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New Arenas of Engagement at the Water Governance-Climate Finance Nexus? An Analysis of the Boom and Bust of Hydropower CDM Projects in Vietnam

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ABSTRACT: This article explores whether new arenas of engagement for water governance have been created and utilised following the implementation of the Clean Development Mechanism (CDM) in large hydropower projects in Vietnam. Initial optimism for climate finance – in particular amongst Northern aid providers and private CDM consultants – resulted in a boom in registration of CDM hydropower projects in Vietnam. These plans, however, have since then busted. The article utilises a multi-scale and multi-place network governance analysis of the water governance-climate finance nexus, based on interviews with government officials, consultants, developers, NGOs, multilateral and international banks, and project-affected people at the Song Bung 2 and Song Bung 4 hydropower projects in Central Vietnam. Particular attention is paid to how the place-based nature of organisations shapes the ability of these actors to participate in decision-making. The article concludes that the CDM has had little impact on water governance in Vietnam at the project level in terms of carbon reduction (additionality) or attaining sustainable development objectives. Furthermore, whilst climate finance has the potential to open new, more transparent and more accountable arenas of water governance, current arenas of the water governance-climate finance nexus are 'rendered technical', and therefore often underutilised and inaccessible to civil society and project-affected people.

KEYWORDS: Water governance, Clean Development Mechanism, hydropower, arenas of engagement, Vietnam

INTRODUCTION

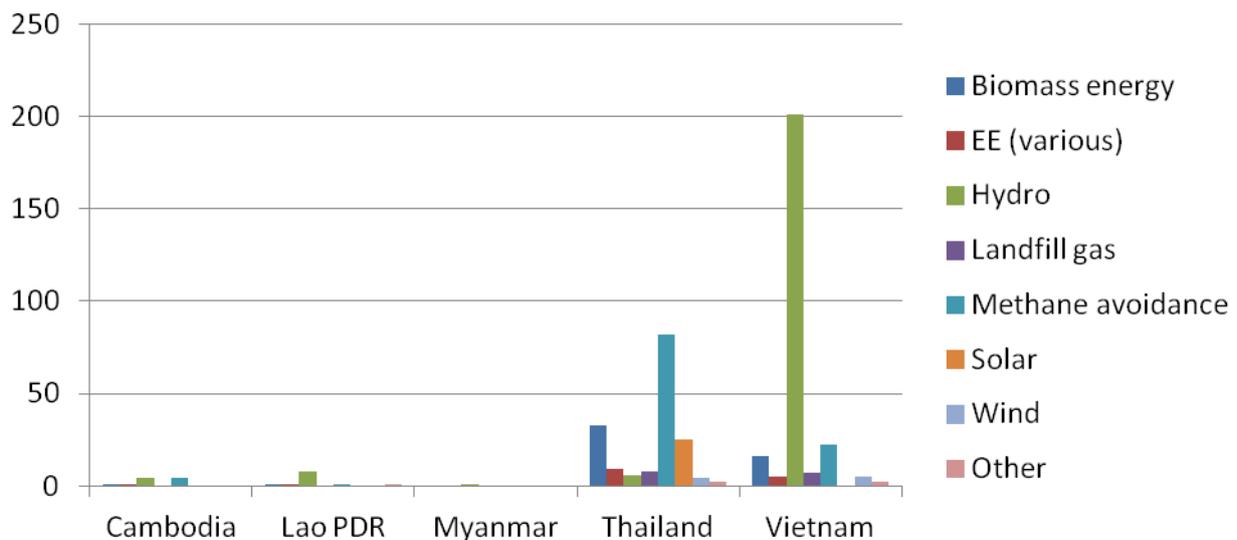
The increasing importance of climate change as a global problem has led to renewed opportunities for large hydropower development. Climate change-related finance mechanisms have proven to be a new avenue for the funding of hydropower. In this article, we seek to address how climate finance mechanisms interact with water governance, which is an issue that has received limited academic attention.

The Clean Development Mechanism (CDM) is one of the flexible climate finance mechanisms under the Kyoto protocol, which was adopted in 1997 and came into effect in 2005. CDM allows private companies in 'developed' or Annex-1 countries¹ to meet their climate targets by buying carbon offsets –

¹ Annex 1 countries are the countries with binding emission targets under the original Kyoto protocol. Non-Annex 1 countries are the other countries.

i.e. investing in clean technology – from private-sector projects in 'developing' or non-Annex-1 countries. The number of projects registered through this mechanism has exceeded the expectations of CDM's supporters and critics alike with over 7200 projects registered by September 2013. This includes around 2000 hydropower projects, constituting the second most important technology in terms of number of projects, but with the highest number of Certified Emission Reductions (CER)² (UNEP Risoe, 2013).³ This article focuses on hydropower CDM projects in Vietnam, as it has the highest number of hydropower CDM projects in the Greater Mekong Subregion (Figure 1Figure).

Figure 1. Number of registered CDM projects in the Greater Mekong Subregion by country and type per September 2013.



Source: UNEP Risoe (2013).

The CDM has been subject to substantial criticism, mainly focused on the twin objectives of the CDM: (1) 'additionality', or whether a project would not be built without CDM funding; and (2) whether it contributes to 'sustainable development' in the 'host' developing country (Paulsson, 2009; Subbarao and Lloyd, 2011; Newell, 2011). Hydropower projects in particular have been criticised as often non-additional and with large social and environmental impacts, such as resettlement, flooding of agricultural lands, and degradation of ecosystems (Haya, 2009; Haya and Parekh, 2011; Cole and Roberts, 2011; CDM Watch, 2012). This article extends the critique of CDM by assessing its contribution to water governance and thereby fills a crucial gap in the understanding of 'global governance' mechanisms and their grounding in local contexts. It does so by mapping the boom and bust of hydropower CDM in Vietnam, and by evaluating in detail two local case studies in Quang Nam Province. While Vietnam has the third highest number of registered hydropower CDM projects in the world, it has gained limited attention compared to China (number one) and India (number two). This research is timely, given the current uncertainty and ongoing negotiations over the successor to the Kyoto protocol and the many new experiments with carbon finance mechanisms currently underway (Newell et al.,

² 1 CER equals 1 tonne of CO₂.

³ The technology with the highest number of projects is wind energy.

2013; Ecofys, 2013). Many of these will have direct or indirect impacts on governance processes in different domains, including water governance.

In this article, water governance is conceptualised as

comprising all social, political, economic and administrative organisations and institutions, as well as their relationships to water resources development and management. It is concerned with how institutions operate and how regulations affect political actions and societal concerns through formal and informal instruments (Tortajada, 2010: 299).

In order to understand the articulation of water governance with climate finance mechanisms, we stress that CDM not only involves multi-scale governance processes, but also multi-place processes. We draw on the framework of Dore et al. (2012) to apply the concept of water governance 'arenas' which can be defined as physical or virtual places where actors meet and governance decisions take shape, and that are infused with politics and asymmetrical power relations. We aim to investigate whether in Vietnam, where there are limited opportunities for freedom of expression, additional governance processes for hydropower such as the CDM could hold the potential – in principle – to offer new arenas for affected communities, civil society and other actors wanting to engage within water governance decision-making.

Water governance in Vietnam is highly contested and has changed dramatically in the last few decades, due both to the extensive construction of dams for hydropower or irrigation, and wider economic, social and political transformations. The Vietnamese government has constructed 500 dams, weirs and sluices between 1959 and 1999, and several hundreds more since the start of this millennium (Dao, 2010). While this has led to more irrigation, flood protection and opportunities for power generation, this has also had direct and indirect impacts on peoples' livelihoods in dam-affected areas, such as reduced availability of agricultural land, the emergence of new forms of inequality between the centre and the periphery, and between the ethnic majority and minorities more generally (Dao, 2011).

Hydroelectric power has been a key source of electricity production in Vietnam since World War II; it was the main source of electricity until the 1990s and was responsible for 29% of Vietnam's electricity mix in 2010 (IEA, 2010). In other words, long before the CDM was in place, Vietnam had already embarked on an energy strategy heavily focused on the exploitation of its domestic hydropower potential (Middleton et al., 2009). The late 2000s and early 2010s saw another wave of hydropower development in Vietnam with thousands of megawatts of hydropower added to the country's production capacity. This was largely driven by the opening up of the country for domestic and international Independent Power Producers (IPPs), as a first step towards the World Bank's supported goal of full privatisation and a competitive electricity wholesale and retail market (World Bank, 2010, 2012).

While the CDM was introduced around the same time as the second hydropower boom, we argue in this article that this hydropower boom occurred irrespective of the CDM, although the governance of hydropower in Vietnam did shape the boom (and bust) of CDM in the country. This article reveals that CDM has had a limited impact on water governance in Vietnam because (1) most projects would have gone ahead without CDM financing anyway (essentially making them *non*-additional, and therefore in principle ineligible for CDM financing), and (2) the CDM's sustainable development objectives are unclear and left to the discretion of developers and consultants, making it difficult to 'ground' CDM. We conclude that while CDM has opened some new – and perhaps unexpected – arenas of engagement, these spaces are not available to all actors, because they require expert knowledge and are thus 'rendered technical' (Li, 2011). Whether the CDM and future climate finance mechanisms might contribute towards strengthened water governance depends in part on the opening up of these spaces to the voice of local civil society organisations and affected communities.

The next section outlines the conceptual framework of this article, followed by the methodology. Subsequently, the boom and bust of the CDM in Vietnam are analysed, before applying the conceptual framework to hydropower CDM in Vietnam in the next few empirical sections. The penultimate section discusses new arenas of engagement, followed by the conclusions.

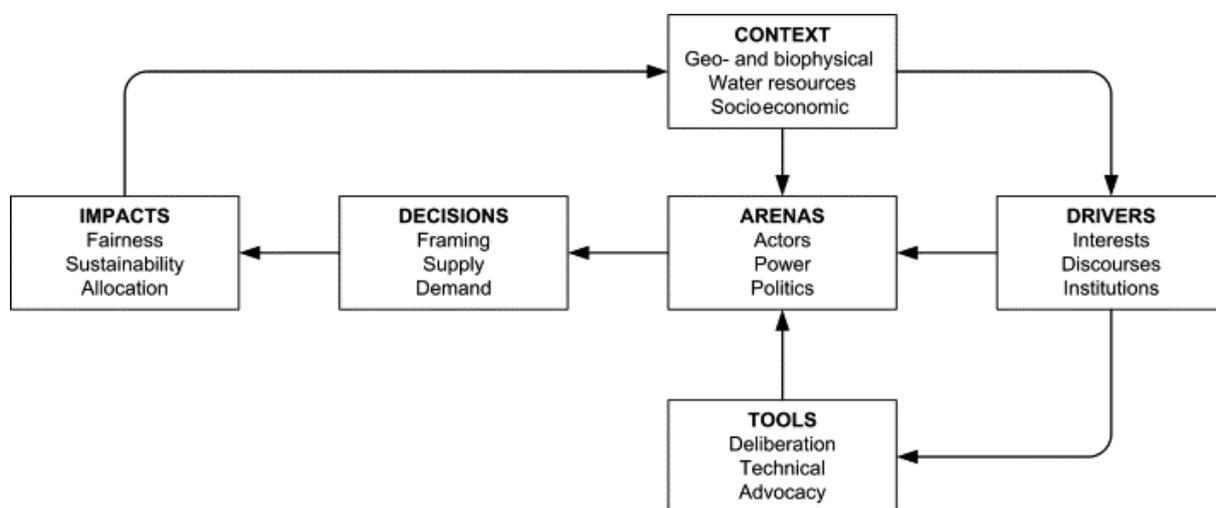
CONCEPTUAL FRAMEWORK FOR THE ARTICULATION OF CDM AND WATER GOVERNANCE

This article seeks to understand how water governance articulates with the CDM, in particular how CDM projects are evaluated and approved. The conceptual framework of this article draws upon a framework developed by Dore et al. (2012) (Figure 2). According to the authors, this framework

assists our understanding of engagement and decision-making involving socially complex water. Each heading and sub-heading in the framework acts as a prompt to the analyst to take stock of the situation being assessed and reflect on key aspects. The framework acknowledges the centrality of power and politics but is not subsumed by these topics. Context, drivers, arenas, tools, decisions and impacts all matter (p. 33).

Below, we describe the usage of the framework through a short description of how each of the framework’s boxes in Figure 2 relates to CDM. The brief analysis demonstrates that the CDM – and climate finance more generally – are more than a financial incentive, but are embedded in many aspects of water governance, and, more broadly, within national and local sociocultural, political-administrative structures and political cultures of Vietnam. In other words, the sustainable development goals of CDM simply cannot – and do not – override the existing rules, regulations and practices related to hydropower construction and operation, for example, surface water use, Environmental Impact Assessment, or resettlement practices.

Figure 2. Framework for analysing water governance. Reproduced from Dore et al. (2012).



The *context* consists of elements such as the biophysical phenomenon of climate change and associated changes and uncertainty in the hydrological regime. This has led to the development of new *drivers*, such as new institutions (e.g. the rules of the United Nations Framework Convention on Climate Change (UNFCCC)), new interests (e.g. the creation of carbon markets) and new discourses (a growing pressure for low-carbon growth and global climate change mitigation activities). *Tools* include technical assessments, which are conducted at multiple levels and a limited number of mechanisms for public consultation. *Arenas* are places where new configurations of actors meet, either physically or virtually,

leading to changing power relations and political outcomes or *decisions*. For CDM, a key *decision* is whether or not the project qualifies for carbon finance based on the CDM's criteria, finally leading to certain *impacts* which according to the objectives of CDM should be 'additionality' and 'sustainable development'. Other possible water governance impacts could be participation, transparency, and fair allocation of costs, benefits and risks.

In this article, we focus in particular on *arenas* which can be simultaneously multi-scale and multi-place. Table 1 provides an overview of the main CDM-related arenas, the actors, their physical characteristics and types of decisions.

Table 1. Overview of CDM-related arenas and 'scales'.

Arena/ 'scale'	Actors involved	Physical characteristics of the arena (place-based)	Types of decisions and power
'Global'	UNFCCC (CDM Executive Board), Designated Operational Entities, ⁴ international consultants	Office buildings in Bonn and other capital cities; Internet (as global public sphere)	CDM rules and regulations, additionality, global approval
'National'	Designated National Authority (DNA), international and national consultants	Office buildings and ministries in big cities	Sustainable development criteria, host approval
'Local'	Project developers, local authorities, affected people	Project offices, provincial and district government offices, villages	Consultation meetings (passive)

We place scale in quotation marks in Table 1 to stress the place-based nature of these arenas. In other words, whilst these arenas may be interpreted as operating at a particular scale, they are simultaneously place-based. The UNFCCC, for example, is a global institution based in Bonn. The Internet is also an increasingly important part of the 'global arena', in particular for global governance mechanisms such as CDM. In the case of the CDM, for example, some project documents (in English) are posted to the UNFCCC website for a 30-day comment period. Like other arenas, access to the Internet is mediated by material constraints (e.g. having a computer with Internet access) and knowledge constraints (e.g. understanding English and the CDM methodologies). Meanwhile, many national-level governance processes take place within office buildings in national capitals. Local arenas, on the other hand, might consist of local government offices or village meeting places. This use of scale espouses a relational definition of scale, rather than one related to size, level or nested hierarchy (Marston et al., 2005; Sayre, 2009).

The characteristics of each of these arenas – as physical and/or virtual places – profoundly influence the ability of actors to engage with these arenas, either positively or negatively. With this focus on arenas, we find it helpful to extend the framework by incorporating two additional concepts: network governance and 'rendering technical'.

Network governance refers to new and loose modes of governance involving a mix of public, private and civil society actors (Khan, 2010). Climate governance mechanisms, such as CDM, are a key example of this new form of governance, in which governments are no longer solely in charge of governing, but

⁴ Designated Operational Entities are private entities involved in (1) validating projects for CDM registration and (2) verifying the emission reductions once the CDM project is running.

do so in partnership with the private sector and civil society organisations amongst many others (Bäckstrand, 2008). Network governance emphasises that the governance of certain places or place-based activities can be dependent on governance processes which are based in other places that can be physically very far away. While improved telecommunication and faster rates of travel are key drivers that facilitate networked governance, we argue that the impact of distance remains a crucial factor mediating the ability of actors to engage in arenas of water governance because not all actors have access to the same telecommunication resources or the ability to travel with ease. Furthermore, other organisational factors, such as power asymmetries, organisational culture and working language, also play a role.

The second concept is that of 'rendering technical' (Li, 2007, 2011), described by Mosse (2013) as "conceiving and rearranging social relations and inherently political processes in alignment with expert designs" (p. 229). The CDM process does just this, turning a heterogeneous and messy reality of carbon emissions into quantifiable and accountable units of CO₂ through complex methodologies that require specific skills and knowledge (Bumpus, 2011; Lansing, 2012). The effect of this rendering technical is that certain actors are able to enter and engage within certain arenas, while others cannot, depending on their level of power and knowledge.

METHODOLOGY

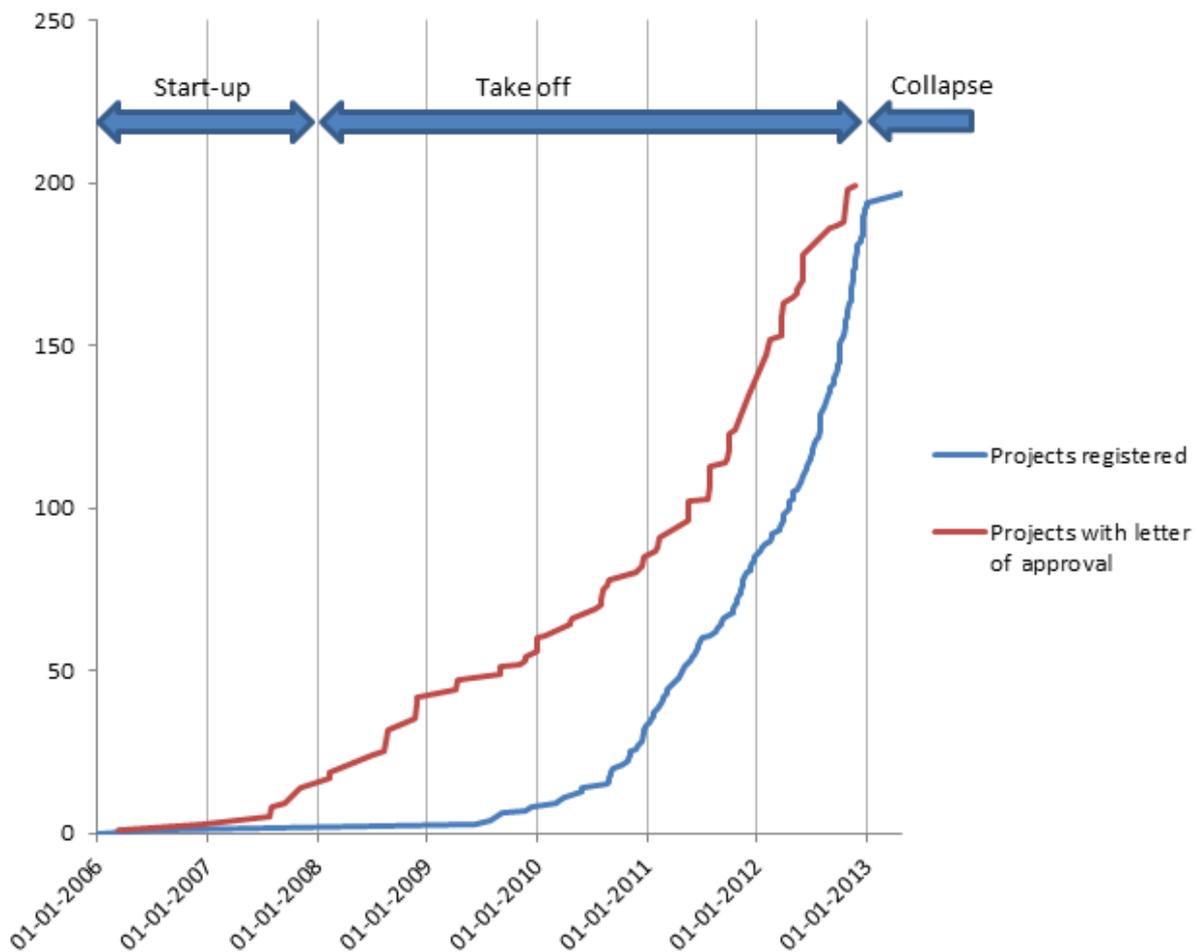
Data were collected through desk-based research and fieldwork in Vietnam, covering most of the scales described in the previous section. Literature was reviewed for the current debates about CDM in general, for the Greater Mekong Subregion, and for Vietnam in particular. Descriptive statistics about the numbers and types of CDM projects in these countries were generated from United Nations Environment Programme (UNEP Risoe (2013). In addition, grey literature and websites were consulted to match the official CDM data with actual project developments and other relevant information on CDM.

Fieldwork was carried out in two locations. Two field trips to Hanoi were undertaken as one of the key arenas of CDM identified in the previous section, in October 2012 and August 2013. During these field trips, a total of 22 qualitative interviews were conducted with the Designated National Authority (DNA), consultancy companies, non-governmental organisations (NGOs), the United Nations Development Programme (UNDP), the World Bank, the Asian Development Bank (ADB), and an international bank, to discuss issues pertaining to water governance and CDM in Vietnam. The content of the interviews varied considerably, depending on the type of actor. Further information was collected through follow-up emails and return visits. Additional fieldwork was undertaken in Central Vietnam in August 2013, focusing on two specific hydropower projects – Song Bung 2 and Song Bung 4 – both located in Nam Giang District, Quang Nam Province, and both involving Electricité du Vietnam (EVN). Interviews were held with the Management boards of both companies in Danang and with different departments of the provincial and district government authorities in Quang Nam. Both construction sites were visited, in order to talk to engineers, construction workers and resettled or otherwise affected people in four communities. Altogether approximately 20 such talks were held – most of them informal – in order to avoid unnecessary bureaucracy and potentially 'scripted' answers.

THE BOOM AND BUST OF CDM IN VIETNAM

This section presents a chronological story of the boom and bust of CDM in Vietnam. While we refer mainly to hydropower CDM, many of the observations also apply for CDM in Vietnam in general and even globally. We distinguish three phases of development: the start-up phase (2000-2008), the take-off phase (2008-2013) and the recent collapse (from 2013 onwards). Figure 3Figure shows these three phases for hydropower CDM projects.

Figure 3. The number of registered and approved hydropower CDM projects in Vietnam over time until 1 October 2013. Data from UNEP Risoe (2013).



Start-up phase (2002-2008)

Vietnam ratified the Kyoto protocol in 2002, but the CDM in Vietnam started slowly, despite large amounts of financial and capacity-building support from donor countries and multilateral banks. Northern donors and the UN carried out several capacity-building projects for consultancy companies and the Government of Vietnam, as Vietnam was seen as a country with good potential for CDM. For example, the consultancy company RCEE-NIRAS⁵ was involved in 15 different capacity-building projects on CDM potential from 2002 onwards, funded by a diverse set of actors, such as the World Bank, ADB, UNDP, UNEP, United Nations Industrial Development Organisation (UNIDO), DANIDA (Denmark's development cooperation), Development Bank of Japan, the German and Australian Government and others (RCEE-NIRAS, 2012). Besides these bilateral projects, Vietnam has also been involved in a number of large international projects, such as Capacity Building for CDM (UNEP Risoe, 2012).

Despite these efforts, only 14 Letters of Approval were issued and only one project was registered by the end of 2007, indicating the difficulties that CDM consultancy companies faced moving their projects forward. According to Nguyen et al. (2011) – and confirmed by our interviews – some of the

⁵ Research Center for Energy and Environment, NIRAS combines the names of the two founders of the company.

key problems during this first period were "regulatory barriers for approval process, bureaucracy and corruption, and tariff uncertainty barriers for project developers, barriers of access to information and local capacity, and barriers due to type of projects" (p. 229).

Take-off phase (2008-2013)

From 2008, the CDM in Vietnam finally took off, for a number of interrelated reasons. First, the consultants operating in Vietnam understood better how to navigate the barriers they had experienced before and the government also began to recognise the potential financial benefits. Secondly, the price of CERs provided a clear incentive: it was over €20/tCO₂ during the first half of 2008, before reducing to around €10-13/tCO₂ until the second half of 2011 (see Figure 4Figure). This price was driven by a strong demand for CERs from companies and traders in Europe, Japan and Australia before the 2008 Global Financial Crisis. Thirdly, there was increasing experience with CDM worldwide and in Asia in particular. Some international companies opened offices in Vietnam, whilst others set up joint-ventures with Vietnamese consultancy companies. Fourthly, the demand for electricity in Vietnam continued to rise, resulting in the construction of a significant number of small to medium-sized hydropower projects (<250 MW), developed by private companies. As one consultant explained, a hydropower project of this size is well-suited to the CDM: they are too small to cause large – and therefore controversial – social and environmental impacts (at least on paper), but big enough to make them financially attractive for the CDM industry and the hydropower project developers. These factors resulted in a massive increase in the number of hydropower CDM projects in Vietnam with 199 Letters of Approval and 194 registered projects by the end of 2012. Consequently, Hanoi became a vibrant arena with around 10 large CDM consultancy companies and many smaller ones competing to benefit from the CDM industry boom (cf. Smits, 2013). In total, there were over 30 consultancy companies in Hanoi with at least one project registered and over half of them with more than two projects (UNEP Risoe, 2013).

Collapse (2013-?)

The end of 2012 brought a sudden end to the boom of the CDM in Vietnam. Again, a number of reasons can be identified. First, the end of 2012 marked the conclusion of the first commitment period of the Kyoto protocol and no new global agreement was reached in time. While key international actors decided to continue with the CDM, there were a number of important changes. First, the EU – by far the biggest buyer of CERs – decided to buy credits from Least Developed Countries only, thus excluding Vietnam. Furthermore, Japan – another important player in CDM in Vietnam – decided at the end of 2010 not to extend the Kyoto protocol beyond 2012 (Valentine et al., 2011). Secondly, too many projects generating CERs had been created, in particular in China, that exceeded demand due to the ongoing effects of the 2008 global financial crisis alongside uncertainty about the future of the mechanism. Consequently, the price of CERs dropped from €10-13/tCO₂ in 2011 to around €5/tCO₂ at the start of 2012 and finally to less than €1/tCO₂ in 2013 (Point Carbon, 2013). This price has made it essentially impossible for CDM consultants to develop CDM projects and many of them had to close their offices in Vietnam or merge with other companies, reducing the number of CDM consulting companies. Those that remained by mid-2013 were the bigger companies offering a range of consultancy services besides CDM. The Vietnam Energy and Environmental Consultancy (VNEEC), the company with the most CDM projects in Vietnam, cut the number of their staff from around 40 to five by August 2013. Intraco reduced its CDM staff from 15 to just three persons, while Blue World Carbon went from 10 persons to one by August 2013, just for monitoring their existing projects. The arena in Hanoi disappeared almost as quickly as it had emerged.

Figure 4. Development of CER spot price in €/tCO₂ from 2008 until October 2013.

Source: Point Carbon (2013).

It is difficult to predict whether the CDM – or a similar mechanism – will make a comeback in the near future. Throughout 2013, there were still projects trickling in, albeit very few compared to the numbers of the years before. Meanwhile, there are ongoing international negotiations about improving or reforming CDM and the introduction of new market mechanisms (CDM Policy Dialogue, 2012; Michaelowa, 2011).

ARENAS OF CDM AND WATER GOVERNANCE IN VIETNAM

Having outlined the boom and bust of CDM in Vietnam, this section of the article applies the water governance framework to the situation in Vietnam. The focus is on the identification of climate finance-water governance arenas. This section also serves as the basis for the analysis of two project case studies in the penultimate section of the article that explores pre-existing and new arenas of engagement in water governance.

Table 2 provides an overview of the different steps in the CDM cycle, the actors involved and the arenas where decisions are made with a focus on place and 'scale'. To reiterate, we see arenas as physical or virtual places where actors interact in official and unofficial processes that lead to decisions and outcomes.

Table 2. Different steps in the CDM cycle, key actors (officially), other actors and arenas. Adapted from UNFCCC (2013b).

Step in CDM cycle	Key actor officially in arena	Other actors present in the arena	Place ('scale') of the arena
1. Project design	Developer	Consultants (lead actor in practice), affected people, civil society organisations	Hanoi ('national') and Internet ('global')
2. National approval	Designated National Authority in host and Annex I country	Other ministries	Hanoi ('national')
3. Validation (of the project)	Designated Operational Entity (A)	Consultants, affected people	International cities ('global') and project ('local')
4. Registration	UNFCCC Executive Board		Bonn (UNFCCC) and Internet ('global')
5. Monitoring (of the project)	Designated Operational Entity (B)	Consultants	Project ('local')
6. Verification (of the credits)	Designated Operational Entity (B)	Consultants	International cities ('global') and project ('local')
7. CER issuance	Executive Board		Bonn (UNFCCC) ('global')

One of the most important arenas for CDM in Vietnam is the one representing the 'national' scale, which in Vietnam has its material base in Hanoi and to a lesser extent in Ho Chi Minh City. This is the scale at which several actors operate, such as the Designated National Authority (DNA),⁶ consultants, the national state-owned utility Electricité du Vietnam (EVN), and some private and state-owned project developers. As Table 2 shows, this is the main arena for the first two steps of the cycle. In theory, the project developers initiate the CDM process and come up with a Project Design Document (PDD).⁷ In practice, however, this is initiated and prepared by the private consultants. They search for new projects with the potential for CDM-eligibility through their networks or through the Power Development Plan (PDP), a key government planning document for the power sector. Once they have identified a project, they talk to the developers seeking to convince them to start the CDM. The reward for the consultants is that they can negotiate a share of the benefit from selling the credits, which depends on the size of the project and a fixed or floating carbon credits price.

Physically, the 'national arena' is largely situated in the (air-conditioned) offices in or near the centre of Hanoi. These offices stand in sharp contrast to the rest of the city and to the areas where the actual project development takes place. These offices are also central to the second step in the CDM process, which is where the approval process by national governments takes place. In Vietnam, there are 16 representatives from 14 different ministries and one science association involved in this process. The

⁶ The DNA is an organisation within a ministry, which is responsible for processing CDM projects. In Vietnam, the DNA is part of the Ministry of Natural Resources and Environment (MONRE), Department of Meteorology, Hydrology and Climate Change.

⁷ The PDD is a document setting out the key parameters of the CDM project, such as the baseline, calculations of additionality and sustainable development implications.

Ministry of Natural Resources and Environment (MONRE) hosts the DNA and therefore has the lead in this process.

The project level or 'local' scale is another important arena, albeit more so in theory than in practice. Important actors in this arena are the project developers, construction companies, local governments (provincial, district, village) and affected people. The local arenas are important for the various Measurement, Reporting and Validation (MRV)⁸ processes of the CDM as well as local consultation processes (UNFCCC, 2013a). The former are covered by steps three, five and six, while the consultation processes are part of the first step, the development of the PDD (Table 2). Physically, the consultation processes take place in meeting rooms at different government levels, while MRV processes are conducted at the site of construction. The consultations are meant to ensure that local people and governments are informed and have a chance to influence the project.

The 'global' scale is also place-based, namely in Bonn, where the Executive Board of the UNFCCC is located. This place is very important for the functioning of the mechanism and in particular for steps four and seven in the process. They exert important influence over other actors through network governance, and are responsible for the institutionalisation of many *tools* and other rationalities into the articulation of CDM in the water governance framework (Lövbrand, 2009).

A final arena is the Internet as 'global public sphere' where information flows are in principle free and open for access by anyone. For CDM, this is mainly in the form of the publication of certain documents and opening for comments during the 30-day comment period. In principle, the Internet could be used more broadly to compare the social and environmental impact between projects and exchange of information between civil society organisations. However, as mentioned above, access and knowledge are two important limiting factors, because the CDM is rendered highly technical.

INSIDE THE CDM PROCESS IN VIETNAM: CASE STUDIES IN QUANG NAM

Having mapped the articulation of CDM processes with water governance in Vietnam, this section presents two hydropower CDM project case studies in Nam Giang District, Quang Nam Province, Vietnam (Figure 5Figure), namely Song Bung 2 and the Song Bung 4.

Song Bung 4 was selected due to its contested nature and the involvement of the Asian Development Bank as multinational actor, whilst in contrast Song Bung 2 was selected due to its relatively uncontested nature. In both cases, a reasonable amount of information had been published by the companies themselves, the ADB (the financier of Song Bung 4) and NGOs active on these projects. In terms of the water governance framework (Dore et al., 2012), the actors, power and politics in the various arenas for the two projects are quite different; for both cases, we link the field-based findings of the case studies at the local level to interviews conducted at the national arena 'scale' and analysis of the global-scale processes, drawing out issues related to power and politics in the CDM finance-water governance nexus.

Quang Nam is one of the poorest and least densely populated provinces in Vietnam (Table 3Table), but is well-endowed with natural resources and hydropower potential in particular; the province – and Nam Giang District in particular – harbours one of the highest densities of (proposed) hydropower projects of the country. The province had approved 44 hydropower projects with a total capacity of almost 1600 MW by 2013 (Thanh Nien News, 2013). As a result, transmission lines now dominate the hilly-cum-mountainous terrain, alongside rivers and upland rice cultivation.

⁸ The term MRV was introduced during the Bali round in 2007 to standardise and increase the transparency of mitigation activities (Mucci, 2012).

Figure 5. Map of Vietnam showing the location of Quang Nam Province and Nam Giang District.

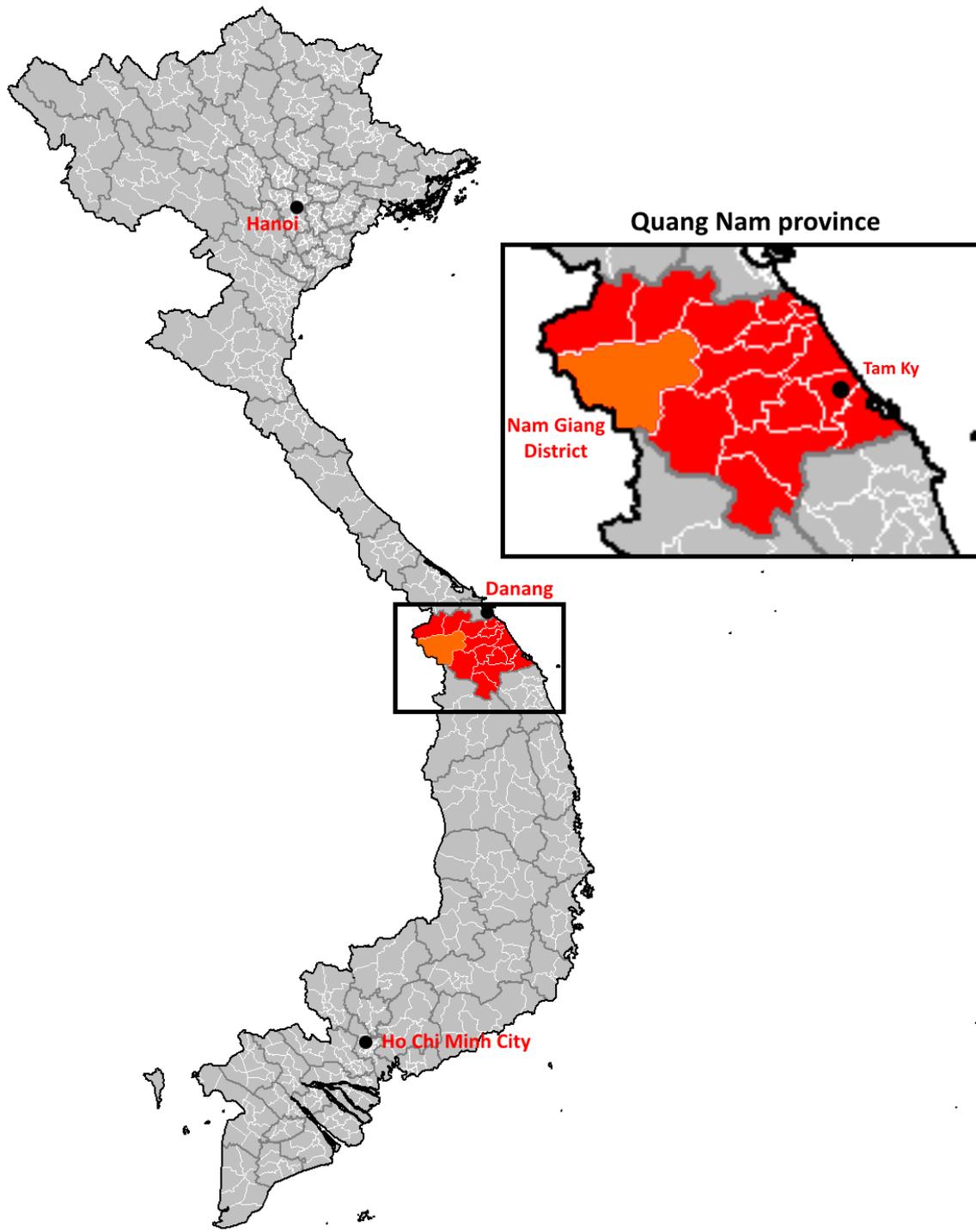


Table 3. Some key statistics on Vietnam and Quang Nam (GSO, 2009).

	Area (km ²)	Population	Population density (/km ²)	% Urban	Forest coverage (%)
<i>Vietnam</i>	331,200	85,847,000	260	32.5	39.5
<i>Quảng Nam Province</i>	10,440	1,422,000	136	18.6	48.2

Hydropower is increasingly controversial in Vietnam and discussions on it have become more open. Examples from the national media are the Dong Nai 6 and 6A dams, which were planned in the middle of Cat Tien National Park and would affect a large number of people living in, or depending on, the watershed area (CleanBiz Asia, 2013; Wells-Dang, 2013). In Quang Nam itself, the 190 MW Song Tranh 2 dam gained nationwide attention because of a series of earthquakes in 2012 allegedly caused by the dam (Vietnam Times, 2013). Dams in Central Vietnam have also been linked to major flood-events in which dozens of people were killed (Viet Nam News, 2011; Chi, 2013) although EVN has disputed this (Viet Nam News, 2013). In addition to the concerns about safety and social and environmental impacts, hydropower projects progressed slowly since the economic crisis in 2008 including due to the lower-than-expected profits from hydropower for IPPs. Therefore, the government of Quang Nam Province proposed to suspend 18 hydropower projects, 11 of which were located in Nam Giang District in 2012. According to the deputy chairwoman of the People's Committee of Nam Giang District, the construction of dams has led to "public disorder" because "[o]pening roads to facilitate the plant construction have accidentally created favourable conditions for illegal gold exploiters to increase their activities" (Viet Nam News, 2012).

In total, 15 CDM hydropower projects in Quang Nam Province have been registered – including Song Bung 2 and 4 – and one was under validation as of October 2013. Not all projects in the province have applied for CDM, because some of them were already under construction before the CDM was implemented, while others are too small (i.e. not yielding enough revenues) to be of interest for the consultants.

The 100 MW Song Bung 2 hydropower dam is – at the time of writing – under construction and set to be finished by 2016. The developer is EVN, a state-owned company. The US\$175 million project is financed through loans from three international banks: Sumitomo Mitsui Banking Corporation (Japan), Société Générale (France), and BNP Paribas (France). According to the PDD, the project reduces 233,000 tCO₂ per year over 7 years (UNFCCC, 2012a). At a price of \$10/tCO₂, this would be worth over \$2 million/year. By the end of 2012 (at around \$0.20/tCO₂), however, it was worth less than \$50,000/year. This points to the great levels of variation and uncertainty, which is why banks do not want to incorporate income from CDM when granting loans (05-08-2013, Hanoi).

The 190 MW Song Bung 4 hydropower dam is also developed by EVN. Construction commenced in 2010 and is expected to be completed by early 2015. Song Bung 4 is anticipated to have higher social and environmental impacts than Song Bung 2 (see below), and has a higher international profile due to the involvement of the ADB, for whom it is their first hydropower project in Vietnam. Besides providing a US\$267 million loan, the ADB is heavily involved in Song Bung 4 through the provision of technical assistance, monitoring and evaluation, and also by promoting the project to the development community through short videos and feature articles (ADB, 2011-2013). This project would reduce 224,000 tCO₂/year over 7 years (UNFCCC, 2012b). Despite its higher capacity, this amount is less than the Song Bung 2, because its bigger reservoir results in higher project emissions.

Both projects have separate managements units that manage the day-to-day activities of the projects.

Social and environmental impact in the CDM and in practice

The social and environmental impact of the Song Bung 2 project is relatively limited because of its small reservoir (2.8 km²) and isolated location. Environmental impacts include the clearing of the forest and pollution during the construction phase. The main social impacts are the flooding of agricultural fields of 26 households and the relocation of some houses due to the construction of a new access road in the nearby village. In total, the developer provided 14 billion VND (~US\$670,000)⁹ to compensate for these impacts, following Vietnamese laws and regulations.

The social and environmental impacts of the Song Bung 4 project, in contrast, are substantial. The reservoir size is 15.7 km² and is much bigger than the Song Bung 2. It also has involved the resettlement of four complete villages and the flooding of their (swidden) agricultural lands and areas for hunting and gathering. An extensive plan was prepared for compensation in accordance with both Vietnam's laws and the ADB's safeguard policy. Each of the households received a monetary compensation (depending on the size of their house and land): 0.04 ha to build a new house, 0.06 ha for a garden and 1.5 ha for sedentary farming. This amounted to a total monetary value of around 300 billion VND (~US\$14.3M). In addition, new facilities (roads, schools, meeting places) were constructed and a programme to reconstruct people's livelihoods was initiated. This meant a big change for the people who used to live in challenging conditions, far from the roads, with little monetary income, and largely dependent on swidden agriculture, hunting and fishing.

Remarkably, the PDD of the CDM application for Song Bung 4 does not mention the resettlement of the four villages as a social impact, and only lists some of the environmental impacts. This typifies an increasingly documented politics of knowledge associated with CDM projects and their reporting, in which potentially 'difficult' information is strategically omitted, as stated by some consultants interviewed. On the other hand, in the ADB documentation, with its extensive safeguard policies, it is rather the opposite, and social impacts are extensively detailed, including their proposed mitigation. Yet here the resettlement is rendered technical in many voluminous reports detailing the nature and procedures for compensation, which may in the end not transform into planned outcomes on the ground. The networked governance of CDM, with its emphasis on carbon accounting and lack of guidance on 'sustainable development', facilitates these different (and deficit) representations of social impacts. After all, the CDM Executive Board is located far away in an Annex-I country, and is both physically and mentally very far removed from the dirt and cement involved in the construction of hydropower projects.

Despite their efforts, the ADB received a lot of criticism from civil society organisations on their involvement with the Song Bung 4, because of the high social and environmental impacts of the project, as well as the prominent public profile of the ADB and the project. The Vietnam Rivers Network (VRN) in particular has been very active in scrutinising the ADB on the amount of compensation and limited opportunities for rebuilding livelihoods of the people (VRN, 2012). Many of the VRN's observations were verified by our own local interviews, which showed that – while people are generally happy with their new houses and facilities – they have very limited means to cultivate land for food and generate additional income. Many of the livelihood projects have failed; almost all the livestock provided have died; the soils of the gardens are poor; 'irrigated paddy fields' have been dry from the start; and the new plots of agricultural land are too small for traditional upland swidden cultivation. At the time of fieldwork, most of the people were living off their compensation money which is expected to run out in the next few years. None of the people in the affected villages have managed to find work at the construction sites of the Song Bung 2 or Song Bung 4, despite the promise in the PDD of (an

⁹ We use an exchange rate of US\$1.00= VND21,000 and round figures.

unquantified amount of) local employment. Instead, the work is carried out by hundreds of Chinese and Vietnamese workers, who are hired by the Chinese subcontractors.

Through their efforts, the local civil society organisations are contesting how the ADB has rendered the resettlement process for the Song Bung 4 technical, i.e. their strict and elaborate compensation and participation protocols and – at the same time – their positive representation of this process to the outside world through online videos and feature stories. Civil society organisations are contesting these processes by undertaking their own research and posting reports of their findings on their own websites, and also sending letters to the multilateral organisation. However, currently they have not used the spaces of engagement in the CDM-related arenas, such as the 30-day comment period or the stakeholder consultations. Our interviews show that the main reason is that they are not aware of these spaces. Moreover, these spaces remain hard to access and the impact of using these means is at best unclear. In addition, their power to confront the ADB is limited because of the political space in Vietnam (Wells-Dang, 2013) and the ability of the ADB to control discourses in the international arena, for example, through releasing videos and other promotional materials. The situation is also markedly different from the Song Bung 2, which has not received any scrutiny from civil society organisations, because of its smaller social impacts and lower international profile.

This section has provided an examination of the social and environmental impact of the Song Bung 2 and Song Bung 4 and their articulation through CDM, as well as the involvement of some of the actors. The bottom line is that the requirements for sustainable development are undefined by the UNFCCC and also weakly articulated by the national DNA of Vietnam. On top of this, the weak environmental governance context in Vietnam renders the few statements on social and environmental impact and improvement written into the CDM documentation essentially meaningless. In other words, despite CDM being an 'international process', 'international standards' of sustainable development still do not apply.

Additionality in the CDM and in practice

From the PDD, it seems that CDM has not played a major role in making the Song Bung 2 project 'additional', i.e. actually needing the climate finance to realise the project. According to the time line – a compulsory element of each project – the Feasibility Study for this project was completed in November 2005 and the Environmental Impact Assessment in 2006. However, CDM was only first considered in December 2009, which is less than 20 days before the approval of the total investment (UNFCCC, 2012a). Moreover, the loan agreement with the three international banks was signed three months before the letter of intent to start CDM was issued. Furthermore, an analyst of one of the international banks that finances hydropower in Vietnam (05-08-2013, Hanoi) mentioned that CDM finance was not an important consideration for their bank, because the revenues are too risky and too low.

At first sight, the Song Bung 4 project's time line in the PDD suggests that CDM was considered before the loan agreement was signed and was a crucial element in the decision-making process (UNFCCC, 2012b). An interview with a senior energy project officer at ADB (07-08-2013, Hanoi), however, revealed that the project would have proceeded regardless, with or without CDM. This was corroborated by an interview with a representative of the Song Bung 4 management board (05-08-2013, Hanoi), who mentioned that they were hardly aware of the CDM and left this work to the private consultants (in this case ADB CDM facility and EVN Finance). Their organisation had not invested any money in the CDM process, instead leaving the responsibility and cost to the consultants and the prospective buyers of the credits.

From other interviews with CDM consultants, we found out that it is common practice for hydropower developers themselves in Vietnam to be little involved or interested in the CDM, both for lack of knowledge and also the relatively low financial gains (compared to the overall cost of the project and future revenue streams). The expert technical knowledge required to operate in the national and

international arenas of CDM is also not possessed by the developers. Therefore, even if they wanted to, the extent to which CDM is rendered technical prohibits developers' direct involvement to a large degree, thus reinforcing the role of – indeed, need for – the consultants.

Consultations meetings

For both the Song Bung 2 and the Song Bung 4, consultation meetings for the CDM were documented to have been held at different levels of government: provincial, district and locally in the villages. The purpose of these meetings is to inform the local government and population about the proposed project, its social and environmental impacts, and the CDM process. They are seen as an important moment for response from local stakeholders. However, it was very difficult to find anyone who remembers attending these meetings – both in the different government departments and at village level – let alone to say something about the process and degree of participation. This could simply be because we failed to find the right people to talk to. It could also be because the meetings were held a few years before our fieldwork, in 2008 in case of the Song Bung 4 and in 2011 for the Song Bung 2. Alternatively, it could be that the meeting did not make a big impression on those who attended. Indeed, many of them mentioned having been part of dozens of meetings about the construction of the dams, the level of compensation, the livelihoods reconstruction project, and other issues.

In general, we found that consultation meetings are often treated as another box to tick, and local people and governments have very limited understanding of why they are consulted and how CDM relates to their situation. In the PDD, any critical comments can easily be omitted from the document. Indeed, as one consultant mentioned (08-08-2013, Hanoi), one of the main strategies is to keep the part of the public consultation in the PDD as short as possible in order to avoid critical comments from the UNFCCC Executive Board. Although a full report of the meeting must be attached to the submitted PDD, this section is not open to public review. In other words, the engagement in the local arena, which is the principle scale for affected people, is very limited and ultimately lacks transparency and accountability. Indeed, as mentioned by some consultants, stakeholder comments are often 'edited' by the consultants, leaving out or downplaying negative comments. In this case, this can be attributed to (dis)incentives of network governance for full accountability at the local level.

In conclusion, the investigation of two hydropower projects in Quang Nam Province demonstrates that the CDM mechanism had not had a major impact in terms of additionality or sustainable development outcomes for the projects, even though some aspects of the project – in particular at Song Bung 4 – have led to a major disruption of the livelihoods of people living in the area. Additional interviews with consultants, developers, and civil servants as well as the consultation of grey and academic literature, confirmed that many of the issues flagged in this section are commonplace in CDM projects all over Vietnam and indeed globally. Paradoxically, the closer we get to the project locations, the less people seem to understand what the CDM is and what benefits it is supposed to bring to them. This reflects the uneven access to knowledge and power distribution within the networked governance of the CDM mechanism, where the emphasis is on rendering CO₂ technical and accountable, whilst leaving the definition of sustainable development ambiguous and therefore downplaying the importance of its operationalisation in local contexts.

NEW ARENAS OF ENGAGEMENT IN WATER GOVERNANCE?

This article shows that the CDM has been largely irrelevant to achieving its twin objectives in Vietnam, namely: additionality and sustainable development. The financing is small relative to total project costs and too late, and not at the core of project development. In other words, CDM has little leverage over projects. Others have also reached this conclusion in other contexts and for other energy technologies (e.g. Newell and Bumpus, 2012; Bluemling and Mol, 2013; Rindeljäll et al., 2011; Paulsson, 2009). However, the arenas of engagement associated with CDM, and its articulation with water governance,

have received far less attention despite their potential significance; this is especially the case for countries such as Vietnam because of the limited media freedom, transparency, and space for civil society. In this section, we return to the question whether there is potential for CDM to provide spaces for democratisation of water governance within the earlier identified arenas (Table 2Table). We ask the following: How accessible are these arenas? Who can engage with them? What types of knowledge – technical, linguistic, or otherwise – are required?

Spaces of engagement in the local arena

In the 'local' or project-level arena, the CDM has the potential to open up new spaces of engagement, as it is a formal requirement that stakeholder consultations are carried out. Again, the costs are often borne by the consultants or the prospective buyers, and not by the developers. While – as far as we can assess – these consultations are undertaken as required in Vietnam, they did not open new spaces within which actors could effectively make a difference in terms of project decision-making and outcomes. Our findings for the cases of the Song Bung 2 and the Song Bung 4 projects show that people do not even remember joining the consultation meetings, although some pictures on the Song Bung 2 website indicate that some of them have joined these meetings. Many CDM consultants also stated that they do not see the added value because they claim that at the consultations local people are there principally to give input on the sustainable development component of the CDM process. Instead, these consultants find that local people use the meetings to register their complaints about other issues, such as compensation arrangements. In addition, the meetings usually reflect existing power relations in the communities, as the village leaders are oftentimes doing most of the talking. Furthermore, the reporting of the consultations in the PDD is very minimal, making it all too easy to omit critical comments heard in the consultations themselves. All these issues are related to the broad and therefore vague guidelines of the UNFCCC, requiring that "comments by local stakeholders have been invited, a summary of the comments received has been provided, and a report to the designated operational entity on how due account was taken of any comments has been received" (UNFCCC, 2014).

Another important observation regarding the consultation meetings from the case studies is that CDM is 'not the only show in town'. Instead, it is part of a bigger process of hydropower development and water governance, involving a range of processes, rules, actors, and institutions. As a new and relatively insignificant process within this wider melee, it is unlikely to have a significant impact upon local water governance dynamics and power relations.

In addition to the lack of awareness amongst local people of the CDM is the 'lag of awareness' in the local government offices we observed as a result of CDM's network governance. This lag refers to the distance from the national arena in Hanoi to the local government levels. Whereas there is a lot of knowledge in the different consultancy organisations and to a lesser extent at the DNA, there is much less knowledge and awareness about CDM at provincial and district government levels. This confirms that much of the capacity-building activities focus on private actors on the national and international level, and much less on the different levels of local government. A striking example was the fact that the department of internal security of Quang Nam Province had just assigned an officer to map out the developments and possibilities for the government to engage with CDM at the time of fieldwork in August 2013, more than half a year after CDM's 'bust'. This, and the fact that many other local government officials asked us as researchers for information (rather than the other way around), is a clear indication that information and knowledge about CDM are highly uneven. This also results in asymmetrical distribution of benefits in the networked governance arrangements of CDM, as local people and governments see very little benefit from the mechanism.

CDM has the potential to make a difference in terms of opening up spaces of engagement in water governance arenas through its requirements for public disclosure of project-related information. The

Song Bung 2 project is a good example here; the project has a surprisingly complete website in Vietnamese with regular updates, including updates on the CDM process.¹⁰ This is probably at least partly related to the involvement of three international banks, because there are only a few other hydropower companies operating in Vietnam providing similar levels of information and public disclosure through project websites.

There is also anecdotal evidence of some developers publicising how they have used revenues from CDM to construct public buildings, such as libraries and meeting places. Some consultants mentioned that they try to make developers aware that the CDM lifts their projects to the 'international stage', which means that they have to be more careful about following rules and avoiding negative publicity.

Finally, there are many ongoing projects but only a limited number of civil society organisations that have the capacity to monitor them and engage in the local arenas where necessary. Besides capacity issues, a key challenge remains the limited knowledge of both local civil society and government actors on CDM and the strong hierarchical power relations in Vietnam, limiting bottom-up involvement in decision-making processes (Wells-Dang, 2013).

Spaces of engagement in the national arena

On the 'national level', i.e. in Hanoi, there are also a number of possible new spaces of engagement that have opened through CDM's articulation with water governance. The first one is through the PDD. This document should contain all the information about how the project satisfies the additionality and sustainable development objectives of CDM. Unfortunately, the major part of this document is usually devoted to calculations about additionality which are hard to follow by anyone who is not a CDM expert, rendering the process highly technical. Even project developers themselves often do not really know what the CDM requirements are, as this is all left to consultants. Conversely, the section regarding socioeconomic and environmental impacts is often very short, generic, and covered in the last few pages of the PDD. Potentially controversial aspects are often excluded, such as the example of resettlement, in case of the Song Bung 4 hydropower project, shows. One consultant (08-08-2013, Hanoi) mentioned that this is a deliberate strategy, because the criteria for sustainable development are not very clear, and – more importantly – the more they include, the higher the chance they will then receive difficult questions to answer from the UNFCCC. The social and environmental impact sections could therefore be seen as spaces of simplification, which paint a much brighter picture than is often the case on the ground.

Another important space for engagement in the national arena is around the Designated National Authority itself. Since specifying the criteria for sustainable development is left to this authority, they have the potential to set stringent criteria. However, as documented in other countries (see e.g. Rindeljäll et al., 2011), the Vietnamese DNA does not have clear sustainable development criteria because they mainly see it as a business opportunity. In fact, in an interview (07-08-2013, Hanoi), a senior representative of the DNA told us that they want projects to just follow the existing laws and regulations in Vietnam and of the CDM. Even if they wanted to, it would probably be difficult for the DNA to move towards more stringent sustainable development criteria because of limited knowledge and human resources. Many consultants stated that it was they, rather than the DNA, who had more detailed and up-to-date information regarding the CDM, and that the DNA just approves projects.

¹⁰ <http://www.sb2.vn/>, accessed on 3 September 2014.

Spaces of engagement in the international arena

At the 'international' level, there are also several spaces of engagement for water governance through CDM. The UNFCCC website, which links place-based governance with the 'placeless' Internet, is at first sight a potentially powerful database and space for public engagement. However, the website is not easy to use, does not include all information (e.g. reports of stakeholder consultations), and requires expert knowledge to read documents such as the PDD.¹¹ The fact that the website is only available in English is also a restricting factor. Furthermore, the possibility to comment on projects 30 days prior to the request for registration is little known, cumbersome, and consequently not often used by those who might like to use it, such as civil society groups. Beside the UNFCCC website, the website of the DNA in Vietnam provides additional opportunities for engagement. This website not only contains lists of the PDDs, but also of the initial Project Idea Notes (PIN), which do not feature on the UNFCCC website. Unfortunately, the website is hard to find and only the titles of the projects (in English) can be found, with very little additional information, let alone space for comments.¹²

Our interviews (08-08-2013 and 09-08-2013, Hanoi) show that civil society organisations involved in water governance in Vietnam – such as interviewed members of the Vietnam Rivers Network – were not aware that over 200 hydropower projects in their country are registered under the CDM. Moreover, they had very limited awareness of the opportunity to comment on controversial projects, such as the Song Bung 4, through the CDM processes, including in these international arenas. They agreed that it could be a potential further avenue to raise concerns about projects that they are monitoring, in addition to the letters they have written to ADB and the reports published on their websites.

A final space of engagement is the possibility of CER buyers engaging in water governance through CDM. The EU has had a requirement since 2004 for projects over 20 MW to commission an independent World Commission on Dams (WCD) compliance report, intended to ensure the social and environmental sustainability of each project. This requirement potentially opens up a significant space of engagement, given that the original WCD (2000) report was influential in drawing attention to the negative impacts of large hydropower projects worldwide. Such a WCD compliance report needs to address all the seven strategic priorities outlined in chapter 8 of the original WCD report: Gaining Public Acceptance, Comprehensive Options Assessment, Addressing Existing Dams, Sustaining Rivers and Livelihoods, Recognising Entitlements and Sharing Benefits, Ensuring Compliance, Sharing Rivers for Peace, and Development and Security.

In practice, however, there are several barriers that limit this potential and the required report seems to be a watered-down version of the original WCD guidelines. One of the key problems is that the WCD compliance report comes at a very late stage in the process. The CDM process does not require having a buyer upfront, so it could take a long time – in theory until the project starts generating credits (around two years after it is commissioned) – before the WCD compliance report is finally produced. In the case of the Song Bung 4, the consultant was still working on the report at the time of fieldwork in August 2013, less than 1.5 years before the scheduled commissioning of the dam and much too late to change anything in the construction, resettlement or any other plans. Another major problem of the WCD compliance report is that the report remains confidential, which makes it very difficult for outsiders to verify its findings. A consultant (09-08-2013) told us that it is possible to make a WCD compliance report on the basis of existing information in the PDD and the Environmental Impact Assessment (EIA), in which case it does not contribute any added value.

¹¹ <https://cdm.unfccc.int/Projects/projsearch.html> (accessed on 3 September 2014)

¹²

www.noccop.org.vn/modules.php?name=Airvariable_Projects&file=index&opcase=viewprocat&pro_cate_id=103&menuid=97 (accessed on 3 September 2014)

The issues with the WCD compliance report relate to the wider problem of private governance, of which the CDM is an example (Bäckstrand, 2008). Similar to the PDD, the consultants understand that CER buyers want uncritical reports so that they can proceed with their purchase (cf. Lund, 2012), and are therefore incentivised to oblige. This is similar to the issue raised by Paulsson (2009) about the validation and verification stages, where the Designated Operational Entity has an incentive to come up with a positive report or risk being replaced. Such accountability issues need to be resolved in order for spaces of engagement in the international arena to be effective.

CONCLUSIONS

This article has explored the potential for new spaces of engagement in water governance arenas that have been created as a result of the implementation of the Clean Development Mechanism (CDM) in hydropower projects in Vietnam. We have analysed the boom and bust of CDM in Vietnam and examined two projects in Quang Nam Province in detail at the various levels of CDM's networked governance.

Our conclusion is that whilst CDM has opened up some new *potential* spaces of engagement in the various different place-based arenas, these are currently underutilised and have not had a material outcome in terms of strengthening water governance including the projects' social and environmental impacts and opportunities for a range of actors to shape project decision-making. One of the key reasons is that CDM is a relatively minor process embedded in wider national and local water governance processes and is relatively uninfluential to affect them. On a positive note, the rules and regulations for hydropower in Vietnam have gradually improved over time, without the need for CDM's networked governance (Dao, 2010). Although they remain imperfect, hydropower CDM projects at least have to comply with these regulations. In practice, however, rules and regulations in Vietnam can still easily be circumvented and the CDM does little to change this. The second reason for the failure of these new arenas of engagement to gain prominence is that many processes in the mechanism are under-publicised, lack channels for ready engagement with local and national actors, and are also rendered technical. As a result, it is virtually impossible for the Vietnamese public – especially those affected by hydropower projects – to engage with the CDM due to the distance, the language and the knowledge required. Even for civil society organisations – and academics like us – it is difficult, because of the opaque language and the many processes that stay within closed doors.

Our academic contribution to the ongoing debates about CDM and other climate finance mechanisms is to go beyond the discussions of additionality and sustainable development alone and to explore how CDM articulates with water governance. We believe that this approach helps to understand the differences between the theory and practice of networked governance mechanisms such as CDM (Bäckstrand, 2008). Leaving aside whether the CDM has the potential to address its objective of reducing carbon emissions – about which we share the scepticism of many – we find that if the articulation of CDM with water governance is to provide new arenas of engagement and thus strengthen social and environmental outcomes at the project level, then the CDM processes must be more accessible and accountable, less technical, and ultimately more clearly linked to actual project decision-making. This must entail a serious commitment to enabling affected communities and civil society to provide the checks and balances – expressed within the various arenas of engagement – and is necessary to ensure that climate finance mechanisms do not remain simply revenue streams tapped by consultants and project developers with few local-level or global-level benefits.

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