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Hydropower in Cambodia

Competing discursive story-lines of a contested development path

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Abstract

This thesis uses discourse to analyze how different story-lines of hydropower development in the Mekong River Basin reproduce the concept of sustainable development. With actors advocating sometimes diametrically opposite development paths resulting in different social, economic and environmental trade-offs they all refer to and motivate their agendas in terms of sustainable development. I applied a qualitative approach facilitated through semi-structured interviews to engage multiple actors in the discourses of hydropower. Using the concepts of *story-lines*, *discursive elements* and *discursive closure* I investigate three tracks in the debate on hydropower development pertaining to Cambodia's downstream position on the Mekong River. By problematizing the concept of sustainable development in regard to hydropower, the thesis demonstrates how its ambiguity can propel debate and I argue that the concept's vagueness is to be seen a potential strength rather than a weakness. The thesis found that strong hydropower proponents tend to emphasis economic aspects of sustainable development succeeded by the environmental and social. Opponents on the other hand demonstrated a reversed tendency while a middle-track expresses difficulties in connecting the two extremes.

Keywords: Hydropower, Cambodia, Mekong River, Sustainable Development, Story-lines, Discursive Closure, Discursive Elements.

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To my parents, Hans and Anne-Marie Nilsson

Contents

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Abbreviations and Glossary

ADB	Asia Development Bank
ASEAN	Association of Southeast Asian Nations
BOT	Build-Operate-Transfer
CSO	Civil Society Organization
EIA	Environmental Impact Assessment
GMS	Greater Mekong Sub-region
HSAP	Hydropower Sustainability Assessment Protocol
IHA	International Hydropower Association
IMC	Interim Mekong Committee
IUCN	International Union for Conservation of Nature
LDC	Least Developed Country
LMB	Lower Mekong Basin
MC	Mekong Committee
MoME	Ministry of Mines and Energy
MoE	Ministry of Environment
MoWRAM	Ministry of Water Resources and Meteorology
MRC	Mekong River Commission
NGO	Non-governmental Organization
PEC	Power Engineering Consulting
RGC	Royal Government of Cambodia
UMB	Upper Mekong Basin
UN	United Nations
UNCTAD	United Nations Conference On Trade And Development
WCD	World Commission on Dams
WWF	World Wildlife Fund for Nature
CO_2	Carbondioxide
CH_4	Methane
ha	Hectare
km	Kilometer
km2	Square Kilometer
km3	Cubic Kilometer
kWh	Kilowatt hour
MW	Megawatt
GW	Gigawatt

Riparian here referes to a nation state situated on the banks of the Mekong River. As such, the *Lower Mekong Basin* Riparians are Thailand, Laos, Cambodia and Viet Nam while the *Greater Mekong Subregion* also include China and Myanmar.

Mainstream here refers to the dominant stream of the Mekong River, as contrasted to its tributaries.

Tributary here refers to a stream or river that flows into the mainstream of the Mekong River contributing to its flow.

Flood-leveler refers to the capacity of a water-body to ingest an increased flow in the rainy season to mitigate flooding. Here it primarily refers to the Tonle Sap Lake in Cambodia.

Build-Operate-Transfer (BOT) is a contract form frequently used in hydroelectric projects in developing countries. Usually a private entity receives a concession from the state to finance, design, construct, and operate the plant for the time period set out in the contract whereafter it is handed back to the state. A usual BOT concession spans over 20-40 years.

Run-of-the-river is a type of hydroelectricity where little or no water at all is stored. There are no universal standards for how much, or the number of days, water can be stored for a hydropower plant to still be considered run-of-the-river.

Installed capacity is the maximum capacity that a hydroelectric plant is designed to run at.

Firm capacity is the amount of energy that a can be guaranteed to be available for production or transmission from a hydroelectric plant at any given time.

1. Introduction

1.1 Problem Outline

The Mekong River is one of the largest and longest rivers in the world and among the most pristine and diverse ecosystems.[1] The River Basin and its tributaries are crucial for a significant part of the Basin's population and the River's ecosystems' health therefore almost directly reflects the wellbeing and economic prosperity of the people living within it having great impact on cultures and traditions (Backer, 2007; Keskinen et al., 2008; Molle et al., 2009; Taylor, 2010).

Historically, and in present time, the Mekong River has simultaneously been a crucial element for economic development in the region, largely by supporting the largest freshwater fishery on the planet of circa 2.3 million tons per year (Mekong River Commission, 2010; Molle et al., 2009). Of the approximately 60 million people living in the Lower Mekong Basin an estimated 85% reside in rural areas and 60% depend directly on the river, mainly through small-scale or even subsistence livelihoods (Conservation International, 2014; Fox and Sneddon 2005; Mekong River Commission, 2010; Öjendal et al., 2012).

Three of the River's riparians — Cambodia, Laos and Myanmar — are Least Developed Countries. An estimated 25% of the population live below the poverty line making poverty alleviation a central development imperative in the region. Cambodia is the second most downstream riparian and one the least developed countries in the world (UNCTAD, 2014; Öjendal et al., 2012).

Cambodia has 86% of its territory within the basin and the Cambodian population is heavily dependent on the River's resources, in particular fishery and those provided by wetlands (Backer, 2007; Dore 2003; Tyler, 2010). The Mekong River works in cyclic tandem with the Tonle Sap Lake in Cambodia producing an annual flood pulse crucial to sustain fisheries and agriculture by bringing sediments and nutrients and serving as a breeding ground for many fish species (Keskinen et al., 2008).

The Mekong River is also seen as an energy source for the countries along the river. The surge in hydropower dam projects in the Mekong River Basin has been described as paramount and chiefly

1 "It is estimated that the Mekong region has 20,000 different plant species, 430 mammal, 1200 bird, 800 reptile and amphibian and 850 fish species making it one of the richest in biodiversity worldwide containing 16 WWF Global 200 ecoregions, which is the most dense concentration in mainland Asia. New species are discovered all the time, only between 1997 and 2007 1068 species were found excluded invertebrates" (Taylor, 2010: 23).

Figure 1.1 The Mekong River Basin and Mainstream Dams

Source: http://imgkid.com/mekong-river-map.shtml

for energy transformation to electricity to outweigh the high dependence on imported fossil fuels in the Lower Mekong Basin (Molle, 2009; Taylor, 2010). The Mekong River Commission estimates up to 71 new large-scale hydropower projects on Lower Mekong Basin tributaries by 2030 together with a renewed interest in mainstream dams, particularly in China's Yunnan province and in Laos (Mekong River Commission, 2010, 2011; Öjendal et al., 2012). Recent developments in Laos have seen fierce criticism from Vietnamese and Cambodian delegates to the Mekong River Commission as well as becoming a matter of controversy of development potential and possible impacts in domestic and regional politics (Trandem, 2015).

High dependency on imported energy and fossil fuels forms a basic rationale for hydropower development and is generally seen by riparian governments as being a cheap and clean(er) energy source providing government revenue as part of wider poverty reduction and development plans

(Ansar et al., 2014; Keskinen, 2008; Mekong Watch, 2013; Royal Government of Cambodia, 2004; Taylor, 2010). However, current trends can be understood as a dual imperative, and dilemma as large-scale hydropower dams also have negative impacts, e.g. displacing communities and disrupting livelihoods, a source for conflict, biodiversity loss and changed quality and quantity of water flows which may affect nutrients and sediments transportation (Baird, 2014; Jackson, 2014; Gätke et al, 2013; Mekong Watch, 2013; Ryan & Goichot 2011; Searin, 2006). The thesis aims to understand these tradeoffs by analyzing competing discursive story-lines on hydropower development as proposed by civil society, government, researchers and development partners.

1.2 Research Problem

Poverty in the Lower Mekong Basin and economic development potential of the Mekong River calls for hydropower development throughout the region while high dependency on riverine ecosystems and uncertainty of impacts simultaneously call for its protection. This presents a dual development-protection imperative and it has be argued that current hydroelectric trends come with tradeoffs between economic, social and environmental development elements (Hansson et al., 2012). Regardless of which tradeoffs are advocated actors refer to and motivate their agendas in terms of *sustainable development* (cf. e.g. Frey & Linke, 2002; Mekong River Commission, 2010; Middleton, 2008; Sinohydro, 2012; Royal Government of Cambodia, 2004; World Bank & Asian Development Bank, 2006; World Wildlife Fund for Nature, 2015).

Sustainable development interprets through actors' social, political and cognitive commitments leading to more than one possible path of what development, or which aspect(s) in a development process is to be sustained. The concept's ambivalence and actors' alternative interpretations thereof have resulted in adherence to similar and sometimes identical terminology while making antipodal conclusions of hydroelectricity's role in sustainable development.

The concept's ambiguity is described by Hajer (1995) who perceive sustainable development as a "story-line that has made it possible to create the first global *discourse-coalition* [emphasis added] /…/ that shares a way of talking about environmental matters but includes members with widely differing social and cognitive commitments" (ibid.: 14). Given the Mekong's social and cultural importance, environmental richness and economic development potential, its future engage a vast number of actors. By adhering and contributing to the reproduction of various *story-lines* they struggle to obtain the interpretative prerogative of sustainable development of the river.

In this thesis I will investigate key actors' positions to hydropower development in the Mekong River Basin from a Cambodian perspective. The purpose is to empirically investigate discourse — through the use of *story-lines* — as integral to the realities of hydropower and thereby contribute to a clarification of varying claims of hydroelectricity's role in leading a sustainable development in Southeast Asia.

1.3 Research Questions

The following research questions guide the thesis in reaching its aim and purpose.

1. How is the concept of *sustainable development* reproduced through the narratives on hydropower development in Cambodia?
    a. What *discursive elements* of hydropower development do the different actors pay importance to?
    b. What narratives and *story-lines* do actors draw upon to describe hydropower development?

1.4 Disposition

The following chapter presents the methodological approaches used to execute the thesis. Chapter 3 presents the conceptual and analytical framework followed by a discussion of the historic importance, current status and trends in regard to the Mekong, its people and hydroelectric development in Chapter 4. Thereafter Chapter 5 presents an analysis of primary data using the story-line approach. In Chapter 6 I discuss the findings and Chapter 7 presents some concluding remarks.

2. Method

To answer the research questions set out above and achieve the thesis' aim and purpose a qualitative methodology is adopted by combining semi-structured interviews and a review of news articles and documents. Semi-structured interviews were conducted with a wide variety of stakeholders and constitute the primary data material while academic articles, reports and English language news articles made up the secondary data material. Due to the character of the primary data material and a discourse analysis approach a social constructivist relational ontology together with an interpretivist epistemology were found suitable (cf. Chapter 3).

Clear referencing and extensive quotation contributes to a transparent presentation of primary and secondary data to the extent possible. Representation of a wide variety of actors — all informants speak for prominent actors reproducing the discourse — awards the thesis satisfactory validity and reliability.

2.1 Primary Data

2.1.1 Fieldwork

Fieldwork was conducted from February 1st to April 19th 2015. This proved to be a fortunate time to engage in the field for administrative reasons as well as two topical events. Firstly, early in the year many state and non-state actors are engaged in planning and reporting activities meaning they are relatively easy to access in respective offices. Although a number of meetings had to be re- and re-re-scheduled it is believed to have been a more prominent later in the year. Secondly, two events of interest coincided with the fieldwork phase. On March 2, 2015, a dam opposition activist was deported from Cambodia (cf. e.g. Lei & Sovan, 2015; Lipes, 2015) stimulating a wide public debate and Cambodia's Prime Minister Hun Sen spent time on the issue in an address to government officials in Phnom Penh (cf. Reaksmey, 2015). Thus the event increased both the topicality and the sensitivity of the subject matter. March 17-18, 2015, I was invited to partake in the final "National Consultation Workshop of the Draft of Environmental Impact Assessment (EIA) Law" in Phnom Penh providing ample space for networking as well as insight in relevant ongoing legislative processes (cf. e.g. NGO Forum on Cambodia, 2015; Baird, 2015).

Primary data was collected between February 4th and April 8th in face-to-face meetings in Thailand (Bangkok and Chiang Mai) and Cambodia (Phnom Penh, Saen Monorom and Kampot), and via Skype, phone and email with respondents in Ratanakiri and Stung Treng, Cambodia; and, Vientiane, Laos. Informants represent Civil Society Organizations (CSOs) working in or towards

Cambodia, administrative bodies and ministries of the Royal Government of Cambodia (RGC), development partners to Cambodia, university scholars and independent researchers. This represents my effort to achieve a heterogeneous sample to maximize the set of opinions (Creswell 2007). In total 47 individuals contributed to the study and notes were taken during all interviews although more studiously when the interview was not being recorded. Recorded interviews were transcribed in part where the respondent talked on the subject, hence a selective transcription. All interviews were conducted in English. The respondents' level of English together with the researcher's basic skills in Khmer deemed an interpreter unnecessary (cf. Appendix III).

Respondents were primarily approached via email or phone directly. In several cases former colleagues or a previous respondent acted as "gatekeepers" facilitating the introduction (Bryman, 2012a: 435; Moyser, 2006). Hence, strategic "snowball sampling" allowed other relevant informants to be identified from an initial small group (Bryman, 2012a: 202). Civil society and academia were easy to approach and thus compose a larger portion of total respondents than other stakeholders (cf. Appendix III). Establishing contact with hydropower development-relevant ministries, government administrative agencies, representatives of regional cooperation bodies and some development partners to Cambodia required more time but were ultimately positive.

Efforts to reach out to the private sector were made possible towards the end of the research after necessary contact details had been acquired. Outreach was conducted through online contact forms, direct email and phone, participation in the EIA Consultation and finally by showing up on two private sector actors' door step.

Private sector outreach through online contact forms, direct emails and phone calls went unanswered. Participation in the EIA Consultation allowed only for non-hydropower related private sector contacts. Attempts to approach company compounds were interrupted by armed guards in three cases. In one case, after some convincing, one of the armed guards agreed to seek the possibility for me to briefly meet with a company representative. Approximately 20 minutes later the guard came back saying "No, all busy. From China, no speak English. [They] have no time. [author's translation from Khmer, likely broken]". On proposing I could come back in the afternoon the guard replied "Nooooo. Impossible. You [better] go now".

One visit was conducted to an in-operation hydropower plant and efforts to acquire formal approval to visit a construction site were made to allow for first-hand experience and consult local communities. At the in-operation hydropower plant armed personnel at military checkpoints

interrupted me from reaching the site from both sides of the river. With this experience in mind and another researchers' testimony to similar difficulties I decided not to approach the construction site without first acquiring a formal government approval. The request was left with the Ministry in charge on March 13, 2015, and I received the Minister's answer on April 22, 2015, appreciating my interest in hydropower noting that the case "is not an appropriate site to your thesis" (cf. Appendix IV).

At the in-operation hydropower plant efforts were also made to reach out to local communities in its close proximity. Villagers were generally skeptic to talk but one group/family shared a brochure that they had received from the project developer upon the hydropower plants completion. These outreaches were done by the author in Khmer and there is a possibility — although unlikely as I am positive to having heard them speak Khmer with one another — that the villagers approached did not speak Khmer. With close to five years experience living and working in and towards Cambodia the villagers' unwillingness to converse on any topic was a first-time experience. Neither the case of me being white, nor clothes or mean of transportation have previously resulted in similar hesitance to engage with me as a foreigner, especially not when speaking Khmer. Not representing a familiar CSO or government body may have contributed to this hesitance although I deem it unlikely.

In summary, 47 individuals contributed to the study representing 14 civil society organizations, 10 international consultants, 5 bodies of the Royal Government of Cambodia, 4 development partners, and 4 researchers. No hydropower plant construction company, developer, concessionaire or operator were interviewed. No villagers except those mentioned in the previous paragraph were consulted.

2.1.2 Semi-structured Interviews

A semi-structured interview approach was used to allow space for the respondent and give the researcher flexibility in reiteration and elaboration. As Bryman (2012a) notes, it is the "[o]pen-ended, discursive nature of the interviews which permits an iterative process of refinement" (ibid.: 472) enabling the respondent to interpret and speak freely while the researcher, in a hermeneutic manner, can readdress initial aspects in tangent with the respondent's ongoing elaborations. A set of pre-formulated open-ended questions served to keep the interview on topic (ibid.; cf. Appendix II).

An elite interview approach was seen most appropriate to discover the reproduction of discourses (Moyser, 2006). Interviews were primarily held at the respondent's office. This was done for two reasons. First, it places the respondent in a familiar place where she is likely to feel secure. This is

believed to have been important as hydropower development can be seen as a sensitive topic due to recent events (cf. e.g. Lei & Sovan, 2015; Lipes, 2015; Muyhong, 2015; Reaksmey, 2015). Second, it granted the possibility to get introduced to additional informants or acquire material for the study directly from the respondent's office. The approach proved successful in both aspects.

2.1.3 Primary Data Analysis

During the data collection phase notes were continuously taken and key points from respective interview, outstanding quotes and the researchers initial thoughts were summarized into a spreadsheet shortly after the interview. Prior to finalization of the data collection phase clusters of positions and interpretations (*story-lines*) to hydropower had started to emerge and thus begun a structured formation of such clusters (cf. 5.1 Narratives of Meaning) using Munasinghe's (1993) sustainable development triangle for a thematic distribution. No acknowledgement of what sector the actor represented was taken in this step allowing multi-sector clusters whereafter the analysis commenced according to Hajer's (1995) argumentative approach to analyzing discourse (cf. section 3.2). The final product of this process is presented in Chapter 5.

2.2 Secondary Data

Secondary data was attained from a wide range of sources related to hydropower development in the Greater Mekong Sub-region — with a particular focus on Cambodia — allowing a comprehensive contextual scope (Creswell, 2007: 73). A presentation of the secondary data is used to explain the background of hydropower in the region and Cambodia in Chapter 4. Documents consulted include legal documents; online news paper articles; position papers; reports; and, published research (cf. e.g. Electricity Authority of Cambodia, 2013; Gätke et al., 2013; International Rivers, 2013; Jude, 2013; Mekong River Commission, 2010; Rasmey, 2014; Royal Government of Cambodia, 2004; Keskinen et al., 2008; Taylor, 2010).

2.3 Reflection of Selected Methods

The selected approach to primary and secondary data collection for the thesis generated a significant amount of highly relevant documents and interviews. The open ended approach — i.e. setting out to gather the respondent's perspective on the subject matter by letting her speak freely within certain topical restraints — resulted in deliberations on multiple aspects of the topic allowing the respondent's perspective to be presented, i.e. what she chose to talk about and how. While being a successful approach in gathering information on respondents' perspectives, the amount of material acquired did at a certain point become close to overwhelming leading to halt further investigation.

In meetings with informants I refrained from taking a stance for or against hydropower. With most informants, and in particular wholeheartedly or semi-hydropower friendly informants the not-choosing-sides approach proved successful. With some strong hydropower opponents I was met with skepticism for not taking a position against dams. Thus, the approach had both strengths and weaknesses but I believe taking sides would have limited my ability in acquiring meetings with the diverse range of informants that was finally achieved. It would also have limited the thesis' validity.

Another challenge is due to limited representativeness of the data in relation to positions of villagers and the private sector. No villager or private sector actor are represented in the analysis of primary data meaning that potentially important perspectives are not included in the thesis. Positions of rural village residents' are in part reflected through some civil society groups working with grassroots although it is recognized not all villagers adhere to these positions. Lacking representativeness of private sector positions is handled to a certain extent as these actors are represented online through their websites and that their agenda can be seen through other hydropower proponents part of the study.

As respondents are not an account of the entirety of actors the thesis cannot be seen as representative of "bewildering variety of separate discursive component parts of a problem" (Hajer, 1995: 56). Nevertheless, throughout the fieldwork phase efforts were made to reproduce the diversity and multiplicity of stakeholders in sampling individuals, organizations and institutions to the largest possible extent. While the number of civil society respondents are higher than those of other sectors nuances within the sector must be emphasized meaning that this is not a coherent group. Also, the case that half of respondents are not nationals of an LMB riparian cause for two readings. First, it suggests that the discourse is significantly reproduced by external actors. Second, it raises the question to the sample being representative of actors reproducing the discourses. I argue the sample is representative of the societal sectors focused, acknowledging that some sectors, and thereby possible discourses, are left out (cf. Appendix III).

2.4 Ethical Considerations

For the purpose of transparency each meeting commenced by a personal introduction of the author and his present and previous affiliation[2] followed by a short presentation of the thesis' aim and purpose. The respondent was further assured that her contribution, identity and affiliation would be

[2] In 2010 I was part of an exchange program between Cambodia and Sweden and from 2011-2013 I worked for the Swedish CSO Forum Syd at their Southeast Asia office in Phnom Penh.

kept confidential. Everyone mentioned on the 'Acknowledgement Page' have given their consent. When allowed the interview was recorded with the premise that the sound file was for the researcher's ears only (cf. Appendix I)[3]. If the respondent preferred, the author refrained from recording and took notes. If the respondent at any point during the interview wished to turn off the recording it was and I retreated to taking notes. All respondents took part of the study voluntarily. As such the thesis project was carried out in accordance with the ethical guidelines as described by the Swedish Research Council (2009) (Bryman, 2012b).

[3] None of the respondents wished to use the informed consent form expressing trust in the author handling of the recorded material with care.

3. Analytical Framework

This chapter lays out the thesis' conceptual and analytical framework. It sets out by problematizing the concept of sustainable development by an admission that its ambivalence constitutes its strength as well as its weakness. It then turns to the study of the political processes using Hajer's (1995) argumentative approach to analyzing discourse and the concepts of *story-lines*, *discourse-coalitions, discursive hegemony* and *discursive closure*.

3.1 Sustainable Development, A Contested Concept

Sustainable development has come to be a prominent concept and commonplace in reference to distinctly different types of development due to its implicit positive, but undefined, meaning (Savage, 2006). However, while its strength may be derived from a multitude of possible interpretations it has also been pointed out as the concept's vague expedient without a clear traction of its own (Daly, 1990; Mebratu, 1998) and that "the emphasis of conceptual development has shifted from logical coherence to that of semantics" (Mebratu, 1998: 518).

Daly (1990) suggests a demarcation between growth and development — where the former defines as a quantitative increase in size by addition and the latter a qualitative expansion by capacities — to return logical cohesion. Therefore, growth based in ecosystems and finite natural resources is impossible to sustain in the long-term leading Daly (1990) to state that "sustainable growth" is a "bad oxymoron" while "sustainable development is much more apt" (ibid.: 1).

The argument hints at a Malthusian theory when Daly (1990) argues for high resource-usage countries to limit consumption and high population-growth countries to apply population control. Building on the argument of development contra growth, poverty alleviation is likely to be more difficult without growth. Henceforth, radically speaking, poverty alleviation by development must, as a logical effect of the argument, apply controls to population and increase wealth redistribution when overall growth is no longer an applicable mean (ibid.: 5).

Operationalization of the sustainable development concept for the thesis builds on the three pillars of economic, social and environmental aspects to development (Munasinghe, 1993). The thesis however acknowledges more recent review of the three pillars suggesting a 'nested approach' of inseparable elements (Griggs, et al.,2013).

3.2 An Argumentative Approach to Analyzing Discourse

As a corrective to Foucault's methodology of discourse analysis and Sabatier's Advocacy Coalition Framework, Hajer (1995) develops his argumentative approach to discourse analysis for a 'middle-ground' approach to the study of political processes. Here focus is given the concepts of *story-lines* and *discourse-coalitions,* introduced through an ontological and epistemological demarcation of *the environment* and the *environmental conflict*.

3.2.1 The Environmental Conflict

First, it is no longer the question of whether or not there is an environmental crisis. Instead the *environmental conflict* "is essentially about its interpretation" (Hajer, 1995: 14). 'Talking green' has become an "inclusionary device" (ibid.: 14) rather than part of a radical social critique. Correspondingly, the environmental conflict must be conceptualized as "a complex and continuous struggle over the definition and the meaning of the environmental problem itself" (ibid.: 14-15) and has as such become discursive. As "various actors are likely to hold different perceptions of what the problem 'really' is" (ibid.: 43) it becomes imperative to investigate "which aspects of social reality are included" (ibid.: 43) as there is no single problem or solution.

Environmental issues bring together a wide range of actors and modes of speech that often involve discursive elements from various disciplines (ibid.: 45-46). Accordingly, ideas from one discourse become part of an inter-discursive group of actors carrying different discursive logic (ibid.: 46). To understand an environmental issue thus necessitates a combination of knowledge produced in different discourses. Hajer (1995) argues that this is enabled by story-lines facilitating the debate where arguments primarily establish political power through their "multi-interpretability" rather than consistency (ibid.: 61).

Consequently, an idea in environmental discourse "should not be seen as the product of a linear, progressive, and value-free process" but rather as the result of "a struggle between various unconventional political coalitions" (ibid.: 12). These coalitions are unconventional because they gather around specific *story-lines* rather than in parties or organizations and infers that actors producing story-lines are located beyond the traditional political sphere (ibid.: 66). Granted that "social action originates in human agency of clever, creative human beings but in a context of social structures of various sorts that both enable and constrain their agency" (ibid.: 58) actors within coalitions are likely to have different interpretations of meanings and implications of a story-line.

The thesis as such appreciates that *the environmental conflict* is a social construction attributing to the material reality of *the environment* and people living in it; "[t]his does not mean that nature 'out there' is totally irrelevant" (ibid.: 17).

3.2.2 Story-lines

A story-line is a "narrative that allows actors to draw upon various discursive categories to give meaning to specific physical or social phenomena" (ibid.: 56). In this way story-lines are key to defragment separate discursive elements of a problem. This assumes that actor cognition of an issue is not dependent on complete systems of discourses but "rather evoked through story-lines" (ibid.: 56).

Story-lines have three functions. Firstly, in "facilitating the reduction of the discursive complexity of a problem" (ibid.: 63). Secondly, story-lines give continuity and stability to the debate when an increasing number of actors start using it. Thirdly, by providing a narrative, story-lines allow actors to expand their engagement and discursive understanding beyond their own expertise. Through its three functions story-lines have "an essential role in the clustering of knowledge, the positioning of actors, and, ultimately, in the creation of coalitions amongst the actors of a given domain" (ibid.: 63).

The three functions of story-lines are facilitated through the "interpretive process of 'discursive closure'" (ibid.: 62) which reduces complex inter-disciplinary issues to a concentrated and simplified argument, e.g. "[a] visual representation or a catchy one-liner" (ibid.: 62). While the process of discursive closure is coupled with a decline of detailed content to a degree where "all uncertainty and all conditionality of the original knowledge claims is erased" (ibid.: 62) it establishes the story-lines' multi-interpretability necessary for communicating inter-discursive problems and thereby reinforce its political power (ibid.: 61).

3.2.3 Discourse-coalitions

The formation of a discourse-coalition occurs in attempts to achieve discursive hegemony by actors that "for various reasons (!) are attracted to a specific (set of) story-lines" (ibid.: 65). Discourse-coalitions are constituted by "(1) a set of story-lines; (2) the actors who utter these story-lines; and (3) the practices in which this discursive activity is based" (ibid.: 65). Actors in a discourse-coalition may identify themselves according to distinctly different discourses and the story-lines therefore become the "discursive cement that keeps a discourse-coalition together" (ibid.: 65).

A discourse is considered hegemonic in a certain domain when *structuration* and *institutionalization* has occurred. *Discourse structuration* is when the credibility of actors in a certain domain are required to draw on the "ideas, concepts, and categories of a given discourse" (Hajer, 1995: 60). *Discourse institutionalization* occurs when "a given discourse is translated into institutional arrangements" (Hajer, 1995: 61).

Actors' adherence to specific story-lines is explained by "'discursive affinities'" (ibid.: 66). Suggesting that story-lines "operate on the middle ground between *epistemes* and individual construction" they neither acquire their "discursive power from the individual strategic choice" nor from "the fact that the specific elements fit together in a logical way" (ibid.: 66). What emerges are actors that do not necessarily understand the full complexity of the argument but who argue "'it sounds right'" (ibid.: 67) based on the elements' "similar cognitive or discursive structure which suggests that they belong together" (ibid.: 66f). Too strong discursive affinity — when discursive elements "flow into one another" — is called "'discursive contamination'" (ibid.: 67).

3.3 The Realities of Sustainable Development

In line with Hajer (1995) I therefore argue that we — inhabitants of planet Earth — do not share the understanding of the environment in the same way we share the planet. It would be incorrect to assume that "the natural environment that is discussed in environmental politics is equivalent to the environment 'out there'" (ibid.: 16). Our shared understanding of the environment is the product of a socio-cognitive struggle over the power of certain story-lines. Hence,

> "sustainable development should also be analysed as a story-line that has made it possible to create the first global discourse-coalition in environmental politics. A coalition that shares a way of talking about environmental matters but includes members with widely differing social and cognitive commitments. The paradox is that this coalition for sustainable development can only be kept together by virtue of its rather vague story-lines at the same time as it asks for radical social change." (Hajer, 1995: 14)

Consequently, reality "is always particular" and "dependent on subject-specific framing or time-and-place specific discourses" (ibid.: 17) resulting in our "current understanding /…/ is just that: our current understanding" (ibid.: 17). In consonance, the thesis applies the argumentative approach to the contested meaning of hydropower development situated within a global discourse-coalition of sustainable development. In doing so it aims to empirically investigate *the realities* of hydropower development in the Mekong River Basin.

4. The Mekong, Cambodia, and Hydropower

The chapter serves to give an overview of the Mekong River's importance in riparian economies, to its peoples and the environment. It centers on Cambodia, its position on the River and the status and trends of hydropower development in the country.

4.1 Importance of the Mekong in Asia

The Mekong River — the Mother of Water[4] — is the eighth largest by volume and 12th longest river in the world (Dore 2003: 16). With its 4,909 km it passes through six countries on its journey from Dzado county in the Kham region of Tibet traversing Cambodia for 480 km before reaching the South China Sea in Viet Nam (Liu et al., 2009: 84). The river has throughout history contributed to shaping cultures, religions and ways of life for over 100 ethnic groups (Backer, 2007: 26; Molle et al., 2009 :1). Still to this day the Mekong River plays a central role in many cultures. Together with the Tonle Sap ecosystem it has the lead in the annual Cambodia water festival Bon Om Touk.

The exceptional seasonal transformations due to the region's monsoon climate is an important factor to its biodiversity. The River's annual flooding is in itself of outmost importance for sustaining ecosystem diversity, particularly fish but also many other organisms. Hydropower will alter flows and it is suggested that a managed flood regime could not replace the natural variations between seasons (Taylor, 2010: 23).

The Tonle Sap Lake — the largest freshwater lake in Southeast Asia and known as the 'Great Lake' in Cambodia — and riverine ecosystems have been called "the heart of the Mekong's aquatic production" (Keskinen et al., 2008: 96). Concerns have been raised of impacts to the Mekong Basin if planned developments of hydropower projects are realized in the Upper Mekong Basin (UMB) (ibid.; Taylor, 2010).

The Tonle Sap River acts as a tributary to the Mekong River during dry season but the approach of the wet monsoon season changes its character dramatically. The increase of discharge in the Mekong mainstream leads it to overflow the Tonle Sap River causing its flow to reverse towards the Tonle Sap Lake. During the wet season the Lake's area expands from approximately 2500 km^2 to 15,000 km^2 and its volume from approximately 1.5 km^3 to between 60 km^3 and 70 km^3. The River's reversed flow brings nutrients and sediments to the lake that also serves as a flood-leveler. The Lake's

[4] The English name the "Mekong River" comes from the Thai and Lao word "Mae Nam Khong". "Mae" meaning mother, "nam" water. The Mekong River, or Mae Nam Khong, as such translates to Khong, The Mother of Water" (Nguyen, 1999).

expansion creates breeding ground for many fish species and thus serves important for livelihoods and food security; way beyond the Tonle Sap. At the end of the monsoon the Tonle Sap River's flow is reversed again to become a Mekong River tributary (Jacobs, 2002; Keskinen et al., 2008; Taylor, 2010).

The River's functions differ between riparians looking at hydrological, economic and social aspects. In Cambodia, Laos and the Delta in southern Viet Nam — which are the Basin's primary rural economies — it is a lifeline supporting millions of fishers' and farmers' livelihoods. In landlocked Laos and China's Yunnan province it is also used for transportation. Rural Lao and Cambodian communities further depend on the River's aquatic organisms that are rich in protein and thus, "rural livelihoods depend on the broad diversity of aquatic plants and animals and are closely entwined with the seasonal rhythm of the river" (Taylor, 2010: 24). The seasonal flooding additionally support cultivation of paddy rice (Keskinen et al., 2008).

Most of the River's runoff comes from the Lower Mekong Basin (LMB). The Upper Mekong Basin (UMB) contributes with less than a fifth but is important for dry season flows and as a source for sediments. Upstream dams risk trapping sediments disturbing the downstream balance affecting agricultural and fisheries production. Dams in the UMB also risk impacting water levels in the dry season and the important Tonle Sap ecosystem (Keskinen et al., 2008; Kummu & Varis 2007; Kummu et al. 2008).

While Laos and Viet Nam have shown prominent potential in developing large and small-scale hydropower, fossil fuel explorations continues in Cambodia, Viet Nam and Thailand. The Mekong's potential as a source for energy is therefore of great importance and has been emphasized by riparian governments (Vireak, 2014; Taylor, 2010).

4.2 Transboundary Water Governance and National Interests

Cooperation on the Mekong began with the Mekong Committee (MC) established in 1957 and pushed by the U.S. Bureau of Reclamation that saw great potential for irrigation and hydropower in the region. Being a product of the Cold War, China was excluded while also not being a UN member and Burma[5] was not interested (Keskinen et al., 2008). With the Khmer Rouge takeover in Cambodia in 1975 political will for regional cooperation vanished. Remaining riparians — Thailand, Laos and Viet Nam — then formed the Interim Mekong Committee (IMC). The IMC

[5] The name was officially changed to the Republic of the Union of Myanmar, short Myanmar, in 1989 by the military government to disaffiliate from British colonial rule.

was however very limited in its functions and cooperation on the Mekong became almost irrelevant for a decade (Keskinen et al., 2008).

After having signed the Paris Peace Accords in 1991, the Cambodian government expressed a wish to recommence cooperation and after lengthy negotiations the four LMB riparians formed the Mekong River Commission (MRC) in 1995 (Keskinen et al., 2008) by signing the "Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin" (Mekong River Commission, 1995). When the MRC Secretariat moved to Phnom Penh from Bangkok in 1998 it marked an important step for Cambodia's path to stability and increased role in regional cooperation (Keskinen et al., 2008).[6] However, already in 1992 all six riparians had joined the Greater Mekong Subregion (GMS) Program supported by the Asian Development Bank (ADB) and in 1996 the Association of Southeast Asian Nations (ASEAN) launched its "Mekong Basin Development Cooperation"[7].

The MRC, GMS and the ASEAN Mekong programs differ in a two main aspects. First, while the GMS and ASEAN programs include all riparians of the Mekong River, MRC signatories were confined to the four of the LMB (Keskinen et al., 2008; Hirsch et al., 2006). Second, the MRC see the river as a natural resource and focus on sustainable and comprehensive management. The GMS and ASEAN programs emphasize economic and infrastructure development and encourage cooperation within the basin (Keskinen et al., 2008; Mekong River Commission, 1995). The latter are also described as seeing the river not as a natural resource but as a symbol defining the region's need for cooperation to achieve economic growth. It is however suggested that the different programs have started to near one another which raises questions of overlaps (Keskinen et al., 2008; Hirsch et al., 2006).

The MRC is perhaps the most central cooperation body in the region. Yet with only the four LMB riparians being signatories to the 1995 Agreement, domestic political reasons and competing national interests, its impact is argued to be limited (Backer, 2007; Keskinen et al., 2008). The exclusion of China and Myanmar are "perhaps the biggest deficiency of the MRC, seriously restricting comprehensive management of the entire basin" lacking the prerequisite of river basin management in considering the basin as a whole (Keskinen et al., 2008). It is also argued that the 1995 Agreement lacks teeth in that national sovereignty is imperative rejecting any enforcement

[6] At present there are two MRC secretariats, one in Phnom Penh and one in Vientiane.

[7] Cambodia joined ASEAN first in 1999 and in 2004 it joined WTO as the second least developed country to be admitted into the organization through the full ordinary process (Keskinen et al., 2008; 99).

power of the MRC. Hence, it is rather a coordinator than a controller and the 1995 Agreement has been described as weak allowing members to act as they choose (Hirsch, 2006; Keskinen et al., 2008; Backer 2006).

While much criticism is launched at the MRC and other programs they have played important roles as platforms for cooperation and sharing of information between countries. More recently these regional efforts are challenged by an increase of uni-, bi-, and multilateral development projects that do not take the watershed in its entirety into consideration and risk sidelining regional efforts. Arguably riparians' prioritization of national interests is subordinating regional cooperation (Keskinen et al., 2008: 90).

4.3 Hydropower History and Status

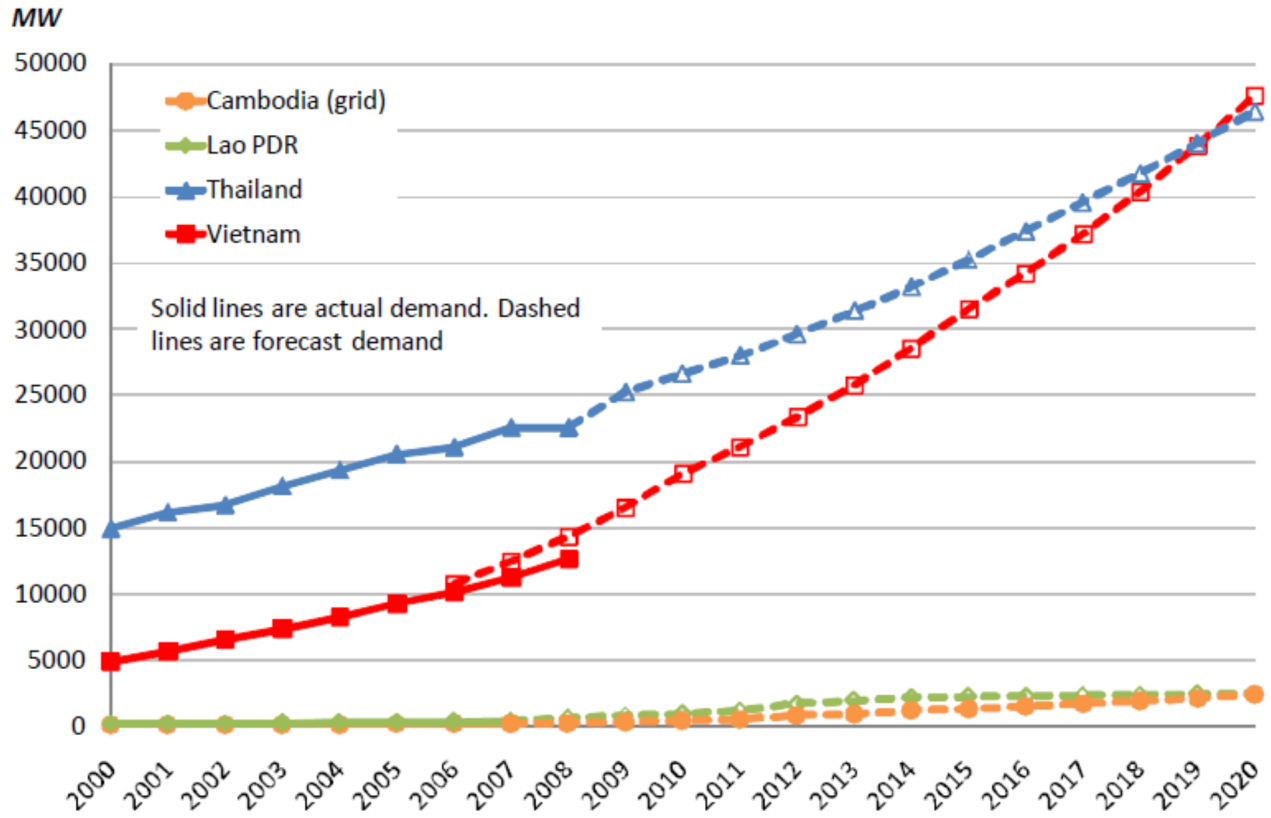
Economic growth has gone hand in hand with an increasing demand of energy (about 8% annually) in the LMB. While average consumption of energy is still low — around 2/3 of average developing countries (920 kWh per capita per year) — it is estimated that 74 million people are still without household electricity and the demand is projected to increase (Taylor, 2010).

The International Energy Agency predicts an 80% increase in energy demand in the region in the next 20 years (Figure 4.1) and the Mekong is not only seen as a source for energy but a path for mitigating climate change impacts and government revenue (Bakker, 1999; Keskinen et al., 2008; Nijhuis, 2015; Öjendal 2000; IUCN et al. 2007). In 2011 hydropower constituted 1,8% of Cambodia's energy mix but 39% of domestically installed capacity (Buysman et al., 2014; Electricity Authority of Cambodia, 2013)

Energy poverty is widespread and many rural areas depend on biomass for household needs. The region is heavily dependent on imported fossil fuels. Imported energy constituted 21% of consumption in 2005 and fossil fuels amounted to 80% of total fuels for electricity transformation. Oil dependency is estimated to increase in near decades and dependence on imports makes the region vulnerable to international fluctuations in prices and availability (Taylor, 2010).

The total estimated potential for hydropower in the LMB is 30,000 MW with the last two decades having seen over 3,235 MW developed on tributaries and another 3,209 MW under construction. If the 134 planned projects would materialize the potential capacity would be exhausted. So far Thailand and Viet Nam have developed most of its potential while Laos and Cambodia remain

Figure 4.1 Annual actual and forecast power demand growth data for LMB countries



Source: Jude (2013)

largely undeveloped (Tyler, 2010). China currently has six existing dams on the Mekong mainstream amounting to 5,300 MW and nineteen proposed or under construction that would add another 11,400 MW (Dong, 2015). Some estimate the capacity of the UMB to 15,000 MW (Keskinen, 2008) while elsewhere Myanmar alone is referred to have a hydropower reserve capacity over 100,000 MW and potential installed capacity of 46,000 MW (Khaing, 2015).

Plans to developing hydropower on the Mekong mainstream have resurfaced in the LMB. If realized it would be the end of a four-decade long development moratorium on the mainstream and the first mainstream dams in the LMB (Keskinen et al., 2008; Öjendal, 2012).

4.3.1 Hydropower Regulation

There are no international laws or standards with mandatory compliance in regard to hydropower. The World Commission on Dams (WCD) have recommendations on how to follow best practices and ensure sustainability (World Commission on Dams, 2000). Another example is the International Hydropower Association's (IHA) Hydropower Sustainability Assessment Protocol (HSAP) (International Hydropower Association, 2015). The WCD is the product of the World Bank and

International Union of Conservation of Nature. The IHA's HSAP is seen by some as the hydropower industry's own assessment protocol (International Rivers, 2013).

4.3.2 Hydropower and Climate Change

Hydropower contributes to global warming by emitting methane (CH_4), mainly through the decomposition of organic matter in anoxic conditions. CH_4 has a global warming potential 28 times that of carbon dioxide (CO_2) over one hundred years and 84 times over twenty years (Li & Lu, 2012; Pachauri & Meyer, 2014). There is however uncertainty over how severe the emissions of CH_4 from hydropower are and what conditions may increase or mitigate these. While some argue that tropical climates and large reservoirs contribute to higher emissions other argue that it has to do with the soil and land covered by the reservoir and the organisms living in it (Li & Lu, 2012; Kummu et al., 2010a & 2010b).

4.3.3 Hydropower in Cambodia

Cambodia's first large-scale hydropower dam was the Chinese-built Kamchay hydropower plant located in Kampot operating at 193 MW when inaugurated in 2011. Other hydropower dams in Cambodia include the Kirirom I and III in Kampong Speu with operating capacity of 12 and 18 MW respectively; the Lower Russei Chrum in Koh Kong with 338 MW with testing started in 2014; and, Stung Tatay and Stung Atay in Koh Kong with 246 and 120 MW respectively being partly operative and partly under construction (cf. Figure 4.2; Middleton, 2008; Open Development Cambodia, 2014a; Rasmey, 2014).

Feasibility studies are underway in Battambang and Pursat by Korean and Chinese companies and the northeastern provinces Ratanakiri and Mondulkiri have been opened up to hydropower exploration since the Sesan River Project was approved in 2011. Upcoming possible projects in Cambodia include the Lower Sesan 3, Lower Sesan 1/5, Lower Srepok 3 & 4 and Prek Liang 1 & 2. The Lower Sesan 2 hydropower project is predicted to cost over US$ 800 million and operate at 400 MW with a 33,500 ha reservoir[8] and has been mounded by critique with regard to social, environmental and economic aspects. In addition to the above tributary projects, the mainstream is considered for development with the proposed Sambor and Stung Treng dams (Middleton, 2008; Open Development Cambodia, 2014a; PEC, 2008; Rasmey, 2014).

Cambodia has no law on hydropower although there are laws on investment, electricity, land, forest, water resources and an EIA Law underway relevant for hydropower dam development. The Land Law, and the Constitution protect private ownership and state appropriation of private land only

[8] 33,500 ha is equal to almost 47,000 soccer fields measuring 105*68 meters.

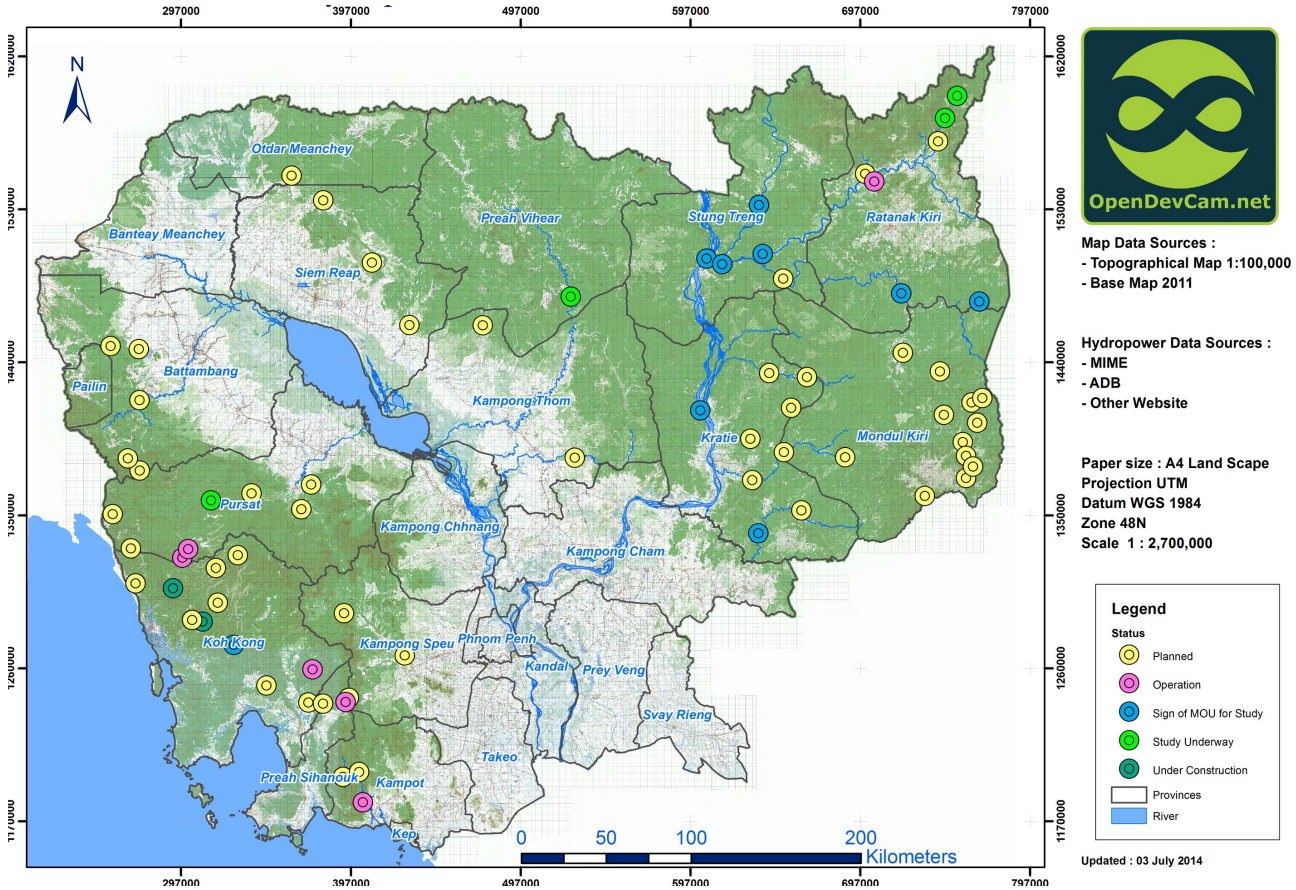
after just and fair compensation in advance. However, full property rights are problematic for many Cambodians after the tumultuous years in the 1970s and many still await formal land titles, leaving people exposed to development projects without appropriate legal protection in land disputes (Baird, 2015; Open Development Cambodia, 2014a; Middleton, 2008).[9]

4.4 Summary

The chapter has sought to illustrate the multi-faceted relevance of the Mekong River in terms of social, economic and environmental aspects with a particular focus on Cambodia. It has highlighted limitations in regulatory frameworks, challenges for holistic river basin management and problematized the account of hydropower as a clean energy source in terms of greenhouse gas emissions.

[9] cf. the following laws of the Kingdom of Cambodia for details: Forestry Law (2002): Article 4; Land Law (2001): Articles 4, 5, Chapter 4; Law on Investment (1994): Article 1; Law on Water Resource Management (2007): Article 12; Law on Environmental Protection and Natural Resource Management (1996): Article 6; Sub-decree on Environmental Impact Assessments Process (1999): Annex.

Figure 4.2 Map of Planned and In-operation Hydropower Dams in Cambodia



Source: Open Development Cambodia (2013)

5. Analysis of Primary Data

The chapter presents an analysis of primary data obtained from interviews divided into four parts. Firstly section 5.1 attempts to justify the clustering of actor positions in creating different *story-lines* whereafter each story-line is briefly introduced. Sections 5.2-5.4 present each cluster of actors that form a story-line one by one. Each story-line is structured using the three aspects in Munasinghe's (1993) sustainable development triangle (cf. section 3.1). A rotating order of the aspects was found to most fittingly to depict each story-line. While each quote can only epitomize the individual respondent they should in this presentation be seen as part of reproducing a story-line's discursive closure as a whole.

5.1 Narratives of Meaning

As social action derives from a combination of actors' agency within enabling and simultaneously constraining social structures, actors are found to operate in the same lacuna as story-lines, i.e. a space between *epistemes* and individual construction. As described earlier, actors adhere to story-lines because its elements' present a cognitive or discursive coherence suggesting they are complementary.

This *discursive affinity*, in the interface of agency and structure, guided the clustering of positions representing discovered story-lines (cf. 3.2.3 Discourse-coalitions).

Three essential story-lines were discovered during the course of the project. Two (Story-lines 1 and 3) can be characterized as extremes in that they follow an (close to) all-or-nothing narrative. Another (Story-line 2), occupy a relative intermediate position arguing "[I]t's not a question of hydropower or not hydropower" which also is the heading of section 5.2 presenting that story-line. In the same fashion the headings for Story-line 1 — "Hydropower will kill the Mekong!" — and Story-line 3 — "We need to develop, you must understand!" — aim to illustrate their narratives through which *discursive closure* is achieved.

5.2 Story-line 1: "Hydropower will kill the Mekong!"

5.2.1 Economic Aspects

The story-line starts with an expression of skepticism to the economic aspects of hydropower development. The reluctance is three-fold including disbelief in projects' ability to generate their calculated capacity; riparian influence; and, questioning global development trends. One respondent used the ongoing construction of the Lower Sesan 2 hydropower project in Cambodia as an example of the first aspect.

> "[It] is a 400 MW project, the firm capacity of this project is only a 100 MW. /…/ And we actually don't even believe it's going to be 100 MW, this is just what the EIA report says." (Interview 13)

The respondent went on saying that,

> "ADB had done studies before and said it didn't make economic sense to build a project there because it's just a complete flatland." (Interview 13)

The same respondent sees the reason to hydropower projects continued development in Cambodia being twofold. The statement implies that current trends are not a result of the country's need but an effect of development in other countries and expansionist policies of an upstream riparian.

> "… part is because they seen it from their neighbors, part is because you have these hydropower companies, especially from China, where they have dammed up the country and now they are seeking to export and look for new opportunities." (Interview 13)

The respondent strongly questioned the trend seen in Cambodia and the need for new projects, not only because they carry negative impacts but also expressed a critical stance towards the sincerity of projected electricity demand.

> "None of this makes sense. And I don't think they could actually consume all the electricity from these projects in the first place. And so they will have to export some of it." (Interview 13)

Consecutively, another respondent takes the argument a step farther questioning development trends more generally implying more is not always better and definitely not sustainable.

> "… that [increasing] power demand brings us to a different question, just, the question of sustainable development in general. Where are we going as you know as a human race on this planet with this constant demand for more and more and more." (Interview 16)

5.2.2 Environmental Aspects

Using a dramatic phrasing one respondent expressed a wide ecological concern to the current trend of hydropower development saying that,

> "… dams are proving to be, in most cases, the final nail in the coffin for Cambodia's natural resources." (Interview 37)

Mentioning natural resources the respondent here refers to a decade long critique of what is seen as mis-management of Cambodia's natural resources pertaining to, in particular, deforestation, sand dredging and depletion of soils [cf. e.g. Global Witness, 2007 & 2009].

Stemming from the above, hydropower is not seen as a clean or green source for energy but rather an aggravating factor to existing development challenges. Referring to the topography of Cambodia often necessitating large reservoirs, which requires additional deforestation that in turn become a source for methane emissions one respondent said that,

> "… in Cambodia it is a myth to say that a lot of the hydropower dams are clean energy." (Interview 13)

Big reservoirs are described as a potent source for methane emissions, which lead to the conclusion that hydropower is contributing to climate change and thereby should not, and cannot be seen as a renewable or green energy source. In concert, a history of hydroelectric projects not reaching sufficient capacity when electricity is needed the most during the dry season was highlighted. One respondent referred to ongoing construction of coal fired power plants in Cambodia to offset the lacking dry season capacity of hydropower.

> "So they are going in both directions, building coal fired and hydro. Now people consume electricity the most during the dry season because it's the hottest, and that's exactly when you don't have water, so for hydropower inside Cambodia doesn't make a lot of sense." (Interview 13)

In combination with hydropower being seen as a source for greenhouse gas emissions and thus contributing to climate change, its impacts on natural flows and annual fluctuations of the River are seen as severe.

> "The fluctuations are what's so important for the vitality of the river." (Interview 13)

> "Chinese dams have blocked sediment flows by 50 percent already and they have also changed the hydrological cycle." (Interview 13)

The River's and riverine ecosystems are described to be in danger with subsequent impacts to livelihoods build around aquatic resources provided by the River, e.g. rain-fed agriculture and dependence on annual floods. An element of distrust in engineering-solutions is present. One respondent highlighted it as a serious food security issue with impacts beyond the environmental, another sarcastically expressed confidence in fish ladders.

> "If you get rid of the fish is there enough livelihood? And there is not. /…/ You don't have enough water resources or land resources to try to compensate for the amount of livestock that you will require." (Interview 13)

> "[Even] if you were to really boost up each of the countries potential in aquaculture /…/ the strategic environmental assessment said they can only possibly replace about 10 percent of lost fisheries." (Interview 13)

> "I saw a fish ladder, I think it was a kilometer long and they had to do a thousand jumps." (Interview 8, Respondent A)

5.2.3 Social Aspects

Turning to social aspect there is a repeated critique against project proponents not implementing best practices and international recommendations. One respondent said, "we haven't seen any projects really adhere to all of the World Commission on Dams standards yet" (Interview 13). The respondent went on arguing the reason was "some of the governments thought the WCD was too difficult and didn't want to follow it so the International Hydropower Association decided to create their own standards" (Interview 13).

Implied here is a perceived unwillingness from project proponents to carry out hydropower projects in ways that will have the least possible impacts to the environment and affected communities. Continuing in regard to the IHA protocol — the Hydropower Sustainability Assessment Protocol (HSAP) — the element of critique extends to its structure where a general lack of regulation necessitating compliance is seen to be a central problem. One respondent said,

> "… [even] if every villager was against it, they still could build it and receive a pretty good score." (Interview 13)

> "It's all just basically standards or principles that, there is no necessity of compliance or anything like that." (Interview 13)

As such the HSAP is characterized as a tool that will allow any project to go ahead, a way to greenwash hydropower projects by the industry. There is a frustration present in this regard when another respondent similarly argued that even though laws and best practices exist they are not followed.

> "There are a lot of good laws out there, but the problem is that they are just on paper, they are not being implemented because of the political structure, the corruption, the systematic you know, abuse of power by the power elites." (Interview 16)

This line of argument carries a belief that project proponents have little regard for direct and long-term impacts and simply want to apply tools that will give the project a green Potemkin-dress.

Another respondent continued by stating that actors have different meanings of who the people are that constitute the country and are eligible to benefits of hydropower projects.

> "We can see people speak different language. The Government they say: 'I develop hydropower for our country and for the income for the people'. But who are really our people? Indigenous people, women, children? They are suffer by development and no one is answer to this up till now." (Interview 18)

Different meanings and a disbelief in existing practices for consulting and compensating affected communities are seen to be further exacerbated by inadequate mechanisms for sharing information. On the latter one respondent referred to Vietnamese hydropower development and impacts in Cambodia in the 1990s.

> "When dams were first built on the Sesan River the villagers were praying to the gods, they thought they had done something wrong, they didn't understand there were dams upstream. /…/ [And when] the first Ya Li Falls [dam] broke in 1996 /…/ [and] caused a lot of flooding and people died in Cambodia, and that's when they started to sacrifice their animals and stuff to the gods then, I don't think it was until 2000 that they learned that there were dams upstream, and they never received compensation." (Interview 13)

Here, communities are seen to be victims of developments in neighboring countries too. Left out not only from the decision-making processes but likewise misrepresented and disregarded by their own government for not receiving timely and adequate explanations to what is happening.

Critique also pertains to details of how compensation is calculated. This is described as simplistic approaches to development and implementation of measurement indicators of acceptable livelihood targets. Taking the Nam Theun 2 dam in Laos as an example — a project lauded as sustainable by developers and financiers — concerns are raised to what are considered best practices when these are adapted by other countries. One respondent illustrated this through the weakness in too narrowly defined income targets of what is sustainable.

> "I can't remember the rates, but they had set livelihood targets, income targets basically that each villager should receive this much money at this point [in time and] then they are fine. But what's happened in is, because the natural resources have declined people have had to go into logging around the plateau, so they are logging out the plateau, so their income is up at the level /…/ [they] said but it is not sustainable because obviously the plateau is disappearing, and they have been pushed into this you know." (Interview 13)

This line of critique is continued by another respondent who sees a failure in considering impacts beyond the directly impacted areas, particularly in terms of fisheries and other riverine resources and livelihoods.

> "If you just focus on like a community in the vicinity and not on the sixty-million people in the region that are going to be affected of course then it is going to look like a great project." (Interview 16)

In addition to emphasizing weak regulatory institutional frameworks and too narrow impact assessments, lacking benefit sharing mechanisms is a central element in reproducing hydropower as

atrocious. While one respondent said that projects "need to be more consider how much benefit for local people" (Interview 18) another was more blunt arguing that affected communities rarely see any benefits from projects "since all the electricity is going to Thailand to you know to power big malls in Bangkok" (Interview 16). Yet another respondent, reiterating the need for consultation and bottom-up community-led development, stated that "what is fair need to talk what is fair mean" (Interview 18). Here the respondent highlights not only the need for deliberations but emphasizes that the meaning of fair compensation might shift between different communities, places and cultures. Therefore, no generic solution or mechanism for compensation of lost livelihoods is likely to suffice.

Community-led development is a fundament for Story-line 1, even if it does not result in the most efficient or effective strategies, technological solutions or holistic understanding and implementation of development projects. Nevertheless, the Story-line respondents express a unified belief that sustainable development can only be realized when it is the result of the wills, and driven by the ides of the grassroots.

> "Sustainable development to me is first of all the development where the communities actually decide what their futures are going to be, they have to be consulted in every step of the way /…/ it has to come from the grassroots." (Interview 16)

> "… local people need to have a say in what they want for their futures and that has to be /…/ the bottom of it." (Interview 13)

> "I'm not saying that the communities will always have the best solutions but nevertheless they need to be consulted and they have to have a voice in all of these decisions and they are just not" (Interview 16)

On respondent expressed the core of the problem being the case that ongoing development does not give the grassroots enough attention. As a result any efforts to consult and compensate communities affected are put into questioning for their efficiency and effectiveness implying that local communities only experience negative impacts and rarely see any benefits.

> "…the underlying problem of all these [hydropower] projects /…/ is that nobody is asking people on the ground /…/ [and they are] displacing whole cultures, cutting them off their land, cutting them off their traditional way of life you know and without consulting them, without you know proper compensation." (Interview 16)

5.2.4 The Alternative

Solar power and varying definitions of small-scale hydropower[10] were raised as the favored alternative. However, this was conditioned by being done through a decentralized approach of community managed energy transformation.

> "[Solar] won't cut the fish supply, you know people can /…/ continue /…/ living off fish, fishing for food for their livelihoods, you know living in an environment that isn't polluted practicing their cultural way of life if they chose to do that." (Interview 16)

[10] The definition of small-scale hydropower among respondents varied from between 1 and 2 MW to 10 and 20 MW.

> "You can look at the energy solution, like solar energy or small scale hydropower as I mention[ed], it will avoid the harm or the impact. That is why the big scale can not avoid." (Interview 17)

> "10 MW [hydropower plants] may be less impact, still impact but slightly impact and managed by local people." (Interview 18)

5.2.5 Discursive closure

As such, the statement "Hydropower will kill the Mekong" (Interview 2), most directly and in the context it was uttered, refer to a changed natural flow of the Mekong, perhaps even ceased, that will place the threatened Irrawaddy Dolphin, and numerous fish and other species in lethal jeopardy.

In the next instance the statement refers to the people directly dependent on the River, riverine ecosystems and natural fluctuations for their livelihoods and ultimately their survival. It says that this group of people are not only the ones who will be most affected, they are also in a situation where they cannot afford, or do not wish to replace river-based fisheries with aquaculture, nor pumping water into their paddy-rice fields instead of relying on the annual flood and seasonal rains. They are the victims of a development juggernaut. The statement also signifies that this group is those who constitute *the people*, *the grassroots* and *the communities* representing the heart of Cambodia's cultural and historic identity. Hence, the Story-line goes that it is not only the flow of water and the ecological diversity that are under threat. Identities shaped through livelihoods, cultures and traditions are dying parts of the Mekong.

5.3 Story-line 2: "It's not a question of hydropower or not hydropower"

First, situated in-between the two extremes, expressions of a perceived polarization was reoccurring in Story-line 2 painting a picture of the difficulties to hold an intermediary position. This was most eloquently stated by on respondent in the two quotes below.

> "I increasingly hear from both sides that there is a need to go into the middle. But there is a real fear of going into the middle because you expose yourself for criticism from both sides. /…/ There's no space in the middle, it's impossible to be in the middle." (Interview 24)

5.3.1 Social Aspects

A central element to sustainable development in Story-line 2 is information sharing and community participation in "every step of development" (Interview 8, Respondent C). Referring to project proponents' haste in getting projects to go ahead and how this limits community participation and taking part of information the respondent continued,

> "… it's very quick and quick and information not reach to the community." (Interview 8, Respondent C)

Information is in this aspect essential because the countries in the Lower Mekong Basin are "the four world records in terms of fish consumption" (Interview 21) and thus crucial to food security.

Timely and appropriate information is seen necessary to allow for communities to be consulted, to adapt and given a chance to replace lost fish-protein.

Another element pertains to sharing the benefits of projects. Two respondents focused on the (lack of) electrification of rural areas close to a hydroelectric plant but not receiving any of the benefits.

> "… [it is] not sustain[able] /…/ they want to produce electricity for the community around, but most of them cannot get electricity. What is sustainable [about that]?" (Interview 25, Respondent B)

> "… the community told [me] that the company told them that they will get electricity for free for the impacted community, but now they pay still higher than Phnom Penh City and that is one problem." (Interview 25, Respondent B)

> "… the argument [of increasing energy demand] would work if we see a pattern of the benefits coming back into the country /…/ but the model throughout the greater Mekong is that they are selling it on. So actually if Cambodia does generate its electricity, one would want to see in all the contracts some little bit that says, well some of it will go into you know Ratanakiri, rather than actually it's all just going across the border." (Interview 8, Respondent D)

Rural and indigenous communities' difficulties to adapt to a new situation after resettlement is further a central issue. Long-term livelihood restoration programs going beyond monetary compensation were seen necessary.

> "[It] is not a big deal for the people in the city but is really completely biggest issue for the indigenous people [and] for ethnic groups because they [depend on] the forest and water [and] soil." (Interview 7)

> "[There has to be] livelihood restoration program[s] after the dam for I mean years and years and years, to ensure that their livelihood is better." (Interview 25, Respondent A)

Hence, while expressing an acceptance for some hydropower differences between rural and urban challenges in development processes are acknowledged. One respondent argued that there are plenty of good practices to follow but that stronger enforcement mechanisms are required.

> "[Cambodia] need energy, [energy] independence maybe not, but at least lower energy dependency /…/ on fossil fuels. But it can not be at the expense on the food security." (Interview 21)

> "… there are plenty of good practice to follow, the evidence is that governments don't. Governments sign an agreement with a private company and the private company is left to do it /…/ so it's the accountability of the private companies and lack of monitoring or holding private company to account [that is the problem]." (Interview 8, Respondent D)

5.3.2 Economic Aspects

On economic aspects one respondent argued that hydroelectricity will allow country to develop in numerous aspects but precaution and careful assessments must remain central to minimize impacts in the long term.

> "We need electricity and when you have electricity you can build up from that and do many other things. Of course we need it." (Interview 5, Respondent A)

> "… those hydropower dam development plan[s] need [to be] carefully study to see, to measure the impact and also maximize the benefit from that." (Interview 5, Respondent B)

Here a criticism against Build-Operate-Transfer (BOT) schemes that govern many hydroelectric projects in Cambodia arose. The argument implies that the desire for foreign investment allows corruptive practices and outrival the need to implement stricter regulations.

> "Those build and operate deals in Cambodia are terrible, it's really too much to the advantage of the developer." (Interview 21)

> "[BOT is a way to] privatize benefits and externalize all the costs to the wider society." (Interview 14, Respondent A)

> "In places like Lao or Cambodia or Myanmar, governments aren't that strong and when you have four billion dollar projects with banks behind it, who is going to say not to that. These countries are in need of foreign direct investment, so they don't want to put in place strict regulations that are going to hurt, or be perceived to hurt investors." (Interview 14, Respondent A)

> "Even the hydropower consultants that work on these projects, apparently when they are assessing a project to say whether they are going ahead with it they expect to lose 10 to 15 percent, and apparently that's an industry thing that they expect." (Interview 8, Respondent D)

Following the institutional critique above, one respondent expressed concerns to not having seen any plans or agreements on what happens after the concession period in terms of what kind of infrastructure the developer is to hand over.

> "… when those contracts after 40 years will be over it is the government that will have to pick up the pieces, and most of those dams will be in such a state in terms of sediment filling of the reservoir [and] in terms of maintenance and so forth, that it's actually going to cost them to maintain those infrastructure instead of benefiting them." (Interview 21)

The respondent continued by questioning the strong focus on domestic energy transformation for the often cited reason of bringing cheap electricity to Cambodia.

> "… they will be dependent on their neighbors for electricity supply forever. I mean there is no way they can avoid that, and why should they avoid it? If hydropower develops in Laos and in Vietnam, if Thailand has… /…/ it will, remain for a very long time cheaper to import electricity than to produce it in Cambodia, that's very clear." (Interview 21)

5.3.3 Environmental Aspects

In the environmental category hydropower's potential to "contribute to reduce the climate change" (Interview 5, Respondent A) was carefully brought up highlighting that uncertainties remain. While seeing an element of environmental benefits, long-term biodiversity impacts must be carefully considered emphasizing the importance of design and location of hydroelectric plants.

> "People may say that the hydropower development also good for the climate change as well with small dam but to me it is very uncertainty about that." (Interview 22)

> "In some cases they find that some of these hydropower plants that was built to replace coal plants, or as an alternative to coal plants, are actually not much better because of the methane it is giving off." (Interview 14, Respondent A)

> "It is not a problem of hydropower, it is how it being done /…/ design, location, strategy, that is where the problem is." (Interview 21)

The need to act out of precaution in development was a central theme. One respondent referred to the ecological and biological richness in the Mekong as "mind-boggling" (Interview 21) pointing out the remaining amount of unknowns about the Mekong.

> "… there is actually still a hell of a lot of unknowns about how this ecosystem functions. So in correlation to that any development you do without knowing all the consequences on the system is a problem." (Interview 21)

Another respondent focused on the diversity of fish species and issues of engineering solutions to different migration patterns.

> "… [the] diversity [of fish species] is very high so it [is] hard to make the pass-way to for all those fish to pass." (Interview 22)

Specifically speaking on the proposed Sambor mainstream dam in Cambodia respondents expressed strong concerns of estimated environmental impacts while recognizing favorable economic, energy and geographical aspects of the project.

> "… still [it is] a very small fraction of the region's energy mix /…/ like 10 percent /…/ but with huge environmental consequences." (Interview 14, Respondent A)

> "… [it would] block the last free flowing water in the Mekong, and that the consequences on fisheries migration will be horrible, because it also going stop also a lot of the reversal of the flow in the Tonle Sap. /…/ [But] it is a two gigawatt dam so for Cambodia to give up on such an amount of power [is unlikely] /…/ and the central position makes it also more interesting." (Interview 21)

A central element of the environmental aspect here is recognition of some changes that have already occurred. Therefore, in line with a belief in the right to develop, focus ought to be on what can be done to minimize impacts from hydropower projects rather than obstruct any proposal.

> "… it's a bit of principle, if you can't beat them, join them /…/ there is a need in a place with such a young population for development to take place. I mean you can't keep 75 percent of the population below poverty levels and depending on subsistence agriculture, I'm sorry nowhere in the world is that [going to] happen. And it is unfair even to do that. So you need to accompany the process in the most positive, the least damaging way possible." (Interview 21)

5.3.4 The Alternative

Hydropower is seen as a far from perfectly clean energy due to negative impacts and uncertainties in all three aspects. It is however recognized that any energy solution comes with negative effects.

> "… clean energy, hydropower, it isn't. There is not such a thing as clean energy, it doesn't exist so far, we haven't found. /…/ You cannot oppose the dams, for example, for the sake of opposing the dams because they do damages to the natural resources. Because the alternative is indeed fossil fuel or expensive electricity which will anyway be detrimental in the long term." (Interview 21)

> "… we have to disband this notion that if you do solar, if you do wind or if you do hydropower these are non-polluting or no environmental footprint, that is not true. /…/ … [for example,] solar is extremely polluting for the elements in the batteries and the panels." (Interview 21)

Hence, no silver-bullet alternative is suggested but rather a struggle to ensure that the hydropower that is build is done in an appropriate place, with least damaging design and together with local communities. One respondent also wished to see more European developers engage the region in order to see what their corporate social responsibility and statutory environmental criteria could achieve (Interview 8, Respondent B; Interview 21).

5.3.5 Discursive closure

As such, the description of the problem that "It's not a question of hydropower or not hydropower" (Interview 14, Respondent A) refers to the perceived polarization of the debate and a notion that many projects will happen regardless other interventions.

The statement also includes a bifold notion of the effects of hydropower. While negative impacts pertaining to all three aspects are recognized, there is an acknowledgement of Cambodia's right to develop — and the need for electricity in that process — with a particular emphasis of the rights of the young population and their futures. The story-line holds a belief in working with established institutions and changing the system from within rather than challenging it as a whole.

Hence, the story-line goes that categorically dismissing hydropower will not lead to the best results. Instead focus ought to be on what can be done to make the best out of the situation that is happening regardless of ideal preferences.

5.4 Story-line 3: "We need to develop, you must understand!"

5.4.1 Environmental Aspects

While concerns were raised to the sustenance of river flows, deforestation and sediment impacts, it was not portrayed as an obstacle to development but factors that necessitate persuading assessments on how and that to proceed. Studies are described as a way to approve a project rather than to evaluate its feasibility.

> "… if they have a lot of reservoir I am afraid of biodiversity and ecosystems there /…/ more deforestations and especially the sediment deposition. /…/… scientific study should be carefully conducted to prove, to show that that area, that the dam will have no severe impact on the ecosystem and environment." (Interview 23)

There was an expressed a belief in technical and engineering solutions to environmental issues such as fish migration, and hydropower is viewed to come with social rewards through its "benefit[s] to reduce poverty" (Interview 29). Some environmental impacts are seen as an acceptable part of hydropower projects as it will allow improvements in other areas.

> "We try to develop our country, cannot keep as it is and will impact environment. /…/ With development we can get income, some impact, but more income. /…/ New technology and methodology [will result in development] with less impact [and] benefit for the whole country and the local." (Interview 27)

Climate change is brought up as an element justifying hydroelectric projects. The argument states that an elevated severity of unpredictable rain patterns call for flood and water release management, which will mitigate climate change impacts and enhance agricultural productivity in the dry season. Climate change, perceived as an external factor, is emphasized as a central reason for hydropower development making it something that has to be done as there is no choice in a changing climate.

> "Because now in Southeast Asia, especially in Mekong region, [we experience] climate change, a lot of change in terms of rain patterns. We have two seasons, dry and wet, but delay, sometime delay, the rain delay and the dry season extend more day[s]. /…/ … somewhere no, never much rain but coming more raining and flood coming and the area [where] often raining [before] but [now] no more raining so it is problem, it is climate change." (Interview 28)

> "… so you develop this hydropower ok, flood control ok, for climate change, we keep water, because if not dam the water will flow out to the sea you know." (Interview 28)

> "… it [is] not really about the [hydropower] dam but about climate change /…/ [it is an] external factor." (Interview 28)

The reservoir is also seen to have benefits, one respondent said that "before reservoir no fish, after a lot of fish [in the reservoir] /…/ [and] the reservoir can be the recharge for groundwater" (Interview 27). The respondent went on arguing that, so far, no significant problems had been encountered as a result of hydropower projects in Cambodia. Acknowledging the importance of flow quantity the respondent referred to it in its capacity in retaining its quality.

> "Pollution from the factory [and agricultural fertilizers] released in river, if flow not enough then quality decrease. If flow enough quality is ok and [fish] living in the river can still alive." (Interview 27)

Turning to development projects upstream from Cambodia an alternative interpretation is demonstrated to impacts from hydropower and the risk of downstream impacts.

> "Tonle Sap is the system of the Mekong, if something change in the Mekong also change in the Tonle Sap. If something change in the Tonle Sap also change in the downstream the Mekong Delta. So it is very very linked system so [in regard to] Xiabury Lao said that not important for Cambodia but no no [can not] say like that, it is important for the whole system." (Interview 28)

> "Vietnam develop more, so impact to /…/ water flow [and] also water quality so change everything, you know natural resource[s] not only fishery, different livelihoods [of] the people and biodiversity in the river [have been affected]." (Interview 28)

The contended state of the hydropower debate in Cambodia is acknowledged and argue to be a result of a public scare from experiences of destructive examples in neighboring countries in the past. The collapse of the Ya Li Falls dam is an example used as a primer directing the burden to Viet Nam.

> "You can see the issues happenings in the Sesan River where Ya Li Falls dam [in Vietnam] was constructed and it provided a lot of negative impacts on rivers. People reported that the fish degradations decrease a lot and also the flow change especially up and down flows in the dry seasons, also /…/ impact on biodiversity and ecosystems." (Interview 23)

> "… people [are] afraid that the fish migrations will be /…/ suffering /…/ [that it is] the main driver for fish degradation, fish decrease in the Lower Sesan. People told me that now you can not even find the bigger fish because that more dam constructions provide some negative impacts to that river." (Interview 23)

5.4.2 Social Aspects

While recognizing that people are scared, hydropower is seen as a "very important source of energies for Cambodia" (Interview 23) and challenges to make it sustainable pertains to "how to make the public accepts it [so we can have] development without any protest" (Interview 23). Negative impacts are admitted to be a possibility, and *if* they occur emphasis is put on managing perceptions of the new situation. One respondent's statement illustrates this by talking on the topic of what fair compensation mean in practice.

> "… simply mean that I win and you win. I mean when I lose fishing jobs what should I do next, I should be trained, I should be supported like financially and I should be provided trainings, technical training for survival for find new jobs how to help them survive in other area that they have no experience [of] before." (Interview 23)

To achieve this a focus is on settling compensation and resettlements through existing institutional frameworks to ensure projects' swift and painless go-ahead. It is also argued that Cambodia to date does not have sufficient experience and the only way to gain expertise is to keep implementing projects.

> "Good consultation with stakeholders and policy[-makers] can make fast development. [We] need EIA and resettlement and compensation plan[s] to make development smoothly and share the benefits to community." (Interview 27)

> "Our experience [is] not enough, not enough experience but we have to learn." (Interview 28)

To Story-line 3 sustainable development is characterized through a modernistic lens where it is argued that subsistence agriculture and fishery as traditional ways of making a living should be replaced by livelihoods that fit the process of a modernizing Cambodia. The statement below involves a strong notion to move away from an agricultural based economy.

> "We need to get people out of traditional livelihood[s], development can be the motivation to move on /…/ they need to try to find the job for the best life when not cultivate rice, cannot just relax." (Interview 27)

5.4.3 Economic Aspects

Arguing for the need of continued investments in Cambodia one respondent questioned "why no other country [than China] want to invest" (Interview 29). The statement was framed in a way lending itself to at least two possible interpretations. The first, and most direct interpretation, is that other countries are very welcome to invest and contribute to the Cambodia's development but for some reason chose not to. The second is that the Chinese and Cambodian governments have a special bond and that the Chinese model is favored to the western conditionality approach. Both possible interpretations were further illustrated when the respondent continued.

> "[There is] no risk with China hydropower investment, [because the] government have the good cooperation and support, no risk." (Interview 29)

The need for hydropower from an economic point of view was seen as given. The same respondent argued, in reference to import and export of electricity, that Cambodia "need to have the exchange of power in the lower Mekong Basin /…/ [and] sell excess back to them" (Interview 29), referring to other riparians. Here the need to transform more energy to electricity than need for domestic consumption is highlighted through, and justified by, the need for generating revenue that will feed into other development efforts. Domestic energy transformation was seen as a pathway to cheaper electricity that will support people in their daily lives and attract more foreign investment.

> "Now the government try to reduce the price of electricity, it is good you know, to promote investment /…/ an important aspect of [hydropower development] /…/ if [we have] cheap electricity, people can use everything to support [a modern] lifestyle." (Interview 28)

Another element of the economic aspect is depicted in arguments pertaining to decisions on how to determine a project's go ahead. Here one respondent suggested that the value from constructing a hydroelectric plant should be compared to the value of other possible uses of the area and in turn constitute the basis for decision. It was further argued that leaving an area untouched does not equate sustainability. Successful and sustainable development is seen as that which generate economically prosperous societies, which in turn will lead to public acceptance.

> "… what can we get from forest if here for 1 year. If develop hydropower what we get for 1 year in money, we need to compare." (Interview 27)

> "… it does not mean sustainable you do nothings in that area without anythings, you should develop with more strategies to make that area more prosperous that the public accept that development." (Interview 23)

While taking a position where economic development have the potential to lead sustainable paths in other areas it was recognized that "tradeoffs must be longer[-term] not only shorter[-term]" (Interview 28). This was given further attention when the respondent took outset in economic development's capacity in leading positive results in other sectors.

> "We have to develop [our economy] but use the result of [economic] development to support social, economic and environment[al aspects] also, how to make better civilization of the people, of the country." (Interview 28)

> "… you can have canal or divert water [through] irrigation system[s] to help people. Pumping [water], if you have electricity you can pump and pump to support people['s livelihoods]. So civilization you know, make not only their lives [better] but [support] education, transportation, you know market system and investment there [to] promote ecotourism something like that you know, so we have to do every sector together." (Interview 28)

Referring to social and environmental impacts from hydropower projects one respondent acknowledged that "sometime money from development cannot solve the problem" (Interview 27). However, the respondent continued by saying that a good way to assess a project's feasibility is to

"convert all to money and compare if or not develop" (Interview 27). In a similar fashion another respondent expressed a view of economic value comparison to determine a whether or not a project should be built.

> "If [the] benefit[s are] bigger than loss, [it is] ok, [but] if [the] loss[es are] bigger than [the] benefit[s], no." (Interview 29)

5.4.4 Justifying the Hydropower Alternative

Hydropower is justified through a firm belief that benefits are greater than the negative impacts it comes with. Impacts are seen as manageable through policies and technical solutions. Economic growth in neighboring countries are seen to necessitate tapping the Mekong on hydropower also in Cambodia; or they will fall behind. One respondent referred to Laos arguing it is Cambodia's turn now, "Lao before not developed but now GDP increase, Cambodia need too" (Interview 27). Another compared Cambodia's use of the Mekong to that of Viet Nam emphasizing a potential great loss relative other riparians if the Mekong was left untouched.

> "You know Vietnam use 99 percent of water in the Mekong, Vietnam use, but Cambodia nothing. You can see Cambodia we never get water from the Mekong, but water from the rain of course, but from the Mekong we don't, so flow out. 100 years ago flow out so no any benefit from the Mekong. /…/ No any infrastructure development yet." (Interview 28)

> "We got nothing from the Mekong [before], [now] we do something. But the mainstream Cambodia maybe not now, in the future [perhaps], if our social economic grow[th] you know next 50 year, if we are strong like in Europe [we can also have] cascade dam everywhere /…/ [they can] because they are strong, strong economic." (Interview 28)

Finally, referring to tumultuous past decades one respondent saw ongoing development as a "[g]ood process, now [we] can realize, before just [a] dream" (Interview 29).

5.4.5 Discursive closure

As such, the statement "We need to develop you must understand!" (Interview 27) focus, most directly on Cambodia's status as an LDC with remaining poverty, energy poverty, lacking infrastructure and humble living standards that necessitates development throughout the country and different sectors. It implies a right to develop in what is perceived as a western way where Cambodia and Cambodians in the future are allowed to enjoy the social and economic living standards of for example Sweden.

The statement also carries a notion that environmental and social impacts as can be manageable. First, environmental impacts from hydropower are possible to deal with by applying new technological and engineering solutions. Secondly, social impacts are seen as a challenge of implementing existing and new policies based on scientific studies that will provide people with proof of this being the right way forward.

Hence, the story-line carries sustainable development with an emphasis on progress. Economic development is the priority, a need and a right to avoid stagnation, and will allow solving the challenges that emerge though the process itself.

6. Concluding Discussion

As has been demonstrated in the previous chapters, hydropower is a complex issue that attract attention from numerous actors from different societal sectors and one which spans over a multitude of thematic, disciplinary and discursive elements. The thesis' attempt to illustrate this was through a clustering of elements according to the three pillars, or aspects of sustainable development. Just as the aspects are nested together, feeding of and into each other and as such inseparable, the discursive elements and the actors are too.

Thematically the discursive elements of hydropower include the need for domestic electricity and hydroelectric plants' part in that play; natural resource management; topographic and geographic appraisals; quality and quantity of river flow and sediment transportation; cultural practices and traditional ways of life; riverine livelihoods; fish migration; biodiversity; the role of research and assessments; the constitution of consultations, compensation and resettlement mechanisms; foreign direct investment; poverty alleviation; regulatory frameworks; democratic representation; information sharing; corruption; centralized and decentralized development; democratic decision-making; and, climate change, to name a few.

While most, yet not all, of these discursive elements are included in each of the story-lines they are given different meanings so to resonate with the whole story-line and contribute to a discursive closure. As set out in Chapter 3, discursive closure is facilitated through a story-line's three functions, i.e. to facilitate the reduction of discursive complexity; to give continuity to the debate; and, to allow actors to engage beyond their area of expertise.

The reduction of discursive complexity can be seen in how the story-lines assemble different elements of hydropower — for example, consultation and compensation plans with principles of democratic decision-making — to reproduce the story-line as coherent. While Story-line 1 holds that communities are neither adequately consulted nor compensated in respect to the impacts they face this is seen as directly coupled with non-democratic principles of an elite's claim to represent the masses.

Story-line 3 on the other hand argue that Cambodia's need to develop requires compelling plans for the masses to accept the path chosen. The wills of communities are — in contrast to Story-line 1 — not to determine the direction. Consultation is not allowed to jeopardize the path in its entirety but as a mean to the end of smooth development. Further, Story-line 3 holds a strong belief in human

ability to manage and control the river, replace lost livelihoods and that the value of, and benefits from, a completed hydroelectric plant is greater than that of leaving the area untouched. The untouched area is not seen to supply resources fungible to use to reach the goal of becoming a modern state. Contrastively, Story-line 1 contend the notion that ecosystems and ecosystem services, cultures and traditions are to be seen as interchangeable in value and meaning to man-made structures; i.e. this Story-line argues that the untouched area has an inherent value. Story-line 1 and 3 therefore take different ontological perspectives to the environment, economic development and the people within. In summary, strong hydropower proponents tended to emphasis economic aspects of sustainable development succeeded by the environmental and social. Opponents on the other hand demonstrated a reversed tendency while a middle-track expresses difficulties in connecting the two extremes.

Another considerable divergence found pertains to Cambodia's role, and experienced impacts from the construction of hydroelectricity in upstream riparians. While respondents adhering to different story-lines primarily and most frequently referred to Laos and Viet Nam, China was also mentioned. While the three story-lines all acknowledge some degree of negative impacts to Cambodia from these upstream developments, they are framed and incorporated in Story-lines 1 and 3 in diametrically opposite manners leading to different conclusions of what the next steps should be. In Story-line 1 it is taken as evidence for the harmful impacts of hydropower and interprets as something that should not be brought to Cambodia as more of the adverse effects will be brought along; this time without possibility to blame other countries. In Story-line 3 upstream development is framed to carry benefits to upstream neighbors while negative impacts becomes the downstream burden. As such, upstream dams justify construction in Cambodia in being the only way to reap some benefits before it is too late.

The above constitutes a collective action problem (Ostrom, 1990) referring to challenges of holistic river basin management as described in Section 4.2. While each country seeks to accrue the largest amount of benefits possible from the resource, impacts are transboundary and particularly downstream. As such impacts are both unevenly shared and riparians bear a biased incentive towards the construction of dams as well as regional cooperation. Story-line 1 can be seen to argue for a caesurae to prevent everybody being left off worse by an overall deterioration of the river while Story-line 3 — arguing for the manageability of negative impacts — take negative impacts from upstream construction as a sign that they need to tap in before it is too late. Story-line 3 as such tangents a presumed upstream-country position and reflects the presence of wider aspects of international relations at play. Consequently, upstream dams can be seen as both enabling and

necessitating construction downstream; and, a sovereignty-centered collective action problem treading towards a tragedy of the commons scenario (Hardin, 1968).

The different approaches to the River as a common-pool resource — and what actions Cambodia's downstream position requires — is a pivotal piece to understand the two extremes' stance on hydropower. It is also central to the difficulties expressed by actors in Story-line 2 that wish to occupy a space in the middle facilitating the conception of a constructive dialogue where the two extremes are foreseen to unite forces. With Story-line 1 pursuing a critique of the system as a whole, its institutions, methods and the righteousness of its goals, Story-line 3 tenure within the system and identify the opposition not only as a threat to the Story-line's perpetuance but to Cambodia's warranted prosperity after decades of struggle.

Three emblematic elements have emerged through this research, one of each story-line. The first is the rural communities as not at all represented or misrepresented and thus constituting a marginalized group on Cambodia's development train. The second is the need to reconvene extreme positions to the middle where an aggregate of the best possible collection of information and wills, technical solutions and strategies takes lead. The third is the authority of economic development to accompany the country's process from a least developed country status into an affluent and healthy society.

The idea that hydropower proponents aren't transparent or kind enough makes it easy for opponents to play the blame-game while proponents only living up to minimum requirements fuel these claims. Meanwhile at the other bank, the idea that hydropower opponents are just trying to restrict and complicate development makes it easier for proponents to disregard them while unlawful or denigrate acts by opponents allow its maintenance. In the middle are actors seeing a need to engage, but who remain hesitant due to the risk of exposure to a two-fronted critique.

> "… you're either with us or against us it sounds like George W. Bush you know, it's crazy, but this is how polarized it has become." (Interview 24)

Viewing the story-lines as relational the reproduction of the sustainable development discourse is two-fold. First, in their interpretation each story-line reproduce the meaning of sustainable development, how the aspects relate to each other and what actions ought to be prioritized. Second, the ambiguity of sustainable development from the aspects of the three story-lines presented is reproduced by their relations. Accordingly, the multi-interpretability of the sustainable development

concept relies on the struggle between the story-lines. Further, the lacuna created by polarization of Story-line 1 and 3 enabled the existence of Story-line 2 by the very struggle of being in the middle.

As pointed out in Section 3.1, the many possible interpretations of sustainable development can be seen as both the concept's strength and its weakness. Firstly, in line with my ontological and epistemological stances to the thesis subject, I argue that the first is more prominent than the latter. A concept that contributes to such significant amounts of passionate discussions, conceptual and theoretical explorations as well as practical actions must be seen as one with a strong traction; de facto permitted through its vague expedient. The relational stance gives additional weight to one interpretation's need of another to exist, and the argumentative approach's description of story-lines' facilitation of reducing discursive complexity to stabilize and give continuity to the debate further legitimize that the Sustainable Development Story-line *should* be ambiguous. Thus, while one will be initially uncertain to what a sole reference to sustainable development actually implies, it is certain there are ample reasons to delve into a deep discussion with endless aspects.

However, power inequities may prohibit deliberations and exclude some story-lines, discursive elements or discourse-coalitions. Considering that some disputed projects proceed despite objection, and the kinship of strong financial actors to Story-line 3, it might, at a first glance, be interpreted that Story-line 1 is marginalized in the struggle for discursive hegemony. Yet, in this case it is not necessarily so.

Although the two Story-lines 1 and 3 draw sometimes diametrically opposing conclusions to what should be done, Story-line 3 must adopt the language of Story-line 1 to remain credible and included in the global discourse-coalition (cf. section 3.2.1). This dependence on opponent characterizations is transmitted to institutions, for example the draft EIA Law. As such, in the struggle for discursive hegemony Story-line 3 depends on ideas and discursive elements characterizing Story-line 1 in its present *discourse structuration* as well as *institutionalization* (cf. section 3.2.3). Consequently, it is possible to argue that Story-line 1, not Story-line 3, drives (part of) the hegemonic discourse. This can be described as a next level of ambiguity where Story-lines 1, 2 and 3 protrude the Sustainable Development Story-line and create a complexity that needs to be reduced in order to facilitate the discursive closure and preserve sustainable development's multi-interpretability.

The findings, and indeed the entire realization of the thesis, are to be seen through the lens of the social constructivist relational ontological and interpretivist epistemological stance as declared in Chapter 2. The outcomes — i.e. story-lines, discourse-coalitions, discursive-elements and discursive closure — are as such to be regarded as particular realities of hydropower, existing not so much in their own capacity but in relation to one another. These are in turn social constructions composed through the interpretations of the author's relation to the subject matter. While admittedly only representing a few of the possible realities, the applied approach has allowed for a comprehensive yet tangible presentation informed directly by some of the many actors involved in reproducing the discourses. The story-line approach further granted the thesis the ability to reduce the discursive complexity of the problem and can in itself be seen as a story-line enabling the author to engage in elements of the debate beyond his own area of expertise. The discursive closure carried by the thesis' story-line is therefore that hydropower in Cambodia is to be regarded as "Competing Discursive Story-lines of a Contested Development Path".

7. Concluding Remarks

The thesis has investigated the realities of hydropower development through key actors' positions in the Mekong River Basin with a focus on the Cambodian perspective. This was done through an empirical investigation of various discourses leading multiple interpretations of the role of hydropower in contributing to or restricting sustainable development in Southeast Asia.

A significant portion of the research and reports done on hydropower in the Mekong Basin focuses on the actions of one or a few actors or a narrow scope of thematics, often to advocate a certain agenda or illustrate a certain benefit or impact. The thesis did not wish to continue on this lane of inquiry and instead set out to investigate the broader debate and the elements of its discourses. This meant that a wide variety of thematics needed to be considered in accordance with respondents' arguments to different topics, status, trends and future scenarios. It also meant that the highest possible number of actors had to be considered so to account for as close to the whole debate as possible. The many actors and aspects were an ongoing challenge but at the same necessary in order to divert from and be able to contribute to existing literature.

A main theme that goes through the entire thesis is the actors' adherence to, or separation from, the notion of the fungibility of the environment 'out there' in *the environmental conflict*. I here refer to the conflict between actors who see the environment as having value and functions that are possible to directly translate into man-made structures or systems; hence an anthropocentric perspective where nature is here to serve humans. Those seeing it so, naturally see little problem in changing or disrupting ecosystems for other uses. Others see the environment as having an inherent value, reflected through cultures, traditions, livelihoods and more. With this perspective any disruptions of an ecosystem result in the loss of an irreplaceable value and harm to its reflections. The question is thus, for example, is fish in the river, and the act of catching it, exchangeable with tucking a fish that spawned and bred in a pool? The answer depends on which story-line, or set of story-lines, one has and inclination towards.

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Appendix I - Informed Consent Form

I volunteer to participate in a research project conducted by Mr. Johannes Nilsson from Lund University. I understand that the project is designed to gather information about 'Alternative interpretations to hydropower as a sustainable energy source in the Mekong Basin, its possible benefits and impacts for Cambodia in a transboundary political context'. I will be one of several people interviewed for this research.

1. My participation in this project is voluntary. I understand that I will not be paid for my participation. I may withdraw and discontinue participation or decline to answer any question at any time without any penalty or consequences.
2. I have been introduced to the researcher Mr. Johannes Nilsson, his affiliation to Lund University, the thesis topic, background, purpose, aim, methods and my role.
3. I understand that the collected data will be treated confidentially and stored safely; that the collected data will only be used for the Masters thesis; and, that the Masters thesis will be published at a public website managed by Lund University Library, Sweden.
4. I agree that the interview and subsequent dialogue is taped for use by the researcher only:
   ☐ Yes
   ☐ No, I prefer notes be kept by the researcher.
5. I agree to be quoted in the thesis:
   ☐ Yes, with my name and professional affiliation;
   ☐ Yes, but not with my name and professional affiliation;
   ☐ No, I do not agree to be quoted. I wish my participation to be confidential. Subsequent uses of records and data will be subject to standard data use policies which protect the confidentiality of individuals and institutions.
6. I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.
7. I have been given a copy of this consent form.

Date:

Signature of the Researcher Signature of the Respondent

_____ _____

Mr. Johannes Nilsson

Appendix II - Interview Guide

1. What is sustainable development for you/ your organization?

2. Can you please reflect on existing and planned hydropower development in the Mekong River?
   a) What is your reflection focusing on Cambodia's downstream position on the river and hydropower development?

3. To some degree I would say one will have to prioritize, or make trade-offs, between economic, social and environmental aspects (examples) in development projects, would you agree?
   a) Can you please reflect on your/ your organizations priorities?

4. As you may be aware, some organizations/ institutions make other priorities, what is your reflection on this?

5. Looking back at the last ten years,
   a) how would your characterize the debate on hydropower then and now?
   b) how would you characterize relationships between different actors engaged in hydropower in Cambodia?
   c) how would you characterize the relationships between Mekong riparians?

6. Is there anything you think I should have asked that I have not?

7. Is it ok that I reconnect with you if I have any follow up questions?

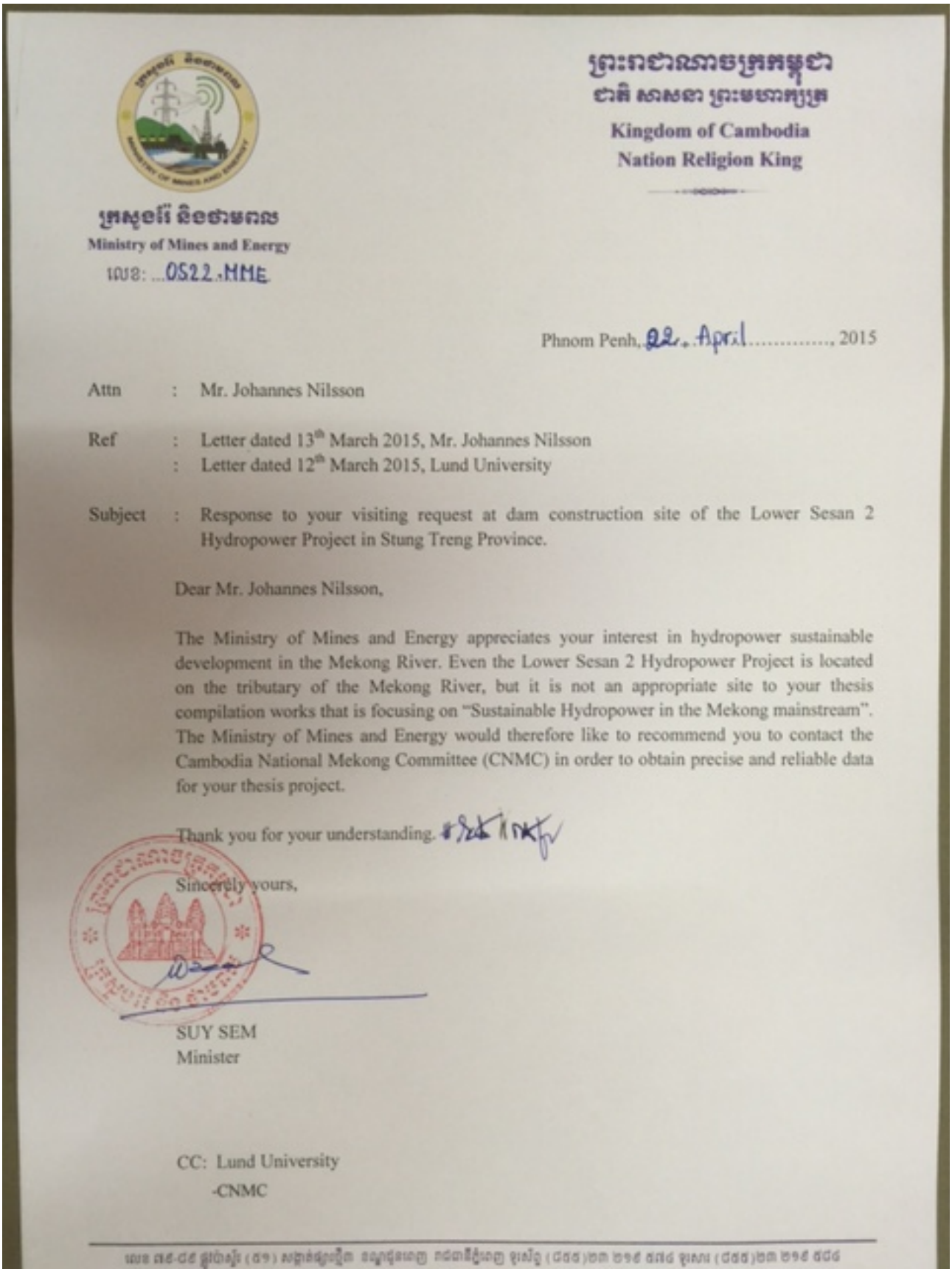
8. Do you have any questions for me?

Appendix III - Interview Reference Codes

	LMB	non-LMB	Rec	Rec min	Cluster	Ref Code
#1		1	0	-	0	Interview 1
#2	1		0	-	1	Interview 2
#3		1	0	-	2	Interview 3
#4		1	0	-	2	Interview 4
#5	3		1	54m 56s	2	Interview 5
#6		1	0	-	2	Interview 6
#7	1		1	28m 22s	2	Interview 7
#8	2	2	1	1h 1m 14s	1	Interview 8
#9	1	1	0	-	0	Interview 9
#10	1		0	-	0	Interview 10
#11		1	0	-	0	Interview 11
#12		1	0	-	2	Interview 12
#13		1	1	1h 1m 46s	1	Interview 13
#14		2	1	48m 10s	2	Interview 14
#15		1	0	-	2	Interview 15
#16		1	1	47m 38s	1	Interview 16
#17	1		1	29m 59s	1	Interview 17
#18	1		1	50m 1s	1	Interview 18
#19		1	0	-	0	Interview 19
#20		1	1	27m 9s	2	Interview 20
#21		1	1	1h 31m 32s	2	Interview 21
#22	2		1	38m 52s	2	Interview 22
#23	1		1	30m 50s	3	Interview 23
#24		1	1	28m 35s	0	Interview 24
#25	2		1	47m 7s	2	Interview 25
#26	1		0	-	2	Interview 26
#27	2		0	-	3	Interview 27
#28	1		1	1h 5m 35s	3	Interview 28
#29	1		0	-	3	Interview 29
#30	1		0	-	0	Interview 30
#31		1	1	25m 51s	2	Interview 31
#32		1	1	20m 58s	0	Interview 32
#33		1	0		2	Interview 33
#34		1	0	-	0	Interview 34
#35	1		0	-	0	Interview 35
#36	1		0	-	1	Interview 36
#37		1	0	-	1	Interview 37
TOTAL	**24**	**23**	**17**	**12h 38m 35s**		

Calum 'LMB' refers to respondents that are nationals of an LMB riparian. Column 'non-LMB' refers to respondents that are not nationals of an LMB riparian. Column 'Rec' 0=not recorded, 1=recorded. Column 'cluster' 0=non-affiliated informant.

Appendix IV - Ministry Response Letter



ព្រះរាជាណាចក្រកម្ពុជា
ជាតិ សាសនា ព្រះមហាក្សត្រ
Kingdom of Cambodia
Nation Religion King

ក្រសួងរ៉ែ និងថាមពល
Ministry of Mines and Energy
លេខ: 0522.MME

Phnom Penh, 22. April, 2015

Attn : Mr. Johannes Nilsson

Ref : Letter dated 13th March 2015, Mr. Johannes Nilsson
: Letter dated 12th March 2015, Lund University

Subject : Response to your visiting request at dam construction site of the Lower Sesan 2 Hydropower Project in Stung Treng Province.

Dear Mr. Johannes Nilsson,

The Ministry of Mines and Energy appreciates your interest in hydropower sustainable development in the Mekong River. Even the Lower Sesan 2 Hydropower Project is located on the tributary of the Mekong River, but it is not an appropriate site to your thesis compilation works that is focusing on "Sustainable Hydropower in the Mekong mainstream". The Ministry of Mines and Energy would therefore like to recommend you to contact the Cambodia National Mekong Committee (CNMC) in order to obtain precise and reliable data for your thesis project.

Thank you for your understanding.

Sincerely yours,

SUY SEM
Minister

CC: Lund University
-CNMC