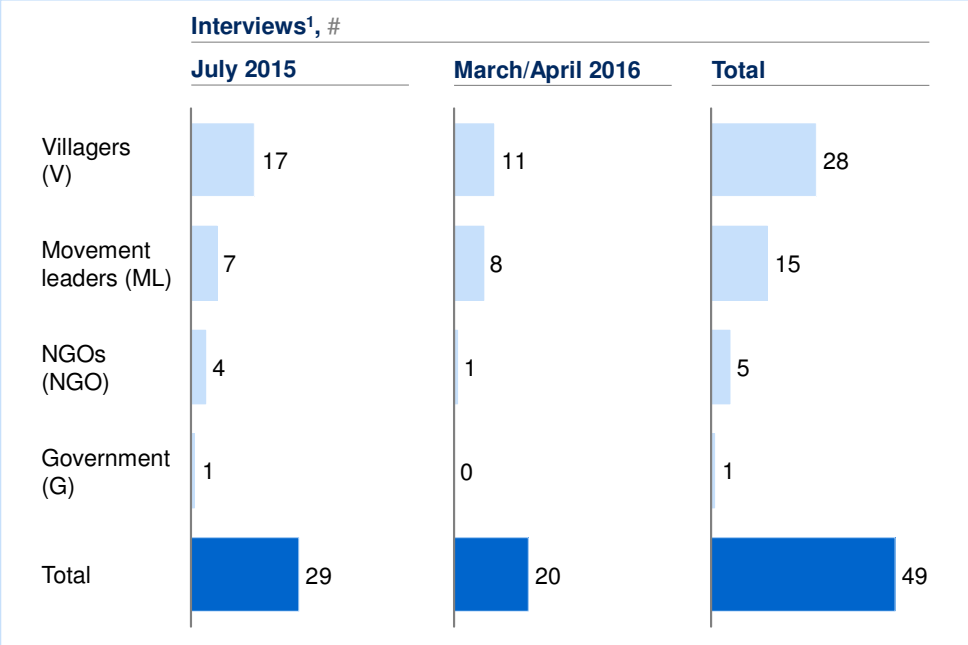
potential impacts, although we also identified several impacts through our field research (e.g. economic impacts of protest activities) that were not included in the framework.

Based upon our field research results, we distinguish between cultural, social and economic impacts. We focus mainly on the protest culture in the villages at question when analysing cultural impacts, while conceptualizing social impacts as impacts on solidarity within the villages, anxiety, and population changes. Economic impacts comprise impacts on private investments (including land speculation), public investments, and the direct and opportunity costs of the protests.

## 3. Methods

We carried out interviews for this paper over multiple weeks in July 2015 with follow-up interviews in March and April 2016. Single interviews lasted from 30 minutes to several hours at times. Overall, 49 semi-structured interviews were conducted. Given the sensitive nature of the topic, all interviewees were assured anonymity. Details regarding the interviews and interview codes are outlined in Figure 1 and the appendix.

FIGURE 1: INTERVIEWS CARRIED OUT FOR THIS PAPER




1 The first letter of the interview code used throughout the paper indicates the type of interview (V for villager, ML for movement leader (further information on movement leader's provided in section 5.1 of the paper), NGO for NGO, G for government) and the number indicates the overall interview number within a type. An F in the interview code indicates that the interview was carried out during our second round of field research.

We teamed up with the Mekong Community Institute, an NGO in Thailand, to carry out this research. Indeed, it was only thanks to the relationships of this NGO with the villagers that we were invited to the villages. One of the authors of this paper is also on the staff of this NGO. This author visited the villagers first in 1994 with the Wildlife Fund Thailand Under The Royal Patronage of H. M. The Queen (WFT) and has remained in touch with the village leadership ever since. The two remaining authors became engaged with this case in the summer of 2015. All interviews were carried out in Thai (at times with the help of a translator since only one of the three authors of this paper is a Thai native speaker; the two remaining authors do not speak any Thai). The dialect spoken in the villages is Kam Muang.

When we first reached the villages close to the suggested dam site in July 2015, our key contact, one of the movement leaders, reviewed our questionnaire with us. We were asked to remove any questions related to land ownership, private investments, and expected compensation payments as well as several interviewee feature questions (e. g. current income and employment). We agreed to these removals. When visiting the villages again in March and April 2016, we discussed with the key contact within the movement follow-ups from our research, including the fact that the lead author had presented preliminary results of the research at conferences in Thailand and the United Kingdom. The key contact in the villages welcomed these follow-ups and then allowed us to ask about topics we were asked not to raise during the first stint of field research. (We also suspect that another reason we were given permission was that the Thai military government had indicated in the meantime that this project would currently not be pursued for the time being and thus any outsiders were seen to be less of a potential threat by the villagers.)

The villagers supported our data collection, with all of our interviewer partners introduced to us via one of the leaders of the village's youth organization *Takonyom* (further discussed in section 5.1 of this paper). Selection of interview partners was seemingly arbitrary – we walked through the village from house to house asking for interviews and also interviewed those we just ran into on the streets. The movement leader who made introductions was present during half of the interviews we conducted (we had two groups of interviewers running parallel interviews). When comparing data from those interviews with the movement leader present to those with him absent, we

did not find that interviewees' responses differed systematically; the movement leader was usually not attentive while the interviews were carried out.

Nevertheless, we are very much aware that many of the answers given to us during the interviews may be exaggerated. Garikipati (2005, p. 356) points out that "the main theoretical impediment to voluntary resettlement is the problem of 'incentive incompatibility'[…]; affected have an incentive to lie if asked about their losses due to [potential] displacement". We attempted to address this bias via triangulation, also interviewing NGOs as well as a government official involved in the project. The government official first heard about the project in the early 1990s (back then as staff of an environmental NGO).

Our second stint of field research also aimed to particularly investigate issues that seemed implausible upon our first visit to the communities. We hope this triangulation and additional data collection effort has helped to balance perspectives presented in this paper. We discuss issues at a particular depth whenever we believe that data collected may not be trustworthy (e. g. population data collected, data on average household incomes in the villages). Lastly, we note that none of the results in this paper claim to be representative. Rather, we aim to present a critical analysis of the villagers' narrative regarding impacts experienced due to the (as yet unbuilt) Kaeng Suea Ten Dam.

## 4. Dam Development in Thailand and the Kaeng Suea Ten Dam

Thailand counts 218 large dams nowadays (defined as dams with a height > 15 meters) (ICOLD 2015). Large dam construction has been a facet of Thailand's development since its First National Economic Development Plan (1961-1966) (Terashima 2010). The country's very first large dam was the 535 MW Bhumiphol Dam, completed in 1964 (Aroonrat & Wongwises 2015, p.74); the Lampao Dam, a major irrigation dam, was completed in 1968 (Sata et al., 2008). A third large dam built in this time period was the Sirikit Dam, completed in 1972, an irrigation dam also with 500 MW of capacity (EGAT 2015).

Dam construction in Thailand significantly slowed from the late 1980s onwards. First, many viable sites were already taken (a comprehensive review on the current status and potential of hydropower in Thailand is provided by Aroonrat & Wongwises

(2015)). Second, numerous dam projects did not live up to their promises. For instance, the Rasi Salai Dam, completed in 1992, was built for irrigation purposes, but caused widespread salt damage in agricultural fields (Terashima 2010). Furthermore, the Pak Mun Dam project was widely criticized because of the Thai government's communication regarding resettlement as well as the project's impacts on fisheries (International Rivers 2014). Prior to construction in 1990, the government announced that 241 households would need to resettle; approximately 1,700 households were eventually displaced (Hirsch 2010). Meanwhile, planners originally identified fisheries as a major beneficiary of the project, but several migrating fish species disappeared because of the dam and the fish catch directly upstream of the dam even declined by 60-80% upon project completion (Amornsakchai et al. 2000). Likely as a consequence of such projects (in combination with increased political openness during the democratic periods in the past few decades), "public resistance to new dam projects [in Thailand] increased dramatically" from the late 1980s onwards (Bakker 1999, p. 216).

Due to various anti-dam-protests in Thailand, Thai policy-makers started to look to their neighbours for sources of electricity beginning in the early 1990s (Hirsch, 2010). A notable example is Laos' operational 1,070 MW Nam Theun 2 Dam; 93% of its electricity is exported to Thailand, with this dam thus "sending more hydropower across national borders than any other project in the history of Southeast Asia" (Baird & Quastel 2015, p. 1224).

Hirsch (2010) points out that the Pak Mun Dam (completed in 1994) is the last large dam project completed in Thailand and "the struggle of Pak Mun has become a prominent symbol of the global anti-dam-movement" (Sneddon & Fox 2008, p. 632). The struggle over the Kaeng Suea Ten Dam may currently be the most prominent anti-dam-movement within Thailand (ML7).

Construction of the Kaeng Suea Ten Dam originally was supposed to start parallel to the Pak Mun Dam in the late 1980s (Mekong Watch 2015). However, plans for the dam date back 36 years with the original plan for the Kaeng Suea Ten Dam outlined in 1980 (Apichitchat & Jung 2015). The Kaeng Suea Ten Dam, with an envisaged height of 72 meters, is supposed to be located in the Song District in Phrae Province on the upstream of the Yom River in Northern Thailand (NGO3). Besides irrigation, the dam's key purpose is flood control (Apichitchat & Jung 2015). It is

supposed to hold up as much as 1,200 million cubic meters of water in order to prevent flooding within Sukhothai Province and lower northern regions (Sarnsama 2012). The project would also feature a capactiy of 49 MW (MRC 2016). Supposedly, implementing the project would cost 3.5 billion Thai baht (100 million USD) (Mwehseng 2013). It would require the relocation of four villages, Don Chai, Don Chai Sak Thong, Don Kaew und Mae Ten, with a total population of almost 3,000 people (ML6F).

## 5. Mapping the Social Impacts of 'Damocles Projects'

### *5. 1. The Cultural Impacts of the (as yet unbuilt) Kaeng Suea Ten Dam*

Our discussion on cultural impacts particularly focuses on the protest culture that emerged in the villages. Downing & Garcia-Downing (2009) argue that (looming) displacement transforms the cultural life of those (to be) resettled; the routine culture of a village would be disrupted and a dissonant culture would emerge that "cries out for a resolution" (Downing & Garcia-Downing 2009, p.230). Indeed, we found a culture in the villages analyzed that is significantly shaped by the (as yet unbuilt) Kaeng Suea Ten Dam; villagers were permanently engaged in (and at the same time hoped to be able to soon refrain from) various protests against the project.

We found signs of the campaign against the Kaeng Suea Ten Dam all around the villages visited. Several movement leaders wore t-shirts with anti-dam-slogans. Pink graffiti saying 'NO DAM – NO WAR' (in English) was sprayed on several walls. We also saw graffiti saying 'We won't move away' in Thai on almost every house. In the evening, we would drink locally produced 'No Dam'-branded rum with the movement leaders. The head of the movement we stayed with even had several anti-dam-stickers on the mirror in his bathroom.

FIGURE 2: GRAFFITI AGAINST THE KAENG SUEA TEN DAM AND 'NO DAM' RUM BOTTLE


Protest activities (led by a committee with 140 members; all of these are denoted as 'ML' throughout the paper) comprise demonstrations in Bangkok and Chiang Mai, *Thai Baan* research, 24/7-monitoring of the dam site and ritual activities. NGOs are acknowledged to have significantly contributed to the villages' protest system and resulting protest culture particularly in the early days of the campaign (ML6; NGO1F). Prior to the collaboration with NGOs "we were just crazy protesters" (ML6). The NGOs helped build capacity within the villages so that the campaign nowadays is largely community-led, but amplified by the networks connecting it to various NGOs (ML6F; G1; NGO3).

The first NGO collaborating with the villagers was the Wildlife Fund Thailand (WFT), which particularly helped to organize visits from 1989 onwards to communities that had been resettled because of the Sirikit Dam and the Bhumibol Dam (NGO1). These visits educated villagers on the Kaeng Suea Ten Dam's potential impacts and thus prepared the ground for the campaign (NGO1; ML6). Prior to this, some villagers were not even aware that their land would be inundated because of the project (V17; ML6). Lack of awareness regarding dams' impacts was also reported by Baird (2009,

p.76 ff.) in his study of those to be resettled because of Cambodia's Lower Sesan 2 Dam, thus highlighting a crucial role NGOs may play in initiating a community's protest culture by providing villagers with crucial information.

The two key partners of the campaign lately have been the Assembly of the Poor (AoP) and Living River Siam Association (LRSA) (WFT shut down due to internal conflicts around ten years ago and relaunched only recently (NGO1)). The villagers reached out to the AoP in 1995, while cooperation with LRSA was launched in 2005 (NGO3).

Cooperation with the AoP focused on the exchange of best practices regarding protests and on demonstrations in Chiang Mai and Bangkok against dam construction in Thailand (organised jointly with other villagers fearing dam-induced dislocation and up to 121 additional NGOs) (NGO2) (on AoP: (Missingham 2002)). Meanwhile, cooperation with LRSA focused particularly on *Thai Baan* research (on *Thai Baan* research: Käkönen & Hirsch (2009, p.346)) with the aim to develop robust arguments against projects. For instance, villagers researched forest ecosystems close to the dam site (with 1,000 copies of a book eventually published by LRSA as a result of this work) (NGO1; NGO3). The villagers also developed 14 alternatives to the construction of the Kaeng Suea Ten Dam based upon this research. These include suggestions regarding the construction of smaller dams or the planting of trees in Central Thailand to enhance flood control, for instance; these alternatives were called "sound" by a government official (G1).

Another key part of the protest system is guards. Every night, two volunteers from each village go to the potential dam site to monitor for activity by the government (ML1). When suspicious activities are observed, an emergency meeting with all villagers is called. "There was a helicopter flying over the dam site at night in early 2015. We then decided that everyone from the villages would come to the site to defend our villages. The helicopter quickly disappeared" (ML1). Monitoring activities also go beyond the dam site. "Everyone in this village is a security man. Every stranger gets picked on" (ML1). One of the movement leaders recalled an instance involving the Google Street View Car that scared everyone initially. "We immediately asked the driver what he was doing here" (ML7). This anecdote indicates that a culture

of distrust and suspicion towards outsiders may be pervasive in communities impacted by projects whose implementation is still uncertain.

Ritual activities which particularly help to reaffirm group identity (Downing & Garcia-Downing 2009, p.234 ff.) are also part of the protest culture. These activities comprise regular tree ordination ceremonies (on tree ordination ceremonies: (Darlington 1998)), river ceremonies, and activities such as puppet burning (Figure 3).

FIGURE 3: RITUAL PROTESTS AGAINST THE KAENG SUEA TEN DAM

"Only three weeks ago, we burnt the **puppets of officials from the Royal Irrigation Department** which are pushing for the project. We put chili and salt on the puppets to enhance the **curse**"

Movement leader (ML7)

SOURCE (picture): www.facebook.com/thaipoor/photos

The protest culture is seemingly pervasive in the villages, with 34 of 35 interviewees reporting having taken part in at least some of the protest activities. "Everybody in these villages is an activist" (NGO2). Indeed, villagers stated that they were unified in their opposition against the project, with 23 of 23 interviewees asked arguing that they would strongly oppose the dam project. Previous research has highlighted, though, that attitudes towards a dam project can be ambiguous at times. While Baird (2009, p.72) found that all 406 villagers interviewed opposed the construction of Cambodia's Lower Sesan 2 Dam, Fernea & Kennedy (1966, p.350 ff.), for instance, report that many Nubians to be resettled because of Egypt's Aswan High Dam hoped for improved social services upon resettlement. Our interviews suggest that

the villagers' visits to communities displaced because of dams dashed any hopes regarding resettlement, with the villagers finding that displaced communities experienced significant declines in living standards (ML1; V17; ML1F) (a finding also generally confirmed by Scudder (2012, p.46 ff.) analyzing resettlement outcomes of 50 dam projects around the world).

While resistance against the project is unanimous, we found that protest involvement and thus protest culture differs based on gender and age. Women reported (with one exception) taking part in protest activities inside the villages, while men also participate in outside activities. Such gender disparities have also been found in the so-called developed world with men devoting more time to protests, on average, than women; time availability is an assumed main reason (Coffé & Bolzendahl 2010). After all, women are still expected to complete household duties (reflecting traditional role allocations) in addition to paid employment in many societies. Traditional role allocation was also identified as a reason for differences in protest activities among men and women during our field research. "We are very traditional", a movement leader said (ML6F). Thus, protests would be considered a man's task.

The youth assist the protests via a youth organization called Takonyom (translation: sediment in the Yom River). For instance, banners for demonstrations are created by Takonyom members, information regarding the project is collected in Bangkok and Chiang Mai (with various Takonyom members pursuing higher education degrees there) and news about protests are disseminated via Facebook – a medium not used by many of the elderly (V9F; V15). While the oldest member of the youth organization interviewed was 33 years old (V11), the average age is between 13 – 15 years (ML6F). Children may join at any age if viewed as mature enough by the movement leaders to meaningfully participate (ML8F).

Of those 23 villagers asked during the first stint of field research regarding their overall assessment of the campaign against the Kaeng Suea Ten Dam, 16 reported to be very satisfied with it, six somewhat satisfied and one satisfied. We found that those somewhat satisfied or unsatisfied reflected the dissonant culture, hypothesized by Downing & Garcia-Downing (2009, p.230), that "cries out for a resolution" in such 'Damocles projects'. For instance, a villager complained that "we are just never done with these protests. That frustrates me" (V5).

### *5.2. The Social Impacts of the (as yet unbuilt) Kaeng Suea Ten Dam*

We discuss three social impacts in this section: Strengthened solidarity due to the looming construction of the Kaeng Suea Ten Dam; anxieties; and population changes.

We view strengthened solidarity as a result of the protest culture found in the villages at question. Of the 21 interviewees asked during the first round of field research regarding changes in the sense of solidarity and community, 19 reported that they believed the (as yet unbuilt) dam had enhanced the sense of solidarity and community in the villages. Villagers felt they could entirely rely upon each other and that the protests had also strengthened ties across generations; they said that such a level of trust and collaboration would not be found in any other villages in the province (V16; V12).

While an increase in solidarity might be an unexpectedly positive impact of 'Damocles projects', this is by no means guaranteed. Furthermore, scholarly writing on dams' planning phase impacts frequently highlights the significant stress felt by those to be displaced (with Bartolome et al. (2000, p.5) arguing, for instance, that this period would be one of "enormous psycho-social anxieties for the to-be-relocated communities"). Anxiety was also particularly highlighted by Colson (1960) in her study of the Gwembe Tonga to be relocated because of the Kariba Dam, by Thabane (2000) in his study of those to be displaced because of Lesotho's Mohlae Dam and by Delang & Toro (2011) in their study of those to be relocated because of Laos' Ye Katam Dam. These findings are also confirmed by our study, with 18 of 23 interviewees mentioning 'anxiety' during the first stint of field research as the key negative impact of the project. The significant sense of solidarity and community in the villages could thus not offset increased anxiety. "It is a permanent mental worry. Tomorrow, our lives could be gone" (V16). According to the interviews carried out, this anxiety particularly manifests in sleeping disorders with four villagers and two movement leaders reporting sleeping disorders (V2F; V3F; V4F; V6F; ML1; ML4) (despite no direct question asked on sleeping disorders). Furthermore, one villager reported that his father took pills to cope with the stress due to the looming project (V9F). Another villager attributed the worsening of her hypertension to the project (V11F).

Two interviewees from the first round of field research even believed that suicides in the village were caused by dam-induced stress (V16; ML5). We investigated this claim again during our second round of field research. Of the 17 interviewees asked

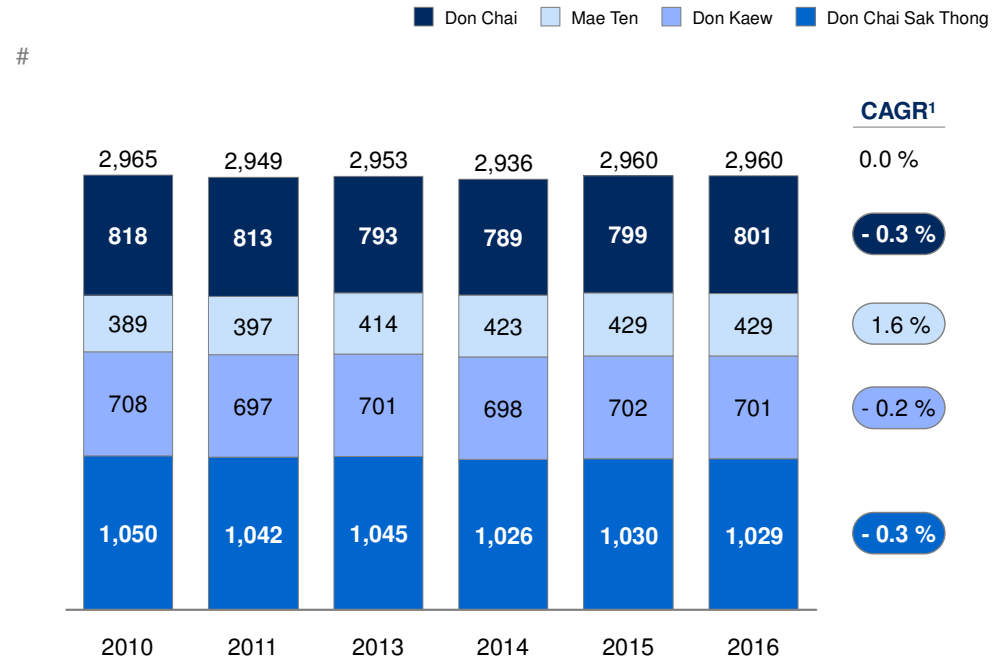
about the suicides, 13 had never heard about any suicides in the villages at question. “I was always worried that something like a suicide may happen, though”, one of the movement leaders said (ML1F). four interviewees had heard about a suicide (with one even providing the name of the deceased), but all claimed this was unrelated to the looming dam construction and due to personal reasons (V1F; V8F; ML4F; ML5F). “He had problems with his wife”, a movement leader explained (ML5F).

Several movement leaders argued that anxiety would be greater for movement leaders than the villagers. “I visited villages resettled and saw the negative impacts resettlement has. Most villagers only heard stories”, one said (ML1F). Another movement leader found the leadership role stressful, outlining the resistance against the dam as a task almost too great to handle. “We are just small people against a big project” (ML8F). A third leader was particularly stressed because he feared the government may “hurt me or take me away” due to his role in the protests (ML3F).

Baird (2011) reports that villagers felt particularly anxious because of the looming construction of Laos’ Don Sahong Dam since they feared they might lose their fish stocks. Fear of losing a source of livelihood was also mentioned as a main cause for anxiety in several of our interviews (V2; ML2; V10). Yet additional causes of anxieties were also identified. Two of the younger villagers reported that anxieties were also caused by those supporting the dam project downstream (V1; V11). "I went to a school downstream. When my teacher heard where I was from, he asked: ‘Why are you opposing this dam?' I got a lot of unfair grades because I come from this village” (V1). It should be noted that seven of 23 villagers asked acknowledged that the dam would contribute to flood control downstream.

We had originally expected that anxieties would cause a reduction in the villages’ population and we suspected that Thailand’s rapid urbanization would further accelerate this population reduction (Thailand’s urban population stood at 50.4% in 2015 (CIA 2016a), compared to 33% in 2008 (CIA 2016b)). Yet government data provided by the leader of the anti-dam-movement did not back this hypothesis (ML6F). According to the data, the population has remained stable in the past six years with a marginal decline in three villages and population growth in one of the villages (Figure 4). Data prior to 2010 could not be obtained.

FIGURE 4: POPULATION CHANGES IN VILLAGES FEARING RELOCATION BECAUSE OF KAENG SUEA TEN DAM




1 2010 – 2016 compound annual growth rate

We suspect that this data may not reflect the actual changes in the population of the villages, though. One of the movement leaders explained that the movement aims to showcase that the villages are growing since growing villages would signal vitality to the government and thus strengthen the villagers' negotiation power (ML4F). Hence, young people that move away upon graduation from high school (mostly for higher education) remain registered in the villages to avoid any population decline in the government statistics (V1F; ML1F; ML2F; ML1F). Estimates regarding the share of young people moving away varied widely – from 10% (ML6F) to 80% (ML2F).

Since none of the 49 interviewees suggested that villagers would move away specifically because of the (as yet un-built) Kaeng Suea Ten Dam, it cannot be claimed based on the data collected that the looming construction of the Kaeng Suea Ten Dam has induced de facto changes in the villages' population. The information provided by various interviewees regarding population registration policies suggests, though, that population in the four villages may de facto be declining.

### *5.3. The Economic Impacts of the (as yet unbuilt) Kaeng Suea Ten Dam*

Four economic impacts on the villages at question were identified during field research: Delays in private investment; land speculation; lack of public investment; and the direct and opportunity costs of the anti-dam-campaign.

Previous scholarly writings have highlighted that private investment would be delayed by those fearing relocation because of a dam project. For instance, BankTrack et al. (2009, p.19) found that those expecting relocation because of Laos' Theun-Hinboun Dam stopped planting timber and fruit trees. During the first round of field research, we were not allowed to directly ask anything on private investment behaviour. Yet one interviewee brought up the topic, stating that he would not build a house despite sufficient savings because he feared it may be flooded soon (V13).

During the second round of field research, the movement leaders allowed us to ask about this issue. Of those 14 interviewees asked (eight villagers, six movement leaders) eight reported to have delayed investments because of the dam at some point, while six reported to never have delayed investments because of it. Movement leaders hoped to prevent delaying investments since, "if you delay your investments that means giving up" (ML7F). Nevertheless, four of the six movement leaders asked actually acknowledged to have delayed investment because of the project at some point. A reason stated was that the leaders oftentimes feared even more than the villagers that the dam would be constructed soon due to their direct interactions with the project's advocates (ML1F; ML8F).

We also found that land speculation took place from 1989 onwards that further disrupted the village's economy. Investors were from Sukhothai Province and Phitsanulok Province as well as Lampang Province (with most investors from Sukhotai Province) (ML3F; V4F; V9; ML3; V7F). Land was sold for 20,000 Baht [570 USD] per rai [1600 $m^2$] (ML5F). While investors from Sukhothai Province and Phitsanulok Province were allegedly related to politicians and policy-makers in the Ministry of Agriculture and Cooperatives and thus knew about the project and possible land compensation payments, investors from Lampang Province were Mae Mok Dam resettlees that thus understood how to gain from dam-induced land compensation (ML5F; NGO3). According to governmental records, seven percent of the total land to be flooded was sold to outside investors (G1).

Originally, the villagers did not understand that the investors only wanted to buy their land to gain compensation payments; it was the AoP that helped the villagers to understand this connection (NGO3; ML1F). The villagers then wanted their land back and were able to successfully regain it until 1994 (ML1F; ML2F). One of the movement leaders estimated that only five percent of the land sold was actually bought back by the villagers for half of the price. The rest of the land "was just taken back. Which was easy because people were afraid to come here" (ML1F). This was confirmed by a government official who said that "the villagers threatened investors to kill them if they return" (G1).

While private investment in the villages plummeted overall, as discussed before, the land speculation and the promised compensation also led to additional selected investments with both villagers as well as investors planting trees on their land as a response to the initially outlined compensation scheme (with compensation promised both for land and trees) in order to maximize potential compensations (ML6; ML6F).

Previous writings on this topic particularly highlight a lack of government investments during the planning phase in communities to be resettled (Scudder 1993, p.130 ff., International Rivers Network 1999, p.31 ff.). WCD (2000, p.99) called this" a form of 'planning blight'". Such a 'planning blight' was also found during our field research. The villages likely to be impacted by the dam were even blacklisted by the Thai government in 1987 for infrastructure investments for 10 years – after all, the villages were expected to be inundated soon (V17; G1; V9; V13; V15; G1). According to our interviews, the villages were connected to the national electricity grid in 1983; water supply and plumbing was only installed in 2012, though, and it was claimed that public infrastructure investment was still less than that of comparable villages in the province (V5; V17; ML3; G1).[2] The removal of the villages from the blacklist in 1997 was aided by the AoP with all its members signing a pledge asking the government to continue infrastructure investments in the villages in question (NGO2).

Lastly, the campaign against the project imposes direct and opportunity costs on the villages. All protest activities are financed via a dam opposition fund and the various

[2] Concrete public investment figures regarding the villages in question and comparable villages could not be obtained.

protest activities, most notably travel to protest locations as well as ritual activities (ML6F), are financed by this fund. The fund (with a volume of around 140,000 Baht [4,000 USD]) is maintained by the movement leaders (ML5F). 70,000 Baht – 80,000 Baht is gathered via a 'mandatory payment' (ML5F; ML6F) – with households asked to contribute 100 Baht each whenever funding runs low and approximately two-thirds of the 1206 households actually then contributing (ML4; ML6F). The remainder is collected via donations (ML5F; ML6F). Most interviewees reported to have donated 100 Baht each in the past year.

According to one of the movement leaders, the average household in the villages at question has an *annual* income of 25,000 Baht [USD 718] (ML5F). No governmental data could be obtained in order to verify this estimate. We suspect this estimate to be significantly low since the average *monthly* income in Thailand is reported to stand at 25,403 Baht [USD 725] (NSO 2016). Even if the movement leader's estimate is correct, with each household then spending 200 Baht [USD 6] on this fund annually, this would only equate to 0.8% of a household's income. Investments in the dam opposition fund are thus a negligible economic impact for the average villager.

Opportunity costs must also be considered, though. These are different for villagers and movement leaders. The 11 villagers asked were unable to provide a concrete estimate regarding the hours spent in a month or year on protests since no fixed schedule for protests exists; protests are simply organized (or intensified) if the villagers believe that the government may attempt to construct the dam again (ML8F). Meanwhile, the secretary of the movement claimed to spend 80% of his time on the movement (ML3F). Travel to and protests in Bangkok are particularly time-consuming. Time spent at protests – with some demonstrations in Bangkok lasting 2-3 weeks – is not reimbursed via the dam opposition fund (ML7F; V6). Hence, lost earnings may be a significant economic impact of the dam for the movement leaders, while main economic impacts for the villagers due to this 'Damocles project' are those occurring due to delayed private investment, land speculation or lack of public investment.

## 6. Conclusion

Large dams may offer various benefits. For instance, the existing 50,000 large dams worldwide provide irrigation water to feed 800 million people (Nombre 2014, p. 1). Yet

the construction of large dams comes at a cost. To promote enhanced living conditions for the majority, a minority of local residents must face displacement.

The typical scholarly article on the social impacts of dams investigates a dams' resettlement impacts 5-10 years after project completion (Kirchherr et al., 2016, p.10). A frequent focus is on how to mitigate these ex-post resettlement impacts (Scudder 2012, p. 37). Plummer (2013, p. 7) calls this "the body of literature on the question [on] 'how to get it right'. [However,] attention must turn to the question on 'how to get it right *on time*'", with Plummer Braeckman & Guthrie (2015) arguing that the project-affected communities lose more from pre-construction delays than any other dam project stakeholder. Our case study corroborates this claim, mapping the impacts of pre-construction delays on to be displaced communities via a study of communities near Thailand's (as yet unbuilt) Kaeng Suea Ten Dam, a project that has been at the planning stage for 36 years. We call this project a 'Damocles project' since the villagers fear that doom (in this case: the construction of the dam) could strike anytime.

We found that the cultural life of the village has been significantly shaped by the looming dam project. While this altered cultural life may have helped to enhance solidarity, most villagers still reported extreme anxieties induced by the project. As one result of these anxieties, many villagers have postponed major private investment. Furthermore, we found that land speculation took place, initiated by outside investors, to gain land compensation. The land was eventually sold and/or taken back by the villagers. Furthermore, we found that the government has withheld infrastructure investment, even blacklisting the villages from any infrastructure investment for ten years. Lastly, we found that maintaining the sophisticated system of protest requires significant time investments (and thus results in significant lost earnings) for the leaders of the movement. Overall, the (as yet unbuilt) Kaeng Suea Ten Dam has thus significantly disrupted and altered the cultural, social and economic life of the villages studied.

We hope to further broaden the perspective on the social impacts of dams to the planning phase via our research. Our case study particularly highlights the significant negative impacts induced by dams whose implementation is still uncertain on to be displaced communities. We note that this research has not assessed whether the Kaeng Suea Ten Dam should be built or not. If a project such as the Kaeng Suea Ten Dam was

built, though, we find that villagers must not only be compensated for their lost land and houses, but also for the various negative cultural, social and economic impacts that occurred during the planning phase of the project. We imagine and recommend that these costs of uncertainty should even be specifically accounted for in future best practice social safeguards policies.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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## Appendix

**Table 1**: Interviewees

| # | Interviewee | Association | Code |
|---|---|---|---|
| **1** | 19-year-old girl | Don Chai/Don Chai Sak Thong | V1 |
| **2** | 33-year-old woman | Don Chai/Don Chai Sak Thong | V2 |
| **3** | 35-year-old woman | Don Chai/Don Chai Sak Thong | V3 |
| **4** | 53-year-old woman | Don Chai/Don Chai Sak Thong | V4 |
| **5** | 58-year-old woman | Don Chai/Don Chai Sak Thong | V5 |
| **6** | 59-year-old woman | Don Chai/Don Chai Sak Thong | V6 |
| **7** | 60-year-old woman | Don Chai/Don Chai Sak Thong | V7 |
| **8** | 62-year-old woman | Don Chai/Don Chai Sak Thong | V8 |
| **9** | Woman | Don Chai/Don Chai Sak Thong | V9 |

| | | | |
|---|---|---|---|
| **10** | Woman | Don Chai/Don Chai Sak Thong | V10 |
| **11** | 33-year-old man | Don Chai/Don Chai Sak Thong | V11 |
| **12** | 38-year-old man | Don Chai/Don Chai Sak Thong | V12 |
| **13** | 45-year-old man | Don Chai/Don Chai Sak Thong | V13 |
| **14** | 58-year old headman in one of the villages | Don Chai/Don Chai Sak Thong | V14 |
| **15** | 59-year-old man | Don Chai/Don Chai Sak Thong | V15 |
| **16** | 72-year-old man | Don Chai/Don Chai Sak Thong | V16 |
| **17** | Man | Don Chai/Don Chai Sak Thong | V17 |
| **18** | 39-year old female leader within movement | Don Chai/Don Chai Sak Thong | ML1 |
| **19** | 56-year old wife of the head of one of the villages | Don Chai/Don Chai Sak Thong | ML2 |
| **20** | 61-year old female leader within movement | Don Chai/Don Chai Sak Thong | ML3 |
| **21** | 29-year-old leader within *Takonyom* | Don Chai/Don Chai Sak Thong | ML4 |
| **22** | 58-year old male leader within movement | Don Chai/Don Chai Sak Thong | ML5 |
| **23** | Monk | Don Chai/Don Chai Sak Thong | ML6 |
| **24** | Male leader within movement | Don Chai/Don Chai Sak Thong | ML7 |
| **25** | Former staff | Living River Siam Assocation | NGO1 |
| **26** | Staff | Assembly of the Poor | NGO2 |
| **27** | Staff | Living River Siam Assocation | NGO3 |
| **28** | Staff | Mekong Community Institute | NGO4 |
| **29** | Government official | Ministry | G1 |
| **30** | 42-year-old man | Don Chai/Don Chai Sak Thong | V1F |
| **31** | 50-year-old woman | Don Chai/Don Chai Sak Thong | V2F |
| **32** | 50-year-old woman | Don Chai/Don Chai Sak Thong | V3F |
| **33** | 47-year-old woman | Don Chai/Don Chai Sak Thong | V4F |
| **34** | 62-year-old woman | Don Chai/Don Chai Sak Thong | V5F |
| **35** | 65-year-old woman | Don Chai/Don Chai Sak Thong | V6F |
| **36** | 59-year-old woman | Don Chai/Don Chai Sak Thong | V7F |
| **37** | 66-year-old man | Don Chai/Don Chai Sak Thong | V8F |
| **38** | 59-year-old man | Don Chai/Don Chai Sak Thong | V9F |
| **39** | 60-year-old man | Don Chai/Don Chai Sak Thong | V10F |
| **40** | 61-year-old woman | Don Chai/Don Chai Sak Thong | V11F |

| | | | |
|---|---|---|---|
| **41** | Former (now retired) main leader of the anti-dam-movement | Don Chai/Don Chai Sak Thong | ML1F |
| **42** | 41-year-old leader within the movement | Don Chai/Don Chai Sak Thong | ML2F |
| **43** | Secretary of the anti-dam-movement | Don Chai/Don Chai Sak Thong | ML3F |
| **44** | Member of the anti-dam-opposition committee | Don Chai/Don Chai Sak Thong | ML4F |
| **45** | One of the leaders within anti-dam-movement | Don Chai/Don Chai Sak Thong | ML5F |
| **46** | Current main leader of the anti-dam-movement | Don Chai/Don Chai Sak Thong | ML6F |
| **47** | One of the leaders within anti-dam-movement | Don Chai/Don Chai Sak Thong | ML7F |
| **48** | Main movement leader for one of the villages | Don Chai/Don Chai Sak Thong | ML8F |
| **49** | Former staff | Wildlife Fund Thailand Under The Royal Patronage of H. M. The Queen (WFT) | NGO1F |