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Conceptualizing Chinese engagement in South-East Asian dam projects: evidence from Myanmar's Salween River

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ABSTRACT

Chinese engagement in South-East Asian dam projects is usually conceptualized by scholars as directly driven by China's political leadership as part of a larger package whose terms would only be favourable to the Chinese party. This article argues against this notion, conceptualizing Chinese engagement in South-East Asian dam projects as engagement that can also be directly driven by a Chinese dam developer in a standalone project whose terms are favourable to all contractual parties involved. The cases of the Mong Ton and Hat Gyi dams on Myanmar's Salween River, which feature the involvement of the Chinese dam developers China Three Gorges Corporation and Sinohydro, are presented as evidence for this latter conceptualization.

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Chinese dam developers; Myanmar; large dams; Salween River; Mong Ton Dam; Hat Gyi Dam

Introduction

This article conceptualizes Chinese engagement in South-East Asian dam projects. Chinese dam developers allegedly dominate the global dam industry (Urban, Nordensvard, Siciliano, & Li, 2015; Verhoeven, 2015). Yet precise data on the overall engagement of Chinese dam developers overseas are lacking. Yeophantong (2013) reports that Chinese players are linked to more than 300 dam projects in 74 countries worldwide, but this is only 8% of the 3700 dam projects worldwide (planned or under construction, with a size of ≥ 1 MW) identified by Zarfl, Lumsdon, Berlekamp, Tydecks, and Tockner (2015). International Rivers (2014), an NGO mostly advocating against large dams, lists only 209 dam projects with Chinese engagement worldwide. Whereas Yeophantong (2013) does not critically discuss the reliability of the data presented, International Rivers (2014) acknowledges that "we ... cannot vouch for the accuracy of the information", which was mostly collected from media reports as well as government and company websites.

Though data on Chinese engagement in dam projects overseas are ambiguous, scholars such as Hensengerth (2015), Matthews and Motta (2015) and Gleitsmann (2015) are largely unanimous in their analysis of South-East Asian dam development with Chinese involvement, conceptualizing this engagement as being driven by China's political leadership as part of a package that yields various political, economic and social benefits for China, and exploits the non-Chinese contractual parties of the project (more details in the next section).

This article aims to rebut this notion. It is argued that dam projects with Chinese involvement in South-East Asia can also be driven by a Chinese dam developer in standalone projects that yield growth and profit for the developer, along with benefits for the remaining contractual parties involved. An analysis of the Mong Ton and Hat Gyi dam projects, which are among seven dam projects to be built on Myanmar's Salween River and which feature the involvement of the Chinese dam developers China Three Gorges Corporation (CTGC) and Sinohydro, is presented to support this argument.

These two case studies are analyzed from the Chinese, Thai and Burmese engagement perspective (which includes the perspectives of dam developers, policy makers, NGOs, etc.) to ensure a comprehensive view of these projects. The role of lenders is not analyzed in the case studies due to the lack of access to information regarding lenders. Challenges faced in seeking information for this study are discussed in the Methods section.

The remainder of the article proceeds as follows. Previous scholarly literature on dam projects with Chinese engagement is synthesized in the next section, followed by a discussion of methods. An overview of the dam projects on the Salween River and in Myanmar is presented, before the analysis of the cases of the Mong Ton and Hat Gi dam projects on Myanmar's Salween River. The argument is summarized in the final section.

Literature review

Academic research on Chinese dam developers overseas in English is burgeoning (Kirchherr, Pohlner, & Charles, 2016). Relevant key analyses have been carried out by Middleton (2008), McDonald, Bosshard, and Brewer (2009), Hensengerth (2012), Tan-Mullins and Mohan (2012), Matthews and Motta (2013), Urban, Nordensvärd, Khatri, and Wang (2013), Chellaney (2014), Gleitsmann (2015), Hensengerth (2015), Lamb and Dao (2015), Matthews and Motta (2015), Nordensvard, Urban, and Mang (2015), Kiik (2016), Kirchherr, Charles, and Walton (2016) and Kirchherr, Disselhoff, and Charles (2016).

Three observations stand out when examining this body of literature. First, South-East Asian dam projects with Chinese engagement are frequently described as projects directly driven by China's political leadership. According to Hensengerth (2015, p. 520), negotiations regarding Cambodia's Kamchay Dam were conducted "between Chinese and Cambodian government officials". Both the dam developer and the lender are state-owned enterprises (SOEs), whose stock is largely retained by the central Chinese government (McDonald et al., 2009). SOEs are seen as at best an extended arm of China's political leadership. For instance, Matthews and Motta (2015, p. 6274) write that "the Chinese government and its SOEs have employed a number of ... narratives ... of hydropower"; a depiction largely echoed by Gleitsmann (2015).

Second, scholars usually point out that the projects in question are part of a larger deal. For instance, Matthews and Motta (2013, p. 4) argue that dam projects with Chinese involvement in South-East Asia "must be viewed as a package rather than separate initiatives". This claim is echoed by Urban et al. (2013), Nordensvard et al. (2015), Hensengerth (2012) and Kirchherr et al. (2016). However, the latter two studies primarily focus on dam projects with Chinese involvement in Africa. Main benefits believed to accrue via such a package are political, economic and social. Regarding political benefits: it is argued that these projects would help expand China's political influence in the region (e.g. by Middleton (2008) and Chellaney (2014) with both of these authors remaining rather vague regarding the exact

mechanisms that translate a dam project in a Southeast Asian country into political influence for China). Regarding economic benefits: it is argued that these projects would be pursued to export their electricity to China (Matthews & Motta, 2015; Urban et al., 2013). Regarding social benefits: It is argued that these projects would be designed to ensure that China's own rivers remain untouched and thus dam-induced resettlement is avoided in China (Urban et al., 2013)

Some works (Kirchherr et al., 2016; Tan-Mullins & Mohan, 2012; Urban et al., 2013) note that dam projects with Chinese engagement are also pursued mainly because the Chinese dam developer involved aims to realize business growth and profit. Yet this statement is restricted to dam projects with Chinese involvement in Africa and explicitly excludes projects in Asia, which “pose a stark contrast to Chinese dams in Africa [where] motives such as business opportunities [are] key” (Urban et al., 2013, p. 313). It is imaginable that electricity exports to China are initiated primarily because the dam developer involved aims to realize a business profit, assuming that electricity prices in China are higher than in the country the dam is built in. However, the works of some scholars (Matthews & Motta, 2013; Urban et al., 2013) which did not suggest this argument proposed that electricity exports to China are undertaken to supply sufficient and affordable energy for China. At least implicit in this suggestion is the allegation that these projects exploit the resources of the country the dam is built in – which relates to the third overall observation.

Third, South-East Asian dam projects with Chinese involvement are often believed to lead to win-lose results with China winning and the remaining contractual parties losing out. Lamb and Dao (2015, p. 2) provide an example of this viewpoint, arguing that Chinese-led package dam projects “suck resources (or is it blood?)” from South-East Asian countries, while Kiik (2016, p. 22) writes, in an analysis of the Myitsone Dam in Myanmar, that this project package is perceived as “Chinese exploitation and ‘takeover’ of Myanmar”. This claim is also echoed by Kirchherr et al. (2016).

In sum, it can be argued that Chinese engagement in South-East Asian dam projects is conceptualized as hegemonic by many current works – with the term ‘hegemon’ used with a negative connotation particularly by Chellaney (2014). The negative connotation of the term is also adopted for this article. While it is acknowledged that the term can also carry a positive connotation, the negative one seems to be dominant in the social science literature on water (Furlong, 2006; Warner & Zeitoun, 2008).

The conceptualization of Chinese engagement in South-East Asia presented in the scholarly literature written in English is tested in this article, but it is acknowledged that any synthesis of mostly qualitative literature is at least partly subjective.

Methods

Two case studies on Myanmar's Salween River, the Mong Ton and the Hat Gyi dam projects, were chosen for in-depth investigation for this article. This choice was driven by two criteria.

First, only dam projects on the Salween River that did not seem to fit the current scholarly conceptualization of Chinese engagement overseas, according to discussions with experts and a preliminary skimming of press reports, were considered. This ensured that the case studies researched could further nuance scholarly writings on the topic. Mong Ton and Hat Gyi were identified as the two dam projects with Chinese engagement on the Salween River

whose electricity would be exported to Thailand. Yet scholarly writing on the topic suggests that electricity generated from dam projects with Chinese involvement in China's neighbouring countries would be exported to China, as outlined in the previous section.

Second, only dam projects on the Salween River which had been the subject of earlier scholarly study and significant press reporting were considered. This ensured that interview data collected could be triangulated, which is particularly essential when carrying out research under less than optimal conditions (further discussed below). Numerous press reports and scholarly studies on Mong and Hat Gyi, such as Kirchherr et al. (2016) and Lamb and Dao (2015), were identified.

The two case studies presented in this article were analyzed via semi-structured interviews as well as a systematic review of scholarly writings on Chinese engagement overseas and the Salween River, and relevant news articles.

Semi-structured interviews.

This article is based on 79 semi-structured interviews carried out in April–August 2015 and February–June 2016. Interviews were conducted with, *inter alios*, senior government officials at the local and national levels in Myanmar, local NGOs in Myanmar, China and Thailand, international NGOs and relevant Burmese and Chinese dam developers. Hensengerth (2015), Lamb and Dao (2015) and other scholars who published on the same topic have not carried out interviews with Chinese dam developers. An overview of the interviews, informed by Siciliano, Urban, Tan-Mullins, Pichdara, and Kim (2016, p. 5), is presented in Table 1. Given the sensitive nature of the topic, all interviewees were assured anonymity. Unique interview codes are used throughout this article: the first letter indicates the mode of interview (T for telephone, F for face to face, O for online survey/email); the second letter indicates the type (A for academia, AA for adversely affected communities, G for government, I for international donor, NI for international NGO, NL for local NGO, P for private sector); and the number is an interview number within the type. Most interviews were carried out face to face in Myanmar, Thailand or China, or via telephone/Skype, while some were conducted by email/online survey. Information on interviewee recruiting and sample termination is given by Kirchherr, Matthews, Charles, and Walton (2017).

The interview data collected for this article have some gaps because of the difficulties inherent in field research in Myanmar and in this topic, as described by Lamb and Dao (2015) and Urban et al. (2013). First, no interviews were done with communities affected by the two dam projects specifically studied for this article. This is because the NGO representative (which the author was collaborating with) argued that it would be too dangerous even for their local staff to visit these communities during the time of field research (FNL2). Simpson

Table 1. Overview of interviews.

Group	No. of interviews
Academia	8
Adversely affected communities	4
Government	5
International donor	6
NGO (international)	14
NGO (local)	15
Private sector	27
Total	79

Source: Author's depiction.

(2013) also found that ethnic conflicts continuing in the relevant Shan and Karen States in Myanmar make it difficult for researchers to access these states, even though research conditions in Myanmar have generally improved since its opening up in 2010 (Lidauer, 2012). Second, no interview was done with a Thai dam developer because the various interview requests were declined. No interviews were done with potential lenders such as the Export–Import Bank of China, for the same reason. This indicates that the South-East Asian dam industry is secretive and thus difficult for scholars to access (FP4; TA1).

Methodological triangulation, as described by Denzin (1978), was chosen as an approach to address these gaps. Data from semi-structured interviews are combined with systematic collection and review of (a) scholarly writings on Chinese engagement overseas and the Salween River as well as (b) relevant news articles. Search results revealed at least partially the perspectives of those not directly interviewed for this article, for example the viewpoints of the relevant Thai dam developer.

Systematic review of scholarly writings on Chinese engagement overseas and the Salween River.

The review was undertaken through keyword searches in several databases, such as Thomson Reuters's Web of Science, the University of Oxford's SOLO (Search Oxford Libraries Online), and Elsevier's Scopus. Searches included any scholarly journal articles, grey literature, book chapters and books that featured (combinations of) relevant keywords, e.g. 'Salween river', 'Mong Ton Dam', 'Hat Gyi Dam' or 'Chinese dam developers'. Results of these searches were presented in the previous section of this article. Scholarly literature written in Chinese was not included because the author does not speak Chinese. This is not considered a major limitation because Chinese scholars working on Chinese engagement in dam projects overseas such as May Tan-Mullins and Bingqin Li publish their results in English to join the international scientific discourse on this topic.

Systematic review of relevant news articles.

A Google News Archive search was conducted for this article with the keywords 'Mong Ton Dam' and 'Hat Gyi Dam' to ensure a holistic examination of relevant news articles. No limit was set for the time period. The search yielded 50 results; all were reviewed. The list of articles found is provided in the online supplementary material (available at <https://doi.org/10.1080/07900627.2017.1322942>). While news articles are frequently used as data sources in studies comparable to this one, for example Urban et al. (2013) and Matthews and Motta (2015), it is acknowledged that news articles (which include articles from NGOs such as International Rivers and Burma Rivers Network) are less reliable than peer-reviewed sources. Hence, the author attempted, whenever possible, to use information from semi-structured interviews or peer-reviewed sources instead of news articles. The author also exercised caution when sourcing information from news articles.

Dam development on the Salween River and in Myanmar

This section provides background on dam development on the Salween River and in Myanmar to contextualize the case studies.



Figure 1. The Nu/Salween River.

The Salween River, with a length of 2800 km, is the last remaining undammed major river ecosystem in mainland South-East Asia (Mellino, 2016). The river originates in the Tibetan Plateau and flows through China as the Nu River (Figure 1) before becoming the Salween River in Myanmar and Thailand and then emptying into the Andaman Sea (Deetes, 2016). At least six million people in the Salween watershed depend on the river for their livelihoods (WWF, 2016).

Dam development proposals for the Nu River were collected from potential developers from 1999 onwards. According to formal reports, there were 13 Nu River hydropower projects, with a total capacity of 21 GW, in 2003 (Magee & McDonald, 2006; Tullos et al., 2013). The planned projects were initially approved by China's National Reform and Development Commission, the macroeconomic management agency under the State Council, China's chief administrative authority (Tullos et al., 2013). However, this approval "set off a furor among Chinese environmentalists" (Ramzy, 2013) and international environmental NGOs (Tullos et al., 2013). In contrast, Tilt (2014, p. 98 ff.) notes that there was relatively little protest

by the communities to be displaced, “due largely to the lack of information about how projects are proceeding, weak capacity to mount a campaign ... and the high political risks involved in any opposition strategy”.

As a result of the environmentalists’ resistance, the proposed projects were abruptly suspended by China’s then prime minister, Wen Jiabao, in 2004 (Mertha, 2008), to allow further study of the projects’ environmental and social impacts (OG1), a “rare victory” (Ramzy, 2013) for activists engaged in China. Nine years ago, Mertha (2008, p. 162), who has conducted the most comprehensive analysis of the protests against the Nu River hydropower projects, predicted ambiguity regarding their future because “Chinese politics is not linear”. Indeed, the construction of the projects was reported to have at least partially resumed in 2011 (MacLeod, 2011). But according to a recent source, national government officials are now less keen to pursue the projects again (Leavenworth, 2016).

Multiple projects have been planned for the Salween River since 1990 (Simpson, 2013). Currently there are seven projects waiting to be implemented, with a total capacity of almost 22 GW – even more than that of the envisaged Nu River cascade. These projects are depicted in Table 2 (which is mostly based on NGO information, for which scepticism is indicated). Simpson (2013) notes that these projects have been also extremely controversial in civil society and project-affected communities. Myanmar’s authoritarian regime attempted to suppress much of this opposition, and various activists who fled to Thailand continued to oppose the projects until the 2011 regime change (FNL1; Simpson, 2013). Opposition intensified when 122 civil society organizations in Myanmar supported the 2015 launch of the Save the Salween campaign (OP3; FNL2; Naing, 2014). The current national government in Myanmar, which has been in power since March 2016, has not yet revealed its stance on the projects (Aung, 2016).

Overall, a major dam development boom in Myanmar is underway: as many as 45 dams are in the planning phase (Brennan & Doring, 2014). The seven projects proposed for the Salween River are thus only 15% of the dams currently planned in Myanmar. Myanmar’s best-known dam project is most likely the Myitsone Dam in Kachin State. Its suspension in 2011 was widely seen as a symbol of Myanmar’s transition towards democracy (Kirchherr et al., 2016). The 6000 MW project is pursued by the Chinese dam developer China Power Investment Corporation (CPI). With CPI as lead developer, 90% of the dam’s electricity would be exported to southern China’s Yunnan Province, and USD 17 billion would be paid to the Burmese government over 50 years (Kiik, 2016; Kirchherr et al., 2016; TP10). Since Yunnan Province has repeatedly reported an electricity surplus, electricity is planned to be further exported from Yunnan Province via China Southern Power Grid, an electric utility, to neighbouring provinces and even Shanghai (Hu, 2013).

Chinese engagement in the Mong Ton and Hat Gyi dam projects

This article has presented three observations by scholars regarding Chinese engagement in South-East Asian dam projects. This section is structured by the three observations, arguing that these observations, and thus also the overall conceptualization of Chinese engagement in South-East Asian dam projects, are to be rebutted in the cases of the Mong Ton and Hat Gyi dam projects on Myanmar’s Salween River. Key facts regarding these projects are presented in Table 3.

Table 2. Dam projects to be developed on the Salween River.

Project	Capacity (MW)	Developer	Power purchasing agreement
Upper Thanlwin Dam	1400	<ul style="list-style-type: none"> • Hanergy Holding Group (China) • Asia World (Myanmar) 	Not yet signed; power likely to be exported to China
Nawngpha Dam	1200	<ul style="list-style-type: none"> • HydroChina (China) 	90% to China
Mong Ton Dam	7000	<ul style="list-style-type: none"> • China Three Gorges Corporation (China) • Electricity Generating Authority of Thailand (EGAT) (Thailand) • International Group of Entrepreneurs (Myanmar) 	90% to Thailand
Ywathit Dam	600–4500	<ul style="list-style-type: none"> • China Datang (China) • Shwe Taung Hydropower (Myanmar) 	Unknown
Wei Gyi Dam	4540 – 5600	<ul style="list-style-type: none"> • EGAT (Thailand) • Myanmar Electric Power Enterprise (Myanmar) 	Not yet signed; power likely to be exported to Thailand
Dagwin Dam	792	<ul style="list-style-type: none"> • EGAT (Thailand) • Electric Power Development Company (Japan) 	Not yet signed; power likely to be exported to Thailand
Hat Gyi Dam	1360	<ul style="list-style-type: none"> • EGAT (Thailand) • Sinohydro (China) • MEPE (Myanmar) 	90% to Thailand

Main driving actor

The first observation identified in the scholarly literature holds that Chinese political leadership would directly drives Chinese dam development overseas. However, the research findings suggest that the Thai government initiated both the Mong Ton and the Hat Gyi projects.

The Burmese and Thai governments started negotiations (initiated by the Thai government) in 1997 regarding cooperation on hydropower development on the Salween River. A memorandum of understanding (MoU) was signed between Thailand's deputy prime minister, Sompoing Amornvivat, and Myanmar's minister of energy, Khin Maung Thein, in July 1997. The MoU originally set out that up to 1.5 GW of electric power would be exported from Myanmar to Thailand by 2010 – a target not reached at the time of this writing (early 2017). Both the Mong Ton dam project (originally called the Ta Sang project) and the Hat Gyi dam project were part of this MoU (OG1; OP5).

The original lead developer of the Mong Ton project was not the Electricity Generating Authority of Thailand (EGAT) but another Thai developer, MDX Group, which commenced initial construction works in 2004. But the contract was terminated in 2009 because the project was not proceeding as fast as the Burmese government had envisaged. Only two days after the contract termination, a new MoU was signed for the development of the Mong Ton dam project. Its project site is only 10 km upstream of the original Ta Sang site, with EGAT as the lead developer and CTGC and International Group of Entrepreneurs (IGE) as additional developers (OG1). Contracts for the Hat Gyi Dam were signed in 2006, with EGAT also as the lead developer (Lamb & Dao, 2015) and Sinohydro and Myanmar Electric Power Enterprise (MEPE) as additional developers (Naing, 2016). Discussions between EGAT and

Table 3. Key facts regarding the Mong Ton and Hat Gyi Dams.

	Mong Ton Dam	Hat Gyi Dam
Capacity (MW)	7,000 (largest hydroelectric power plant in mainland South-East Asia, and sixth-largest worldwide if completed)	1,350 (projected to be the first of Myanmar's Salween dams to be completed)
Resettlement	12,000 people ^a	5,000 people
Lead developer	Electricity Generating Authority of Thailand	Electricity Generating Authority of Thailand
Project shares	<ul style="list-style-type: none"> • EGAT (Thailand): 40% • CTGC (China): 40% • IGE (Myanmar): 20% 	<ul style="list-style-type: none"> • EGAT (Thailand): minority • Sinohydro (China): majority • MEPE (Myanmar): minority
Contractual agreement	<ul style="list-style-type: none"> • Build-operate-transfer • Concession period of 30 years, extendable twice for 5 years each 	<ul style="list-style-type: none"> • Engineering-procurement-construction
Environmental and social impact assessment	<ul style="list-style-type: none"> • Completed in 2015 • Carried out by SMEC, an Australian consultancy 	<ul style="list-style-type: none"> • Completed in 2008 • Carried out by Chula Unisearch, a Thai consultancy

^aSamarkand (2015) notes that 300,000 people have been displaced around the dam site since 1996. These displacements are at least partly due to ethnic conflicts.

Sources: Burma Rivers Network (2016); Kirchherr et al. (2016); Lamb and Dao (2015); Platts (2015); Samarkand (2015); Naing (2008); semi-structured interviews.

the Burmese government had started in 2005, and EGAT was acting as a substitute for the Thai government in these discussions (OG1). EGAT has been reported to be a key implementer of the Thai government's energy policy strategy previously (Matthews, 2012), with EGAT significantly intertwined, particularly with Thailand's Ministry of Energy and the Energy Regulatory Commission until today (the process of liberalizing Thailand's energy sector began in 2007, but is not completed; IEA, 2016).

Both of the Burmese private-sector players involved in the projects, IGE and MEPE, were also found to be significantly intertwined with their government. IGE is owned by the sons of the late minister U Aung Thaung, one of the wealthiest political figures in Myanmar (Moe & Ramzy, 2015; OG1), and the various businesses of U Aung Thaung's sons are reported to have particularly grown while their father was minister for industry from 1997 to 2011 (Kachin News, 2014). Meanwhile, MEPE was formally organized as a department within the Ministry of Electric Power (MOEP) in 1989 (MOEP is now the Ministry of Electricity and Energy, MOEE; MOEE, 2017). The Burmese government initiated the involvement of IGE and MEPE in the two case studies ex officio (by rights), with a Burmese partner being legally required for foreign companies in most business endeavours (Martov, 2012; Turnell, 2014).

Meanwhile, the involvement of Chinese dam developers was initiated by these developers. Chinese dam developers (including CTGC and Sinohydro) approached the MOEP from 2006 onwards to discuss possible hydropower development on the Salween River (OG1). One of the first Chinese dam developers reaching out to MOEP was China Huadian Group, which held the development rights on the Nu River cascade (Magee & McDonald, 2006; OG1), but lost these projects after the suspension of the cascade in 2004. Notably, China Huadian Group did not manage to secure any project involvement on Myanmar's Salween River (Table 2). No Chinese government officials were reported to take part in the meetings between Chinese dam developers and MOEP (OG1). Nor was it suggested that the dam developer is the extended arm (representative) of Chinese government officials (OG1).

Hence, evidence is lacking in these cases that Chinese political leadership drove the Mong Ton and Hat Gyi projects directly. It is acknowledged, however, that the Chinese government prepared the ground for CTGC's and Sinohydro's engagement and thus drove their involvement indirectly via its Go Out policy, adopted in 2001 to encourage Chinese SOEs to expand their operations abroad. Discussion of the Go Out policy can be found in Murphy (2008), Nordensvard et al. (2015) and Kirchherr et al. (2017). The Burmese government and Burmese dam developers did not appear to stir the course of events either, but were approached because of legal obligations. The initial approach was undertaken by the Thai government, with its deputy prime minister, Sompoing Amornvivat, who is thus the main driving actor. In the next section, the main benefits sought via this approach are presented.

Type of deal

The second observation identified in the scholarly literature holds that single dam projects with Chinese involvement are part of a larger deal from the Chinese perspective. Typical deal elements described by scholars are related to political, economic and social benefits for China. While no such deal elements from the Chinese perspective were reported for either project investigated, they were found for the Thai and Burmese.

While it could be hypothesized that Chinese officials encouraged CTGC and Sinohydro to take part in the projects to ensure a Chinese foothold in the country, with possible political benefits, no supporting evidence was found for this hypothesis. The electricity generated by the two projects is not an economic benefit to China, as outlined previously, and thus no river in China is left untouched, and no resettlement in China avoided, because of these projects. The Upper Thanlwin and Nawnghpa Dams are the only projects on Myanmar's Salween River featuring future electricity exports to China, as shown in Table 2. These exports have a total capacity of only 2.3 GW, in contrast to the Nu River cascade's 21 GW. Thus, it cannot be argued that the multiple Salween River dams would be a substitute for the Nu River cascade from the Chinese perspective.

On the other hand, the Mong Ton and Hat Gyi dam projects were and are part of a larger deal between the Thai and the Burmese governments, as outlined previously. No political benefits were apparently sought via this deal from the Thai side, according to the research. Rather, economic and social benefits drove this deal. It is "all about energy security [for Thailand]", a consultant said (FP9). Thailand has had rapid growth in electricity demand since the early 1990s, with power consumption growing by 5% a year on average (IEA, 2016). The country's hydropower potential stands at 15 GW – four times its current installed capacity (Aroonrat & Wongwises, 2015). However, no large dams have been completed in Thailand since the Pak Mun Dam (completed in 1994) due to the fierce resistance of civil society and project-affected communities (Bakker, 1999; Sneddon & Fox, 2008).

As a consequence of this resistance, Thai policy makers started searching for sources of electricity in neighbouring countries (Hirsch, 2010). A notable result of this search is Laos' operational 1070 MW Nam Theun 2 Dam. With 93% of its electricity exported to Thailand, this dam is thus "sending more hydropower across national borders than any other project in the history of Southeast Asia" (Baird & Quastel, 2015, p. 1224). If completed, the Mong Ton Dam could break this record, but Thailand does not plan to depend entirely on energy imports from neighbouring countries. Thailand continues to maintain at least partial energy

self-sufficiency. Its target policy is to cap the share of electricity imported at 15% from 2020 onwards (IEA, 2016).

Not political but economic and social benefits were also suggested regarding Burmese involvement. A relevant Burmese dam developer interviewed said that the firm had entered one of the two dam projects studied to “provide a source of income for Myanmar through ... energy sales” (OP5). It was further said that revenues from energy sales would be used for “local job creation [and] development of local economies” (which could be deemed social benefits), but no further details were provided by the interviewee. The developer also did not outline how profitable the endeavour in question will be for the company. Large dams typically take 20 years to amortize (Kirchherr et al., 2016).

Meanwhile, vague information provided supports the claim that the benefits sought via these projects will accrue to Burmese policy makers and businessmen rather than the people of Myanmar. The claim is also strengthened by the close intertwinement of IGE and MEPE with the Burmese government, outlined in the previous section. For instance, a former civil servant who worked in the Office of the President of the Union of Myanmar argued that one large dam project in Myanmar “creates [illegitimate] generational wealth for many public-sector individuals” (TG2). No further evidence was given to support this argument, though, and such a claim should be treated with great caution.

Meanwhile, the research suggests that the main benefits sought by CTGC and Sinohydro from the two dam projects studied are business growth and profit – benefits suggested by scholars studying Chinese engagement in Africa, as outlined previously. Chinese dam developers can only explore certain rivers, because different rivers are assigned to different companies for development. For instance, CTGC is only allowed to develop the Yangtze River (TNI4). After a company is assigned to build key dams on the Chinese part of the river, overseas expansion is necessary for continued growth (TNI1; TNI2; TNI4). CTGC will have completed its final large dam project on the Yangtze River in 2020 and is thus actively looking for growth in overseas markets via standalone projects (Reuters, 2014). For instance, CTGC has set up a joint venture with Energias de Portugal, a Portuguese dam developer, to pursue large dam projects in Latin America (Clercq, 2015; TP8). Overall, the company aims to gain 25–30% of its profits from overseas projects via the realization of these growth opportunities (International Rivers, 2016) and the potential Mong Ton project. Meanwhile, Sinohydro is keen to further expand its 50% share of the global hydropower construction market (CHINCOLD, 2009), and it views the Hat Gyi Dam as “a lucrative business” (Gleitsmann, 2015, p. 59) that will help in achieving this aim.

Hence, from the Chinese perspective, both the Mong Ton and Hat Gyi projects appear as standalone projects pursued for growth and profit. However, deal elements were found from the Thai and Burmese perspective because both sides were keen to secure both economic and social benefits. Questions were also raised over whether the Burmese side pursued these projects for personal gains. The next section is a discussion of whether these benefits can be realized.

Project results

The third observation outlined in the scholarly literature holds that South-East Asian dam projects with Chinese involvement lead to win-lose results with China winning and the remaining contractual parties losing out. However, the research suggests that both the

Burmese and the Thai players at least expect positive results from CTGC's and Sinohydro's involvement in the respective projects. The deal between the Thai and Burmese governments is difficult to assess.

Interviewees such as TP8 and FP4 argued that CTGC was involved in this specific project because only this developer can develop a project of such a scale and that the project may not be possible to complete without CTGC's engagement. CTGC may be the most experienced mega-dam developer globally, having constructed the 22.5 GW Three Gorges Dam, the largest hydroelectric power station in the world (McDonald et al., 2009; Wilmsen, Webber, & Yuefang, 2011). Sinohydro's vast capabilities for constructing large dams were also repeatedly praised by interviewees, including TP6 and TP8. Already Magee and McDonald (2006), McDonald et al. (2009), and interviewees such as TP8 noted that Chinese companies have accumulated significant experience in constructing half of the world's 45,000 large dams. No evidence showed that CTGC or Sinohydro may be exploiting its contractual parties via unfavourable contract terms or delivery. Rather, scholars such as Nordensvard et al. (2015) stress that Chinese dam developers tend to be particularly low-priced. This was echoed by European dam developers such as TP1 and TP2. Even International Rivers (2015), an NGO which was mostly advocating against dam developers, rated CTGC 'good' for its environmental management in its projects, and 'fair' for its social safeguard policy commitments. Meanwhile, Sinohydro was rated 'good' for its environmental project management and 'good' for its social safeguard policy commitments (International Rivers, 2015). These ratings were largely echoed by T11, F12, TN13 and FNL3.

Assessment of the deal between EGAT and the Burmese side would require access to the relevant contracts. This access has not yet been granted. The opacity of the contractual details of these projects provides the ground for the claim that it is a losing deal for the people of Myanmar. A lawyer consulting with the Export-Import Bank of China noted how ill-prepared most policy makers in South-East Asia's poorest countries, including Myanmar, would usually be when negotiating such deals (FP7). This suggests that the contracts may be more favourable to the Thai than to the Burmese side. The projects may not particularly benefit those displaced by them, because resettled communities are usually worse off after resettlement, as seen in Scudder (2012)'s analysis of 50 resettlement cases. The social impact of the Mong Ton and Hat Gyi projects lies beyond the scope of this article.

Overall, while data are insufficient to assess the deal between the Thai and Burmese governments, both Thai and Burmese players expect to benefit from the deal with the Chinese side.

Summary

None of the three observations found in the current scholarly literature regarding Chinese engagement in South-East Asian dam projects seem to hold in the cases of the Mong Ton and Hat Gyi dam projects. While previous work has largely conceptualized Chinese engagement in South-East Asian dam projects as hegemonic, these case studies suggest that it can also be what this author calls contractual, a conceptualization that emphasizes the business perspective over the political one, with a decidedly more positive connotation than much of the current writing on the topic.

Table 4. Conceptualizing Chinese engagement in South-East Asian dam projects.

	Typical dam project with Chinese engagement (according to the current scholarly literature)	Mong Ton and Hat Gyi dam projects
Main driving actor	Chinese political leadership	Chinese private-sector player
Type of deal	Package	Standalone
Main benefits sought (from Chinese perspective)	<ul style="list-style-type: none"> • Political: expansion of political influence • Economic: electricity import • Social: avoiding resettlements in China 	<ul style="list-style-type: none"> • Business: growth and profit
Project results (Chinese player/partners)	Win/lose	Win/win
Overall conceptualization of Chinese engagement	Hegemonic	Contractual

Source: Author's depiction.

Observations from the current literature regarding Chinese engagement in South-East Asian dam projects are compared with the Mong Ton and Hat Gyi projects in Table 4.

While the Chinese engagement in the Mong Ton and Hat Gyi dam projects can be conceptualized as contractual, the Thai engagement features at least some hegemonic elements, given that in both projects, the Thai political leadership is the main driving actor seeking economic and social benefits in a package deal. The conceptualization of Burmese involvement remains ambiguous.

Conclusion

A discussion with a Burmese activist in the summer of 2015 may be indicative for the deeply held beliefs in Myanmar's civil society regarding Chinese engagement in South-East Asian dam projects. The activist, FNL2, was involved in the Save the Salween campaign, meant to focus particularly on the Mong Ton dam project. Little was known about the project back then. But the activist hypothesized that "the Chinese government" must be behind the project, which would be part of a greater effort to exploit the people of Myanmar and their political representatives. It was outlined that these beliefs were also reflected in much of the scholarly literature on Chinese engagement in South-East Asian dam projects.

Yet the analysis of the Mong Ton and Hat Gyi dam projects in this article underscores that the main driving actor of Chinese engagement in a South-East Asian dam project can also be the Chinese dam developer instead of Chinese political leadership, considering that overall the projects are driven by Thai players – first the Thai government, and later EGAT. Both projects are standalone deals for the respective Chinese dam developers, who seek continued growth and business profit via these engagements. The Chinese dam developers' involvement led to a win-win deal for the contractual parties involved. This is because the respective Chinese developer brought unique expertise in implementing large dam projects: CTGC constructed the Three Gorges Dam, the world's largest, and Sinohydro holds a 50% share in the global hydropower construction market. Without such expertise, the Mong Ton Dam, touted as the sixth-largest hydroelectric power plant in the world, could not be built. It could be argued that non-implementation of both of the projects studied for this article is in the interest of the people of Myanmar.

These case studies are not intended to undermine other scholars' earlier findings on Chinese engagement in South-East Asian dam projects. The author has also studied dam projects (such as the Myanmar's Myitsone Dam) that largely confirm the various observations frequently outlined by scholars on this topic. This article aims to nuance the generalizability of these observations. While much of the previous literature has conceptualized Chinese engagement in such projects as hegemonic, the two case studies presented in this article show that sometimes it can be contractual. Thus, scholars working on this topic are encouraged not to politicize such engagement a priori, but to consider it on a case-by-case basis.

However, more research is needed to further conceptualize Chinese engagement overseas. While major data collection efforts regarding dam construction on Myanmar's Salween River have been undertaken by the author for more than two years, gaps in the interview data remain, as acknowledged in the Methods section. The author has carried out field research in Myanmar since 2012, and having gained greater ease of access to interviewees over time, the author is optimistic about obtaining additional relevant stakeholder information regarding dam construction with Chinese involvement in Myanmar. This article may serve as a foundation for future research on this topic.

Such future research could explore whether projects with Chinese engagement comparable to Mong Ton and Hat Gyi also exist elsewhere in Myanmar, the rest of South-East Asia, and possibly beyond. It could bring about a medium-*N* study on the topic at hand to further generalize scholarly work on Chinese engagement in overseas dam projects. Research on Latin American dam projects with Chinese engagement would be of great interest, because not much work has been carried out on such projects by the scientific community so far. Furthermore, analyses with a focus on Chinese lenders could further nuance the conceptualization of Chinese engagement in overseas dam projects. Their role in dam projects both within and outside China also remains under-researched. Lastly, future research that conceptualizes both Thai and Burmese involvement in dam projects is also needed. This article has only provided a starting point for such conceptualizations.

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