

SOCIAL IMPACT OF CHINESE DAMS IN THE UPPER MEKONG RIVER ON
AMPHOE CHIANG SAEN AND AMPHOE CHIANG KHONG,
CHANGWAT CHIANG RAI



Miss Apiya Wittayanukorn

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

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ผลกระทบทงสั้งคมจากเชื่อนแม่่น้ำโจงคอบนบในประเทศจีนต้อพื้นที่อำเภอเชียงแสน
และอำเภอเชียงของ จังหัดเชียงราย



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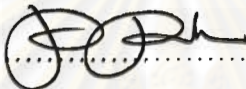
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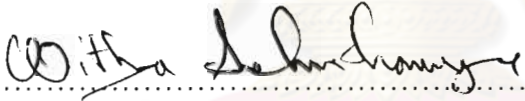
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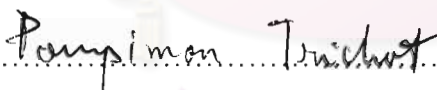
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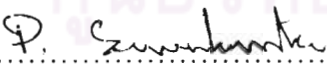
Accepted by the Graduate School, Chulalongkorn University in Partial
Fulfillment of the Requirements for the Master's Degree

..... Dean of the Graduate School
(Associate Professor Pornpote Piumsomboon, Ph.D.)

THESIS COMMITTEE

..... Chairman
(Associate Professor Withaya Sucharithanarugse, Ph.D.)

..... Thesis Advisor
(Miss Pornpimon Trichot)

..... External Examiner
(Pittaya Suvakunta, Ph.D.)

อภิญา วิทยานุกรณ์: ผลกระทบทางสังคมจากเขื่อนแม่น้ำโขงตอนบนในประเทศจีนต่อพื้นที่อำเภอ

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โครงการพัฒนาไฟฟ้าพลังงานน้ำในคอนนี้ประเด็นที่สำคัญคือประเทศในกลุ่มน้ำโขง เมื่อปัญหาและผลกระทบจากเขื่อนจีนได้กลายเป็นประเด็นใหญ่ต่อประเทศริมน้ำโขง และเป็นที่น่าสนใจของสาธารณชนมากขึ้น และมีผลกระทบต่อคนจำนวนมาก ดังนั้นจึงเห็นสมควรที่จะทำการศึกษา เรื่องนี้อย่างจริงจัง

จุดประสงค์ของการศึกษาเป็นคือ 1) เพื่อวิจัยปัญหาสังคมที่เกิดจากการสร้างเขื่อนของจีนในแม่น้ำโขงต่อพื้นที่อำเภอเชียงแสนและอำเภอเชียงของ เนื่องจากสองอำเภอนี้เป็นสองอำเภอแรกที่ริมน้ำโขง 2) เพื่อศึกษาเครือข่ายและการเคลื่อนไหวขององค์กรอิสระและองค์กรชุมชนท้องถิ่นในการจัดการกับผลกระทบทางสังคมที่มาจากเขื่อนจีน อีกทั้งการมีส่วนร่วมขององค์กรอิสระและองค์กรท้องถิ่นที่มีส่วนร่วมในการแก้ไขปัญหาสังคม อันเกิดจากการสร้างเขื่อน

การศึกษานี้ใช้ข้อมูลและหลักฐานของผลกระทบทางสังคมและบทบาทขององค์กรอิสระและองค์กรชุมชนของไทยที่ต่อต้านเขื่อนในแม่น้ำโขงตอนบน ระเบียบวิธีในการศึกษาวิจัยเป็นการวิจัยเชิงคุณภาพโดยใช้การสัมภาษณ์เชิงลึกกับผู้เป็นข้อมูลหลัก อย่างเช่น ตัวแทนชุมชน หรือตัวแทนหมู่บ้าน องค์กรอิสระและองค์กรชุมชนที่เกี่ยวข้อง ผลจากการสัมภาษณ์ถูกแบ่งเป็นสองกลุ่มหลักคือมุมมองจากภาครัฐและภาคประชาชน โดยพบว่ามีผลกระทบทางสังคมเกิดขึ้นที่อำเภอเชียงแสนและอำเภอเชียงของ ข้อค้นพบของการวิจัยครั้งนี้พบว่าทางภาครัฐยังไม่รับรองว่าเขื่อนของจีนในแม่น้ำโขงตอนบนนั้นมีผลกระทบร้ายแรงต่อพื้นที่ของอำเภอเชียงแสนและเชียงของ แต่ในขณะที่ทางภาคประชาชนนั้นยืนยันว่าทั้งสองพื้นที่นั้นได้รับผลกระทบทางสังคมและได้ให้รายละเอียดและข้อมูลในเรื่องนี้ ได้อย่างถี่ถ้วน

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Hydropower development projects in the Upper Mekong River are now significant issues for the Mekong's riparian countries. As the problems and impacts from Chinese dams have become critical issues for its riparian countries and affected a large number of people, with more attention from the public are paid on them: therefore, it is considerably necessary to study these issues practically.

The objectives of this study are: firstly, to investigate social impacts caused by Chinese dams on Chiang Saen and Chiang Khong district, Chiang Rai Province, as they are the first two districts along the Mekong River; and secondly, to study social networks and movements of NGOs and local community organizations in dealing with the social problems caused by Chinese dams. It also includes participation of NGOs and local community organizations which have played a part in dealing with the social problems causing by dam constructions in China on the Upper Mekong River.

This study is based on the information of social impacts and role of Thai NGOs and community organizations on opposing the dams in the Upper Mekong River. Therefore, the methodology for this study is qualitative research conducted by in-depth interviews with key informants; local leaders, NGOs, local community officials concerned with these issues. The result from interviews is categorized into two perspectives which are government sector and people sector. This research found there are social impacts occurring in Chiang Saen and Chiang Khong districts. In addition, the finding of the research is that while the government sector did not affirm that the Chinese dams in the Mekong River causing critical impacts on Chiang Saen and Chiang Khong districts, the people sector did confirm that there are social impacts in these two areas and they could give detail and information on these issues thoroughly.

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ศูนย์วิทยทรัพยากร
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LIST OF ABBREVIATIONS

| | |
|---------|--|
| AMRC | Australian Mekong Resource Center |
| ASEAN | Association of Southeast Asian Nations |
| CMS | Cubic Meters per Second |
| DWT | Dead Weight Tonnage |
| EIA | Environment Impact Assessment |
| FER | Foundation for Ecological Recovery |
| IRN | International Rivers Network |
| IWMI | International Water Management Institute |
| IUCN | The World Conservation Union |
| M-POWER | Mekong Program on Water Environment and Resilience |
| MRC | Mekong River Commission |
| NGO | Non-Government Organization |
| SEARIN | Southeast Asian Rivers Network |
| TERRA | Towards Ecological Recovery and Regional Alliance |
| TEI | Thailand Environment Institute |

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CHAPTER I

INTRODUCTION

1.1 Background

The Mekong River is one of the most important rivers in Southeast Asia. It originates in the Tibetan Plateau and flows into China's Yunnan Province, where it is called Lancang Jiang, then flows through five Southeast Asian countries downstream and finally out into the China Sea. As it is an international river which flows through six countries; China, Burma, Laos, Thailand, Cambodia, and Vietnam. It becomes a major source of livelihood of millions of people along the river. It covers an area of 811,000 square kilometers with the length more than 4,800 kilometers.

The Mekong Basin can be divided into two parts; the Upper Mekong Basin starting from Tibet to China, and the Lower Mekong Basin in Laos, Thailand, Cambodia and Vietnam. The Mekong River is an important source of food and livelihood for around 60 million people in mainland Southeast Asia, and people rely on the river through irrigation, transport, fisheries, and many aspects of their daily lives. Therefore, it is considered to be the largest trans-boundary river in mainland Southeast Asia.

Apart from being a natural lifeline, over the last decade, the Mekong has become a major hub of the economic development plans for many of its riparian states. The river itself offers significant development resources in terms of hydropower and water for large-scale irrigation projects, and is also a major potential regional shipping route. Control of the river basin may be measured in terms of each state's proportion of river discharge, basin area and basin population. The upper riparian states, China and Myanmar, are least reliant on the Mekong. In contrast, Laos and Cambodia are both almost totally dependent on the river. (Goh, 2007: 17)

In Thailand, the Mekong River creates a natural border between Northern Laos and North and Northeast Thailand. This border begins at the Golden Triangle in Chiang Rai, then flows southwest to Central Laos. As the Mekong River continues

along its path in Laos, it turns back south to once again form the border with Thailand in the Loei, Nong Khai, Nakhon Panom, Mukdaharn, Amnaj Charoen, and Ubon Ratchadhani provinces of Thailand. It flows through seven provinces of Thailand with 976 kilometers long and covers 183,000 square-kilometers in Thailand's Mekong River basin.(see Appendix A) There are also major tributaries that flow from Thailand into the Mekong River such as the Kok, Sai, Ing, Chi, and Moon River. Thailand as a riparian country depends upon the Mekong for basic needs. The Mekong basin areas in Thailand are very rich in their biodiversity and have been home to many complex ecological systems which maintain the livelihoods of local people and communities along the river.

However, the complex ecosystem and the livelihoods of millions who depend on it, is threatened by China's plans to build eight large dams on the upper reaches of the Mekong in Yunnan Province. The scheme will drastically change the river's natural flood-drought cycle and block the transport of sediment. These environmental changes will affect the livelihoods of millions of people living downstream in Burma, Thailand, Laos, Cambodia, and Vietnam. Despite these serious potential impacts, construction of the upper Mekong dams has proceeded without consultation with China's downstream neighbors and without any real assessment of the likely-impacts to the river and its people. No Environmental Impact Assessment of downstream impacts was carried out when the first dam was completed. (International Rivers, 2010: online)

1.2 Rationale

Since the 1980s the character of the river has been steadily transformed by China's dam-building program in Yunnan province. Three hydroelectric dams are already in operation and two more very large dams are under construction and due for completion in 2012 and 2017. Plans exist for at least two further dams, and by 2030 there could be a 'cascade' of seven dams in Yunnan. Even before that date and with five dams commissioned China will be able to regulate the flow of the river, reducing the floods of the wet season and raising the level of the river during the dry. In

building its dams, China has acted without consulting its downstream neighbors, but until now the effects of the dams so far built have been limited. (Osborne, 2009: vii)

China is developing critical hydropower projects in Lancang or the Upper Mekong River in Yunnan aiming to improve the quality of life in the country's western region and generating the Mekong navigation channel improvement project starting from Yunnan to South China Sea for 2,500 km. This poses new environmental, social and economic problems for the downstream countries which are Myanmar, Thailand, Laos, Cambodia and Vietnam. As environmental and social negative impacts are causes for the serious concern, people downstream have been worried about severe impacts for these dams. The dams are considered to be a threat to livelihood, property, and life in all of the downstream countries.

China, with its rapid economic growth and hungry for electricity, has already built four cascade dams on the Mekong River. The first dam was completed in 1996 without consulting with its downstream countries. These cascade dams have generated power and created great revenue to China. The Mekong River has become unpredictable since China started building hydropower dams and blasting the rapids upstream. In addition, the hydropower exploitation of the Lancang Mekong River has given rise to much controversy about the environment and other issues as for now there are four dams have already completed. Much of the queries and criticism from the Mekong states that are affected by dam construction, have primarily come from non-government organizations, community organizations, and research institutes. Downstream countries say that fish catch has not been as good since the Chinese dams were built upstream in the 90s.

Lancang hydropower poses some interesting challenges for national planners in lower Mekong countries, who in turn commonly find their own "optimal" plans challenged by those affected by dams and other interventions that have severe local livelihood impacts. Despite the known – and unknown – risks of large scale hydroelectric development of the upper Mekong, the social and environmental costs per megawatt are significantly lower than the costs that would be incurred by downstream dams on the Mekong mainstream. So, on the assumption that some

tradeoffs are going to be necessary to satisfy growing regional power demand, the argument goes that it is more optimal for China to make the (relatively small) social and environmental sacrifices and export its surplus power to downstream countries. (Australian Mekong Resource Center [AMRC], 2002-11: online)

On November 18th, 2010, when reporters asked China's Ministry of Foreign Affairs spokesperson Hong Lei, he said: "China and downstream countries are good neighbours and our development in water resources exploitation on the Lancang-Mekong River is fully consistent with the interests of those countries along the Mekong River. As a responsible upstream country, China has always attached great importance to environmental and ecological protection during the development of water resources on Lancang River and fully considered the concerns of downstream countries." (Chinadialogue, 2010: online)

It could be said that in terms of cost-benefit analysis, these dams would help control floods and could guarantee water in dry season. The Chinese government said these dams did not have negative impact on downstream countries. However, these dam projects are affecting the natural water level and seasonal fluctuations of the river causing the stocks of fish to dramatically decline. Recently, it has been found that the Manwan Dam has had a noticeable impact on the minimum discharge of the Mekong, especially in dry season.

Nevertheless, the water regulations set by China to allow cargo ships to travel during dry season as the trade agreement with Burma, Laos, and Thailand, has completely disrupted the cycle of water levels in the entire Mekong River. The constant changes of water levels due to power production of the dams and rapid blasting have had many negative impacts on the ecological systems in the river. These development projects have directly impacted on fish and plant species and the way of life of people on both sides of the river. Rapid blasting has caused extensive negative impacts on the ecological system of the Mekong River as it has destroyed the natural balance that once existed. An essential part of the ecosystem of the river lies in its many rapids. These areas play a significant role of the life cycles of many fish that live in the river. Rapid blasting destroys these essential habitats and causes the

decimation of the fish population. (Southeast Asia Rivers Network [SEARIN], 2006: 70-71)

Dam construction always coexists with the statement “The dam prevents dryness in downstream areas during the dry season and prevents flooding during the flood season”. However, since the three dams in the Upper Mekong River were first in service, it has been very dry during the dry season. But dam supporters, especially the Chinese government, reasoned that this phenomenon results from the overall environmental changes of the world; they do not admit that dams are a significant factor of the dryness of the Mekong River. The heavy flooding at the end of the Ing-Kok Basin and the Mekong River banks from 9-15 August 2008 is a good lesson and significant witness of the heaviest flooding for a 40-year period in the downstream areas in China. (Niwat Roykaew and Nopparat Lamun, 2010: 16)

In Thailand, the affected areas are provinces along the Mekong River as the river basin. Chiang Rai province can be the best example of affected area because there are clear evidences of dams’ impacts. From some researches on fisheries in Chiang Rai province show unusual fluctuations in water levels have already caused the number of fish in the area to decline. Flood, drought, and soil erosion are also obvious examples of the impacts.

According to Montree; coordinator of the Foundation for Ecological Recovery, due to its location along the Mekong River and close proximity to southwest China, Chiang Rai province in northern Thailand, is seen as a pivotal ‘gateway’ for investment and trade between China, Thailand and the rest of the Mekong region. Increasingly referred to as an “economic hub”, investments in cross-border transport infrastructure, including the development of the Mekong as a commercial navigation route, is being heavily promoted in this northern province. (International Conference on Thai Studies, 2010)

During these years, water levels rose and fell as the controlled flow from China, affecting the entire ecosystem and environment. Villagers witnessed bizarre water fluctuations after the rapid blasting had begun. Moreover, due to the changing

water levels removing natural obstacles which slow down natural water flow, these have caused riverbank erosion where Chiang Khong and Chiang Saen districts have also affected. Large numbers of people in Chiang Saen and Chiang Khong district in Chiang Rai depend on the Mekong River and its tributaries for their livelihood in various aspects. However, their livelihood now is threatened by the Chinese hydropower dams building on the river upstream. Locals have witnessed the severe drought and flood during these years. As a result, lack of concern for the serious impacts from the Chinese encourages Thai non-governmental organizations and community organizations taking actions in the issue concerning with the impacts of Mekong dams, Mekong ecology, and local livelihood.

Dams can have both positive and negative consequences for people living downstream of the Mekong River. There are several aspects of impacts from Chinese dams which are economic, environmental, and social impacts. When environmental impacts occurred, social impacts would come along with them as they could be related to each other. As for now, the flow system of the river have been changed, they bring transitions to communities and livelihood of people depending on the river. These transitions are considered to be social impacts from the Chinese dams such as;

- 1) Changes in local economies and livelihood
- 2) Increase of fear over unstable life and food security
- 3) Transformation in long-established local communities caused by the spread of Chinese influence on the area

As a result, the Mekong River Commission, which is a regional inter-governmental agency working on the Mekong basin is expected to help and deal with the dam issue because the impacts cause critical concerns to the riparian countries not just Thailand. The MRC has showed its concern in the Chinese dam building, “The MRC uses modeling systems to assess the potential impact that the Chinese cascade of dams will have in the future and the results of this work forms the basis of our discussions with China. For example, we are discussing potential cooperation in the Strategic Environmental Assessment of proposed mainstream dams.” (Mekong River Commission [MRC], 2005-2009)

The MRC has revealed how it feel about the Chinese dams building in the Upper Mekong that, North of Vientiane, about 50 percent of the Mekong's dry season water flow comes from China, so the potential influence of the Chinese dams in increasing dry season flows will be more significant in the upper part of the lower Mekong basin (in northern Lao PDR and Thailand). However most of the wet season flows are generated in the area downstream of the Chinese dams and so they will have minimal influence on the flood peaks. For the basin as a whole, only about 16 percent of the overall Mekong flow (measured at the river mouth) comes from China, so although more research is needed in this area, especially on issues related to sediment flows, by the time the water from Chinese dams gets to the Tonle Sap and the Mekong delta (where most of the people live) the effects mentioned above will have diminished due to the magnitude of tributary inflows from Laos, Thailand and Vietnam as they start to dominate the flow pattern. (MRC, 2005-2009)

Even though there were an Environmental Impact Assessment (EIA) conducted by the Chinese and Impacts Assessment done by Mekong River Commission (MRC), some people do not accept these assessments. Because China is not a member of the MRC and the assessments do not indicate the exact impacts, many NGOs and people disagree with the assessment report undoubtedly. Moreover, China does not give sufficient information about its dam buildings.

China claims the project has been implemented according to the Environmental Impact Assessment (EIA) that they say meets international standard and complies with environmental laws of the individual countries. However, in April 2003 the Thai cabinet approved a bold resolution to halt the project on the Thai-Lao border until a new EIA is conducted. The decision made by Thailand brings into question the legitimacy of China's claims. In another action against the validity of China's claims, an independent EIA review undertaken by the Monash Environment Institute and sponsored by the Mekong River Commission found, "the EIA is unacceptable in many respects. Far too much of the content is based on speculation, the data that is used is patently inadequate, longer-term impacts are almost entirely overlooked, and the cumulative impacts (both social and environmental) are

essentially ignored.” (International Rivers Network [IRN], Mekong Watch & Southeast Asia Rivers Network [SEARIN], 2003: 38-39)

1.3 Objectives

1. To investigate social impacts caused by Chinese dams on Chiang Saen and Chiang Khong district, Chiang Rai Province.
2. To study social networks and movements of Thai NGOs in dealing with the social problems caused by Chinese dams.

1.4 Major Argument/ Hypothesis:

Hydropower development in the Upper Mekong Basin in Chinese territory, has caused serious concerns among the riparian countries and people in the lower part of this great river. The people in these countries, including those in Thailand’s Chiang Rai Province, have already experienced the adverse impacts because water and fishery resources of the river, among other natural aspects of the river, have been gravely affected, and this has had serious effects on the livelihood of the people in this part of the river basin. It is the Thai NGOs and social movements that have assumed an active role in countering this problem. The actions they have taken including making criticisms of the Chinese hydropower development projects, providing the local people with information on the environmental and other impacts of these projects, and helping them solve the problems that are facing. These NGOs and movements represent social networks that help the local people cope with complex environmental problems and their social impacts.

1.5 Scope of Study

Geographic scope – Chiang Saen and Chiang Khong districts, Chiang Rai province are the districts located alongside the Mekong River. The sites of the research are Wieng and Rim-Khong sub-districts; Chiang Khong district and Ban-Saeo and Wiang sub-districts; Chiang Saen district.

Content scope – Content of this study is mainly focused on the social impacts caused by Chinese dams and the roles of Thai NGOs in dealing with the problems. The social impacts are studied through different areas and with local people in both districts.

Time scope – This research examines social impacts on Chiang Saen and Chiang Khong districts occurring during 2003 to 2010.

1.6 Conceptual Framework

The study of social impact of Chinese dams in the Upper Mekong River on Chiang Saen and Chiang Khong districts, Chiang Rai province emphasizes on impacts revealing from NGOs and community organizations working for Mekong issues. Therefore, the ideas of civil society will be guideline for studying of this research because hydropower development has begun to emerge among a diverse range of civil society groups at various levels, including local communities, NGOs and academics.

1.6.1 Civil Society

“Civil society refers to the sphere of association and conversation which falls outside the direct control of the state and other authorities. Civil society encompasses the dialogues and interactions through which political views are formed and through which groups come to understand their interest vis-à-vis those of other groups and the state. Social movements generally emerge out of civil society and often attempt to expand it, and movements are themselves an important component of civil society” (Goodwin and Jasper, 2003: 251)

The United Nation Global Compact (2010) stated “civil society organizations — also known as non-governmental organizations (NGOs) — are critical actors in the advancement of universal values around human rights, the environment, labor standards and anti-corruption.” (United Nations Global Compact, 2010: online)

“Civil society groups operate with a more critical worldwide which emphasizes the social and environmental costs of transformations, and civil society networks have also made some effort to go beyond national boundaries and to tackle regional governance problems.” (Molle, Foran, and Kakonen, 2009: 405)

“Civil society becomes the arena for argument and deliberation as well as for association and institutional collaboration, and civil society is essentially collective action – in associations, across society and through the public sphere – and as such it provides an essential counterweight to individualism” (Edward, 2005: online)

In Thailand, there are several NGOs and community organizations working on the Mekong dam issues. Realizing the impacts from the Chinese dams, civil society, NGOs and local community organizations have become very active and strong concerning with the impacts of dams. These groups are:

- Towards Ecological Recovery and Regional Alliance (TERRA) (Thailand)
- Mekong Energy and Ecology Network (MEE Net) (Thailand)
- Thai Peoples’ Network for the Mekong (Thailand)
- Chiang Khong Conservation Group (Thailand)
- Living River Siam (SEARIN) (Thailand)
- Mekong-Lanna Natural Resources and Cultural Conservation Network (Thailand)
- Save the Mekong Coalition
- EarthRights International (ERI)
- Mekong Watch (Japan)
- International Rivers (US)

These organizations have been setting up a range of activities and public forums, engaging active campaigns, making researches, and also developing projects, programs and policies for the environment and local people. They have done many researches and projects on the Chinese dam issues as well as engaged in activities for peoples’ participation in the issues. Furthermore, they also have done activities directly concerning with the Chinese dams such as Thai Baan Research, Complaint to the Chinese Government, Public Forum on Sharing the Mekong River, and Save the Mekong Statement.

1.6.2 Social Movement

Therefore, the ideas of social movement are also essential in studying the actions and activities of these organizations through their works. Furthermore, the

social movements are both complex and varied. They do not only express the discontents of the present, the social movements also represent the shared will of large numbers of people. Some have created formal organization, and others have relied upon informal networks. Their activities have had to choose between violent and non-violent, illegal and legal ones, and disruption and education.

Pasuk (1999) described the theory of social movement as “a collective form of action to contest the abuses of political and economic power, and to change the political and market institutions in order to produce a better society. The social movement will come into conflict with existing norms and values”.

While others described: “A social movement is a collective, organized, sustained, and non-institutional challenge to authorities, power holders, or cultural beliefs and practices. Social movements are conscious, concerted, and sustained efforts by ordinary people to change some aspect of their society by using extra-institutional means.” (Goodwin and Jasper, 2003: 3)

Mario Diani stated “social movements are a distinct social process, consisting of the mechanisms through which actors engaged in collective action:

- in conflictual relations with clearly identified opponents;
- linked by dense informal networks;
- sharing a distinct collective identity.

Social movements actors are engaged in political and/or cultural conflicts meant to promote or oppose social change.” (cited in Porta, 2006: 20)

1.6.3 Social Network

In addition, the concepts of social network must be studied as well because it is an important process to understand the behavior of NGOs and local community, their relationship and connection. It could be said that social networks are social fields made up of relationships between people. Social networks are significant in the operation of individual participation in social movements. In addition, it could purposefully link three or more people together and establish connections with the

similar intension. Some groups use social networks in order to exchange their information, seek to attain goals and solve problems.

For Goodwin and Jasper, “The web of social ties that connects individuals (and organizations) to others is often referred to as a social network. One’s ideas and attitudes are typically strongly influenced and reinforced by one’s social network, and scholars have emphasized how recruitment to movements often occurs through network ties. Movements, then, are often built upon pre-existing networks, although they also bring together previously unconnected networks and organizations.” (Goodwin and Jasper, 2003: 26)

Mitchell, C. refers the concept of a social network as “a specific set of linkages among a defined set of persons, with the additional property that the characteristics of these linkages as a whole may be used to interpret the social behavior of the persons involved.” (Mitchell, 1969: 2) Walker KN see social network as “that set of personal contacts through which the individual maintains his social identity and receives emotional supports, material aid and services, information, and new social contacts.” (cited in Maguire, 1983: 14)

1.7 Methodology

The methodology for this study is a qualitative research methodology to analyze the impacts. The information in this study is collected from both field study and documentary use as primary and secondary sources. In order to achieve the objectives, different tools will be used to conceive social impacts and there must be a cooperation and assistance from non-government organizations, community organizations and research institutes as follows;

Living River Siam – is a Chiang Mai- based NGO working for the protection of the Mekong and the Salween River, and of the people who are dependent on them for their livelihood. With its environmental and social concerns, it has done several researches, activities, projects, and movements against large-scale dam constructions in the region.

Chiang Khong Conservation Group – is a local community organization in Chiang Khong district, Chiang Rai. It has done environmental activities in the area relating to Mekong issues since 1992. With the worries on the exploitation of the Mekong, this conservation group is active in opposing the rapids blasting and protesting the construction of mainstream dams in the upper Mekong.

Mekong-Lanna Natural Resources and Cultural Conservation Network – is the network organization collaborating with communities around the Mekong River. It was originated from three local organizations grouping together during blasting rapids had occurred, to promote the protection of the river. With its concern on the natural resources and culture in the Mekong River basin area, it has started the Mekong conservation campaign and published researches and reports on the Mekong issues.

The reasons of choosing these three organizations for gaining particular detail and information are because of their locations, connection with the communities, and their works and researches.

1.7.1. Research site and criteria for choosing research site

Research site and criteria for choosing research site are two districts of Chiang Rai province, Chiang Saen and Chiang Khong districts as they are located alongside the Mekong River. In Chiang Khong, three sub-districts; Wiang Chiang Khong, Rim Khong, and Sri Donchai sub-districts will be chosen for research sites. Wiang and Baan Saew sub-districts will be chosen for research sites in Chiang Saen district.

1.7.2 Methodology and techniques used to inquire information

Field study as the primary source is consisted of:

In-depth interviews: In-depth interviews were conducted with constructed and open-ended questions with key-informants. 17 key-informants were interviewed at the research sites; they are as follows:

- NGO or local community organization personnel;
 - 1) Niwat Roykaew from Chiang Khong Conservation Group

- 2) Nopparat Lamun from Mekong-Lanna Natural Resources and Cultural Conservation Network
- 3) Miti Yaphasit from Chiang Saen Conservation Group
- 4) Pianporn Deetes from Living River Siam organization
- Local leaders: Village headmen and Kamnan;
 - 5) Songpon Katesopa, Village Headman Moo.8, Wiang Chiang Khong Sub-district, Chiang Khong District
 - 6) Sawahthon Kardruang, Village Headman Moo.2, Wiang Chiang Khong Sub-district, Chiang Khong District
 - 7) Noppadon Sangdee, Wiang Chiang Khong Kamnan, Wiang Chiang Khong Sub-district, Chiang Khong District
 - 8) Suriyon Saowrisaen, Rim Khong Assistant Kamnan, Rim Khong Sub-district, Chiang Khong District
 - 9) Vichien Maneerat, Assistant Village Headman Moo.7, Baan Sop-Kok, Baan Saew Sub-district, Chiang Saen District
 - 10) Somsak Madsang, Village Headman Moo.3, Baan Wiang Tai, Wiang Sub-district, Chiang Saen District
 - 11) Prasit Supan, Wiang Kamnan, Wiang Sub-district, Chiang Saen District
- Sub-district and district administrators;
 - 12) Nawapon Auioutai, Mayor of Wiang Chiang Khong Sub-district, Chiang Khong District
 - 13) Weerasak Sirisit, Chiang Khong District Chief Officer
 - 14) Settasak Promma, Deputy Chairman of Baan Saew Sub-district Administrative Organization, Chiang Saen District
 - 15) Jamrat Kotiyee, Chairman of Wiang Sub-district Administrative Organization, Chiang Saen District
 - 16) Phrasert Jommoon, Assistant Chiang Saen District Chief Officer
- A government official;
 - 17) Manop Thailor, Chief of Hydrometeorology Center 12th at Chiang Saen from Department of Water Resources, Ministry of Natural Resources and Environment.

Focus groups: Kai Women Collector group at Baan Haad Krai, Chiang Khong District, and boat drivers at Chiang Saen District held meeting in order to discuss about matters concerning their lives and careers. They were asked with several questions as they are local people who experienced the direct impacts living along the Mekong River.

Participation and observation: In order to understand local livelihood and community, participation and observation were essential conducting practicality in the field research.

Documentary use as the secondary source is the information collected from various sources including books, articles, news, journals, official documents, for example, documents from organizations and various websites.

1.7.3 Research questions:

1. What are social impacts of Chinese dams on Chiang Saen and Chiang Khong areas?
2. How Thai NGOs and community organizations play a part and participate in the Mekong dams' issues?
3. How these Thai NGOs and community organizations address the issues and find possible solutions for the impacts?
4. What are alternative ways for local people after their living and livelihood are affected by Chinese dams?
5. What are the relationship between local people and social movement groups?

1.7.4 Limitations

There are limitations in this research such as the period of the field study and the available time of key-informants. This research was conducted in December when the river was considered to be in normal level. However, the Mekong seaweed or Kai was not available for collecting yet, and the most important traditional ceremony of Chiang Khong; Hunting Giant Catfish Ceremony, will occur in April. Therefore, participation in some local activities would not be happened. In addition, in

December, many key-informants were busy with their works and some were not available because they had to organize and sum up all their works. Some were away to join the conferences. Thus, some key-informants had a limit of time for interviewing and discussing, and the appointment had to rearrange many times before the actual meeting were made.

1.8 Significance of research

This study will provide a model of social movement organized by the local community and non-government organizations (NGOs) in order to solve social problems. In addition, this model can be applied by other communities facing the similar problems in the future.

1.9 Structure of the Thesis

This thesis is divided into five chapters;

Chapter 1 provides a short background of the Mekong River and also the rationale of this study. After that it indicates major argument/hypothesis, objectives, and scope of study, respectively. Conceptual framework, methodology, and significance of this research are then mentioned later.

Chapter 2 explains historical background regarding to the Mekong's riverine system, fisheries, hydropower development, and navigation improvement project. Then, it informs current situations of Chinese hydropower development projects which concerning with their impacts on downstream countries and the MRC's perspectives on the projects.

Chapter 3 indicates three social impacts on Chiang Khong and Chiang Saen districts; changes in local economies and livelihood, increase of fear over unstable life and food security, and transformation in long-established local communities caused by the spread of Chinese influence on the area. Next, it indicates perspectives from the government sector and local community organizations.

Chapter 4 describes and presents civil society and social movements on Mekong dams' issues by mentioning numbers of NGOs and local community organizations with different concerns. Then, it discusses role of NGOs and local organizations at Chiang Khong and Chiang Saen districts and responses to Mekong dams' issues. Activities done by NGOs and local community organizations, and also response to Mekong dams' issues are showed later.

Chapter 5 summarizes this study as conclusion in China's hydropower development projects, social impact on Chiang Saen and Chiang Khong, and civil society and Mekong dams' issues. Lastly, it provides recommendations to different sectors relating to the Mekong River basin.



ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

CHAPTER II

LITERATURE REVIEW

2.1. Historical Background

The Mekong River is an internationally significant river of Mainland Southeast Asian countries and the Mekong River basin is rich of natural resources including biodiversity, forests, water and wetlands. However, the Mekong River is a large river basin which now is modified by large-scale infrastructure in the Upper reach of the river in Yunnan, China. As the Upper Mekong is considered strategically important because it links China, Myanmar, Thailand, and Laos, it became the major routes for opening trade and commerce between the basin's countries. In addition, with the Chinese development strategy aiming to expand its economy and improve its western region, Lancang, the Mekong River in China was targeted to be suitable for this strategy. Therefore, the upper Mekong area is experiencing rapid economic, ecological and social changes which are forced by many factors such as the river navigation to commercial vessels and the building of hydropower dams on the mainstream in China, and Thailand as a riparian country is also undergoing impacts from these changes.

With 4,800 kilometers, the Mekong River is the longest river in South-East Asia. It is the eight largest river in terms of the amount of water and twelfth longest river in the world. The Mekong River basin (watershed or catchment) is 795,000 km², which represents a very small percentage of the territory of China, about 4 per cent of Myanmar, 97 per cent of the Lao PDR, 36 per cent of Thailand, 86 per cent of Cambodia and 20 per cent of Viet Nam. (IUCN, TEI, IWMI, and M-POWER, 2007: 12)

The seasonal variation in the water level and the range of wetland habitats inundated by the Mekong River provide the source of the river system's productivity. The rich biodiversity within the Mekong River basin, especially fisheries, is fundamental to the viability of natural resource-based rural livelihoods of the people living within the basin. These livelihoods are founded on the integrated use of a wide range of natural resources, and which are adapted to the seasonal changes of flooding

and recession. Maintaining and improving the natural productivity of the river basin is essential to both the local populations and the national economies of those countries within the basin. (The World Conservation Union [IUCN], 2006: 7)

Since the 1980s, China has played an important role in the development of the Upper Mekong due to its 'Go West' policy and the Lancang Economic Belt policy. These policies have led to the creation of cascade hydropower dam projects, industrial estates, and the upper Mekong navigation channel improvement project, which is an attempt to allow large ships to navigate from Simao in China to Luang Prabang in Laos. (SEARIN, 2006: 42-43)

Official Chinese plans for large-scale development in the Lancang Jiang date back to the 1970s, but it was only during discussions between scholars from upper and lower riparian states in the early 1990s that the lower Mekong states learned about China's hydropower plans upstream. Chinese studies and plans for developing the Lancang regard it generally as a national issue, and largely do not take into account the implications for the Mekong basin as a whole. The eight hydropower stations and dams are designed to tap 60% of the Mekong's flow. Chinese policymakers argue that Chinese dams will have little impact on the lower basin because the Lancang Jiang only contributes 16% of the Mekong's total discharge. (Goh, 2007: 42)

China plans to build eight dams on the Upper Mekong to supply power to southwest China. This first in the scheme, the Manwan Dam, was completed in 1996 without prior consultation with China's downstream neighbors. No Environmental Impact Assessment of downstream impacts was carried out. When the reservoir was filled in the 1992-1993 dry season, Thai authorities complained that the dam caused unusually low water levels downstream in the province of Chiang Rai. Construction of the second dam, Dachaoshan, started in 1996 and was completed in 2003. A third dam, Xiaowan, began construction in December 2001 and was completed 2009. At 292 meters in height, Xiaowan is one of the highest dams in the world. (International Rivers, 2010: online) A fourth dam, Jinghong, was built in 2004 and completed in

2009. It is built mainly to transfer power to Southeast Asian countries, and it is located just about 300 km from Chiang Rai, Thailand.

Table 1: Showing the Chinese upper Mekong dams' operation and construction stage

| No. | Name | Height from the Mean Sea Level (MSL) | Potential installed capacity | Potential electricity/ power generating capacity (MW) | Submerged lands (Rai) | Number of relocated people (Person) | Height of dams (meter) | Constructing stage |
|-------|------------|--------------------------------------|------------------------------|---|-----------------------|-------------------------------------|------------------------|---------------------------------------|
| 1 | Gonguoqiao | 1,319 | 510 /120 | 750 | 2,144 | 4,596 | 130 | Under construction |
| 2 | Xiaowan | 1,236 | 14,560 / 9,800 | 4,200 | 23,200 | 32,737 | 300 | Finished in September 2009 |
| 3 | Manwan | 994 | 920 / 258 | 1,500 | 2,594 | 3,513 | 126 | The first built dam, finished in 1996 |
| 4 | Dachaoshan | 895 | 890 / 240 | 1,350 | 5,163 | 6,100 | 118 | Finished in 2003 |
| 5 | Nuozhadu | 807 | 22,400 / 12,400 | 5,500 | 28,175 | 23,826 | 254 | Prepared to be built |
| 6 | Jinghong | 602 | 1,233 / 230 | 1,500 | 3,188 | 2,264 | 118 | Finished in 2009 |
| 7 | Ganlanba | 533 | - | 250 | 75 | 58 | - | Under designing and planning |
| 8 | Mengsong | 519 | - | 600 | 363 | 230 | - | Under designing and planning |
| Total | | | | 15,650 | 64,902 | 73,324 | | |

Source: www.mekonglover.com, 2010

Hydropower construction is a very sensitive issue throughout the region. While it provides benefits, there are concerns about some of the negative impacts of altering the natural flow regime of rivers. Among the cited negative consequences are increased downstream erosion, serious disturbances of fisheries, destruction of annual

agricultural cultivation along the riverbanks and disruption of flood-pulsed systems. (IUCN, TEI, IWMI, and M-POWER. 2007: 34)

2.1.1. Mekong Riverine System

The Mekong riverine system is dynamic and complicated as it passes through mountains and valleys. Various reefs, rapids and deep pools are situated along the river with small stream and tributaries that flow into and off from the Mekong mainstream. Communities along the Mekong take a chance from the declined water levels for their economic activities such as growing riverbank garden and collecting the Mekong water weed or Kai. Thus, the natural patterns of flooding and water recession provide important livelihood opportunities.

The Mekong has three seasons. The cool, dry period runs from November to February. March and April are the hottest months, when Thailand, Laos and Cambodia celebrate the New Year. Then the wet season begins. With the May monsoon the Mekong fills, expanding Cambodia's Tonle Sap, or Great Lake, to more than five times its dry-season size of 2,700 square kilometers (1,040 square miles). By July, the Khone Falls in southern Laos -- the widest waterfall in the world -- is in full flood, turning its crystal-blue waters to muddy brown. (Bloomberg, 2010: Online)

The seasonal changes of the river are dramatic, with water levels increasing and decreasing as a result of the combined effect of snowmelt from the Tibetan plateau and monsoon rains. The seasonal changes are important contributors to the overall production of the region's rich biodiversity. Important bird areas are found around Chiang Saen. This area also includes important habitats for fish species along stream banks, floodplain, rapids, rocky shores and deep pools. Deep pool areas are important fishing sites. Local fishers have long known that many fish species, often large ones, gather in deep pools especially during the dry season. Deep pools are believed to be used as breeding grounds for fish. Seasonal changes in the hydrological regimes affect fish biology – their foods, movements, growth and breeding seasons. (IUCN, 2006: 12)

Before the implementation of development projects, the ecosystem in the upper Mekong was pristine. The stretch of the river that forms border between Thailand-Laos and Burma-Laos has been home to many very complex ecological systems. These areas, which are very rich in their biodiversity, have been sustaining the livelihoods of local people and communities for countless generations. Also, this area is considered one of the most important wildlife sanctuaries in Southeast Asia. (SEARIN, 2006: 35)

According to *Chao Baan Research* conducted in 2004, which studied the ecological systems in the Mekong River, the village researchers were able to divide the complex ecological system of the Mekong River along the Thailand-Laos border into 11 subsystems. These subsystems include *Pah* or *Kaeng* (river rapids), *Khok* (whirlpool), *Don* (sandbar), *Haad* (sand or pebble beach), *Rong*, *Long*, *Nong* (swamp), *Cham* (larger rapids that make whirlpool), *Rim Huay* (creek side), *Rim Fang* (riverbank), and *Kwan* (lake). Each of these ecological subsystems is highly complex and some are home to important aquatic plants, such as Kai which grows on rapids when the water is low and then rots and becomes food for fish as the water rises. (Ibid.)

Some ecological systems, like the *Khok* (an area of the river in which the water is deep and contains whirlpool) are very suitable as habitats and spawning grounds for various species of fish. During the rainy season, fish often swim from the deeper water of the Mekong into *Khok* in the tributaries to lay their eggs. During the dry season the fish that spawned in the tributaries swim back into the Mekong River supplying it with a significant percentage of its fish populations. (Ibid, 35-36)

2.1.2. Mekong Fisheries

The fisheries sector is a crucial supplier to the Mekong River basin's economy for both the livelihood and a main source of income. Moreover, fish from the Mekong River are also the major source of food and protein for the basin. Large number of livelihoods along the Mekong River depends on the fisheries. Local people living along the Mekong River are familiar with its rich resources and natural system. The

river has provided them a massive amount of plants, fish and aquatic animals such as crabs, frogs, shrimp and turtles. However, after dam constructions occurred on the upper Mekong River, concerns on decrease in fisheries production automatically come along them.

The Mekong's fisheries are an integral and vital part of the socio-economic structure of the countries in the lower Mekong basin: Cambodia, Lao PDR, Thailand and Viet Nam. Most of the 60 million people living in the basin are in some way involved in the fisheries sector; fish and aquatic animals are an essential component of their diets and provide an important source of hard income for many poor rural households. The fisheries make significant contributions to the economies of all four riparian countries. (MRC, 2005: online)

The fishery of the Mekong Basin is one of the most productive river fisheries in the world. High diversity of resources, in close proximity to large rural communities, leads to a high degree of participation in resource exploitation. Impressive large commercial fisheries occur in the basin, but because most people farm as well as fish, their involvement is largely part-time, using smaller fishing gears. The links between biodiversity and exploitation are immediately obvious. Reduced biodiversity will lead to decreased participation, loss of livelihoods and generally unfavorable socio-economic impacts. (MRC, 2003:1)

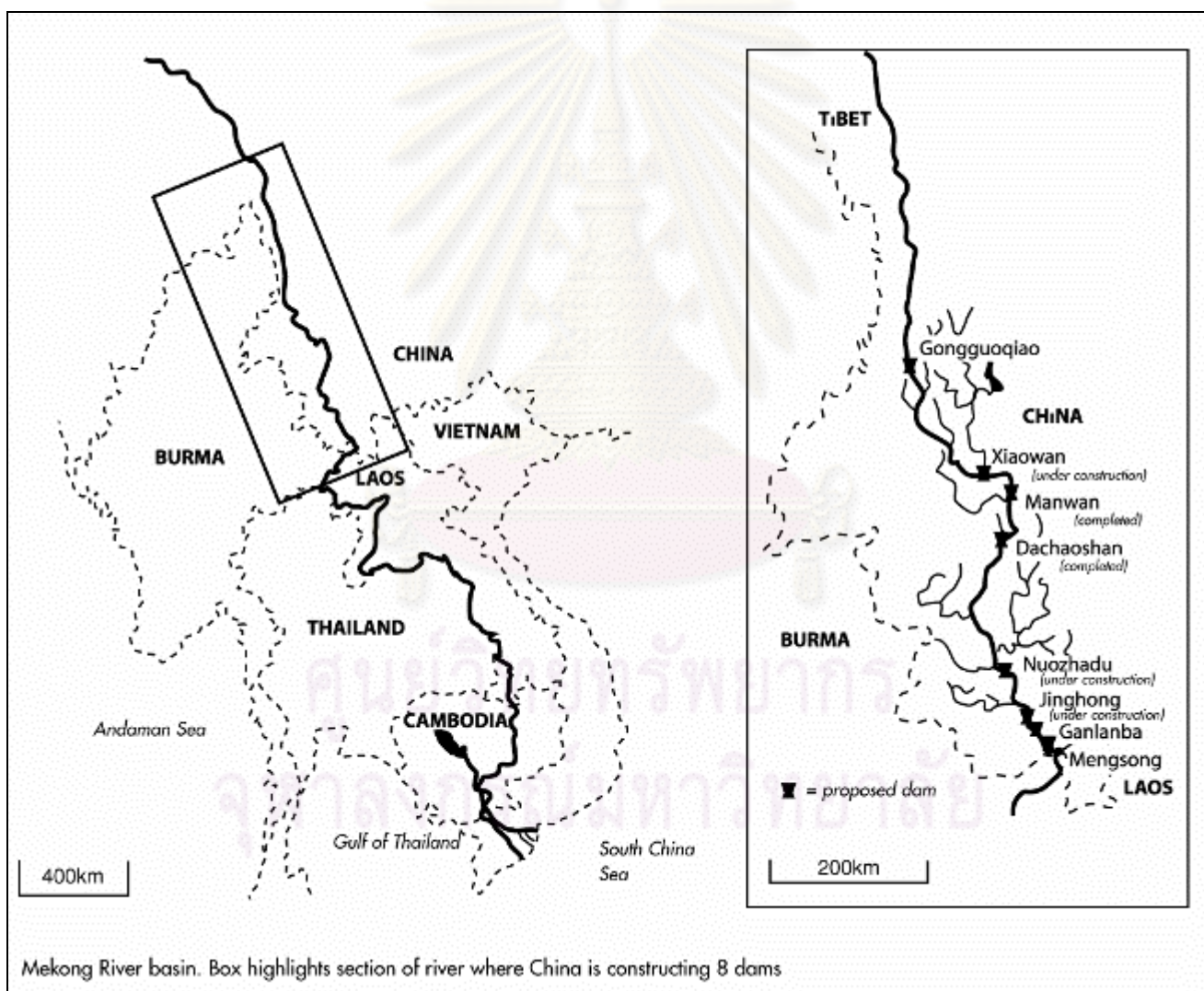
Nevertheless, fisheries production is also an important part of the agricultural sector in the four countries of the basin, accounting for 2-10% of each of the four countries' gross domestic product between 2002 and 2006. Measuring the wider benefits of fisheries in terms of food security, livelihoods, biodiversity and ecological functions is much more difficult. Such benefits are not part of the formal economy. They do, however, form a crucial part of people's livelihoods, especially for those who share the waters of the Lower Mekong Basin and their migrating fish species. (MRC, 2005-2009: online)

The fisheries of the Mekong are depend upon migration over both long and short distances, with many of the commercial species having highly developed

migratory patterns. The migratory fish species generally move upstream to spawn, while juvenile fish then move back downstream to feed and grow on the floodplains and wetlands. Dams act as barriers for fish migrating upstream, while fish migrating downstream must usually pass through hydropower turbines, resulting in mortalities with very low rate survival rates. (Molle et al., 2009: 228)

2.1.3. Mekong's Hydropower Development

Figure 1: Chinese dams on the Upper Mekong River



Source: <http://www.internationalrivers.org/node/1856>

China is scheduling to build more dams in the upper Lancang-Mekong River in Yunnan province. Large-scale dams have been built in the province in the past

decade: Manwan, Dachaoshan, Jinghong and Xiaowan dams, and at least four more big dams are being planned to boost electrical capacity for western part of China. Moreover, there are close ties between the dams and the navigation channel improvement project because China has arranged the advantages of the eight dams including the water flow regulation in the Mekong River especially in the dry season to facilitate navigation by large vessels. On the other hand, Chinese control of the flow of water from its dams on the upper Mekong can have hasty effects on the river inevitably and threaten to change seasonal flows, degrade the Mekong ecosystem and fisheries in which millions of people depend on.

At a time when China is facing severe power shortages as a result of its rapid economic growth, the hydropower to be extracted from the Mekong is only part of a much larger projected program of dam building associated with the ‘Western Region Development Strategy’; a program better known in its slogan form of ‘Develop the West’. This program reflects the concern of the Chinese leadership – a leadership in which engineers have long played a dominant part – to modify the economic imbalance that has seen China’s coastal provinces surge ahead in terms of economic development by comparison with western regions of the country. (Osborne, 2004: 12)

China’s hydropower development plans are a key part of its West-East Power Transmission Project and Western Development Project. Due to its sharp drops and its abundant and stable water reserves, the Lancang valley is suited to generating hydropower – it has thus become a hotspot for energy development. But amid these plans, the worries of the other countries in the Mekong region have been rising. (Son, 2005: 15)

It was not until the mid-1990s that there was any general awareness of the scope of China’s plans for dams on the Upper Mekong in the Yunnan province. China had not made any major announcements of its plans and had not then, nor since, sought any international finance for the construction it was undertaking. Moreover, the dams it was building were located in remote areas of Yunnan, far from any casual visits by foreigners. By the time its intentions became more generally known, China

was close to completing the first dam, at Manwan and had started work on a second dam, at Dachaoshan. (Ibid., 11)

Hydropower dams also affect river flows, causing different kinds of changes in both water quantity and quality. These include, for example, changes in the extent, duration and timing of annual floods, as well as reduction in suspended sediment concentrations due to sediment trapping of the reservoirs. Reduced floods with shorter duration reduce the available fish habitats in the floodplains, resulting in lower fish production. Changes in the timing of the floods can also disrupt the crucial spawning and migration cues of fishes. (Molle et al., 2009: 228)

2.1.4. Mekong Navigation Channel Improvement Project

China and the three upstream riparian countries; Burma, Thailand, and Laos have organized the Mekong Navigation Channel Improvement Project to extend the river for commercial vessels of up to 500 tones. The project is funded by the Chinese Government. Then following by the signature of the navigation agreement was the preparation of an Environmental Impact Assessment (EIA) designed to lay out the impact of the proposed river clearance necessary for implementing the plan to increase the size of vessels using the river. As a result, rapids of the Upper Mekong River would be dynamited and eradicated. Nevertheless, lack of response and awareness on natural resources, these rapids are important habitat for fish and plants that provide to the food security of communities along the river. Although this project is benefit for economy and trade, in term of environmental aspect it has negative impacts from the river's ecosystem and the fisheries and communities of the Mekong River are forced to suffer the impacts.

Awareness of the actual and potential problems associated with the Chinese dams has been growing since the mid-1990s, but until recently, less attention has been given by many outside observers to the serious impacts resulting from the increased navigation of the Mekong River, first as a result of increased Chinese usage since the 1980s, and more recently following the conclusion of the agreement signed in 2000. (Osborne, 2004: 25)

The cargo ship navigation project is a joint-venture between four countries in the upper reaches of the Mekong River. This project, which includes rapid blasting, has been spearheaded by China and supported by Burma, Laos and Thailand. A detailed survey, which was made possible by USD \$4.3 million, has already been carried out. (SEARIN, 2006: 42-43)

The Lancang -Mekong Navigation Channel Improvement Project is divided into three implementation phases;

- The 1st phase entails removing 11 major rapids and shoals, 10 scattered reefs, setting-up 100 navigation marks, and placing 106 markers and 4 winches. Once these steps are completed the waterway will be navigable for vessels up to 100-150 DWT (Dead Weight Tonnage) securing passage for at least 95% of the year.
- The 2nd phase is the removal of 51 rapids and shoals. Waterways will then be navigable for vessels up to 300 DWT for at least 95% of the year.
- The 3rd phase consists of the canalization of the waterway to make it navigable for vessels of 500 x 4 DWT for at least 95% of the year. (SEARIN, 2003: 29)

As for now, the rapid blasting and canalization of the Mekong along the border of Burma and Laos has been completed and 300 DWT cargo ships can navigate to Chiang Saen. However, the plan to blast Khon Pi Luang rapids on Thai-Laos border has been halted due to a Thai Cabinet resolution issued on 8 April 2003. This resolution requests that the Ministry of Defense complete a new Environmental Impacts Assessment (EIA) and a new waterway Terms of Reference before this phase of the project can be completed. (SEARIN, 2006: 43)

The EIA, known formally as *The Report on Environmental Impact Assessment, The Navigation Channel Improvement Project of the Lancang Mekong River from China-Myanmar Boundary Market 243 to Ban Houei Sai of Laos*, was completed in September 2001. In the final conclusion section of the report, possible negative aspects of the planned river clearances were almost totally discounted with the proposition that the clearance program would be positive for the “promotion of the sustainable development of the Greater Mekong Subregion”. It is apparent that Chinese officials played the leading part in the completion of this report, though it

should be noted that it was eventually accepted by all parties to the navigation agreement of 2000. (Osborne, 2004: 26)

Following the completion of the EIA, and acting at the request of the Lao government, the MRC commissioned an independent evaluation of the document by three consultants. The consultants' report was completed in December 2001 and was published by Monash University's Environment Institute. Their report stated that the EIA was "substantively inadequate" and in many places "fundamentally flawed. The EIA is inadequate in that it is not based on assessments of the full range of potential impacts. In general it omits assessment of long-term impacts associated with the operation of the waterway following the proposed work." (Ibid.)

The critical nature of this report did not lead to any of the parties drawing back from their decision to being the removal of obstacles to navigation in the river. Blasting and dredging undertaken by Chinese work teams took place in 2002 and 2003 and was scheduled to take place in March-April 2004. As has been the case with the dams built on the Mekong in China, finance for the clearance operations has come completely from the Chinese government. (Ibid., 26-27)

In addition, port constructions are also the continued development projects from the navigation project, and the ports are developed in response to the commercial trade of China. However, those ports were poorly planned without taking into account of the impacts on the local communities and the environment. Thailand's ports on the Mekong River can be clear examples of these.

In Chiang Khong, ports were rebuilt three times showing an inadequate planning process. The first port was reconstructed at a new site because the former structure was inappropriate given the river flow. The structure was ruined due to the erratic river flows before a year had even passed. The second port included a section that extended 90 meters over the water. The Lao government was so concerned about the obstruction of the waterway they had it destroyed. Additionally, the current remodeled port is still not built to satisfaction especially for the people living in its proximity. It was built upstream of Chiang Khong town directly affecting the town's

water supply system which relies on river water. (IRN, Mekong Watch and SEARIN. 2003: 37-38)

Figure 2: Current Chiang Khong Port



Even worse, in Thailand's Golden Triangle District of Chiang Saen, ports have been constructed and destroyed twice because of their poorly planned structure and location. The port was built in the center of a 700-year-old historical site. It is not easy for one who has lived in a quiet town to be suddenly inundated by air-pollution from the 60 cargo trucks that enter that port daily. The small, cozy and calm ancient town of Chiang Saen has been transformed into a medley of disorganized karaoke bars, shops, and warehouses. Moreover, Chinese merchants are taking over businesses that were once owned by local Thai people. Along the riverside road near the port, there is only one shop still locally owned. (IRN, Mekong Watch and SEARIN. 2003: 37-38)

2.2 Current Situations

Dam projects on the upper reaches of the Mekong in China and the development of navigation are linked to the changes in the behavior of the Mekong

and water bodies. Hence, Chinese development projects on the upper Mekong basin have become a critical issue. It drove the people in the lower reaches to have more suspicions and worries, and they worried that China's hydropower development would impact negatively on the lower reaches of the river. Because of lack of resource exploitation awareness and China's predominant geographical position, desire in hydropower development and regional projects in the upper Mekong of China have direct critical impacts on the lower Mekong River Basin countries ; Thailand, Laos, Cambodia and Vietnam.

Evelyn said China's privileged position on the Mekong basin, with its primary upstream location and relatively low dependence, places it in direct competition with the lower Mekong states. As the uppermost riparian country, China enjoys significant geographical advantages over the lower riparian states, particularly Cambodia and Vietnam. (Goh, 2007: 17)

The Mekong cascade dams in China have caused significant controversy in downstream countries over the potential impacts. Since the first dam was operated, the critical concerns of the impact of dam construction have become noticeable. Those concerns relate to fish stocks, river's ecosystem, agriculture, floods, and likelihood of people along the river. These dams also have effects on river flows resulting on both quality and quantity changes. The 2008 floods and the 2010 drought were also blamed on these dams according to lot of news from recent years.

For example, an article criticized the Chinese dams that drought was of course a contributing factor to this year's low water levels, but with so many huge dams on the river China needs to back up its claims that the changes in flow were entirely natural. Talk of small surface areas, low evaporation and hydropower not consuming water are transparent attempts to fob off China's critics. The impact of a reservoir downstream has nothing to do with "water consumption" or "evaporation", but the impoundment and release of water. Opening or closing floodgates has a huge impact on downstream flow. (Chinadialogue, 2010: online)

From Niwat Roykaew's article¹ showed that during the past 50 years, the water level of the Mekong River reached the lowest point on 27th February 2010 at the Chiang Khong Station, which was 0.36 m. On 28th February 2010, it rapidly increased by 0.20 m. to 0.56 m. although there was no rain in the area and there was no report of rain at the upstream areas. The water level remained constant until March, and they rose into 1.12 m. on 13th March 2010 and then decreased. The increasing water was not turbid whilst water that flows from the north is turbid. On the contrary, in February 2010, the water level of the Salween River, which also originates in Himalayan mountain ranges and has no dam, gradually reduced and had more abundant water. The answer of the governor of the Xishuangbanna Dai Autonomous Prefecture to the governor of Chiang Rai about drought downstream areas in China: "There is a need to store water in the reservoirs because Yunnan is very dry." has identified that unusual water fluctuations are mostly caused by the opening and closing of dams in China. (Niwat Roykaew and Nopparat Lamun, 2010, p.18)

Likewise, environmentalists and sections of the regional media are blaming the Chinese dams being built or operating on the upper reaches of the Mekong for contributing to the dramatic drop in water levels that are affecting communities in Myanmar, Cambodia, Laos, Thailand and Vietnam, the lower Mekong countries. Saying that changes to the Mekong River's daily hydrology and sediment load since the early 1990s have already been linked to the operation of the (Chinese) dam. Communities downstream in northern Thailand, Myanmar and Laos have suffered loss of fish and aquatic plant resources impacting local economies and livelihoods. (Irrawaddy, 2008: online)

¹ "Local Cultural Ecology and Natural Resource Management in the Mekong Basin: A Case Study of The Mae Khong River-Lanna Area." is asynthetic article obtaining informations from the working experience of The Mekong-Lanna Natural Resource and Cultural Conservation Network, research preparing by villagers; community –base research projects ; the group's publications and its activity of restoring natural resources and local culture in The MaeKhong River-Lanna area, which otherwise called Ing-Kok basin and Mekong riverbanks.

China is aware that its dams are viewed critically for their adverse environmental effects and effects they are likely to cause, by governments and by various groups in downstream countries, and internationally. However, the Chinese argue that such concerns are misplaced and that, in fact, the dams will have a beneficial effect by ‘evening out’ the flow of water down the river and so reducing the problems associated with flooding. Chinese spokesmen have argued that there will be no change to water quality as a result of the dams on the river. (Osborne, 2004: 15)

2.2.1. Impacts on Downstream Countries

Consideration the significant impacts on the lower Mekong Basin can be divided into three main aspects. The development of the Upper Mekong River in China, including the construction of eight cascade dams and the rapid blasting for ship navigation in the river, has direct impacted to the downstream countries. It endangers and disrupts the Mekong’s complex ecosystem and biodiversity which millions of people who depend on the river will be affected. The impact of these dams has begun to affect the diet and the livelihood of communities living along the lower Mekong. As a result, it gives inevitable environmental, social, and economic impacts with more concerns and worries that they will be worse in the future.

- **Environmental Impact**

The Mekong ecosystem is in a relatively healthy condition at present. Installation of high mainstream dams on the Lancang Jiang and construction of the navigation channel will cause great ecological damage and deterioration. Moreover, the environment impacts will not act individually, but cumulatively. Massive loss of biodiversity is only one of several predictable results. There would be certainly extinction of some fish species such as giant catfish, but also, and of even more consequence in terms of adverse effects on people reduction of populations of many of the migratory fish species that are most important in Mekong wild-capture fisheries. Negative impacts of China’s Mekong modifications include those on fisheries, agriculture, water quality, health, forest, Capital cities and larger population centers situated on the banks of Mekong in Laos, Thailand, Cambodia, and Vietnam

will be subject to physical impacts such as erosion and flooding caused or aggravated by the Lancang hydropower dams. (Roberts, 2001: 147)

The development of the upper Mekong is causing an increase in many kinds of trans-boundary environmental problems affecting the areas long the rivers. These projects are affecting the natural water level and seasonal fluctuations of the river causing the stocks of fish to dramatically decline. Recently, it has been found that the Manwan Dam has had a noticeable impact on the minimum discharge of the Mekong, especially in dry season. Since the dams have been constructed and the rapid blasted, the water levels in the Mekong River have changed drastically, especially during dry season. (SEARIN, 2006: 46-58)

In addition, the water regulations set by China to allow cargo ships to travel from during dry season as the trade agreement with Burma, Laos, and Thailand, has completely disrupted the cycle of water levels in the entire Mekong River. The constant changes of water levels due to power production of the dams and rapid blasting have had many negative impacts on the ecological systems in the river. These development projects have directly impacted the fish and plant species and the way of life of people on both sides of the river. Rapid blasting has caused extensive negative impacts on the ecological system of the Mekong River as it has destroyed the natural balance that once existed. An essential part of the ecosystem of the river lies in its many rapids. These areas play a significant role of the life cycles of many fish that live in the river. Rapid blasting destroys these essential habitats and causes the decimation of the fish population. (Ibid., 70-71)

In addition, Kai, Mekong river seaweed, is used for food for the villagers and for raising fish. When Kai is becoming less and less, fish has lack of food. The number of fish is also decreased. Importantly, Mekong giant catfish, which mainly eat Kai, are going to be rare. If Kai is disappeared, the Mekong giant catfish is put in the great risk to be extinct as well. Especially, in Chiang Saen, Chiang Khong, and Wiang Kaen district of Chiang Rai province, these areas are the places for the Mekong giant catfish laying eggs in the dry season every year. Specially, during April

to May at the Khon Phi Long is providing the deepest basin among the Mekong rapids at over 50 feet under for giant catfish to lay eggs. (Nopparat, 2010: 31)

- Social Impact

The loss of fisheries, crops, livestock, and drinking water has struck the livelihoods, food security and economies of some of the region's poorest communities. There is a high likelihood of far wider impacts throughout the Mekong basin, as the river is usually at its lowest in April and May. In Cambodia, the drought threatens the massive fisheries productivity of the Tonle Sap Lake, where the total fish catch each year is proportional to the extent of flooding, and is central to Cambodia's food security and economy. In the Mekong delta in Vietnam, where over 10 million farmers and fishers live, salt water intrusion threatens the farming and fisheries and has been reported in some places to have already extended nearly 60 km in land, which is double the usual extent. (FER, 2010: online)

In Thailand, low water levels on the Mekong have also brought impacts to its tributaries. On 23 February 2010, water levels of Ing and Kok rivers in Chiang Rai province decreased. The mouth of the Ing and Kok rivers was estimated to decrease 15 centimeters and 30 centimeters, respectively. The Mekong's tributaries drying up have also affected to 36 fish conservation areas of the Ing River's watershed communities. Fish populations were confused by the quick decreasing water levels, which off-balances seasonal fish spawning during May-July. The Mekong's tributaries are often compared to a womb, because they are host to fish spawning. Long-term fluctuations on the Mekong will significantly impact the Ing River and its fish population, as well as the income of local fishers in Chiang Rai and Pra Yao provinces. (Nopparat, 2010: 28)

The changes in the Mekong River also affect ways of life, the livelihoods and cultures of people in the Mekong region, especially fishermen. As a decline in fish means a decrease in food security for local people and it would harm their fish occupation, they are living in the food insecurity condition and it tends to get worse. Many fishermen quit their fishing and turn to work in labor force.

- Economic Impact

The Upper Mekong dams threaten to disrupt the Mekong's complex riverine ecosystem upon which millions of people depend for fish and agriculture. About 90% of the population in the Mekong basin is engaged in agriculture and depends on wild caught fish from the Mekong and its tributaries for 80% of their protein needs. The Mekong River Commission (MRC) estimates that the total value of fish caught per year in the lower Mekong basin is more than \$1 billion. (International Rivers, 2010: online)

Low water levels in the Mekong River during 2010 has also affected 100 ferry boats and 200 trading boats loaded with cargo between Huay Sai in Bo Kaew province and Luang Prabang, forcing them to suddenly stop travel on March 19. Lao media reported that the Boat Association of three Lao provinces (Bo Kaew, Udomxai and Luang Prabang) have never seen such drying phenomenon in 30 years. Economic losses estimated from this phenomenon total almost 1 million Baht. It has also affected Mekong tourism, as Luang Prabang is a well-known, attractive place that has been popular among tourists from all over the world. (Nopparat, 2010: 28)

Rapid water level changes have affected riverbank agriculture, which relies heavily on the Mekong. In many areas, water pumps were laid down on the riverbanks alongside fishing gear. Villagers in the Mekong have to walk very far to dip water for their crops and vegetable. Furthermore, the fishing gear laid on the riverbank cannot catch any fish. A significant measure of the unprecedented river fluctuation is the declining of Kai – the Mekong algae. Kai is an indicator of rich biodiversity in the Mekong. This plant can grow on rocks at an estimated depth of no more than 50 centimeters, as it needs proper sunlight and seasonal changes. (Ibid., 29)

2.2.2. Mekong River Commission Perspectives

The Mekong River Commission (MRC), an intergovernmental agency consisted of Cambodia, Laos, Thailand and Vietnam responsible for sustainable development and water resource management of the Mekong. Because China is not a member of the MRC but it is only a dialogue partner of MRC, the MRC was criticized

because of its failure in attaining information from China and the transparency of information of its dams on the upper Mekong River is still inadequate.

The MRC said in 2004 that the Chinese dams had exacerbated the drought and sent an official letter to Beijing demanding information on the Chinese dams. In a seeming about turn, then-MRC chief executive officer Oliver Cogels wrote a letter to the Bangkok Post on January 9, 2007, claiming the impact of the Chinese dams was exaggerated in public opinion and not a factor in the drought affecting downstream countries. He also noted, echoing Beijing's line, that because the Chinese dams are for power generation and not for irrigation, they do not hold water, but instead regulate flows, increasing them in the dry season and reducing them in the rainy season. (JapanFocus, 2002-2010: online)

Despite the MRC having an annual consultation with Chinese water officials, the MRC has not noticeably affected China's consultation agenda. Real-time flood data is now provided by China, and future consultations could fruitfully examine hydropower operation regimes in order to minimize negative downstream impacts – negotiations to do just that were propelled in 2008 by serious floods along the Mekong River, with the flood level reaching a height not seen since 1996. The impact of the Chinese dams is not included in MRC cumulative impact assessments and scenarios work; but dialogue by the MRC with Chinese officials has, to this point, been very limited. At least until 2008, exchanges have been more substantial beyond the MRC. (Molle et al., 2009: 362)

In response to heavy flood in August 2008, the MRC conducted a swift analysis of the Secretariat's performance before and during the flooding and developed an action plan to address shortcomings. At the beginning of September the *Flood Situation Report August 2008* was published to give an overview of events. The report shows that runoff for the floods in question was almost entirely generated in the area between Jinghong, in Yunnan province, and Luang Prabang, and so the most critical floods occurred in upstream reaches. Analysis of available storage behind the three operational dams on the Mekong in Yunnan revealed it to be insignificant compared to runoff volumes during the flood. Releases from these dams would have

played no significant role in the conditions, which were the result of natural meteorological and hydrological circumstances. Hydrometric data supplied by China under the 2002 data exchange agreement with the MRC proved important, providing a solid starting point for flood routing on the mainstream. This information can be made even more useful by review and improvement of the forecasting model. (MRC, 2005-2008: online)

In the State of the Basin Report 2010 Summary, the MRC stated that the major anticipated consequence of hydropower development is an increase in regional dry season flows as water stored in the flood season is used to generate electricity in later months. The decrease in flood season flows is proportionally far smaller. It is not just the distribution and volume of seasonal flows that are important. The timing of the onset of the different season changes very little from year to year so any small change could have potentially large environmental consequences. (MRC, 2010: 21)

Another long-term impact of dams is sediment trapping. The Mekong carries large amounts of nutrient-rich sediments which are important for the high productivity of wetland areas, such as the Tonle Sap Great Lake and the Mekong Delta. So, the potential reduction in mainstream sediment loads is a serious concern. About half of the total sediment contribution to the Lower Mekong Basin originates from the Upper Mekong. It is estimated that the Yunnan cascade of dams being built in China will trap some 90 per cent of this sediment. (Ibid.)

In addition, Chris Barlow; the Manager of the MRC Fisheries Program also revealed that the renewed interest in hydropower development on the mainstream of the Mekong is driven primarily by two factors – the increase in international crude oil and gas prices over the past two years, and increased dry season flows resulting from the operation of dams in China. A third factor is that climate change concerns have led to resurgence in interest in hydropower as a clean energy source. Dry-season flows in the Mekong will increase significantly as more Chinese dams are commissioned. In the Mekong between Vientiane and the border with China, where plans for four dams are currently being considered for implementation, preliminary estimations have indicated average dry-season flows will increase by 40-60%. The

increased water in the dry season makes hydropower dams on the mainstream a more financially attractive proposition. (MRC, 2005-2009: online)

2.3 Conclusion

The biodiversity in the Mekong River is being put at risk by the development projects along the river. As a result, the communities along the river are also struggling to deal with the changes. Additionally, the negative impacts of the dams at different timescales should be introduced in the balance between development and environment. Due to the lifetime of the dams is short and limited considering with progress desired for the ecosystem to flourish its maintenances, the rich Mekong diversity was shaped more than 1,000 years ago. The changes have affected not only Thailand but also the Mekong region as a whole.

Hydropower developments have effects on the hydrology of the Mekong by altering the natural timing and system, the volume of its flow cycle, and the migratory way of important species of Mekong's fish. Additionally, the situation has been aggravated by uncoordinated regional organizations give more economic and political interests rather than environmental concern. Besides, because of the lack of transparency and access to data, international frameworks have barely been able to develop incorporated solutions to these problems.

Since September 2003, the Environmental Impact Assessment (EIA) Law has been formally enforced in China. However, EIA law has not been adequately implemented and has not played a role in the decision-making processes around proposals for large-scale dams. Due to lack of rights and effective mechanisms to put into place adequate information disclosure procedures, there is a continued lack of information on plans for dams in improper assessments, and studies on the potential impacts. Therefore, the approval of an EIA law is welcomed but still needs to be properly implemented. (IRN, Mekong Watch and SEARIN. 2003: 20)

China's plans for dams on the upper Mekong in the Yunnan province rise environmental awareness. However, the downstream governments are still not able to

confront China, even if there are solid reasons for an assessment that the dams will have negative environmental impacts. Moreover, the governments in the region have not adopted the environmental awareness and measures essential to prevent the ecosystem as their economic development. Therefore, regional cooperation in the Mekong region would be a key mechanism to solve development project problems and address many of these issues. Furthermore, there is a need in giving information on the condition and use of Mekong resources because it is vital for the proper development and management of biodiversity and livelihoods in the Mekong basin.

Because of the enormous imbalance of power between China and the downstream countries it is highly unlikely that there will be a halt to China's projected dam building program on the Mekong in response to concerns the downstream countries might have. In contrast, the very recent announcement of a suspension of China's plans for dams on the Salween appears to have been made in response to domestic pressures. Customary international law and the provisions of the 1997 *Convention on the Law of the Non-Navigational Use of International Watercourses* of the United Nations' International Law Commission, require an upstream country not to act in an inequitable fashion in relation to its use of rivers, so far as countries downstream are concerned. Based on China's past and present record it is apparent that this is a provision that China will continue to ignore. (Osborne, 2004: 42)

Because these development plans are primarily in response to the increase in trade between China and mainland Southeast Asian countries. Chinese trade is rapidly extending in ASEAN markets and especially in the Indochina countries. In contrast, the dam development and navigation projects are being engaged in appreciable human and environmental costs. The Navigation Agreement has put the MRC Agreement in a difficult position because the rapids blasting in the upper Mekong River is not a sustainable management of the river, hence it oppose the agreement.

At a wider level, what is happening in relation to the Mekong may be seen as a further reflection of the paramount position that China now occupies in relation to its neighbors in mainland Southeast Asia. The construction of dams, without

consultation, the promotion of river clearances and the accompanying extension of Chinese trade down the river sit alongside other aspects of China's steady push to assert its position of dominance in the region. (Osborne, 2004: 43)

Four countries; Thailand, Vietnam, Laos and Cambodia, are members of the Vientiane-based Mekong River Commission that coordinates the shared use of the river. Although China is not a member, the MRC does its best build good relations with it. Given's China's role in the Mekong Region, in fact, it has been said that if an agreement among the four downstream nations does not have China's cooperation, it is a mere scrap of paper. (Son, 2005: 17)

The MRC has sought to exonerate China's dams on the Mekong River's upper mainstream (Lancang) for the severity of the drought in its reports and through the media. The MRC has taken this position despite the fact that neither China nor the MRC have publicly released data supporting this position. China began filling the reservoir of the Xiaowan Dam - the world's highest arch dam and the fourth on the Lancang – in October 2009. This timing, and the subsequent drop in downstream flows, coincides with the MRC's identified onset of the drought. (FER, 2010: online)

These problems represent the inadequacy of the only existing water-utilization arrangement, the Mekong Agreement. China is not a party to the agreement, and even if it signs it, lower riparians have no right to demand impact studies or mitigation measures, nor would China require their agreement to go ahead with its water projects. The most the agreement can do is require "minimum" water levels be guaranteed through releases. China has no intention of joining the MRC, and is instead intent on pursuing bilateral and multinational negotiations, such as electricity deals and navigation agreements, outside the MRC framework. Indeed, China has never signed any international water agreements. (Goh, 2007: 45)

CHAPTER III

SOCIAL IMPACTS ON CHIANG KHONG AND CHIANG SAEN DISTRICTS

Chiang Rai as a province of Northern Thailand where the Mekong River first reaches, is about 300 kilometers far from Yunnan Province of China. Since China has positioned as an upstream and economic powerful country by building large hydropower dams and encouraging regional trade, it has undeniably altered the livelihoods of downstream communities in Thailand. Furthermore, after a commercial navigation agreement of the Mekong River was signed in 2001, trade between China and Thailand via Mekong has since rapidly increased. Many things relating to the river were forced into a way of commercial advantages. Local people and local community organizations are worried about the impacts from the Chinese hydropower and economic development projects. Downstream communities in the Mekong River are encountered with impacts caused by rapid developments upstream as well as Chiang Saen and Chiang Khong districts of Chiang Rai province. These are the first two districts that the Mekong River has reached. After there are dam constructions in China's Mekong River, the locals have experienced with some changes in the river which are now affecting their communities. The areas are perceived the impacts in the different ways but people are the one suffering from these dam development projects.

The areas of this study are composed into two areas; Chiang Khong and Chiang Saen District, Chiang Rai province. Chiang Saen is the first area where the Mekong River flows to, and Chiang Khong is a second district locating next to Chiang Saen. Both districts have experienced with impacts as they are located alongside the Mekong River. Therefore, both districts have shared the impacts but various in details depending on the location and geography.

The social impacts in this study are categorized into three aspects;

- 1) Changes in local economies and livelihood
- 2) Increase of fear over unstable life and food security

3) Transformation in long-established local communities caused by the spread of Chinese influence on the area

3.1 Social Impacts

3.1.1 Changes in local economies and livelihood

Because of the dam constructions in the Upper Mekong River, it has caused several changes in the river's flow which directly affected people who depend on the river for their daily lives. Local leaders mentioned impacts relating to changes in local economies and livelihood in their areas as follows;

Songpon Katesopa, Village Headman Moo.8, in Chiang Khong District, expressed his opinion "The river is no longer the same as well as the livelihood of communities along the river. There are impacts on the livelihood, riverbank agriculture and fisheries as well as changes in the river flow and unusual fluctuation. People who depend on the river are directly affected until they have to change their ways of life and works."¹

In addition, Sawahtpon Kardraruang, Village Headman Moo.2, Wiang Chiang Khong Sub-district, Chiang Khong District, also added "After there are dam constructions in the upper reach of the Mekong, the river's fluctuation is irregular; the water level rises and falls rapidly. Heavy flood occurred often in rainy season which damaged riverbank gardens and crops. In dry season, the water level was very low."²

Meanwhile, Noppadon Sangdee, Wiang Chiang Khong Kamnan in Chiang Khong District, stated "There are impacts on agriculture and fisheries because the river's fluctuation is not naturally changed; it is controlled by dams. However, it is difficult to manage or solve them because the dams are in China."³

¹ Interview at Chiang Khong, 13 December 2010

² Interview at Chiang Khong, 13 December 2010

³ Interview at Chiang Khong, 9 December 2010

Moreover, Suriyon Saowrisaen, Rim Khong Assistant Kamnan in Chiang Khong District, said that “Villagers and communities along the Mekong River are in trouble because of the impacts on their livelihood. At Rim Khong sub-district, we are dependent on the river for our livings and agriculture; we do lots of riverbank garden, tobacco farm, and corn fields. In 2008, when there was a heavy flood in the Mekong River basin, our crops and farms were damaged.”⁴

Likewise, Vichien Maneerat, Assistant Village Headman Moo.7, Baan Sop-Kok, Baan Saew Sub-district, Chiang Saen District, informed “The store and release of China dams have effects on riverbank agriculture, farming, and fisheries. The riverine ecosystem has also been disrupted. In March – April 2010, the water level was very low, boats could not navigate. Moreover, the village also suffer from the pollution made by Chinese trade boats which release oil and waste in the river.”⁵

“The control of river flow by Chinese dams has impacted the area. Furthermore, as a result of rapid blasting, it has changed the geography of Sop Ruak area as the mouth of Ruak River has come closer to Wiang sub-district than before. Because without the rapids functioning as barriers, slow down the river’s current, the mouth of Ruak River which is a basin, was vanished by strong river flow”, Prasit Supan, Wiang Kamnan Wiang Sub-district, Chiang Saen District, said.⁶

Furthermore, Somsak Madsang, Village Headman Moo.3, Baan Wiang Tai, Wiang Sub-district, Chiang Saen District, said “Severe drought has affected tributaries in Chiang Rai of which large number of people depend on them for farming and agriculture. In addition, trading and transportation could not be made all year when the water level was too low. I am worried that if China build more dams in the Mekong, the situation would get worse.”⁷

⁴ Interview at Chiang Khong, 15 December 2010

⁵ Interview at Chiang Saen, 15 December 2010

⁶ Interview at Chiang Saen, 23 December 2010

⁷ Interview at Chiang Saen, 21 December 2010

The livelihood is the way that people earn for a living including accessing to social welfare services. For the livelihood of communities along the Mekong in Chiang Khong and Chiang Saen, they depend on water for subsistence, and they mainly reside near water where they are able to irrigate their paddy fields and gardens. They also have traditional festivals to sustain their beliefs.

Last year when the Mekong River had been so low, the agricultural and economic activities reliant on the river were seriously impacted. Villagers who made their livings from fishing had found out their catch amount lessened. Farmers no more had enough water to irrigate their crops and provide for their livestock. Shipping and transport boat operators had had to stop their business for a while, badly affecting tourism and trade.

Pianporn Deetes, a network coordinator of Living Rivers Siam, said “When the river’s ecology has been changed, that means the livelihood of the Mekong communities will be affected and of course downstream people have to suffer from negative consequences that they have not made. Negative impacts have affected food security, fisheries and agriculture.”⁸

Fisheries along the Mekong River are considerably significant occupation of local communities. Nonetheless, irregular fluctuation in the river’s flow and level has affected the river’s form, harmed fish habitats, spawning and feeding grounds, and made changes in the migration pattern of some fish, causing drop in fish quantity, species and size. Bizarre or sudden rises and falls in the water level has interrupted fish life cycle and resulted in irregular fish migrations. Therefore, these have affected the local fishermen who earn their living with Mekong’s fisheries.

Local fishermen have complained about less catches forcing many of them to turn to other jobs to make a living such as labor-intensive workers or farmers. These local fishermen depend largely on the Mekong River for their catch, but their catch has decreased over the years because of the changing ecology of the river. Fishermen

⁸ Interview via telephone, 18 March 2011

have noticed how water levels in the river are no longer predictable, and because of this, the breeding cycles of many fish species have been disrupted.

Sow Rawangsee, local fisherman in Chiang Khong said “I had earned my living as a fisherman since I was a young man. But now I have noticed that large amount of fish in the Mekong have been gone and some even disappeared. Sometimes, I went out fishing, I did not get any fish.”⁹

Sit Kanjaree, local fisherman in Chiang Saen mentioned “I have stopped fishing for two years because there is less fish to catch. I am doing a tobacco farm instead. As I know for now, there are only two fishermen left here in this community.”¹⁰

As well as boat operators who make their livings in the Mekong River, they also get affected from China’s dam constructions. The followings are the responses of the focus group of boat operators at Chiang Saen;

“I think that dams have decreased almost 50 per cent of water quantity and caused low water level. When the water level was very low, we had to stop our services; that means we lost our incomes.”¹¹

Another boat driver also added “I have been doing this job for 10 years; I can feel that there is change in the river. The drought in the river is getting more severe as well as flooding. When I could not make a living from driving boat, I had turned to do farming instead or else I could not earn any money.”¹²

⁹ Interview at Chiang Khong, 13 December 2010

¹⁰ Interview at Chiang Saen, 23 December 2010

¹¹ Focus Group, Chiang Saen boat operator, 24 December 2010

¹² Focus Group, Chiang Saen boat operator, 24 December 2010

3.1.2 Increase of fear over unstable life and food security

The Mekong River provides primary food security for people and communities along the river because fisheries are the most important source of food and income for villagers living along the river and its tributaries. The fish catch of the Mekong River is significant to the livelihood and food security of communities depending on the river, considering it as the most important source of protein for the people in the basin. Moreover, riverbanks and sandbars supply nutrient-rich areas to cultivate a sort of short-cycle crops which play an important part in the diet and food security of the local communities.

Chiang Khong district is located next to Chiang Saen district where the Mekong River also has significant part in the area. However, Chiang Khong is a small Thai town along the Mekong River which is now struggling with the effects of large hydropower dams which have been built along the river in China. Local fishing communities here have reported that their livelihoods are not stable anymore as fish stock has declined, and some fish species have completely disappeared.

Although the rapid blasting project was halted in Chiang Khong but there is a port construction near the town. Some people have lost their riverbank garden's lands from soil erosion and building roads to the port. For some affected people who have no choice to move their houses, still have to suffer with the impacts or they have to change their livelihoods.

As Niwat Roykaew, the leader Chiang Khong Conservation Group, said "The Mekong River is a shared river; no one owns the river itself. For us, the river is a blood life, when the river changes, our lives will be changed also."¹³

Riverbank gardens provide food and income for people along the Mekong River. However, riverbank gardeners are also affected by unavoidable changes from

¹³ Interview at Chiang Khong, 16 December 2010

dam constructions. As the variety of plants and product from the river get decreased, people have to counter with the food insecure condition.

Nopparat Lamum, the head of Mekong-Lanna Natural Resources and Cultural Conservation Network, said “Riverbank agriculture has been pushed into insecurity. The farmers barely predict the usual rises and flows of water level because of the dams release and install water. Many times the farms and gardens have been flooded and sometimes run dried. Farmers have to maintain a higher investment cost and loss.”¹⁴

Figure 3: Riverbank Garden in Chiang Khong District



According to Osborne, another food source that has been affected by changes to the river is Mekong ‘seaweed’ or Kai. This is an underwater plant rich in protein that has long been harvested from the Mekong by villagers living along its course. Growth of Kai has ceased from the point the river begins to flow past Thailand at the triborder point – where the boundaries of China, Laos and Thailand meet – down to Chiang Khong. This has occurred because of changes in water levels and increased sediment stirred up as the result of the river clearance covering area where Kai previously grew. (Osborne, 2004: 29-30)

¹⁴ Interview at Chiang Khong, 14 December 2010

Kai is a valuable source of food and seasonal income to communities in Chiang Saen, Chiang Khong and Vieng Khaen districts. People can earn 150 -300 Baht per day from selling fresh and dried Kai, which is collected when the water level lessens and appears clean and clear. Nevertheless, unexpected fluctuation in water level and increased silt and sediment have shortened the period in which the villagers can collect Kai. Therefore, people who depend on collecting and selling Kai have lost some income from this. The following responses are from focus group interview with Kai Women Collector Group at Baan Haad Krai, Chiang Khong District;

Figure 4: Kai dried on the bank of the Mekong River at Baan Hai Krai, Chiang Khong



Source: www.mekonglover.com, 2010

“Before the dam constructions occurred in the Mekong River, we could collect Kai for five months (December to April) a year, but after the dams started to control the river flow, the duration for cultivation of Kai has been lessened, we could collect Kai only three months which are January to March. Because of the unusual fluctuation and river being muddy, Kai cannot grow in these conditions. Kai grows very well in shallow and clear water.”¹⁵

Moreover, another woman also said, “The abnormal water fluctuation has affected growing of Kai because unstable water level causes Kai to die and could not grow. As the water now rises and falls rapidly and unpredictably, Kai could not adapt

¹⁵ Focus group, Baan Haad Krai, Chiang Khong District, 14 December 2010

itself in the condition. Therefore, when there is less Kai to collect, our income is also reduced.”¹⁶

For the Kai women collector group can represent the affected people whose incomes are decreased. Kai is an indicator of abundance of the Mekong River and the main source of food for locals. Kai collectors have seen changes in the river which affected the amount of Kai. When there are some changes in the river, the number of Kai are lessened, affecting the income of Kai collector. The local community organization in Chiang Khong has worked with Kai collector group in studying the impacts from the Chinese dams, and the group has reported what they have been affected hoping the local authority come to realize what they are affecting.

Besides, severe flood and drought also lead to increase in fear over unstable life and food security. Flooding crisis in August 2008, people were not able to prepare because it came very fast. The farms on bank of river, houses and roads were destroyed and bank was eroded. The lost evaluation is estimated at over 85 million Baht in 39 villages in Chiang Saen, Chiang Khong, and Wiang Kaen districts. Baan Sop Kok, Moo 9, Chiang Saen, is the most affected area from the floods. About 90 percent of the agriculture lands were destroyed. Moreover, Rim Khong sub-district, Chiang Khong, was affected as well even though this area is located nearby rocky area, Kon Phi Long, that people expected it would help protecting floods. (Nopparat, 2010: 34-35)

Nopparat Lamun mentioned “The damming in the Upper Mekong River of China has caused severe flood in 2008 and drought in 2010 and also affected riverbank agriculture and local communities’ economy.”¹⁷

In 2010 when the Mekong River had reached seriously low level, tour boat drivers in Chiang Saen district had to stop their services because the water level was too low to navigate. Large boats from China were stranded on the Mekong shoreline

¹⁶ Focus group, Baan Haad Krai, Chiang Khong District, 14 December 2010

¹⁷ Interview at Chiang Khong, 14 December 2010

at Chiang Khong port. Drought in the Mekong River had also affected its tributaries in Chiang Rai province such as Ing and Kok rivers. However, the Chinese government informed that the drought was affected from global climate change and its dams on the Mekong River have no impacts on this drought. Many people are concerned that drought in the Mekong River basin would be more severe.

Figure 5: Flooding at Check Point Port in Chiang Khong on August 2008



Source: www.mekonglover.com, 2010

As well as soil erosion causes unstable life to communities along the Mekong River. Over the past few years, the unusual and rapid change in the river's flow and tide in the Mekong River has caused the erosion of riverbank areas. Soil erosion along the Mekong River is also a result of rapid blasting because the rapids in the river functions as barriers slowing down the water flow. Soil erosions along the river have occurred in Chiang Khong and Chiang Saen districts as well as Wiang Kaen district.

The obvious evidence of soil erosion in Chiang Khong district is at Baan Pak Ing Tai, Sri Donchai sub-district. Baan Pak Ing Tai is a village located along the Mekong River where 600 meter-long-erosion can be seen. Although the government sector had brought sandbags and concrete block to prevent more erosion, people who live along the riverbank still feel insecure.

Mae Dee, a villager in Baan Pak Ing Tai, Chiang Khong District, mentioned with worries about soil erosion in at her village “Soil erosion has occurred since 2009. It could happen any time. We were scared every time when there was heavy rain but we could not move to anywhere else. I have seen my neighbor’s land slide into the river.”¹⁸

Figure 6: Soil erosion at Baan Pak Ing Tai



3.1.3 Transformation in long-established local communities from the spread of Chinese influence on the area

The Mekong River in Thailand begins at the Golden Triangle in Chiang Saen district of Chiang Rai province where it meets with Ruak River then forms the border of Thailand and Laos. Chiang Saen district depends mainly on trade and tourism. The Chiang Saen port was constructed in 1993 as the first commercial port on the Thai

¹⁸ Interview at Chiang Khong, 14 December 2010

side of the Mekong with the purpose of facilitating growing commercial trade between China and Thailand. Free Trade Agreement with China has adversely affected local farmers but with profit to private business. Trading businesses in Chiang Saen are owned by a few groups of powerful businessmen while local people do not get any advantage from this trade.

With the constructions of the landing sites and port at the Golden Triangle area, Chiang Saen district can be an apparent case of rapid economic development in the Mekong River basin. Chiang Saen district is considered to be an ancient historical site, but at the present, trade-related activities are now occupying this local ancient district and displacing local residents. For local people who have lived in this quiet town, they can see a rapid change in the town where it turning to be a busy port town.

In addition, the spread of Chinese influence on the area lead to changes in local communities. The growing numbers of Chinese labors and traders as well as immigrant workers move to the town, and they also carry transboundary health risks. At present, the area around the river port at Chiang Saen is home to an increasing number of expatriate Chinese business enterprises and also migrant workers. The Thai – China’s river trade seems to be more important than local economies.

As Miti Yapasit noted, “Nowadays, most of the shops and businesses at Chiang Saen are owned by Chinese people. Moreover, most of the workers at the port are migrant labors from Myanmar. The flux of these migrant labors would lead to increase of crimes. Sometimes local labors had a fight with them because they took away their jobs.”¹⁹

Chiang Saen is the main discharge port for vessels coming downstream from China, though existing plans call for Chiang Khong to be developed as another major river port. Fishing around Chiang Saen has, it has been reported, been badly affected since the local small craft used by Thai fishers are swamped by the wakes of the large cargo vessels now using the port. (Osborne, 2004: 29)

¹⁹ Interview at Chiang Saen, 21 December 2010

3.2 Perspectives from the Government Sector and Local Communities

According to the key informants, they are categorized into two group interviews; with the government officials and with local communities, whose perspectives on the impacts are different. Finding of the study focuses on two perspectives: 1) perspectives from government officials such as sub-district and district administrators 2) perspectives from local leaders, NGOs, local community workers and also local people.

3.2.1 Perspectives from the Government Sector

Sub-district and district administrators of Chiang Khong district gave similar perspectives on the impacts in Chiang Khong that dam constructions in China have no critical consequences on the area. In addition, the perspective geared toward natural causes such as climate change factor which has affected the Mekong water level. However, water resources management is needed in order to reserve water in the future.

Nawapon Auioutai, Mayor of Wiang Chiang Khong Sub-district, Chiang Khong District, said “In Chiang Khong, I think there is no serious impact because the geography of the Mekong River in this area is a deep pool. And I think climate change is also another factor of low water level. I have visited Chiang Rung (Jinghong) and seen the Mekong River still looks normal. Likewise, China has informed that its dams have no impacts on downstream countries.”²⁰

Moreover, Weerasak Sirisit, Chiang Khong District Chief Officer, said “There are just a small number of impacts in Chiang Khong and because of less melting snow from the Tibetan Plateau lead to low water level. I think it is just a result of way of nature. Moreover, China also has the right to do any development in its country and its river as the dam constructions in its region.”²¹

²⁰ Interview at Chiang Khong, 7 December 2010

²¹ Interview at Chiang Khong, 17 December 2010

In Chiang Saen district, sub-district and district administrators have diverse perspectives on the impacts from China's hydropower developments. However, their opinions are concerned with the economy of the area as Chiang Saen is largely dependent on river trade and travelling. The following perspectives are from interviewing with them;

Settasak Promma, Deputy Chairman of Baan Saew Sub-district Administrative Organization, stated "I am not sure whether Chinese dam constructions in the Mekong River have impacts on Chiang Saen area. However, the dams control the river's flow which can alter the mainstream. In terms of development, China also needs to improve its economy and hydropower development is necessary for China. We cannot stop China as the dams are in its country."²²

Jamrat Kotiyee, Chairman of Wiang Sub-district Administrative Organization, described "There are few impacts but they are indirect impacts which are not seriously affected on the area. Affected people primarily are businessmen who do trading with China because boats cannot navigate down to Thailand or go up China when the water level is too low. Trade value of import and export with China is about 7 billion Baht."²³

Whereas Phrasert Jommoon, Assistant District Chief Officer mentioned "Drought is the impact from Chinese dam constructions which has affected transportation, trading and travelling; however, we have no power to negotiate with China, and China always denies about the impacts."²⁴

According to Manop Thailor, a chief of Hydrometeorology Center at Chiang Saen, and his record from Table 2, indicated that during 1962-1992, before the first dam construction (Manwan dam), the mean of minimum discharge was 754 CMS (Cubic Meters per Second) where the water discharge was quite steady. However,

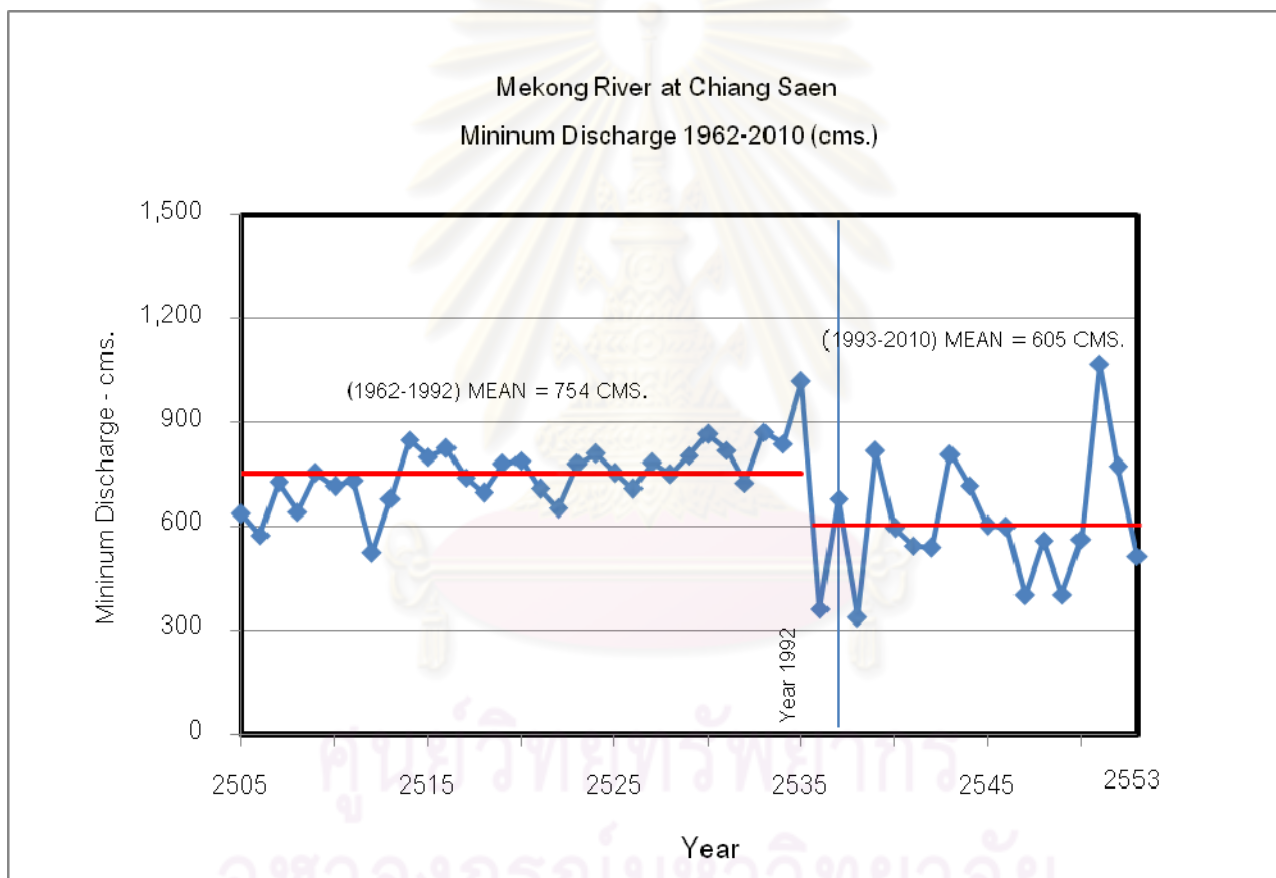
²² Interview at Chiang Saen, 15 December 10

²³ Interview at Chiang Saen, 24 December 10

²⁴ Interview at Chiang Saen, 24 December 10

during 1993-2010, the mean of minimum discharge was only 605 CMS where the water discharge was unstable. There was also a noticeable rapid drop in 1992-1993 when the first dam (Manwan dam) was operated. He also noted that there is a trend in a total reduction of discharge in the long term. Therefore, this would imply that the entire volume of Mekong water would be reduced.

Table 2: Comparison of the minimum water discharge between 1962-1992 (before dam construction) and 1993-2010 (after dam construction) at Mekong River Station, Wiang Sub-district, Chiang Saen District, Chiang Rai Province.



Source: Hydrometeorology Center 12th at Chiang Saen, Department of Water Resources, Ministry of Natural Resources and Environment.

However, he mentioned “There is no evident confirmation that Chinese dam projects have impacts on downstream area. We still have to find the concrete cause of the impacts whether they are from climate change effects or dam operations. Yet,

MRC and Department of Water Resources have agreed to request China release more water.”²⁵

Due to Thai government has a good relationship with China and it is seeking electrical power from its neighboring countries such as Laos and China, the government sector does not put the blame on the Chinese dams. Perspectives from the government sector are on the same patterns which are more on Pro-Chinese government because Thailand gets benefit from China’s hydropower development projects and also has a plan to buy electrical energy from the Chinese dams.

3.2.2 Perspectives from Local Community Organizations

While local community workers confirmed there are impacts from Chinese dams which directly affected to the communities’ livelihood. As these local community workers have lived in the affected areas and studied the impacts from the affected people, they critically considered the impacts as important problems, and the impacts are needed to be solved and cannot be neglected.

Nopparat Lamun, Mekong-Lanna Conservation Network worker, mentioned “Mekong ecology has been damaged by unusual fluctuation. The ecology changes affect the society and livelihood of the Mekong people. The dams have changed the nature of Mekong as well as the culture, livelihood, and local economy. But the question is who will be responsible for these impacts.”²⁶

Niwat Roykaew from Chiang Khong Conservation Group, gave an opinion “I strongly confirm that there are impacts from Chinese dams but the government sector do not accept. They ignore and do not take the impacts seriously. The livelihood, fisheries, and almost everything depending on the Mekong River are affected. In Dam buildings in the Mekong, for villagers along the river, there is no gain, but there is only loss.”²⁷

²⁵ Interview at Hydrometeorology Center, Chiang Saen, 24 December 2010

²⁶ Interview at Chiang Khong, 14 December 2010

²⁷ Interview at Chiang Khong, 16 December 2010

Additionally, Miti Yaphasit from Chiang Saen Conservation Group, noted that “The irregular fluctuation has lead to many consequences such as in agriculture, fisheries, and fish life-cycle. Additionally, the local livelihood is directly affected by projects both in economic and hydropower developments of China. Flood and drought are also visible effects from dams while illegal workers are a problem from river trade development.”²⁸

Pianporn Deetes from Living River Siam also added “There are impacts from the Chinese dam constructions which result in ecological changes. Then they lead to decline in natural resources. As a result, people who depend on the Mekong River are pushed into difficult situation when their livelihoods have been changed by impacts from dam operations in China.”²⁹

In conclusion, the perspectives and opinions expressed by government sector seem to put the blame on nature; saying that water level in the Mekong is a matter of nature which is beyond China’s control. Some said there was no serious impact from China’s dams while another said climate change would be a factor in change of the Mekong River. Some mentioned that they knew about the impacts but could not do anything to halt Chinese development. In contrast, local community organization people’s perspectives are different from the government sector’s perspectives. While government sector’s opinions on the impacts seem to be minimal that do not have serious effects, local community organizations’ opinions indicate that the impacts do really exist and they can give precise detail. They proved and indicated impacts from the Chinese dams in the mainstream Mekong River and also disagreed with dam constructions. Their opinions showed that dam constructions have destroyed the nature of the river and brought some impacts related to livelihood, fisheries, and ecology of the river.

²⁸ Interview at Chiang Saen, 21 December 2010

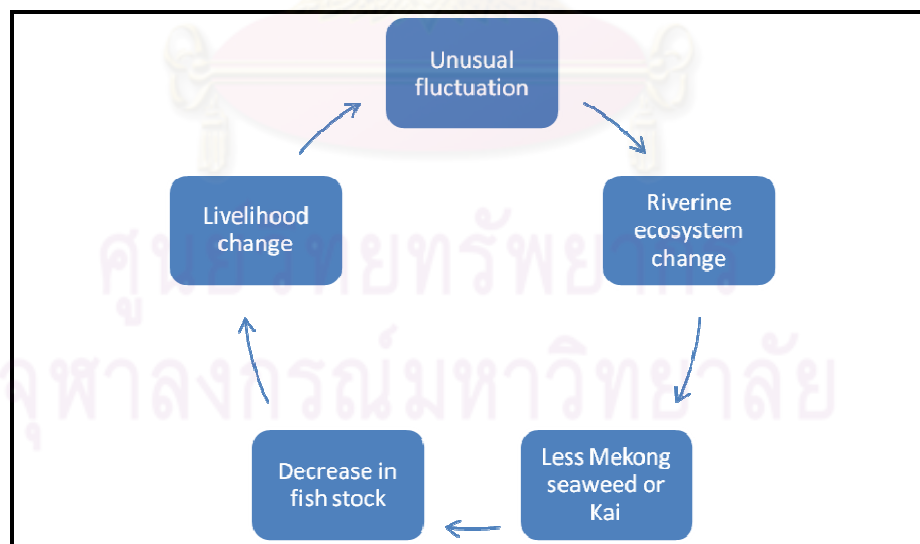
²⁹ Interview via telephone, 18 March 2011

3.3 Conclusion

The study of social impacts of Chinese dams in the Upper Mekong River on Chiang Saen and Chiang Khong districts, Chiang Rai province indicates that China has gained benefits on dam building on the Upper Mekong River which also caused damages to the lower areas of the river, especially in Chiang River Province of Thailand. The opinions expressed in this chapter reveal that there are several factors which needed to be addressed and called attention to.

With the flow control over the Upper Mekong River in China, the unusual fluctuation leads to inevitable consequences downstream. Even though the fluctuation in the water level pursues a natural cycle, upstream development projects such as dams in China have made the fluctuation even more severe. Locals have noticed that the levels are even far lower than usual. The impact of changes in hydrological systems on river fish ecology cannot be ignored. The impacts have already been experienced by people relying on the river for food, water, and transport.

Figure 7: Effects in a sequence system



Locals along the Mekong River confirm having seen the irregular water fluctuations. They have noticed when water was released from the Chinese dams, the level in the Mekong River could rise and fall rapidly. Some communities are worried about fish quantity in the Mekong River due to the unpredictable circumstances while

some communities have observed decline in certain types of fish species that were previously plentiful.

From Chiang Khong local leaders' perspectives, they pointed out various impacts happening in the area. Most of impacts related to local agriculture, fisheries, and livelihood. As the local leaders have worked for locals in the area, they have seen the impacts and got complains from villagers. Meanwhile, in Chiang Saen, local leaders' perspectives showed the impacts concerning with fisheries, agriculture, transport, drought, and environment. As China has controlled the river's flow, the unique ecosystem of the river has been destroyed. Moreover, the rapids in this area were destroyed for navigation improvement and commercial trade from China, so some changes in the town can be experienced

However, the impacts from hydropower development projects can be both negative and positive. While some businesses may get benefits from project activities, some have lost their lands and livelihood. For the affected people who have no alternatives have to change their livings and careers while some have turned to do farming and gardening.

As a result of the changes in the Mekong River, they also affect ways of life, the livelihoods and cultures of people in the Mekong region, especially fishermen. Because there is less fish in the river, fishermen can no longer do their traditional and local way of fishing. As a decline in fish means a decrease in food security for local people and it would harm their occupations, they are living in the food insecurity condition and it tends to get worse. Many fishermen quit their fishing and turn to work as labor force.

Hydrological changes in the Mekong River resulting in reductions of fish catches, riverbank agriculture, and other riverine resources, has affected the food security and livelihoods of local communities. The unusual fluctuation also affects the riverine ecosystem and nature of the river. Nevertheless, without realizing the impacts on downstream people, China still continue working on its hydropower development projects in the Mekong River. Even though now there are no large-scale

hydropower dams in downstream of Mekong, downstream countries also have plans to build large dams in the mainstream of Mekong River.

Lack of responsibility for the devastation of local livelihoods is more evident when development projects have transboundary impacts. However, these development projects are continuing without solving the issues related to the impacts of existing projects and neglecting the concerns and rights of local people. Therefore, there should be more concrete study in the impacts from dam constructions in the upstream Mekong. For many people, they think the Mekong River Commission should have played a part in this issue and MRC should be an institute that negotiate and deal with China in managing problems.



ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

CHAPTER IV

NGOS AND SOCIAL MOVEMENTS ON MEKONG DAM ISSUES

Building dams on the Upper Mekong River in China or Lancang River has raised critical environmental issues on riparian countries in the Mekong basin. Environmentalists and activists are questioning whether the Chinese dams directly cause severe flood and drought and they will be threats to ecosystem. Without consulting its downstream neighbors, or any assessment of the environmental impact, China already has the development of an eight-dam cascade underway, with four completed and two more under construction. Impacts to water levels and fisheries have already been recorded along the Thai-Lao border, especially in Chiang Rai as had been explained in Chapter III. Therefore, many NGOs and environmental groups in local communities call on protection the Mekong River. They have made assessments and recommendations on the situation.

There is growing concern by civil society on large-scale infrastructure development in the Mekong region because these projects affect the livelihoods of local communities of the Mekong River. The civil society groups and social movements have played a considerable role on the Mekong dam issues including Non-Governmental Organizations and local community groups. The emerging role of the civil society groups and social movements in the Mekong River Basin is increasingly involved with hydropower dam constructions. Both domestic and international civil society organization have been growing in number and areas of activities in the Mekong region. They have achieved the necessity to act collectively to address the hydropower development issues.

The countries of mainland Southeast Asia and Yunnan Province, China, threaded together by the Mekong River, are currently enjoying a period of stability and rapid economic growth not experienced for centuries. As a result, the region demands increasing quantities of electricity, especially in China, Thailand and Vietnam. Government electricity-demand forecasts and plans to meet this growth are,

however, challenged by civil society. Since the early 1950s, frequently controversial and as-of-yet only partly fulfilled plans for extensive large-scale hydropower development have been high on the agenda of the Mekong country governments. Yet, in the region where millions of people depend upon the natural resources that river provides, many proposed dams pose risks for the environment and rural communities, as well as, ultimately, for project developers and the host governments. (Molle et al., 2009: 23)

Dam constructions in the Upper Mekong has increased controversy about the environment and other issues, and much of criticism from the Mekong riparian countries have mainly come from NGOs and community organizations. The organizations that working on the Mekong dams issues in Thailand have play a vital role in influencing people's participation on the issues and also oppose the dams. They have indicated some researches and assessments on the potential impacts from the dams although sometime they are ignored by the government. As they claimed that people's voice are absent in Mekong dams issues, they try to raise the voice of the people who depend on the river and have been affected from the dams. Therefore, these NGOs and community organizations are trying to call for more attention and recognition to those who are affected by the Upper Mekong dams.

4.1 NGOs and Local Community Organizations against Mekong Dams

Thailand is having the most active and efficient advocacy groups and networks comparing to all four riparian countries since Thailand is opened society while the rests are closely controlled by their governments. Civil society organizations are formed by the range of people as a response to the worries on impacts of the Chinese dam construction. They are progressively active in promoting sustainable development in the Mekong region as well as criticizing and addressing problems from hydropower development projects. Moreover, mass media in Thailand are also supportive of this movement. Thai NGOs also co-operate with international NGOs and those in other country such as Japan and America, in order to promote awareness among general public as well as government agencies. Several cases can be

emphasized of civil society involvement in monitoring and opposing destructive development projects.

There are numerous active NGOs and community organizations working on the Mekong dam's issues as follows;

- Towards Ecological Recovery and Regional Alliance (TERRA) (Thailand)
- Mekong Energy and Ecology Network (MEE Net) (Thailand)
- Thai Peoples' Network for the Mekong (Thailand)
- Chiang Khong Conservation Group (Thailand)
- Living River Siam (SEARIN) (Thailand)
- Mekong-Lanna Natural Resources and Cultural Conservation Network (Thailand)
- Save the Mekong Coalition
- EarthRights International (ERI)
- Mekong Watch (Japan)
- International Rivers (US)

With their concerns and awareness on potential environmental impacts in the Mekong River, they indicate the present situation and urge the government to address the issues. Considering them as civil society, they should play a potent part in these issues. The work of these organizations is setting up a range of activities and public forums, engaging active campaigns, making researches, and also developing projects, programs and policies for the environment and local people.

Some organizations are local people who organize themselves together and join with other local groups, operating a movement against Mekong dams constructions. Many groups have their own websites, and some wrote articles and news and books. They also create alliance network and cooperation with the similar organizations, and their works and movements are continuously arranged. Their missions and works can be divided into three different concerns; ecological, energy, and livelihood and social concerns.

4.1.1 Ecological Concern

- ***Towards Ecological Recovery and Regional Alliance (TERRA) (Thailand)***

TERRA a project under Foundation for Ecological Recovery (FER), was established in 1991 to focus on issues concerning the environment and local communities within the Mekong Region. TERRA works to support the network of NGOs and people's organizations in the Mekong Region, encouraging exchange and alliance-building, and drawing on the experience of development and environment issues in Thailand. It thinks that public debate on, and participation in, decisions concerning environment and development is a crucial first step in forging paths towards a more equitable and sustainable future for all people in the Mekong region.

- ***Chiang Khong Conservation Group (Thailand)***

Chiang Khong Conservation Group comprises villagers and local officials. Together with other conservation groups, they have formed the Lanna Cultural and Natural Conservation Network. The Chiang Khong Conservation Group representatives brief the participants on deteriorating conditions of the river and its tributaries. They are working along with local community in Chiang Khong district and study the impacts in occurring in the community. They have made several researches on the Mekong River with Mekong - Lanna Natural Resources and Culture Conservation Network such as Chao Baan Research (Thai Baan Research).

- ***Mekong-Lanna Natural Resources and Cultural Conservation Network (Thailand)***

Mekong - Lanna Natural Resources and Culture Conservation Network, a local environmental group, founded in 2002 of three local organizations. They are Rak Chiang Khong Conservation group, Ing River Basin Natural Resources Conservation Club, and Project for the River and Community. They have worked for protecting natural resources and cultural in Mekong river basin area with well organized and clear objectives. Nowadays, the network covers the area of Chiang Khong, Chiang Saen, Wiang Kaen, Khuntan and Thoeng in Chiang Rai. It has indicated the impacts of Mekong development projects to the communities along the river and concerns on the livelihood of local communities.

- ***Mekong Watch (Japan) (International NGO)***

Mekong Watch was established in 1993 as a network of seven Japanese organizations that were concerned about the role of Japan in development in the Mekong Region. Mekong Watch is a Japanese NGO based in Tokyo. Their activities focus on the environmental and social problems resulting from development projects in the Mekong Region. Most of their work relates to projects that involve funding by the Japanese government. They combine researches and advocacy to address and prevent the negative environmental and social impacts of development in the Mekong Region.

4.1.2 Energy Concern

- ***Mekong Energy and Ecology Network (MEE Net) (Thailand)***

MEE Net is a local NGO founded in 2008, has been established under Foundation for Ecological Recovery (FER) as a sister organization of Towards Ecological Recovery and Regional Alliance (TERRA) to work on an energy issue especially the electricity structure, governance and policies to sustain local livelihoods and ecology in the Mekong Region. MEE Net has been working on energy related ecology issues in the Mekong Region, focusing especially on electricity structure, governance and policy reform towards sustainable energy and local community livelihood sustainability.

- ***Thai Peoples' Network for the Mekong (Thailand)***

The Thai People's Network for Mekong or TPNM was established in 2007 by several of Thai-based organizations including The Ecological Awareness Building (EAB), Udon Thani province; Chiang Khong Conservation Group, Chiang Rai province; Towards Ecological Recovery (TERRA)/Foundation for Ecological Recovery (FER), Bangkok; Pak Mun Community Network, Ubon Rachathani province; Loei Foundation, Loei province; SEARIN, Chiang Mai province; and Tam Mun project, in order to coordinate a range of exchange activities to increase awareness regarding the proposed dams in potentially affected communities and the broader public in Thailand. The group also recognizes the importance of working with other Thai organizations and energy analysts who are currently advocating more

participatory and integrated electricity planning in Thailand, as at least two of the proposed mainstream dams are slated to be connected to the Thai electricity grid.

4.1.3 Livelihood and Social Concern

- ***Living River Siam (SEARIN) (Thailand)***

Living River Siam (former Southeast Asia River Networks), founded in 1999, is a campaign-based organization, working to support local communities' rights to their water resources, promote local knowledge-based sustainable water resource management, and oppose threats to rivers and riverine ecosystems in Thailand and neighbor countries in the Mekong and Salween River Basins, such as large-scale dams and water diversion projects. It analyzes the impact of dam projects and coordinates the research of local people to give Thai villagers the power to verify the effects of local rivers and dams.

- ***Save the Mekong Coalition***

The Save the Mekong coalition is a new network formed of local and international groups and ordinary people who all share a concern about the future of the Mekong River. The Save the Mekong coalition is working to protect the river, its resources and people's livelihoods, and is calling for better ways to meet energy and water needs. It brings together non-government organizations, local people, academics, journalists, artists and ordinary people from within the Mekong countries and internationally. It also urges the Mekong governments to keep the Mekong flowing freely to save this critical source of food, income and life for present and future generations.

- ***EarthRights International (ERI) (International NGO)***

EarthRights International (ERI) is a nonprofit organization that combines the power of law and the power of people in defense of earth rights. They specialize in fact-finding, legal actions against perpetrators of earth rights abuses, training grassroots and community leaders, and advocacy campaigns. Through these strategies, ERI seeks to end earth rights abuses, to provide real solutions for real people, and to promote and protect human rights and the environment in the

communities where they work. It consists of a group of activists, organizers, and lawyers with expertise in human rights, the environment, and corporate and government accountability.

• ***International Rivers (US) (International NGO)***

International Rivers' mission is to protect rivers and defend the rights of communities that depend on them. The Mekong Region is the main focus of International Rivers' work in Southeast Asia. International Rivers' mission is to protect rivers and defend the rights of communities that depend on them. They oppose destructive dams and the development model they advance, and encourage better ways of meeting people's needs for water, energy and protection from damaging floods. It is working with a growing movement in the region to challenge dam plans and promote more sensible options for meeting the region's energy and development needs.

Figure 8: Thai protesters at Chinese Embassy in Bangkok against Mekong Dams



Photo by SEARIN/Thailand

These Thai and International NGOs, and Thai civil society organizations play a very active role in monitoring country and regional hydropower development issues. They have been working together and cooperated with each other on the Mekong dams' issues as they have networks to each other. They also work with the local

people who have been affected by the downstream impacts of the Chinese dams on the upper Mekong. One activity was to hold a rally in front of the Chinese Embassy in Bangkok demanding the Chinese government stop the hydropower dam and rapid blasting projects on the Mekong River.

Moreover, they questioned the governments' and the MRC's continued support for hydropower dams. They observed that the MRC has failed to take account of well-established flaws in Thailand's power planning process and emerging shortcomings in Vietnam's process used to justify dam projects that consistently overestimate power demand and do not prioritize modern renewable electricity generation technologies and energy efficiency measures. They challenged China to release to the public all relevant data sets including the water levels in the Xiaowan dam's reservoir and historical data since dam construction started. Furthermore, they added that the downstream impacts in Northern Thailand and Laos caused by China's dam construction to date should be recognized and compensated for, and negotiations take place on how to minimize future downstream impacts. (Save the Mekong, 2010: online)

A sample of NGOs challenging the Chinese Government and the MRC is *Thai People's Network for Mekong Statement* (See Appendix C.1) – launched on 16 August 2008 with the topic “Mekong flood, MRC's roles, dams in China, and a failed alarm system”. The severe flood occurring to the Mekong River in August has been causing much suffering to people living along the River, all the way from the Chiang Saen and the Chiang Khong district in the Chiang Rai province, Thailand, down to the Vientiane municipality, Lao PDR, as well as to the Nongkhai and the Nakhonpanom province, Thailand. The Thai People's Network for Mekong, who have been closely monitoring the current critical situations in Mekong, would like to pose questions and requests to the Mekong River Commission (MRC), as a mechanism to help manage the Mekong River. In addition, cooperation and a flood alarm system among MRC, China, and the lower Mekong countries have completely failed to protect people living along the Mekong River.¹

¹ Available at <http://www.terraper.org>

Figure 9: Thai villagers protest at Chinese Embassy in Bangkok to demand a halt in blasting rapids on the Mekong for a navigation project



Photo by SEARIN/Thailand

4.2 Role of NGOs and Local Community Organizations in Chiang Khong and Chiang Saen

There are several activist groups working on the Chinese dam construction issues in Chiang Khong and Chiang Saen districts which are Chiang Khong Conservation Group (Raks Chiang Khong) , Mekong - Lanna Natural Resources and Culture Conservation Network, Chiang Saen Conservation Group (Raks Chiang Saen), and Living River Siam (SEARIN). Member of the groups mostly are local people, and the groups have connections to each other in order to work and encourage awareness in the Mekong River environment as well as protect the local communities; therefore, they also have good relationship and cooperation with local people as local people realize the impacts and participate in their activities.

4.2.1 Chiang Khong Conversation Group (Raks Chaing Khong)

Chiang Khong Conesevation Group is located right at Chiang Khong district with numbers of local people working for it. Initially, this group was formed in 1996 with the local forest conservation issue and then became more active in 2001-2002 when the Mekong Navigation Channel Improvement Project began. With the

concerns on deterioration in community's environment, local culture and society, Niwat Roykaew, a founder of this group who was a teacher in Chiang Khong, organized activities and brought local people, business owners, public servants, policemen, teachers and doctors together as Raks Chiang Khong group. This group has actively protested to stop the rapids blasting along the Mekong River in Thailand.

On May 21, 2002, Chiang Khong Conservation Group, a local activist group focusing on Mekong development, along with villagers from the Chiang Khong and Wiang Kaen districts of Thailand, submit a petition to Thai Environmental Senate Committee. The petition asks the committee to come to the potentially affected area and hear their concerns about unavoidable impacts of the project on the environment and their livelihood. The petition also demands a halt to the project, release of information to the public, and public participation of affected and concerned people in the decision making process. They also demanded that the Thai government review the Cabinet's approval of the project's EIA. (SEARIN, 2003: 32)

With the advocacy to make locals realize the impacts and changes in the Mekong River on Chiang Khong area, it has raised awareness on protection of the river along with promoting natural resources conservation in the area. It has created community radio project to give knowledge for locals and organized the Giant Catfish conservation group in Chiang Khong district. As most of the members of the group are locals and locals have a good relationship with the organization, it has had discussions with locals in perceiving problems and finding solutions for them. More attention from locals is given to the Mekong dam issues when the impacts from the Chinese dam become more noticeable; therefore, the organization appreciates giving knowledge and information concerning the causes of impacts to the locals. In April 2010, the organization submitted a protest letter to the Chinese embassy, as well as a letter to the MRC in response to the drought situation.

4.2.2 Mekong-Lanna Natural Resources and Cultural Conservation Network

Mekong-Lanna Natural Resources and Cultural Conservation Network is also located at Chiang Khong district. It is a joint of three local conservation groups; which are Raks Chiang Khong Group, Ing River Basin Natural Resources

Conservation Club, and Project for the River and Community, in order to work systematically in the Mekong Basin issue. The aim of the network is to enhance and support natural resource protection and cultural conservation by making activities, presenting creative ideas organizing movements and advocating cooperation in the local community. This group emphasizes on the media promotion, publications and researches. It conducts the Mekong Post and Mekong Community Media Project.

This network organization supports conservation of local culture, nature and wisdom and appreciation of local communities in several districts of Chiang Rai Province. It also works with locals in order study local cultural ecology in the Mekong basin as well as provides campaigns and reports on changes from development in the Mekong River. It has conducted many publications and researches such as “Two Important Lessons from Mekong Mainstream Dams in China”, “Local Cultural Ecology and Natural Resource Management in the Mekong Basin: A Case Study of the Mae Khong River-Lanna Area”, “Mekong Post” books, and Thai Baan Research on Kok River basin. It uses the media to broadcast news in the communities.

4.2.3 Chiang Saen Conservation Group (Raks Chiang Saen)

Chiang Saen Conservation Group is placed at Chiang Saen district. Miti Yaprasi, a school teacher, realized the changes in Chiang Saen community and losing of local wisdom, so he started this group with local youth, and elderly. Originally, the main issues of this group concern with local arts, culture, livelihood, and environment, but after the development in the Mekong River occurred, the group started to put interest in this issue. This group encourages involvement and coalition of local people, provides knowledge, and open up for debate and discussion. It also coordinates with other organizations and NGOs in order to study the impacts from the development projects and Free Trade Agree with China.

As the founder of this organization has noticed changes and development in Chiang Saen district, which is an ancient city, he wants to reserve important parts of this area. This organization promotes people participation in protection their communities by organizing some activities locals, especially for local youth. Although Chiang Saen Conservation Group is not a big organization, it has

connection with other local community organizations in Chiang Rai in researching negative effects caused by dam constructions.

4.2.4 Living River Siam (SEARIN)

Living River Siam is located Chiang Mai not in Chiang Rai Province; nonetheless, its network and works are also sited at Chiang Khong and Chiang Saen. It was found by a group of academics and NGO workers relating to environmental and social issues in Thailand and also transboundary issues from dams in the Mekong River. Rather than accounting on academic or government experts, the organization's members work closely with the locals who make their living from the rivers and know the cycles of its biodiversity more than anyone else. The organization has worked with locals together with Mekong-Lanna Natural Resources and Cultural Conservation Network and Chiang Khong Conservation Group in doing Thai Baan Research and against Mekong's rapid blasting.

This organization educates people about the importance of the Mekong River and explains the impact of the Chinese dams on the lives of people who depend on it. The organization has also conducted many publications including books and DVD such as "A Testimony of the Downstream People", "Local Knowledge on Fish in the Mekong River by Thai Baan Research", "Thai Baan Research at Chiang Khong" and "Lancang-Mekong: A River of Controversy". It has cooperation with many NGOs and local community organizations including the three organizations mentioned earlier in studying the Mekong dam issues as well as join in several activities protesting dam constructions in the Mekong River.

All these organizations dramatically were risen from the Mekong dam issues especially when the rapid blasting was occurred. When the impacts from the dams become more apparent, more interests from people are put on the organizations. Their relationship and connection with locals are good because they can present and reflect the exact impacts. Locals give good cooperation with them as well as provide and report the problems that they are facing. These organizations have worked with locals who are the affected people to reflect the impacts. Sometimes, locals become members of the organizations and work for them. The affected people inform the

impacts to this organization hoping the government sector will come to realize the impacts and help them solve the problems.

To sum up, these organizations are concerned with the protection of the Mekong River and they have played a part in raising awareness of locals to realize changes in the river. They disagree with dam constructions in the Mekong River and have realized the impacts from those dams. Consequently, they are actively against dam constructions in the Mekong River. Even if they have informed and complained the impacts to government sector, they still do not see any progress. They want the government sector come to see the problems and take more serious actions in dealing with the impacts, and they also want Chinese government come to know about the impacts. Thai government should consider this as a national issue.

In addition, the affected people or locals, NGOs, the government, and the regional cooperation have differently played an important part in reflecting the impacts. In addressing the impacts, the connection between these four actors are essential in terms of network with each other. The affected people or locals are important in the way of primary witness while NGOs play a role in examining and surveying the impacts from the affected people or locals. Then NGOs take an action in reporting and providing the information to the government. After that, the government has to discuss the impacts with other countries' governments leading to regional cooperation within the Mekong region.

Meanwhile, the network of NGOs and local community organizations can be divided into three levels; local, national, and regional levels. The cooperation of NGOs and local community organizations in studying the impacts with locals in the affected areas is considered in the local level. NGOs working with other conservation organizations regarding with Mekong issues and informing the impacts to the government are in the national level. Debating and sharing the information with other international organizations concerning with the impacts are at the regional levels.

Figure 10: Connection between four different actors



4.3 Activities Done by NGOs and Local Community Organizations

Civil society groups, NGOs and local community organizations have become very active and strong concerning the impacts of Mekong dams. They have done many researches and projects on Mekong dam issues as well as engaged activities for peoples' participation in the issues. They also open up for debates and conferences. These following activities are done by Thai NGOs and community organizations in recent years directly concerning with the Mekong dams.

1) *Thai Baan Research* - a research undertaken by villagers – has recently emerged as a counter-hegemonic approach, aiming to reveal local knowledge about the environment and how villagers interact with it. It reveals their practical understanding of the complexity and dynamics of natural resources, the way in which resources have been used, and the moral economy of those who depend upon them for their

livelihoods. Thai Baan Research was identified as a new way of influencing the contested dam project. The Thai Baan approach also provides a basis for more informed, balanced negotiations between local stakeholders and government. By working with local development institutions and gaining the support of provincial and national government agencies, the Thai Baan Research is complementary to decentralization initiatives and national policy towards more integrated water resources planning and the establishment of river basin organization. (Molle et al., 2009: 346)

2) *Complaint to the Chinese Government, the Thai Government and the MRC* (See Appendix C.2) – done by several NGO groups in April, 2010 under the title; “Stop Mekong Mainstream Dams: Let the Mekong River Flow Freely”. Thai civil society organizations together with the local people who have been affected by the downstream impacts of the Chinese dams on the upper Mekong held a rally in front of the Chinese Embassy in Bangkok demanding the Chinese government stop the hydropower dam and rapid blasting projects on the Mekong River. They also demand the Thai Government and the Mekong River Commission to listen to people’s voices, stop the dam projects on the Mekong River and its tributaries.²

3) *Public Forum on Sharing the Mekong River* (See Appendix C.3)– set on 1st April 2010, brought together various participants from different organizations and groups concerning with the Mekong River. 190 representatives from civil society, academia, media, and government agencies met for the public forum at Chulalongkorn University, Bangkok. The meeting debated recent development trends in the Mekong basin and the role played by the Mekong River Commission (MRC), the impacts and causes of the current drought, plans for dams on the Mekong River’s lower mainstream, and visions for the future of the river.³

4) Campaign to raise awareness from the general public - one example of this task is the *Save the Mekong Statement* (See Appendix C.4) – conducted on 14 March 2010

² Available at <http://www.terraper.org>

³ Available at <http://www.savethemekong.org>

with the title “Drought brings severe hardship to riverside communities, demonstrates need for regional cooperation to protect Mekong River”. March 14th is the International Day of Action for Rivers. As the Mekong suffers its worst drought in decades, painfully demonstrating the importance of the river to the region’s people, and revived plans to build dams on the mainstream threaten the river’s ecology and resources, this is a day to reflect upon the life-giving benefits that rivers provide, and to take action to protect the Mekong river for present and future generations.⁴

4.4 Responses to Mekong Dams Issues

Over the past few years, the Lower Mekong River has witnessed severely low water levels. There is speculation that the changes are an effect of the construction and operation of the Chinese cascade dams in the upper Mekong River. Even though there are researches doing on the impacts from Chinese dams, those researches have been ignored by the Chinese. Criticism of the Chinese dams has come mainly from NGOs. The Chinese Government claims that floods and droughts during these years are the results of climate change and global warming.

4.4.1 The Chinese Government’s Response

According to the Chinese Embassy’s statement to the *Public Forum on Sharing the Mekong River* last year, it provided the information about the severe drought in Southwest China and the hydropower development in Lancang River that;

Since the end of last year, the entire Mekong River basin has experienced severe drought. The Southwest China is also suffering from the severest drought over the last 50 years. The drought in Yunnan province is the worst in China. From September 2009 to March 2010, the average rainfall in Lancang River area was only 37 mm, declining 65%, and the water flow of the Lancang River accounted for only half that would be considered normal for the same period.....The Lancang River covers 23.5 of the total catchment area of the Lancang-Mekong River basin. About 86.5% of water volume of the Mekong River comes from the Mekong River basin outside China. China has

⁴ Available at http://www.terrapeer.org/what_new_view.php?id=72

been actively implementing sustainable development strategy during the Lancang River hydropower development and taking into consideration the concerns of the countries in the lower reaches... (Save the Mekong, 2010: online)

The Chinese still claim, despite increasing evidence to the contrary from China and elsewhere, that large hydropower dams can have sustainable long-term multipurpose benefits. Probable social and environmental impacts unacceptable to the downstream countries are valid grounds for the projects to be rejected. Since 1950 China has been taking steps towards large-scale exploitation of the vast Tibetan forests, mineral deposits, and energy resources. The combined Lancang cascade of hydropower dams and Mekong navigation scheme should be seen as part of this process. China will not be satisfied until the entire Mekong River below Yunnan has been turned into a navigation channel for the largest ocean-going cargo vessels that can be accommodated. For decades China's strategy to carry out its designs on the Mekong River has involved silence and secrecy. China built Manwan Dam (1986 – 1993) in a remote area without consulting any of the downstream countries. China still has not joined the Mekong River Commission (MRC), and did not make any effort to keep MRC informed of her Mekong projects until very late. (Roberts, 2001:154)

Speaking at a press conference in March 2010, an official from China's Bangkok embassy responded to the outcry by repeating the usual refrain that "outflow from China into the Mekong only accounts for 13.5% of the volume at the river mouth". He pointed out that the surface area of the reservoirs behind China's three dams on the river – at Manwan, Dachaoshan and Jinghong – is very small and results in negligible evaporation, while hydropower generation does not actually consume any water and therefore has virtually no impact on the river. (Chinadialogue, 2010: online)

Notwithstanding, the Chinese authorities are certainly aware of criticism of their policies and they have allowed discussions relating to the dams, including their negative aspects, to take place in China itself. Additionally, China allows at least one

NGO with a highly critical view of the dams to function in Kunming, the capital of Yunnan province. Nothing suggests, however, that criticism leveled at the Mekong dams has led to a revision of the government's policies. (Osborne, 2004: 16)

4.4.2 MRC Secretariat's Response

The MRC also shares the claims by the Chinese government on natural causes saying climate change lead to flood and drought in recent years. It expressed that the potential function of the four existing mainstream dams in Yunnan on quantity and discharge was irrelevant, or they did not have the ability to alter natural flood and drought condition.

A recent example of misguided criticism of the MRC Secretariat took place following the heavy flooding in Laos and northern Thailand in August 2008. Responding to suggestions from NGOs that the reason for the floods was unreported releases of water from Chinese dams, the MRC put out a press statement on 15 August, denying this was the case and stating that the flooding was due to extraordinarily heavy rains over Laos and northern Thailand. This statement was first criticized by NGOs as an improper defence of China, and then later held up as an example of how, contrary to the Secretariat's claim to be divorced from taking political positions, it was in fact doing exactly that. (Osborne, 2009: 48)

The Mekong River Commission (MRC), said in a statement that the high water levels were the result of above average rainfall and not the result of upstream Chinese dams opening sluice gates. The situation was compounded by tropical storm Kammuri, which hit the region between August 8 and 10, the statement said. The MRC also noted that just half of the flood waters in Vientiane originated in China with the rest from Mekong tributaries, namely the Nam Ou and Nam Khan rivers. It concluded, "The current water levels are entirely the result of the meteorological and hydrological conditions and were not caused by water release from presently operating Chinese dams which have storage areas far too small to affect the flood hydrology of the Mekong," the statement said. (JapanFocus.org, 2002-2010: online)

The higher-than-usual flood levels that occurred in the Mekong River in August 2008 triggered a rapid response from a coalition of local and international organizations that are typically opposed to mainstream dams. The Thai's People Network on Mekong, including the NGOs Foundation for Ecological Recovery and Living River Siam, were quick to assert that the serious flood conditions were, in part, as a result of operations of dams in China's Yunnan Province. Dams, they argued, were a cause of flooding, not a source of protection, as has been frequently claimed. (Molle et al., 2009: 295)

Nevertheless, the Mekong River Commission was quick to defend China, stating that there was no evidence that dam operations had any impact upon the severity of the flood. The print media in the region closely followed the debates, continuing to give substantial space to dam critics. Many other related articles appeared in the media in the following days, reporting on the perceptions of people along the banks about river-level change and its likely causes, as well as the performance of early warning systems. By 1 September 2008, the MRC had followed up with a detailed situational report backing its initial claims of no significant effect of dams in China on flood situations. (Ibid.)

From the Mekong River Commission (MRC) Summit at Hua Hin in April 2010, in Lower Mekong countries, many view the drop in water levels as a result of the construction of hydropower stations upstream in China. But Chinese vice foreign minister Song Tao refuted the claims, saying that drought, and not China's dams, is to blame for the low levels. Song said drought in southwestern China has left about 18 million people and 11 million animals with insufficient drinking water, and has affected 4.3 million hectares (10.6 million acres) of crops. Chinese officials also contend that China's four completed dams are small and that their water storage capacity is not significant enough to affect the flow of water downstream on the Mekong, though they have offered to share more data with their southern neighbors. Activists and environmentalists say China has not provided relevant data to assess the impact of the dams on water flows. But Song said China has provided rainy season data since 2003 and dry-season data from two hydrological stations since March in

response to requests from four downstream countries through the intergovernmental Mekong River Commission. (UNHCR, 2010: online)

The MRC remains largely ineffective in resolving conflicts arising from transboundary impacts of developments in the basin, as exemplified by the case of downstream impacts of dams on the Lancang-Mekong in China. The MRC has not been able or willing to respond to concerns by dam-affected communities or civil society groups. It seems that the MRC considers itself only accountable to its member states and not the people of the Mekong basin. Meanwhile, the MRC member states have all but abandoned the Agreement as they push forward with plans to dam the Mekong and its tributaries, with little regard for the environment and communities that depend on the basin's abundant resources for their livelihoods. (FER, 2010: online)

Moreover, TERRA organization comments that the Mekong River Commission (MRC), established with the signing of the 1995 Mekong Agreement by the four Lower Mekong Basin countries - Thailand, Laos, Cambodia and Vietnam, was meant to signal a new era of cooperation and a commitment to sustainable development, environmental protection and management of the Mekong River for a wide range of users. However, there is little indication that the MRC has moved any closer to becoming an "international river basin organization" capable of protecting the river from severe ecological damage or responding to the diverse needs and interests of people in the basin. (FER, 2010: online)

4.4.3 Thai Authority's Response

From the MRC's response on the flood in 2008, it also was supported by Thailand's Prime Minister Samak Sundaravej and the Thai Water Resources Department, which oversees Mekong water flows and Lao government officials also said Chinese dams are not at fault. Heavy rains had lashed Myanmar and Vietnam - lending credence to the nation's views - resulting in severe flooding that killed at least 130 in northern Vietnam and forced thousands from their homes in both countries. (JapanFocus.org, 2002-2010: online)

Additionally, the Thai Deputy Interior Minister Prasong Kositanond said that officials were studying the floods and that China may be asked to provide future warnings on the timings and volumes of water released by the dams. He noted that without the cooperation of China, Thailand's northeastern regions could face more severe flooding. Even the MRC in Thailand, in contradiction to the statement from the organization's headquarters, has said it will ask the Thai Foreign Ministry for help in requesting more information from China about its dams. (Ibid)

On the other hand, Chiang Rai provincial authority sent a letter to the China's Yunnan province's governor in February 2010, demanding China release water to alleviate the water shortage in the lower Mekong region. However, the Yunnan governor sent a reply saying he could not release the water to the lower part of the river because he needed to reserve water for agriculture during the dry season.

Nevertheless, Thai authorities always claim that the drought and floods have nothing to do with the dams. In 2010, the Water Resources Department said the drought was brought on by a lack of rainfall and high temperatures, and was not expected to end until the rainy season begins in May. China's dams were not a major cause of problems along the river, and the unusual low river levels were instead caused by a drought brought about by global warming.

4.5 Conclusion

Dam constructions on the upper Mekong River rise environmental awareness to downstream countries including Thailand. However, the downstream governments are still not able to confront China, even if there are solid reasons for an assessment that the dams will have negative environmental impacts. Moreover, the governments in the region have not adopted the environmental awareness and measures essential to prevent the ecosystem as their economic development. For Thailand, many provinces along the Mekong River are facing with impacts of Mekong dams and these make many NGOs and community organization have to take action as well as call for attention for the government and Chinese government, in order to solve the problems.

Over the past decade, public concern about extensive plans for large hydropower dams throughout the Mekong region has been growing. Since early 2006, these concerns reached new heights when the plans for eleven large dams on the lower Mekong mainstream were revived. Potentially-affected riverside communities, civil society groups, academics, journalists, businesses, and the general public within the Mekong region and internationally have all raised their concerns. In November 2007, 201 individuals and organizations co-signed a campaign letter to the inter-governmental Mekong River Commission, and in November 2008, 300 people joined the Mekong Public Forum in Bangkok about the Mekong mainstream dams, raising concerns about the threats that they pose. Continued efforts by civil society groups over the past two years to ensure disclosure of information on the impacts of the dam from major actors, such as the Mekong River Commission (MRC), have received limited response. (Save the Mekong, 2010: online)

On the other hand, the actions of advocacy groups in civil society can be a significant driver of decision-making processes. Many civil society organizations in Thailand have been closely monitoring the current critical situations in the Mekong River working together with the aim of indicating the impacts from China's dam constructions. As Mekong dam constructions are considered to be an environmental issue, more interests focus in participation in the management of the environment. Public opinion, public participation, the civil society, and NGOs are also important in the water resource management and development.

Civil society networks have also made some effort to go beyond national boundaries and to tackle regional governance problems. One of their advantages is that they are often less intimidated by dominant actors or beholden to prevailing options and agendas. Thai-based and international organizations, however, still dominate many of these initiatives. There are also limitations in terms of continuity of effort as such cooperation is often not strongly institutionalized. Even so, the contributions of non-state actors and the networks that they drive and support are becoming an emergent feature of water governance in the Mekong region. (Molle et al., 2009: 405)

Until today many of the decision-makers in some riparian countries have not been aware of the project's impacts on their own population. Although there are those who are aware, none of the riparian governments dare to neither criticize nor raise questions against China. Neither do they take any action to make the project more responsible and comply with the law concerning environmental and social aspects. In case of Thailand, the lack of information disclosure and lack of participatory decision-making process violates the 1997 Thailand Constitution, which underscores people's rights to information, community rights, and rights to participation in development projects. (Living River Siam, 2010: online)

In addition to the harmful and adverse impacts that local people are experiencing, they have had little knowledge and input of the dam project that has affected their lives. Throughout project implementation, communities depending on the Mekong have not been informed about development in the river. They are only witnesses to the immense changes, bearing the brunt of the impacts. At the decision-making level most of the responsible Thai authorities, especially those from environmental agencies had little information on China's scheme. In many cases officials have no idea of the plans and impacts upstream. (Ibid.)

The easiest and most accountable way for China to build trust with downstream communities and demonstrate that its dams are not compounding the impacts of the drought would be to invite representatives of civil society as observers to the inspection trip to Jinghong and to extend the trip to all four Lancang dam projects. Disclosure all data regarding rainfall, river and reservoir water levels and dam operation since the mid-1980s when dam construction started and regular public reporting on dam operation and water levels would further build trust with downstream neighbors. This should lead to negotiation with downstream countries over reparation for the project's existing impacts and restitution to minimize future impacts. (FER, 2010: online)

It is a critical lesson showing that the sustainable water management must be a cross borders practice. Every country must honestly and friendly discuss and create a plan to take care of Mekong River together at both national and local policies. The

peoples along the Mekong must be able to participate in every process of policymaking decision, and must benefit from the project as well. If the governments and the peoples in the Mekong region did not learn from the past and try to live together peacefully: or do live without respect the nature and each other, the upstream and downstream people will continue being and facing the together. (Nopparat, 2010: 47)

For making better decision through people in involvement in large-scale development projects, the voice of the people should be heard as they are also “stakeholders” of the impacts from dam construction. People should have played a part in decision-making and problem-solving, and they should be involved and received information of the situation. With an increasing awareness and information via the media, websites and other sources, and also by a network of NGOs and local community organizations, civil society participation in the Mekong dam issues is more open. Considering the social and environmental costs from the negative impacts, the local interests and safety should be given importance.



ศูนย์วิทยทรัพยากร
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CHAPTER V

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The rapid economic growth and the subsequent drive to exploit water resources for irrigation, hydropower, and navigation, threaten to alter the natural flood-ebb cycle of the Mekong. While factors such as deforestation, changing land use patterns, and increased chemical pollution of waterway also affect water flow and quantity, the hydrological impacts following the construction of large-scale dams and reservoirs tend to be more immediate and apparent, through a direct regulation of water flows. In particular, the capture and release of water from dam reservoirs for power generation and irrigation influence downstream water flows and levels. For example, the in-filling period of the reservoir generally corresponds with a reduction in downstream flows, whilst water releases for power generation can cause severe and abrupt fluctuations in river flow and volume. (Towards Ecological Recovery and Regional Alliance (TERRA), 2005: 13)

The livelihoods of communities along the river including Chiang Saen and Chiang Khong districts are mainly dependent on the Mekong River for agriculture, fisheries, and transportation. As a result of ecosystem and natural resources of the river have been threatened, this has caused inevitable consequences on the livelihood of people. Therefore, this makes many NGOs and local community organizations worried about negative impacts and then leading to action against the Chinese hydropower development projects.

This study has two objectives: 1) to investigate social impacts caused by Chinese dams on Chiang Saen and Chiang Khong district, Chiang Rai Province, and 2) to study social networks and movements of Thai NGOs in dealing with the social problems caused by Chinese dams. The study has fulfilled the two objectives as follows:

5.1.1 China's Hydropower Development Projects and Social Impact on Chiang Saen and Chiang Khong

Downstream people are worrying about the impacts from Chinese dams in the Upper Mekong River, and currently numbers of impacts have occurred affecting to communities along the river. Chiang Saen and Chiang Khong as affected areas, are experiencing with some changes, which lead to economic, environment and social impacts. Because this study focuses on social impacts, several social impacts have been discussed and pointed out by different groups of people. As Chiang Saen and Chiang Khong districts are dependent on the Mekong River for many aspects, they have both comparable and different impacts.

In Chiang Saen, the spread of Chinese influence on the area from economic development, commercial trade, and navigation channel improvement project, has brought transformations in long-established local communities in Chiang Saen town. This also contributes to changes in local economies and livelihood because Chiang Saen is now more dependent on commercial trade with China and tourism. This ancient town is becoming a busy port town while local businesses are taking places by Chinese merchants and local fisheries are disappearing.

At Chiang Khong, because of the regulation of Chinese dams controls the river's flow which has affected the river's ecosystem and fish production, the livelihood of communities has been changed as well as there is an increase in fear over unstable life and food security of locals. The erratic fluctuation from withhold and release water of Chinese dams has directly impacted on the nature of the river. Shifting livelihood, insecure food source, soil erosion, severe drought and flood are the impacts that Chiang Khong district has experienced.

The Chinese government has boosted its southern province of Yunnan by taking advantage of the Mekong River as source of energy and transportation. It seems that the economic advantages of the power generation and increasing trade are being evaluated more importantly than the potential socio-economic costs to the total condition of the river and local communities. Without awareness on the future effects

of such developments, in the long term, they could have negative consequences on fish stocks, riverine ecology, and livelihood of people. Concerns with environmental and social impacts are being addressed from people along the Mekong River, academics, and NGOs. The impacts from Chinese dam constructions should be considered as an international issue between the countries of the Mekong region.

The hydropower development projects usually faced with some problems of project profits and the spreading of its profits to local communities that directly and indirectly affected by the project development. An increasingly desperate balancing act between economic growth and environmental protection has been necessary for this issue. In addition, the severe impacts from dam constructions would be more intense when there were more dams building on the mainstream of the river, and it would inevitably bring changes in the total river system. As for now there are four hydropower dams on the mainstream of the Mekong River which are all located in China, China still continues working on building several more dams over the next eight years. Consequently, the future of the Mekong River will be insecure and uncertain.

5.1.2 Civil Society and Mekong Dam Issues

Social movements and civil society groups have actively studied and worked on impacts from Chinese dams in the Mekong River as they realize that the impacts have affected the riverbank communities as a whole. As Thailand has the most effectively involved groups and networks in the Mekong basin countries, they have taken actions and done some activities in responding to the impacts and China. Their actions and activities come out in form of criticisms and giving information of the impacts of dam projects, and also finding out the solution of the problems.

Meanwhile, the social network helps promoting social movement and the sharing of information among NGOs and local communities. They have raised their concerns through their works, researches, and activities. With their concerns and awareness on environment, livelihood, and energy, they have progressively played a very active role in examining the existing impacts. In Thailand, there are cases of civil

society groups taking part in monitoring and opposing China's hydropower development projects such the Chiang Khong Conservation Group, Thailand People's Network for the Mekong, and Save the Mekong Coalition.

Hydropower is one of the most controversial issues in the area of power development. Although there are apparent concerns over environmental and social effects of development, the social and environmental damages are often depreciated during the design and planning stage. As the effects from the dams have implications for social stability at the local, national, and regional levels, more cooperation and network between different levels are needed to be made. From what local community organizations and NGOs do, can make many people realize the impacts and increase awareness of environmental protection on the Mekong River.

The future of the Mekong River and the livelihoods of people along the river will continue to preserve the balance at the same time as civil society concerns strive to make the case for an alternative future. Civil society groups try to raise public awareness of the environmental impact of water infrastructure projects and recommend the policymakers allow public participation. They also emphasize on networks and the media because they can cover the issues. Public involvement in hydropower development is and will continue to be a critical process to ensure that the opinions and concerns of people affected by projects are heard.

Local communities are considered stakeholders of the hydropower development projects of China in the Mekong River; therefore, they should have played a part in decision making of the projects although they have had little understanding and information of the dam constructions that have affected their lives. Nevertheless, some decision-makers in riparian countries have not been aware of the impacts from the Chinese dams on their own people. Due to the transparency of data providing from China and the ineffectiveness of the MRC, many civil society groups recommend negotiation and cooperation within downstream countries to diminish the impacts as well as sustainable water management should be considered in further development. The controversy over dams raises the issues of good governance in the region, and significant improvements need to be made in hydropower governance.

5.2 Recommendations

5.2.1 Recommendation to Thai Authority

- The government should find another alternative ways in generating electric such as “Demand Side Management” or “Energy Demand Management”, building turbines, or renewable generated energy.
- Thai authorities should take serious actions and help solve the problem for the people or give more interest in this issue by listening to the affected people and accepting information from NGOs.
- There should be more systematic attempts to do research and collect information that will help to affirm the impacts of Chinese hydropower development projects.

5.2.2 Recommendation to Chinese Authority

- China should be full membership of the Mekong Commission.
- China’s government should have transparency in releasing information of its dam constructions.
- They should study and survey on the potential effects of its hydropower development projects before building more dams by making environmental impact assessment, conducted by professional and neutral bodies.
- They should negotiate its downstream countries who are sharing the Mekong River and share information on causes and effects causing by dam constructions.
- Chinese government needs to take responsibility in dealing with the negative impacts which are actually direct caused by its dam projects and affect the local communities of lower parts of the river.

5.2.3 Recommendation to the countries of Mekong basin

- All riparian governments in the Mekong basin should revise their decision-making methods and policy concerning large-scale development projects by considering the seven strategic recommendations made by the World Commission on Dams.
- They need to consider the impacts as the international issue by analyzing the further consequences and raising awareness on ecological protection in every riparian country’s government.

- They should particularly accept recommendations concerning the utilization of international rivers for peace and the necessity to consult with downstream countries whose livelihoods depend on the river before any project implementation.
- They should co-operate closely on monitoring the impacts of development along the Mekong River and share information.

5.2.4 Recommendation to Mekong River Commission

- Water resources management of the Mekong River is necessarily needed along with sustainable development.
- The MRC should give more importance in regional cooperation of the Mekong countries and increase its engagement in China's hydropower development issues by building tight collaboration within the region in order to negotiate with China.
- It should negotiate and discuss with China on water-controlled system controlling over the Upper Mekong River.

5.2.5 Recommendation to Thai NGOs and local organizations

- Whether they are in Northern part or North-Eastern part of Thailand, they should cooperate with each other in the Mekong dam issues as well as coordinate with other international organizations in the Mekong sub-region countries.
- They should work together in order to tackle the issues and also give recommendations and potential solution to the government sector.
- In addressing the impacts, they need to build the network between locals and NGOs by co-operating with locals as well as studying and working with the affected people, and between NGOs and government by providing and sharing their information to the government sector.

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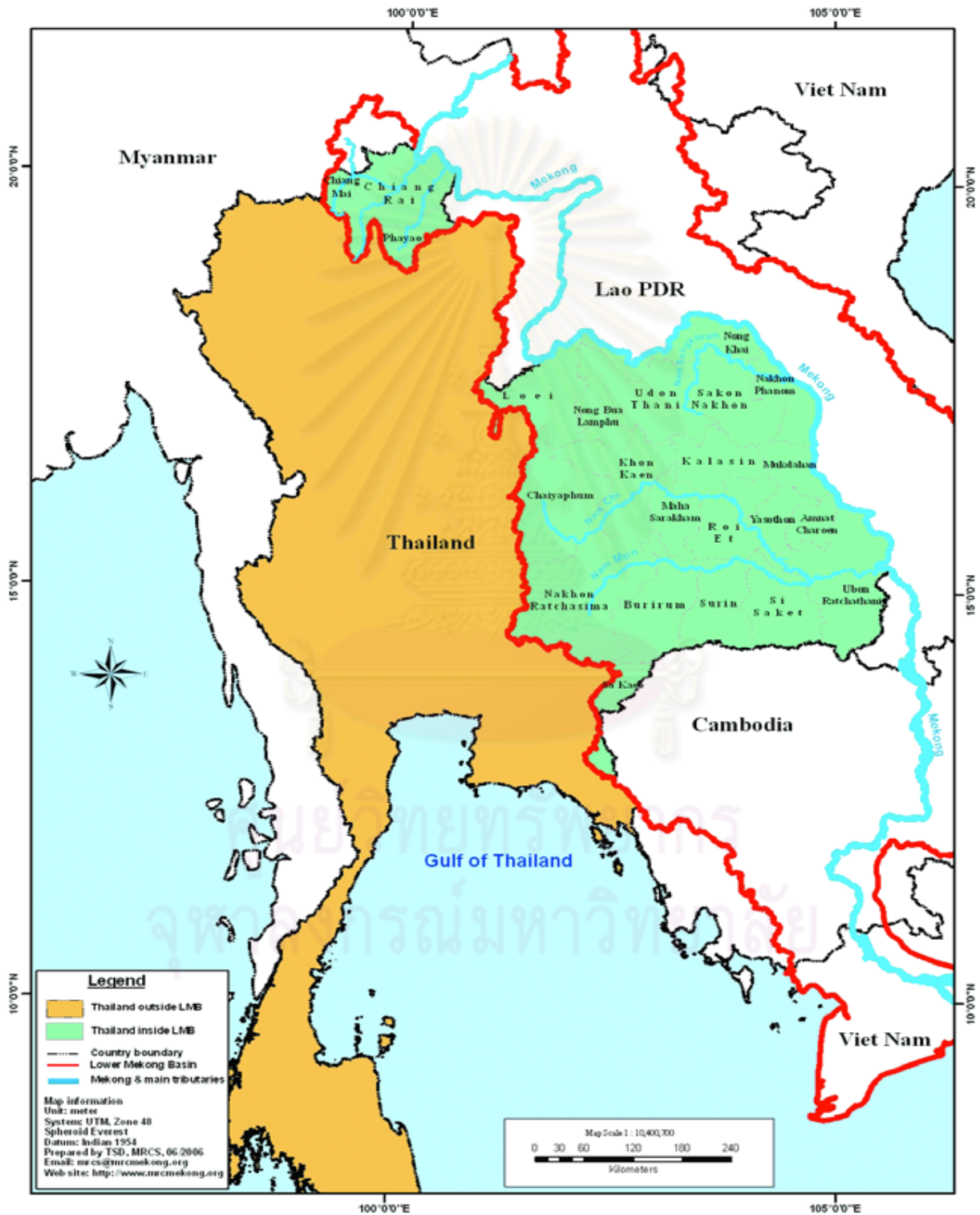


APPENDICES

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APPENDIX A

Map of Thailand showing the portion of the country and the provinces that lie within the Lower Mekong Basin



Map Source: Mekong River Commission, 2007.

APPENDIX B

Constructed questions:

1. Do you think what the impacts of Chinese dams on this area are? And what are the obvious impacts?
2. Do they have any social impacts? What are they?
3. Who are the affected people from Chinese dam constructions?
4. Do you have any problem management and solution on the impacts? Is there any alternative way for affected people?
5. How about the relationship between government sector and local community/ NGO, do you have a good relationship or have a problem with them? And the relationship between local people and local community/ NGO?
6. Do you have comment and suggestion on this issue?

Focus group questions:

1. What kind of business or living you have with the Mekong River?
2. Do you think Chinese dams have affected on your living and livelihood? How?
3. What do you think changes that Chinese dams have made?
4. Do you have any alternative ways after have been affected?
5. Is there any sector or organization come to realize your impacts?
6. Do you anything to tell the government sector about your problems?

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APPENDIX C.1



16 August 2008

Statement

Mekong flood, MRC's roles, dams in China, and a failed alarm system

The severe flood occurring to the Mekong River during the past week has been causing much suffering to people living along the River, all the way from the Chiang Saen and the Chiang Khong district in the Chiang Rai province, Thailand, down to the Vientiane municipality, Lao PDR, as well as to the Nongkhai and the Nakhonpanom province, Thailand. We, the Thai People's Network for Mekong, who have been closely monitoring the current critical situations in Mekong, would like to pose the following questions and requests to the Mekong River Commission (MRC), as a mechanism to help manage the Mekong River:

Contradicting roles played by MRC

Yesterday (15 August 2005), MRC released a statement regarding the massive flood currently occurring in Mekong and said in the statement that the "northern parts" of the Mekong basin had experienced above-average rainfalls, intensified and prolonged by a tropical storm "Kammuri" and that this had led to massively increased water runoffs in the northern river basin. MRC also pointed out that "in the case of the flood water that reached Vientiane, some 50% originated in China". MRC then made contradicting remarks in the end, saying, "The current water levels are entirely the result of the meteorological and hydrological conditions and were not caused by water released from presently operating Chinese dams which have storage volumes far too small to affect the flood hydrology of the Mekong".

MRC has not disclosed complete information, as its statement referred only to the flood that had reached Vientiane, some 50% of which had originated from China, according to the Commission. MRC has avoided providing information on the severe flood happening to Chiang Saen and its link to the water flown from China, conceivably attributable to natural rainfalls as well as the water released from the 3 dams.

The total storage capacity of 3 Mekong mainstream dams in China is 3,043 million cubic meters. The Manwan dam has the storage capacity of 920 million cubic meters. The other two upstream dams in China, the Dachaoshan dam and the Jinghong dam, have the storage capacity of 890 million cubic meters and 1,233 million cubic meters, respectively.

Apart from having only given such incomplete information, MRC stated that there is an alarm system between a water level measuring station in Chiang Saen in Thailand and a station in Jinghong, where a dam closest to Thailand is located. MRC claimed

that all the 18 stations along the Mekong River work together and exchange information with each other. “The time it takes the water to travel from these stations is as follows. Jinghong to Chiang Saen 21 hours; Chiang Saen to Luang Prabang 17 hours; and Luang Prabang to Vientiane/Nong Khai 24 hours. This enables short term flood forecasting which in turn allows the MRC to issue advance notice of extreme water levels to concerned agencies,” MRC described.

Spotting contradiction in MRC’s statement, we, Thai People’s Network for Mekong, stress that we disagree with MRC’s roles in finding excuses to protect China’s dams. Instead, we insist that MRC should examine the most updated information from China and should immediately alert the countries and communities located in the lower Mekong on potential severe floods. MRC must have been monitoring Mekong and have had all the information available on the water levels from all the stations along the River. MRC must have realized very well that the water from China would flood lower parts of Mekong. That MRC has never alerted people living in its member countries about the current flood through all the channels available to the Commission to prevent disasters is not acceptable. The only channel through which MRC has provided information to the public is its website. When the situations became serious, MRC released a statement only to protect China and itself.

The fallacy on dams and alarm systems in China

Since the beginning of its plan to build a series of Mekong mainstream dams until the completion of the first dam, Manwan, in 1996, China claimed that Chinese dams upstream would help provide more water to the Mekong River in the dry season, as well as prevent the flood during the rainy season. However, with the presently occurring flood, it has become clear that the water is coming mostly from the Mekong mainstream, not from tributaries in Thailand or Laos. This observation is in line with a news report in “Shanghai Daily” on 13 August, which wrote that Yunnan was experiencing a monsoon and that the monsoon caused the death of 40 people and affected more than 1,250,000 people living in 11 towns. As a matter of fact, since the Manwan dam was completed, the water level in the Mekong mainstream has never decreased during the wet season. Instead, the water keeps increasing, when compared with that prior to the dam construction.

We believe that the water in China has significant impact on the water flow and the hydrology of the lower Mekong, especially in the Chiang Rai province, Thailand. Nevertheless, cooperation and a flood alarm system among MRC, China, and the lower Mekong countries have completely failed to protect people living along the Mekong River.

We request that MRC should disclose all the relevant information on the current situations in China. MRC must disclose information on how much water from China has affected the lower Mekong, as well as in which parts. We request that MRC should disclose information on the water levels measured at the Manwan, Dachaoshan, and Jinghong dam sites. We believe that only transparent processes can prevent disastrous floods in the lower Mekong. If it is indeed the case that China has installed an effective alarm system and/or established good working relationships with MRC, MRC should prove this to the public in the lower Mekong countries.

We believe that MRC's statement has shown that MRC is trying to avoid pointing out a very key issue, that is, Chinese dams' roles in the severe flood currently occurring to the lower Mekong countries. MRC's assertion that Chinese dams have storage volumes far too small to affect the Mekong hydrology is shameful, as it misses an issue central to the present disaster and suffering faced by people living in the lower Mekong countries, whom MRC is supposed to serve.

Thai People's Network for Mekong

Foundation for Ecological Recovery

Living RiverSiam

Chiang Khong Conservation Group

Loei Foundation

Tam Mun Project

Pak Mun Dam Affected People's Network



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APPENDIX C.2

Third Complaint to the Chinese Government

**“Stop Mekong Mainstream Dams: Let the Mekong River Flow Freely”
3rd April 2010**

Statement to the Government of China

For over a decade, your Government’s development plan for the upper Mekong River (Lancang Jiang) has had many impacts on the people who live downstream along the river. Specifically 4 dams, the Manwan (1996), Dachaoshan (2003), Jinghong (2008), and Xiaowan (started storing water and the first turbine’s operation in September 2009) caused the largest flood disaster in the past 40 years in August of 2008. The cost of this flood on Chiang Saen District, Chiang Khong District and Wiang Kaen District, Chiang Rai Province, Thailand was initially calculated at around 85 million baht. Furthermore, these dams have spurred a drought crisis on the mainstream Mekong River in 2010, such that even the assumption that “*dams assist to prevent dry rivers in dry season and control flooding*” is not true anymore. Actually “*Dams can’t control flooding and dams cause rivers to become dry.*” It is these dams that have caused the water level to rise and fall rapidly and abnormally both during the flood and dry seasons. The dams have caused huge impacts on ecosystems, natural resources, food security, cultures, social well-being, local economies, trade and tourism in the lower Mekong countries.

Furthermore, the Mekong River Rapids Blasting Project for commercial boat navigation (2001 and suspended in 2004) is another example of a project that threatens the lower Mekong riparian villagers. We, the Mekong-Lanna Natural Resource and Cultural Conservation Network sent a complaint your project’s field-staff on 24th April 2004. We then sent a second complaint about your dams’ impacts after the huge flood crisis in August 2009 on 25-27 April 2010 on the occasion of the *Pak Lak Serm Din Pong Karn Taling Pang Rimfang Khong* (placing poles to stabilize the riverbank against erosion) event in Pak Ing Tai Village by sending a letter to your consulate in Chiang Mai Province.

However, on your part, we have seen no response, nor any action taken recognizing your responsibility to the people downstream who depend on the same shared river. We have been waiting for your answer in our community downstream but have not received a response. We can wait no longer and so come here to deliver a third complaint to you, the Chinese Government, here at the Republic of China Embassy in Bangkok, Thailand today, the 3rd April 2010.

All of us who live downstream have suffered the disaster caused by your dam development project, whilst the electricity generated by these dams is sent to China’s Eastern Industrial Area and the profit gained by Huaneng Company. This is a huge company that received a permit from the Chinese government to build and manage the dams that now control the natural resources of the upper Mekong River.

This demonstrates that the Chinese Government is willing to seize a common property resource shared by all the people who live along the Mekong River and allot it for the benefit of a few people. This human invention in the form of a series of huge dams on the

upper Mekong River exemplifies China's recent *Open-Socialist Economic System*. This economic system ignores the people, farmers, peasants and labors of China. It also ignores those of us living in the downstream countries who still drink the same water of the same shared river, even though it is known by a different name. It is clear that the Chinese Government, who are the children and grandchildren of President Mao and the Chinese Communist Party, are betraying an important founding principle, namely "Respect to the People".

Climate change is a consequence of human activity. Dams such as those on the upper Mekong River contribute to the vulnerabilities caused by climate change by destroying the natural ecosystem and balance of the earth, both upstream and downstream of the dams.

The headwaters of the Yang Si Jiang, Mekong River and Salween River all originate in the Himalaya region of Tibet. Why then is the Salween River flowing naturally, whilst the Mekong River is suffering a drought that has now become a crisis, even though they start from the same point? Is it because there are no dams on Salween River?

Finally, we raise our concern over a potentially devastating consequence of building dams on the upper Mekong River in China, which may cause the end of Mekong civilization itself. The large amount of water stored in the reservoirs of Dachaoshan, Manwan and Xiaowan is located on a powerful fault-line called the "Dragon's Teeth Fault", which is the boundary between the Yunnan Plate and the Tai Shan Plate. If there is an earthquake, like the earthquake in Sichuan Province in 2009 that caused the death of 68,000 people, it could also destroy one of these dams. Our fear here is that the massive amount of water unleashed from one dam will flow rapidly downstream breaking the dams downstream in a domino effect. Wouldn't you agree that the Mekong river communities are gravely at risk from this threat?

We – the Thai Peoples Network for the Mekong, Environmental NGOs, Social Activists, Students, Academics, Artists, Writers and Civil Society Organizations have come together to deliver to you this important package that includes a list of our demands that are:

1. The Chinese Government must stop building all dams on the upper Mekong River's mainstream.
2. The Chinese Government must stop pursuing the Mekong River Rapids Blasting Project.
3. The Chinese Government must release data that details their operation of the upper Mekong dams and the past records of the river conditions before the dams were built.
4. The Chinese government is urged to ratify the 'UN Convention on the Law of the Non-navigational Uses of International Watercourses' and to encourage other Mekong countries to also ratify it. This would ensure that the future utilization of the river's resources guarantees the sustainability of the ecosystem and shares the benefits in a just way
5. The Chinese government must cooperate with other Mekong governments to establish a joint committee, in which people affected by dams and blasting projects from each country are represented, to study and seek ways to manage the river in a just and sustainable way

6. The commission's mission is also to revise the management of the four completed dams on the upper Mekong River and to seek approaches on managing their reservoirs without causing impacts to the downstream communities. The commission should also assess damage from the implemented projects and explore ways for the Chinese Government to compensate in the form of a fund to restore the ecology, culture, economy and society of the downstream communities.

“Stop the Mekong Mainstream Dams: Let the Mekong River Flow Freely”

Respect Nature and Human Equality

Thai Peoples' Network for the Mekong (Thailand);
 Mekong-Lanna Natural Resources and Cultural Conservation Network;
 Chiang Kong Conservation Group (Thailand);
 Eco-Culture Study Group / Isan Human Rights and Peace Information Center (Thailand);
 Hug Nam Khong (Thailand)
 Towards Ecological Recovery and Regional Alliance (TERRA) (Thailand) ;
 Mekong Energy and Ecology Network (MEE Net) (Thailand);
 Living River Siam (SEARIN) (Thailand)

Statement to the Thai Government and the MRC

“Let the Mekong River Flow Freely”

3 April 2010

The mother nature of the Mekong River that feeds more than 60 million people is being threatened by plans to build large-scale hydropower dams. Over the years, the Thai government, the Electricity Generating Authority of Thailand (EGAT) and dam developers have tried to justify these plans through Thailand's growing power demand that is concentrated in the cities and industrial development. They have not taken into account these projects' environmental costs and the costs to the livelihoods of the people who have depended on the Mekong River their entire life.

The Mekong River Commission (MRC) has claimed the benefits of China's dams to be increased water flow in the dry season and flood prevention in the wet season. But, the severe flood in August 2008 and the unprecedented drought this year, which are unnatural phenomena, debunk this claim. These dams in fact create transboundary economic, environmental and social damage and threaten the livelihoods of the riparian communities.

We – the people affected by the dams, environmentalists, social activists, students, academics, artists, Civil Society Organizations, gather together as Thai Peoples' Network for the Mekong to launch this statement to voice our concerns to the Thai government and the Mekong River Commission as follows:

1. The Thai government and the MRC must revise their stance towards the Chinese government regarding dam building on the upper Mekong River, to protect the people's interests
2. The Thai government and the MRC must cooperate with other Mekong governments to urge the Chinese government to review their operation of the upper Mekong dams and to release the past records of the river conditions before the dams were built
3. The Thai government and the MRC must cooperate with other Mekong governments as well as the Chinese government to establish a joint committee, in which people affected by dams and blasting projects from each country are represented, to study and seek ways to manage the river in a just and sustainable way
4. The Thai government is urged to ratify the 'UN Convention on the Law of the Non-navigational Uses of International Watercourses' and the MRC must encourage other Mekong countries to also ratify it. This would ensure that the future utilization of the river's resources guarantees the sustainability of the ecosystem and shares the benefits in a just way
5. The Thai government and the MRC is urged to listen to the voice of the people of the Mekong River who are demanding cancellation of dam building projects on the river's mainstream and its tributaries. The Thai government must stop buying electricity from neighboring countries, and revise its power development plans taking into consideration social and environmental impacts. The Thai government must not take advantage of the current drought to justify pushing ahead with more dams. Democratic process must be followed that guarantees access to information and the full participation to the people.

“Let the Mekong River Flow Freely”

Respect Nature and Human Equality

Thai Peoples' Network for the Mekong; Mekong-Lanna Natural Resources and Cultural Conservation Network; Chiang Kong Conservation Group ; Eco-Culture Study Group / Isan Human Rights and Peace Information Center; Hug Nam Khong ; Towards Ecological Recovery and Regional Alliance (TERRA); Mekong Energy and Ecology Network (MEE Net) ; Living River Siam (SEARIN)

APPENDIX C.3



Forum Report: April 1st, 2010
Public Forum on Sharing the Mekong

[Bangkok, Thailand] On 1st April 2010, 190 representatives from civil society, academia, media, and government agencies met for the ‘Public Forum on Sharing the Mekong Basin’ at Chulalongkorn University, Bangkok. The meeting debated recent development trends in the Mekong basin and the role played by the Mekong River Commission (MRC), the impacts and causes of the current drought, plans for dams on the Mekong River’s lower mainstream, and visions for the future of the river.

A representative of the MRC started the public forum presenting about the MRC’s Basin Development Plan (BDP). Outlining the BDP process, the MRC identified the need for participation, transparency and consensus-building, and discussed some of the challenges in bringing together different viewpoints, including time and resource limitations. Civil society representatives questioned the governments’ and the MRC’s continued support for hydropower dams. They observed that the MRC has failed to take account of well-established flaws in Thailand’s power planning process and emerging shortcomings in Vietnam’s process used to justify dam projects that consistently overestimate power demand and don’t prioritize modern renewable electricity generation technologies and energy efficiency measures.

Millions of people in Yunnan Province of China, Eastern Shan State of Burma, North and Northeastern Thailand and Northern Lao are suffering from the present severe drought. Representatives from the Chinese embassy told the forum that the low water levels in the Mekong River were caused by low rainfall, not the operation of China’s dams on the Lancang (Upper Mekong) River. The MRC said that their analysis suggested the same. Whilst welcoming China’s increased sharing of information, civil society representatives challenged China to release to the public all relevant data sets including the water levels in the Xiaowan dam’s reservoir and historical data since dam construction started. Furthermore, they added that the downstream impacts in Northern Thailand and Laos caused by China’s dam construction to date should be recognized and compensated for, and negotiations take place on how to minimize future downstream impacts.

Civil society groups raised concerns about plans to build eleven dams on the Mekong River’s lower mainstream, highlighting the threats that the dams represented to livelihoods and food security. MRC representatives described their Strategic Environmental Assessment (SEA) study now underway intended to assess the impacts and benefits of the dams, and outlined the Procedures for Notification, Prior Consultation and Agreement process. Civil society representatives questioned the

ability of the MRC to shape decisions on mainstream hydropower dams, given that a Memorandum of Understanding for tariff negotiations was recently approved by Thailand's National Energy Policy Committee for the proposed Xayabouri Dam in Laos, despite the fact that neither an environmental impact assessment nor the MRC's SEA study has been completed.

The public forum also heard from community and civil society representatives about the existing value of the Mekong River and its natural resources, and their vision for the future. They urged for future dam construction to be halted and the Mekong River to be protected. In considering the future of the Mekong River, they urged for the region's leaders to listen to the voice of local people.

Closing the public forum, Professor Vitit from the Faculty of Law of Chulalongkorn University summarized the meetings discussion and offered a number of recommendations:

- Invite China and Burma to be full members of the MRC and parties to the 1995 Mekong agreement, and to implement fully the agreement on the basis of benefit sharing and equity
- Invite an enlarging of space for stakeholders' participation, especially riparianization, transparency, and management by the people at large.
- Underline that prevention is better than cure. We need to appreciate the total ecosystem affect due to dams. Invite countries to sign up to the UN Convention on the Law of the Non-navigational Uses of International Watercourses, and hold a respect for ecology and equity.
- Emphasize better quality baseline monitoring and impact assessment, with public participation. Access to and sharing of data relevant to the Mekong's waters.
- Invite all to explore alternatives to big dams, in particular clean energy through other forms of electricity generation including smaller-scale projects. There should be participation and sustainable development.

About the Public Forum

The 'Public Forum on Sharing the Mekong River' brought together 190 participants consisting of civil society organizations, academia, government and donor officials, and MRC representatives from all Mekong countries, and international organizations. The public forum was hosted by the Mekong Studies Center, Institute of Asian Studies, Chulalongkorn University, the Center for Peace and Conflict Studies, Chulalongkorn University, and the Master of Arts in International Development Studies (MAIDS) Programme, Faculty of Political Sciences, Chulalongkorn University.

The public forum was co-organized by Towards Ecological Recovery and Regional Alliance (TERRA) (Thailand), the Vietnam Rivers Network (Vietnam), Mekong Energy and Ecology Network (MEE Net) (Thailand), the Thai Peoples' Network for the Mekong (Thailand), the Chiang Kong Conservation Group (Thailand), the Eco-Culture Study Group / Isan Human Rights and Peace Information Center (Thailand), the Living River Siam (SEARIN) (Thailand), Hug Nam Khong (Thailand), the Save

the Mekong Coalition, Mekong Watch (Japan), International Rivers (US) and Service Center for Development Cooperation (KEPA) (Finland).

APPENDIX C.4



Statement: 14 March 2010

Drought brings severe hardship to riverside communities, demonstrates need for regional cooperation to protect Mekong River

Saturday, March 14, is the International Day of Action for Rivers. As the Mekong suffers its worst drought in decades, painfully demonstrating the importance of the river to the region's people, and revived plans to build dams on the mainstream threaten the river's ecology and resources, this is a day to reflect upon the life-giving benefits that rivers provide, and to take action to protect the Mekong river for present and future generations.

Severe Drought

The Mekong River is facing an increasingly severe drought that holds serious implications for river-side communities and the wider population of the Mekong region. To date, the people of Yunnan Province of China, Lahu State of Burma, North and Northeastern Thailand and Northern Lao have especially suffered. Fish catch has declined, water for irrigated agriculture, livestock and drinking water has become scarce, and river transportation has been grounded, affecting trade and tourism.

The loss of fisheries, crops, livestock, and drinking water has struck the livelihoods, food security and economies of some of the region's poorest communities. In the context of the ongoing global economic crisis, these communities have few alternative means to see through this disaster.

There is a high likelihood of far wider impacts throughout the Mekong basin, as the river is usually at its lowest in April and May. In Cambodia, the drought threatens the massive fisheries productivity of the Tonle Sap Lake, where the total fish catch each year is proportional to the extent of flooding, and is central to Cambodia's food security and economy. In the Mekong delta in Vietnam, where over 10 million farmers and fishers live, salt water intrusion threatens the farming and fisheries and has been reported in some places to have already extended nearly 60 km in land, which is double the usual extent.

Mekong River Commission: Negligence

The Mekong River Commission (MRC) issued a statement on the drought on 26 February 2010, over two weeks after the media began reporting the severity of the situation. The statement attributes the exceptionally low Mekong River levels to a

“drier than normal” wet season in 2009 combined with “a consistent pattern of monthly precipitation significantly below average amounts since September 2009” in Yunnan Province China, Northern Thailand and Northern Laos.

Given these apparently clear indicators foreshadowing the severity of the drought, available since at least September 2009, and that the MRC Secretariat is charged with monitoring this data, the MRC Secretariat’s failure to warn the public and instigate precautionary actions amounts to a serious negligence on its part.

This situation mirrors the earlier failure of the MRC Secretariat in August 2008 to warn with sufficient notice communities in Northern Thailand and Northern Laos whose livelihoods were devastated by the flooding. This failure was widely criticized by communities and NGOs at the time, and the recurrent situation indicates serious systemic incompetence within the MRC.

The Save the Mekong coalition remains disappointed over the MRC Secretariat’s poor record on transparency, access to data and belated action, now for the drought conditions as well as on the proposed Mekong mainstream dams, and calls for a public review of the MRC Secretariat’s performance.

China’s dams

The MRC has sought to exonerate China’s dams on the Mekong River’s upper mainstream (Lancang) for the severity of the drought in its reports and through the media. The MRC has taken this position despite the fact that neither China nor the MRC have publicly released data supporting this position. China began filling the reservoir of the Xiaowan Dam - the world’s highest arch dam and the fourth on the Lancang – in October 2009. This timing, and the subsequent drop in downstream flows, coincides with the MRC’s identified onset of the drought.

It is not surprising that communities in downstream countries are suspicious of the Lancang dams contribution to the current drought. Since the early 1990s, changes to the Mekong River’s daily hydrology and sediment load have already been linked to the operation of the Lancang dam cascade by academics. As a result, communities in Northern Thailand, Burma and Laos downstream have suffered loss of fish and aquatic plant resources impacting local economies and livelihoods. These dams in China have been built without consultation, apology, disclosure of data, compensation or restitution, all of which are now long overdue.

The first turbine of the Manwan dam – the first dam built on the Lancang - came online in 1992, coinciding with the 1992-1993 Mekong drought. Construction of the second Lancang dam was completed in October 2003, coinciding with the 2003-2004 drought. Construction of the third dam, Jinghong, was completed in late 2008. The Xiaowan Dam, presently filling its reservoir, has a reservoir capacity approximately five times larger than that of the combined storage of these three earlier dams.

The role that these dams played in earlier droughts has never been clarified or communicated; instead the facts have often been muddled. The Thai National Mekong Committee, for example, in a report this year on the drought identified the Manwan

Dam to start operation in 1994, rather than 1992, thus masking the potential implications of the dam during the 1992-3 drought.

The extreme suffering of the drought-stricken farmers in Yunnan province, China, is shared by fishers and farmers in Thailand and Laos. The Save the Mekong Coalition therefore makes a direct appeal to the Chinese Government to equitably share the remaining water resources between countries to alleviate to the extent possible the suffering of all river-dependent communities.

On 10 March 2010, the Bangkok Post reported that Chinese officials have invited the lower Mekong governments to visit the Jinghong dam to inspect the water levels. In addition, the Chinese Embassy in Bangkok held a press conference on March 11 to state their position on the situation. The Save the Mekong Coalition welcomes these gestures of increasing transparency and disclosure.

The easiest and most accountable way for China to build trust with downstream communities and demonstrate that its dams are not compounding the impacts of the drought would be to invite representatives of civil society as observers to the inspection trip to Jinghong and to extend the trip to all four Lancang dam projects. Disclosure all data regarding rainfall, river and reservoir water levels and dam operation since the mid-1980s when dam construction started and regular public reporting on dam operation and water levels would further build trust with downstream neighbors. This should lead to negotiation with downstream countries over reparation for the project's existing impacts and restitution to minimize future impacts.

Mekong Mainstream Dams: Threat to Ecosystems, Livelihoods and Food Security

In addition to plans for up to fifteen dams on the Lancang (upper Mekong) mainstream in China, the Mekong River is threatened by plans for eleven hydropower dams on the river's lower mainstream in Cambodia, Laos and Thailand which, if built, would have severe consequences on a regional scale. By blocking massive fish migrations building these dams would place at risk the millions of people who depend upon the Mekong for their income, livelihood and food security. Experience around the world demonstrates that there is no way of mitigating such large dams' impacts on fisheries.

The Save the Mekong Coalition has consistently called for all actors to protect the Mekong River for present and future generations. We emphasize the importance of the river for the food security of millions of people throughout the region. Conveying this message, in October 2009, a 23,110 signature petition was sent to the Prime Ministers of Cambodia, Lao, Thailand and Vietnam. The petition was also sent to the chairpersons of the National Mekong Committees (NMCs) of Lao PDR, Thailand, Cambodia and Vietnam calling for a strong and trusted consultative process at the national and local level on development options for the Mekong river, which guarantees the participation of all riparian communities.

The present severe drought and the extreme floods of 2008 testify to the dynamic nature of the river, but also to its seasonable variation and the need for far more cautious approach to human intervention in the River's future. More dams are not the solution to a warming world. The Save the Mekong Coalition is very concerned about recent announcements by the Thai government that has sought to justify dam construction, including Ban Koum and Pak Chom mainstream dams, to fix the drought. Building dams on the Lancang-Mekong River's mainstream will further undermine the Mekong River's resilience. The Save the Mekong Coalition calls for a better approach that sustainably meets energy needs whilst at the same time protecting the region's rivers.

Urgent Regional Cooperative Action Needed

The severe drought highlights once again the importance of the river and its resources to all riparian communities that live along it, as well as the wider Mekong basin population.

Cooperation under the MRC has failed to ensure a coordinated and preemptive response to the drought. Under these exceptional circumstances it is critical that the Mekong region's governments, including China, proactively work together to share information and forge a cooperative response to work with riverside communities along the entire length of the river to minimize the droughts economic, social and environmental costs.

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

BIOGRAPHY

Apiya Wittayanukorn was born in Bangkok, Thailand in 1982. She graduated from Mahidol University International College, Thailand with Bachelor's Degree in Social Science, Southeast Asian Studies Concentration in 2007. She has worked as a sale coordinator at Chumporn Plam Oil Industry Public Company Limited for two years. In 2009, she enrolled in the Master program in Southeast Asian Studies at Chulalongkorn University, Thailand.



ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย