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WHERE ARE THE FARMERS?

ASSESSING ENVIRONMENTAL JUSTICE IN COLLABORATIVE WATERSHED MANAGEMENT IN THE UPPER-MOST PART OF THE MAE CHEAM WATERSHED

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Abstract

Taking environmental procedural justice as a standard of assessment, this thesis sought to examine to what extent participation of all affected communities was achieved in the context of collaborative watershed management (CWM) in the upper-most part of the Mea Cheam watershed, Northern Thailand. Based on political ecology theory and discourse analysis method, the thesis first examines what characteristics framed watershed discourse in the study site. Secondly, it examines how civil society organizations (CSOs) as representatives of public opinion, responded to other actors attached to watershed discourse.

The first set of findings indicates that the watershed discourse in the study site was framed by three major characteristics: 1) environmental narrative that forest regulates flow; 2) development narrative that alternative agriculture contributes to income generation and 3) identity narrative of ethnic minorities as hilltribes. Second set of findings indicates that the way watershed discourse was framed had high influence on the way CSOs responded to other actors. Finally, participation was achieved but it was not socially just. Therefore, in order for CWM to become socially just, the weaknesses in representational democracy, blurred distinction between science and political dynamics and institutional problem of "fit" of CWM need to be considered.

Keywords: Discourse Analysis, Political Ecology, Highlands, Northern Thailand, Civil Society Organizations, Watershed, Ethnic Minorities

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Foreword

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Abbreviations

AMC	Aae Mujakhee Council
BAAC	Bank of Agriculture and Cooperatives
CSD	Commission on Sustainable Development
CODI	Community Organization Development Institute
CWM	Collaborative Watershed Management
FIO	Forest Industry Organization
ICRAF	International Research Centre on Agroforestry
IMPECT	Inter Mountain Education and Culture in Thailand Association
IWRM	Integrated Water Resource Management
MoNRE	Ministry of Natural Resource Management
PASED	Pgkajo Association for Social and Environmental Development
RCSD	Regional Centre for Social Science and Sustainable Development
RFD	Royal Forestry Department
RID	Royal Irrigation Department
RTG	Royal Thai Government
UNCED	United Nations Conference on Environment and Development

"There is a considerable power in a structured way of seeing."
(Hajer 1997:57)

1. Introduction

1.1. Global structural change in natural resource management

Some of the discourses surrounding global environmental change are the debates around "global" problems such as deforestation, desertification, soil erosion, freshwater availability, biodiversity loss and climate change, among others. In a highly publicized article by Rockstrom *et al.* (2009), it is argued that humans have entered into a new geological era, the Anthroposcene, where anthropogenic factors are identified to be the major drivers of global environmental change and if the human-induced pressures on earth sub-systems continue in the same pace, it would trigger abrupt or irreversible environmental change with catastrophic consequences upon human well-being. From the first international conference on global environmental change held in Stockholm in 1972, through the 1992 Earth Summit and Agenda 21[1] and until highly anticipated Rio+20 conference on sustainable development to be held on the 20th of June 2012, great emphasis is placed on how to address global environmental problems that are increasing becoming complex: multi-scalar and cross-sectoral involving multiple actors beyond the state such as private sector, civil society, expertise networks in problem identification and decision making for transitions to sustainability.

Accordingly, it is identified that global environmental change requires fundamental reorientation and reconstruction of national and international institutions including both public and private actors with particular emphasis on strengthening the consultative rights for civil society representatives as a mean to ensure accountability, transparency and legitimacy of policy making (Bierman *et al.* 2012). Since environmental governance has become less centric and is no longer confined to nation states, it includes a wide range of entities, networks and bodies, such as private sector, networks of experts, environmentalists, multinational

[1] Agenda 21 is a UN plan of action related to sustainable development formulated in 1992 during the UN conference on Environment and Development (UNCED) or the Earth Summit as alternatively called. It was adopted by 178 governments and subsequently the Commission on Sustainable Development (CSD) was set as a UN body to ensure the implementation, monitoring and reporting of the agreements as stipulated in the agenda at the international, regional, national and local level (UNSD 1992).

corporations, intergovernmental agencies, NGOs, civil movements, etc., which play an increasingly significant role in decision making and implementation of policy priorities (Bernauer and Betzold 2012, Bierman and Pattberg 2008, Trenz 2007).

1.2. Integrated Water Recourses Management paradigm

After a brief presentation of the emerging global structural change in natural resource management, this sub-heading will focus on the structural change that emerged in water governance. It is estimated that from 5% to possibly 25% of global freshwater use exceeds accessible supply (MEA 2005: 42). Major changes identified to influence and pressure freshwater availability in the global context are interrelated processes of population growth, economic growth, increased demand for food, feed and energy, demands for agriculture and increased climate variability (UNESCO 2012, UNDP 2006). Moreover, as agriculture was identified to be a main water user (UNESCO 2012:18), where between 15 to 35% of water used for irrigation exceeds supplies rates (MEA 2005: 42), the inter-linkages between freshwater availability and land use management played a significant role in enhancing the governance of water resources (UNESCO 2012: 139, GWP 2003: 8, UNSD 1992: Article 18.21).

However, as the protection of the quality and supply of freshwater resources was highly emphasized in Agenda 21 (UNSD 1992: Chapter 18) coupled with the findings that the root of water scarcity could be traced more to poverty, inequality, unequal power relations, poor and flawed water management policies and institutional arrangements than to the absolute shortages of physical water supply (UNDP 2006: 2), IWRM (Integrated Water Resource Management) emerged as a new structural paradigm on water resource management aiming to incorporate all the complexities associated with sustainable water management. IWRM approach promotes “the coordinated development and management of water, land, and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems” (GWP 2003: 8). Moreover, IWRM recognizes the interdependencies and interrelation of multiple components of a water system, such as inter-linkages between water and land use, and considers dialogues among multiple water users and trade-offs among different water uses in other to preserve critical ecosystems (UNESCO 2012: 138). Accordingly, the role of ecosystem protection, and especially the role of forest ecosystems of the mountainous regions, and stakeholders’ negotiations was emphasized as a key vehicle for successful IWRM that can be enhanced

through establishment of new institutions that integrate different scale of water management through stakeholders participation and negotiation over decision making (GWP 2003: 45).

However, in Chapter 13 of Agenda 21 it is emphasised that watersheds in the mountain regions are experiencing rapid change such as soil erosion, landslides and biodiversity loss and moreover are home to one of the most poor people in the world, it called for promoting integrated watershed development projects and strengthening knowledge about sustainable development of mountain regions (UNSD 1992: Chapter 13). Accordingly, after Agenda 21 and subsequent Johannesburg Plan of Action (JPoA) called for the nation states to commit to sustainable natural resource management, sustainable agriculture and livelihoods, the participatory, integrated watershed management projects emerged as a major development paradigm incorporating multipurpose objectives. Moreover, after Agenda 21 asked the governments to provide U.S. $13 billion for integrated watershed management projects between 1993 and 2000 (UNCED 1992 cited in Rhoades 2000: 329), dozens of integrated watershed projects emerged at national, international and bilateral levels from small NGOs to the World Bank. For the overview of the most relevant integrated watershed projects, refer to Appendix 1.

1.3. Collaborative watershed management paradigm

Integrated watershed management emerged directly from Agenda 21 aiming to link poverty and watershed management through focusing on those aspects of livelihoods that are directly linked to natural resources, such as for example strengthening the capacity of local people to manage agricultural land in a way that promote environmental stability, food and water security (FAO 2006: 42), promote conservation-based opportunities for income generation such as eco-tourism, organic farming, handicrafts or strengthen local capacities to manage forest, land and water (FAO 2006: 46). Since a paradigm on collaborative watershed management emerged as a promising institutional shift in managing multiple aspects of interrelated natural resources, such as land and water, and contribute to poverty elevation, this sub-section will focus on providing a overview of the rationale behind the role of watershed as a main engine for securing freshwater availability and the enhanced role of public participation in successful collaborative watershed management.

1.3.1. The role of watershed

The role of ecosystems in relation to freshwater availability is said to have particular implication for sustainable water management as ecosystems can be proactively managed, through for example their conservation or rehabilitation, in order to allow them to continue to regulate freshwater and sustain freshwater availability (UNESCO 2012: 27, MEA 2005: 42). The role of forest ecosystems in mountain regions in relation to freshwater availability is particularly emphasised as if appropriately managed they can deliver clean water, regulate floods and restore soil functionality (UNESCO 2012: 28), conserve biodiversity and soil, and contribute to poverty reduction (MEA 2005). Agenda 21 placed particular emphasis on managing mountain ecosystems in its Chapter 13 entitled *Managing Fragile Ecosystems: Sustainable Mountain Development* where mountain ecosystems are described as an important source of water, energy and biodiversity (ibid.). Therefore, the role of forest ecosystem in providing watershed services was highly emphasized and the paradigm shift on observing mountain ecosystems as watersheds emerged.

Watershed is defined as a delineated area drained by a common river system with a well-defined topographic boundary, whose characterising output is water and which comprises a complex of soils, landforms, vegetation cover, and land uses (Garrity and Agus 2000: 168, Lal 2000:4). By studying interactions in the hydrological system, the watershed unit encompasses cross-ecosystem linkages, including upstream and downstream dynamics where the characteristics of flow at the lower end of watershed integrate the effects of upstream changes as they have affected the hydrology of the watershed (Shaxson 2000: 348, Rhoades 2000: 331). Therefore, watersheds are considered to play a critical role in IWRM as a basic hydrological unit within a river basin since the way they are managed has a cascading effect on the hydrological cycle and services for the communities in the wider basin (Bach *et al.* 2011:16).

1.3.2. Public participation

Beside the value of ecosystem services for securing freshwater availability, one of the promising responses that would enhance freshwater service is to increase the effectiveness of public participation and combine top-down and bottom-up approach in decision making of watershed management through multi-stakeholders collaboration (MEA 2005: 126). In Article 18 concerned with freshwater availability particular emphasis is placed on introduction of public participatory techniques, including enhancement of the role of women, youth,

indigenous people and local communities (UNSD 1992: Chapter 18.19). Accordingly, big support to public participation, improving representation of marginalized stakeholders and providing space for stakeholders negotiations and deliberation over water resource management was set as an imperative (UNESCO 2012, Bach *et al.* 2011:11, MEA 2005: 126).

Therefore, beside participation of communities in watershed management, the role of other actors and their collaboration and participation in watershed management is characterized as equally important. For example, various organizations like NGOs, user groups, local administrations and various associations were emphasized to have a mediating role between the public and the watershed programmes (FAO 2006: 49). It is argued that through administrative decentralization there are higher opportunities for collaborative watershed management programmes to be successful providing the capacity of local governments and civil society organizations is enhanced as they are the ones directly linked to local decision making (ibid.). Finally, it is argued that in order to bridge the gap between the science and practical expertise, action research should be implemented addressing watershed management in the context of local views and social institutions related to watershed management that would be compared with relevant scientific knowledge and policy (FAO 2006: 54). Therefore paradigm shift to collaborative watershed management refers to "participation in natural resource management that is pluralist and based on mutual learning, exchange and negotiation among actors with diverse interests and concerns, including technical experts and policy-makers" (FAO 2006: 49).

1.4. Background of the research

After presenting the paradigm shift in water resource management focusing on collaborative watershed management and its main characteristics at international level, this sub-section will first briefly present the evolving forest resource management policies at the national level in the highlands of Northern Thailand and subsequently focus on collaborative watershed management project implemented in the upper-most part of the Mae Cheam watershed that served as a study site.

1.4.1. The context of collaborative watershed management in Thailand

Since the establishment of the Royal Forestry Department (RFD) in 1896 the expansion of logging operations into the highlands of Northern Thailand by the British concession companies took place (Delang 2005:226, Hayami 1997: 561, Renard 1997: 659). Logging intensive manufacturing expended dramatically after the mid of the last century when the private Thai companies replaced the British concession markets for export purposes (Delang 2005:230) and the official government statistics estimate that the total forest cover in Thailand declined from 53, 3 percent of the total land area in 1961 to 25 percent in 1999 (Lakanavichian 2001). Moreover, before international community put a pressure on Thailand to sign a United Nation international treaty on elimination of illicit poppy cultivation in 1959, opium production had been a significant source of national income for the Thai state where the production sites were established in the highlands of Northern Thailand due to its suitable cool climate (Delang 2005: 231).

During this period it is the ethnic minorities and particularly Hmong and Lisu who were encouraged to grow opium since the high mountains above 1000m where they lived were the most suitable for growing opium. Highlands of Northern Thailand are inhabited by various ethnic groups such as Karen, Hmong, Lisu, Laha and Ahka where access to land and to timber and non-timber products is important source of their livelihoods (Lebel 2005: 533). However, during the last 30 years as a consequence of political unrest in neighbouring countries of Burma, Southern China and Lao many of ethnic minorities migrated from these neighbouring countries to the highlands of Northern Thailand and many of them still don't have citizenship cards (ibid.). Due to these reasons public services are very poor and in some cases non-existent in the higher elevation zones (ibid.).

Moreover, after the halt of opium production, the Thai government encouraged projects to find crops that would substitute opium and the biggest opium substitution programme was implemented by the Thai king's foundation when a number of the Royal Development projects emerged in the highlands. The increase in so called cash crop production and its commercialization in the highlands of Northern Thailand were fuelled by the increase in a demand for temperate agricultural products in the lowlands and by the economic incentives provided by the government through setting the Bank of Agriculture and Co-operatives (BAAC) in 1966 (Delang 2005: 231). Moreover, with the increased production and promotion

of cash crops in the highlands area, additional pressured on land occurred, the water demand for irrigation during the dry season increased and increased use of chemical fertilizers for growing cash crops was seen as particularly problematic (ibid.).

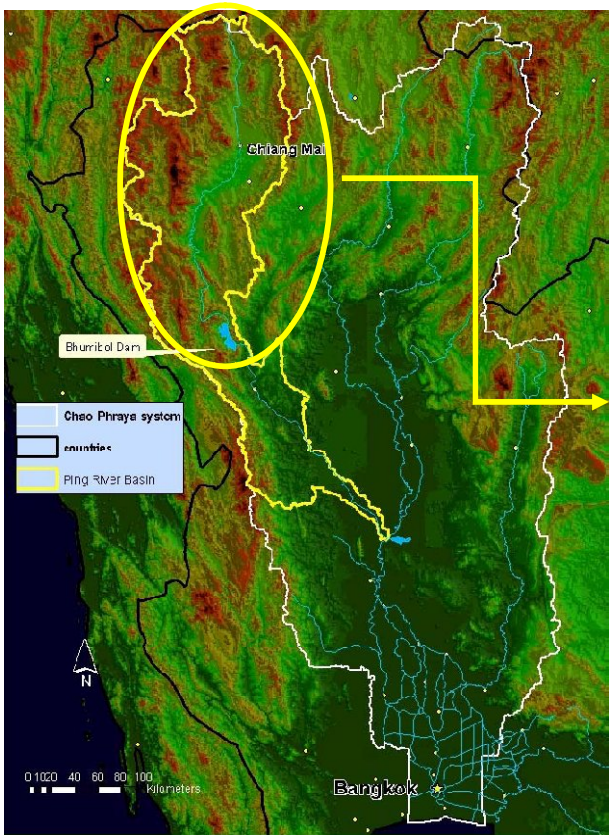
However, unexpected and devastating mudslides of 1988 put higher pressure on the government to revoke all logging licences, evoke logging ban, and reforest 40% of all land area out of which 25% to be established as conservation zones and protected areas and 15% as production forest in the highlands of Northern Thailand (CIFOR 2010:4). Beginning in the 1970s large national parks began to be declared in various parts of northern Thailand, forest watershed management units were established at various locations, state forest plantations began to be planted into areas of ethnic minorities' settlements, the promotion of organic farming and off farm activities occurred (Thomas *et al.* 2008). In 1982 the Office on the National Environment Board (ONE B) was commissioned to carry out the study on watershed classification throughout the whole country (Krairapanond and Atkinson 1998: 491). The project was finalized in 1995 and the whole territory of Thailand was classified into six watershed categories where categories 1 and 2 were officially characterized as „critical" or „protected" and all activities in these watershed like cutting trees or farming are prohibited (Surasawadi *et al.* 2005: 364). However, although only 25% of the country is classified into the class 1 and 2, compared to other regions of Thailand the percentage of watershed area under the category 1 and 2 doubles in the region of Northern Thailand and increases to 90% of all the area in the Mae Cheam watershed which is a major tributary of the Ping River (Thomas *et al.* 2004: 17). For the watershed classification in Thailand, please refer to Appendix 2. Accordingly, since many of the ethnic minorities were found to be living in these watershed areas, they became a problem to the government and subsequently many relocation projects of the homes of ethnic minorities occurred (UNHCHR 2005:7).

However, with the constitutional reform that occurred in 1997, popularly called the People's constitution, the great focus was placed on empowering and democratization of sub-district administrative unit (TAO) that were upgraded and given higher role in problem formulation and decision making (Badenoch 2006: 44). Moreover, with adoption of 1997 People's constitution political and administrative reform enabled space for local communities to participate in many aspects of political decision making which resulted in the rise of civil society organizations such as community organizations, non-governmental organizations and different networks (Badenoch 2006). Accordingly, many international and national projects

emerged in the highlands of Northern Thailand focusing on different issues such as the right of ethnic minorities to land, community forestry, and participatory projects on natural resource management and particularly participatory and integrated watershed management projects that aimed to integrate local livelihoods of the highland ethnic minorities as part of the watershed areas. The subsequent sub-section will present the case study where the collaborative participatory watershed management was implemented.

1.4.2. The study site: Upper-most part of Mea Cheam watershed, Northern Thailand

Galyani Vadhana is the newest 25th district of Chiang Mai province and the 878th in the country situated in the most northern part of the Upper Part of Mae Chaem watershed and was originally the most northern part of the Mae Chaem district, Chiang Mai province. Mae Chaem river sub-basin is a major upper tributary of the Ping River basin which in turn is the largest upper tributary of the central Thailand's Chao Phraya River (Thomas 2005: 2-3). The Chao Phraya River covers about 30 percent of Thailand land area, is home to about 40 percent of population and is said to employ more than three-fourths of its work force, and generate two-thirds of Thailand's GDP (ibid.). The fertile central plain area in Thailand, often known as the "rice bowl" of Thai agricultural production, has the most important and biggest economical and political power due to its high agricultural productivity, important centres of power in the Siamese Kingdom, and is a hub for a megacity of Bangkok and growing industrialization (ibid.).



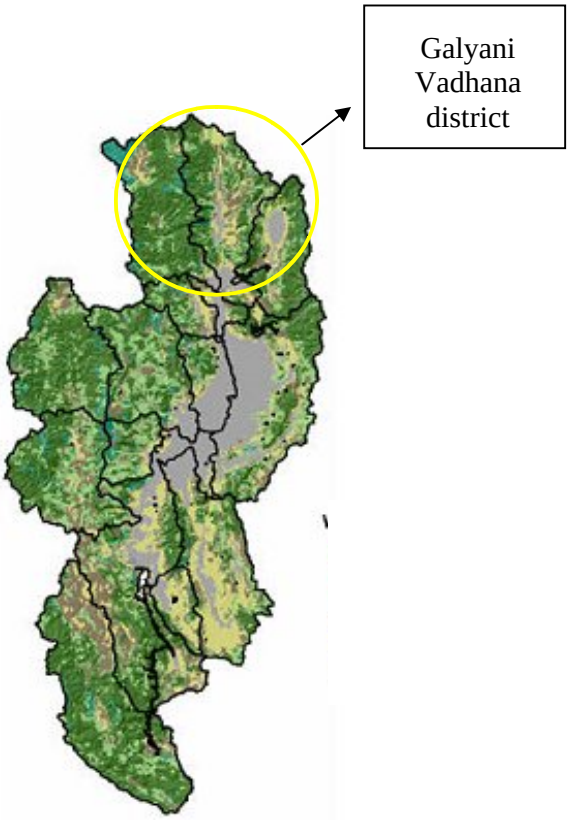


Figure 1: Ping river basin in the Chao Phraya River (Thomas 2005: 3) [Modified with a circle and an arrow]

Figure 2: Mae Cheam Watershed (Thomas *et al.* 2008: 33) [Modified with a circle]

Galyani Vadhanna district comprises of three sub-districts Ban Chan, Cham Luang and Mae Det and lies between 800 and 2000 m.a.s.l. where 80% of the area is considered as highland region (PAO 2011). It is a mountainous region covered with the pine tree forest of nearly 60 000 acre which makes it the largest natural pine forest in Thailand (Sitthikriengkrai 2012: 3) and is entirely inhabited by ethnic minorities where Karen are the majority with 17 villages living in mid-elevation zones, Hmong with two and Lisu with one village living in high-elevation zones, which makes the whole district unique when compared to other districts in Northern Thailand that are inhabited by both lowland ethnic Thai and highland ethnic minorities. They have extended their villages and migrated into the area of Galyani Vadhana several hundred years ago from adjacent areas of Samoeng and Mea Cheam district as well as from adjacent districts from Mae Hon Son province (Sitthikriengkrai 2012: 3). The mosaic of different land uses comprise of paddy rice fields in the valleys of the mountains and close to

the villages, decreasing but still prevalent rotational agriculture[2], cash crops like strawberry in the higher alleviation zones, maize and corn on the steep of the mountains, and home gardens with temperate cash crops like cabbage, pumpkin, onion and similar.

Figure 3: Paddy fields

Figure 4: Strawberry fields

However, as the whole Galyani Vadhana district is located in the forest reserve and officially classified as a watershed class 1, all land use activities in the watershed area are officially restricted by law (PAO 2011). Accordingly, all land in the area of the district belongs to the state and villagers don't have official land rights, but only land titling deeds which means that they can be evicted or restricted to have right to agricultural land at any point (TAO2, AMC 1). Moreover, big concern was raised related to illegal cutting of the trees and the so called slash-and-burn practices of the villagers for clearing land for agriculture and particularly for corn and maize (PAO 1, PAO 2). Accordingly, it is identified that the whole area is highly susceptible to landslides due to unsustainable use of land (Direct observation 3).

Figure 5: Typical mosaic of different land use types (shifting cultivations, strawberry fields, paddy rice)

[2] Rotational agriculture is considered as a sustainable way of managing land and forest resources which is based on keeping the land to fallow for certain period of years before it grows back again (PART 1).

Accordingly, funded by the Thai Environment Fund, the project on Collaborative Management of the Mae Cheam Watershed was implemented in the period of three years starting in 2009 and it is expected to be finalized in September 2012 where the P'gkajo Association for Social and Environmental Development served as a mediator between the communities and other stakeholders (PASED 2012). The purpose of the project is to rehabilitate watersheds and solve the problem of deforestation and unsustainable forest management such as illegal logging and slash and burn practices through collaboration with local institutions, public and private institutions, different NGOs and academic community (PAO 2012). Moreover, great emphasis is placed on promoting watershed restoration activities that are based on P'gkajo indigenous ecological knowledge such as fire break, check dams, ritual forests, indigenous ecological knowledge transfer from the elderly to the younger generations (PASED 2012, PAO 2012). Other activities were exchange of scientific and traditional knowledge on watershed management, participatory land use mapping and finally awareness rising of His Majesty King Bhumibol Adulyadej philosophy of the Sufficiency Economy[3] and installation of 84 check dams and organization of the tree ordination ceremony in order to pay tribute to the King's 84th birthday (ibid.). The output of the project is a CD where activities related to collaborative watershed management can be accessed by various stakeholders, while the outcome is to restore watersheds through promoting sustainable watershed management that would enhance sustainable livelihoods of the villagers thus showing that people and nature can co-exist together (PASED 2012).

1.5. Research problem

About 10 percent of the Earth's population live in the high elevation slopes of the mountainous regions, while about 40 percent inhabit mid and lower zones of watersheds (UNSD 1992: Chapter 13). In Asia alone about 65 percent of the region's rural population of 1.6 billion lives in these watersheds (Garrity and Agus 2000: 168). As argued these people are the ultimate managers of these invaluable ecosystems and without their participation in problem framing and subsequent decision making, sustainable watershed management cannot be achieved (FAO 2006: 49). Accordingly, participation has become a popular development

[3] Sufficiency economy and New Theory that were initiated in 1992 are ideologies developed by His Majesty King and in the context of rural livelihoods and agriculture they promote a particular lifestyle that is based on self-reliance and balance in production-consumption system. Moreover, it provided a model of land and water management for the farmers where land is divided into four parts where 30 % of the land should be allocated for pond and fish culture, 30 % for rice, 30% for growing fruit and the remaining 10% for housing and raising animals (UNDP unknown).

approach where through combining two perspectives of watershed and participation, two academic concerns of both social and natural scientists has been solved and their "marriage" opened space for everyone (Shaxon 2000: 332). Moreover, participation has become integrated into spheres such as community forestry, joint forest management, participatory natural resource management, integrated conservation management and so on (Shaxon 2000: 334). But what participation really means and how it is achieved?

As Lebel *et al.* (2008: 141) argue "upper tributary watersheds in mountain areas have a special position, being upstream of virtually everyone else with power", and in the context complexities that emerged with multiple stakeholders such as SCOs, academic communities, private and public sector involved in problem framing and decision making, the issues of power imbalances and embedded interest cannot be overlooked. The questions that kept rising while I was thinking about this structural shift are who has the power to decide what the problem is and subsequently decide what actors are found to be "appropriate" to negotiate over decision making, who is left out and why? These questions became particularly important in the context where the role of civil society organizations as representatives of public opinion and mediators between the government and the people serve as an engine for increasing public participation. Yet, there has been little research on examining how different social groups or organizations may shape particular issue (Forsyth 2005a). Accordingly, the purpose and research questions will be presented in the next sub-section.

1.6. Purpose and research questions

Considering a new paradigm on multi stakeholders' negotiations and public participation in decision making related to watershed management, it is important to consider to what extent public participation in the upper-most part of the Mae Cheam watershed, Northern Thailand has been achieved and if not why.

Accordingly, this thesis has a normative characteristic in so that the environmental procedural justice will serve as a standard for assessing a degree of public participation in problem formulation and decision making related to watershed management in Northern Thailand. Although there are many different definitions of environmental procedural justice, adapted from the work of Rachtschanaffen (2003: 96) it is defined here as a fair decision making process that can only be achieved if all affected communities are able to participate effectively in problem framing and decision-making process.

Accordingly, the main research question is:

1. To what extent is environmental procedural justice in collaborative watershed management in the upper-most part of Mae Cheam watershed, Northern Thailand achieved, and if not, why?

In order to answer the main research question, the following sub-questions will be examined:

2. What are the major characteristics framing watershed discourse in the upper-most part of the Mea Cheam watershed, Northern Thailand?

3. How do the civil society organizations as representatives of public opinion, respond to other actors attached to watershed discourse in the upper-most part of the Mae Cheam watershed, Northern Thailand?

1.7. Demarcation of the study

Considering the purpose of the research, the study has the characteristics of the evaluation where the main criteria for the evaluation is the participation of all affected communities in the context of collaborative watershed management implemented in the upper-most part of the Mae Cheam watershed, Northern Thailand in the period between 2009 and September 2012. Since collaborative watershed management incorporates multiple aspects as presented earlier, the focus of the thesis is on the participation of all affected communities in the project.

1.8. Methods in brief

The study site is located in the upper-most part of the Mea Cheam Watershed, Northern Thailand where collaborative watershed management project was implemented in 2009 and is expected to end in September 2012. Accordingly, the research used an embedded case study as a method of inquiry where unit of analysis is considered to be the interaction between the CSOs and other actors attached to watershed discourse in the context of collaborative watershed management in the upper most part of the Mae Cheam watershed. This unit of analysis is considered as embedded in the broader unit which is considered as the characteristics that frame watershed discourse.

The research is based on multiple sources of data such as semi-structured interviews, direct and participant observations and documentation all conducted in the period between December 2011 and February 2012 with three study visits to the upper-most part of the Mea Cheam watershed, Northern Thailand.

The thesis is organized into seven chapters. Accordingly, the introduction chapter provided an overview of the structural change in water governance with particular focus on collaborative watershed management, the background of the research that introduced the specific context of collaborative watershed management in Thailand and the study site, and finally the research problem, purpose and research questions were presented. The second chapter presents a detailed research design, data collection methods, reliability/objectivity, reflexivity/limitations and ethical considerations. The third chapter provides inquiry into theoretical framework, while the fourth chapter presents the summary of the concepts that will be used as model of analysis. Subsequently, the analysis and results follow in the fifth chapter that is organized according to the sub-questions of the research. The sixed chapter presents the discussion of the findings in regard to research objective. Finally, the conclusion of the research is presented in the seventh chapter.

2. Methodology

2.1. Post-structuralist research paradigm

The focus of the inquiry is set under the relational ontology of post-sructuralist research paradigm as it gives more emphasis to alternative accounts of reality than the author's interpretations, agency and resistance rather than structural inequalities (Blaikie 1999:33). Under post-structuralism paradigm, many accounts of complex and in some cases contested realities emerge as some person's account of reality may offend or contradict the values and interests of other group or person's accounts of reality. Here discourses on different accounts of reality emerge. They should not only be considered as external realities that constrain people as some discourses may recognize particular knowledge or interests as valid, acceptable or relevant while discounting others (Dryzek and Niemeyer 2008:482). They should be also considered as enabling, since people actively engage in the production and transformation of these discourses through particular practices (Hajer 1995). All practices are considered as meaningful while social meanings are contextual and relational (Szarka 2004:318). Accordingly, a seamless overlap between 'discourse' and 'reality' transpires to be an illusion (ibid.). Post-structuralist research paradigm recognizes both the constitutive force of discourse, and of the actors' practices in formation and transformation of discourses (Herre and Davis 1990).

Finally, based on the work of Bruno Latour the assumption of nature with its own laws as only understandable to scientists can no longer be accepted since “different cultures of science, different paradigms, different and open conflicting claims, instrumentations and research protocols” have already been recognized (Latour 2011: 72). He pleads for facts and values, reality and multiple accounts of “reality”, science and politics, nature and humans should be seen as inseparable (Kenedy 2010: 84). Nature would then become an essentially negotiable concept that can be represented not only by scientists, but also by artists, architects, farmers and laymen (Hajer and Versteeg 2006: 178).

I used post-structuralist research paradigm in order to challenge positivist view of participation in the context of increasing role of civil society organizations as representatives of public opinion contributing to participation of communities in problem framing and decision making. Accordingly, the study takes a deductive approach.

2.2. Research design

2.2.1. An embedded case study method

Since the research questions focused on the social and political dynamics in the interactions between civil society organizations and other actors attached to watershed discourse in order to explore more socially just form of decision making defined as full participation of all affected communities, I have chosen to employ the case study method as it suits well for offering explanatory inquiry into the complexities of these relations that require multiple sources of evidence bounded by time and space (Yin 2003: 8, Creswell 1998: 64). The study was conducted in the period from January 2011 until March 2012 with three visits to the field site in the intervals of five days each when I visited both Karen and Hmong communities with exception of Lisu communities.

This case study involves multiple units of analysis where the main unit of analysis is the interaction between civil society organizations (CSOs) and other actors attached to watershed discourse in the upper most part of Mae Cheam watershed, Northern Thailand. However, this unit of analysis is considered as embedded into a bigger unit of analysis. This bigger unit of analysis are considered to be the characteristics that watershed discourse in the study site.

2.2.2. Discourse analysis method

In order to provide an operational definition of the units of analysis, I used social-interactive discourse theory developed by Hajer (1995). From the perspective of social-interactive discourse theory, vested interests or power structures cannot be taken as given a priory but are "constituted through discourse" themselves as actors are constantly involved in and hold a certain position in formation and transformation of the structure and dominance (Hajer 1995: 52-54). Hajer who saw a great contribution of discourse analysis to policy analysis defines discourse as „ a specific ensemble of notions, concepts, and categorizations that are produced, reproduced, and transformed in a particular set of practices through which meaning is given to physical and social realities" (Hajer 2009: 61). Since the social-interactive discourse theory has added another layer to exploring policy formulation by going beyond the analysis of usual conflicts of interests, it offers a way to study how subjects get involved in particular discourse production and transformation, reframe their interests, communicate arguments and finally change their interests and positions (Hajer 1995: 52-54).

Accordingly, discourse analysis method was used as analytical framework for analysing characteristics that frame watershed discourse and the way CSOs respond to other actors attached to watershed discourse through analyzing their practices, arguments and position in watershed discourse which will be explained more thoroughly in the model of analysis section.

2.2.3. Theoretical and purposeful sampling

Since the unit of analysis is not the CSOs per se but the interaction between them and other actors attached to watershed discourse, based on Hajer's model for explaining the interactive dynamics between different actors in problem formulation and decision making, I used the concept of discourse coalitions in order to distinguish what actors are attached to watershed discourse and subsequently form watershed discourse coalition (WDC)[4]. Hajer (1995: 66) argues that in the struggle for establishing dominant discourse, coalitions are formed among actors that, for various reasons are attracted to a specific (set of) narratives and therefore these narratives and not interests, or set of beliefs, are seen as a foundation that keeps a discourse coalition together. Discourse coalitions include all the actors that produce these narratives, such as scientists, activists, journals, and not just state officials (Hajer 1995: 67) and through

[4] From this point actors who are attached to watershed discourse will be referred to as watershed discourse coalitions (WDC)

these coalitions actors "not only try to make others see the problems according to their views, but also seek to position actors in a specific way' (Hajer 1995: 53). Accordingly, WDC are all the actors that are for various reasons attracted to and share the same understanding of the characteristics that frame watershed discourse.

Therefore, I sought the opportunity to diversify channels and interview as many members of the civil society organizations active in the field as possible, governmental officials at different levels dealing with watershed management, villagers and other relevant actors. Interviews were guided more towards the inquiry into the relations between SCOs and WDC by asking questions about their role and particular activities they conducted in the area, their agendas, how they work with other organizations or governmental officials, etc. However, it is important to emphasize that although members of different CSOs can be attached to watershed discourse as well, I decided to take the common assumption of what actors comprise CSOs and therefore I considered CSOs to be community-based organizations, NGOs, academics and organized networks.

Based on literature review and preliminary visit to the field site, I established six categories of respondents according to their role in relation to watershed management. They can be found in Table 1.

Category	**Major characteristics**	**Role in decision making process related to watershed management in the study site**
Provincial Administrative Organization (PAO)	After the Tambon Administrative Act of 1994 provincial government officials were given high responsibility in programme implementation and budgetary allocation.	They have high responsibility in implementation of watershed restoration and protection projects. Moreover they serve as a valuable information source of information for the central government and as a linkage between central and local government.
Tambon Administrative Organization (TAO)	After the Tambon Administrative Act of 1994 was declared, sub-district administrative units through local officials were upgraded with greater role and	Due to low capacity of TAO due to financial constraints, budgetary allocations for natural resource management are not a priority.

	responsibility in project implementations and budgetary allocations transferred from the central government.	
Community based organizations		
Aae Mujakee Council (AMC)	A community based organization established by the Karen villagers themselves in order to track transparency, accountability and participation of the projects implemented by the district officials.	They are valuable source of information about traditional knowledge on land and forest resource management and are mediators among local people and the NGOs working in the area.
Lisu Community Council (LCC)	Recently established, it is a Lisu community based organization with the aim of evaluating both negative and positive impacts of projects implemented in their communities.	They are not involved with watershed management directly, but they have deep knowledge on different agricultural practices in the highlands.
Non-governmental organizations		
P'gkajo Association for Social and Environmental Development (PASED)	Founded in 2009, PASED is a Thai NGO funded by the Thai Environment Institute which is primarily working on conflict mediation between the state authorities and communities in Mae Chaem watershed, revival of	Their projects are concerned with environmental knowledge transfer between the villagers and outsiders, youth and elders, revival of traditional knowledge on natural resource management and awareness rising on

	traditional knowledge, and awareness rising on HIV and drug addiction.	sustainable agriculture.
Rask Thai Foundation (RTF)	As a member of Care International, it has been working for over 20 years in the highlands of Northern Thailand mostly concerned with improving livelihoods and natural resource management in partnership with the RFD and TAO.	Their work is focused on implementation of collaborative natural resource management projects through institutional strengthening of community conservation groups, watershed management networks and TAO on natural resource management.
Foundation for Indigenous Wisdom (FIW)	Recently established NGO, they work on environmental awareness in the highlands of northern Thailand and revival of traditional ecological knowledge.	They provide support on implementation of projects such as building check dams, organizing fire breaks and conducting research on biodiversity in the area.
Inter Mountain Peoples Education and Culture in Thailand Association (IMPECT)	As an indigenous development organizations founded by the representatives of indigenous groups, they work on variety of issues including education, co-operation with state authorities over access to natural resources, promotion of the convention on biodiversity conservation and networking among indigenous groups.	They work on enhancing networks among indigenous groups, promoting indigenous peoples rights and promoting collaborative management between communities and state authorities.
Academic community		
Natural science	In collaboration with national	The focus of research is usually on

expertise (SE)	departments related to land and water management, national soil and water scientists have long history on influencing policy decision making in the highlands of northern Thailand.	exploring the impact of different land uses on soil erosion and water availability.
Participatory action research team (PART)	Affiliated with Social Science department of Chiang Mai University, they have long history of conducting participatory action research on the issues of the rights of ethnic minorities and community based natural resource management.	They have an on-going research project entitled *Strengthening the Special Ethnic Cultural Zone: the Case Study of Galyani Vadhana District* funded by the Thailand Research Fund aiming to strengthen the participatory approach to policy development from cultural perspective.
Villagers		
Karen people (KP)	They live in the mid elevation zones. They are of Sino-Tibetan origin and they migrated to these areas from Burma or are indigenous to the place. There are 17 Karen villages in the study site.	They are beneficiaries of the collaborative watershed management project, but also their traditional ecological knowledge in relation to watershed management is considered as integral part of collaborative watershed management in the study site.
Hmong people (HP)	They live in the high elevation zones. They are Miao ethnicity of Southern China and they migrated either from Southern China or Lao due to political unrest and in search of more arable land. There	Due to specific agricultural practices, they are a targeted group of the project for environmental awareness rising.

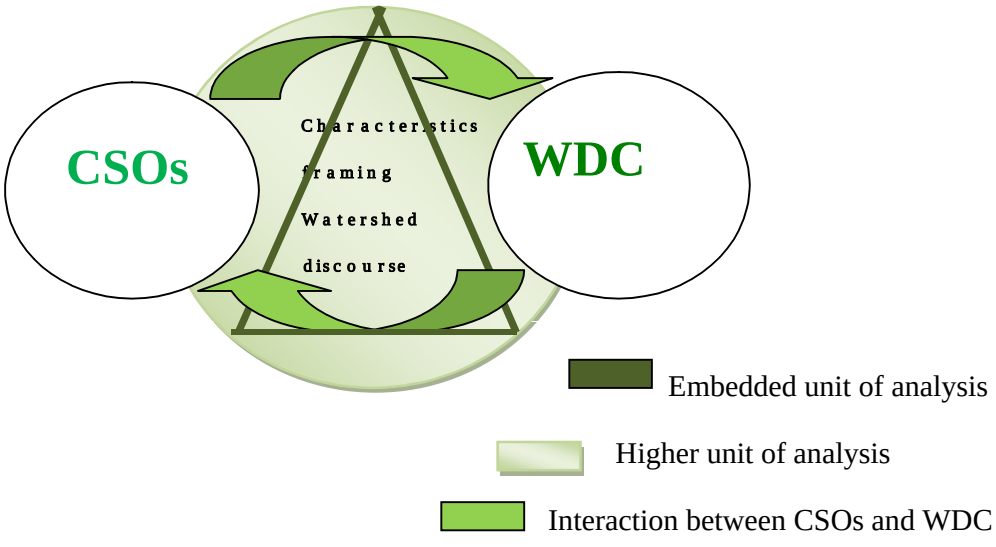
	are two Hmong villages in the study site.	
Lisu people (LP)	They live in the high elevation zones. They are of Tibeto-Burman origin and they migrated from Burma due to political unrest. There is only one Lisu village in the study site.	They are the targeted group of the project as well although not mentioned too much in the progress reports or interviews.

Table 1. The categories of respodents

2.2.4. Summary of the research design

Considering the purpose and research questions, the main unit of analysis is the interaction between the CSOs and WDC in the study site, where CSOs are considered to be community based organizations, NGOs and academic community, while WDC are all other actors attached to watershed discourse. This unit of analysis is considered as embedded into a bigger unit which are the characteristics that frame watershed discourse in the study site. A research design diagram can be found in Figure 6.

Figure 6: Research design Diagram



2.3. Data collection methods

The research was based on multiple sources of evidence, such as interviews, direct and participant observations and documentation in order to triangulate data sources (Yin 2003: 99).

With the help of the colleagues from Stockholm Environment Institute Asia Center (SEI Asia) where I was placed as an intern, I established contacts with the researchers from Chiang Mai University's Regional Center of Sustainable Development and Social Science (RCSD), Chiang Mai University's center for Ethnic Studies and Development and the Unit for Social and Environmental Research (USER) in order to get feedback on the relevance of my initial research interest before entering the field and in order to establish further contacts with relevant stakeholders. Considering that the team of researchers from the Ethnic Studies and Development center had an on-going research project in the same study site entitled "Strengthening the Special Ethnic Cultural Zone: the Case Study of Galyani Vadhana District", my key informant was a member of the research team Dr Malee Sitthikriengkrai in regard to introducing me to the villagers and other stakeholders like governmental officials and NGOs. However, in the study site my key informant was a member of the local community based organization AMC, Mr. Brunperm who has a deep understanding of the local context and is quite respected in the villages. Accordingly, I was reliant on two key informants, one that is based in the city of Chiang Mai and another who was a resident of Galyani Vadhana district.

2.3.1. Interviews

Considering that the research is of qualitative nature, interviews were one of the most important sources for primary data collection. Due to complexities of the research topic requiring various sources of data from multiple stakeholders and groups, I found it constraining to follow one interview guideline, but instead I focused more on distinguishing particular topics that would need to be covered during the interviews. In cases when I had limited time to interview respondents, for example with government officials or members of particular NGOs, interviews were more focused following interview guidelines, while in other cases where time was not an issue, interviews were more open-ended, informal and conservational. However, in both approaches taken, interviews were conducted so as to allow

the respondents to propose their own insights into particular topic that were in some cases further followed up (Yin 2006: 90). Moreover, I tended not use the “why” questions while interviewing since it may influence the respondents taking certain stance towards the questions, and instead I focused more on using the “how” questions (ibid.). For the list of interview guideline, please refer to Enclosure 1.

Interviews were conducted in both local Karen and Thai dialect with the help of Chiang Mai University PhD student who is Karen himself and with the help of another student from Bangkok. They were both introduced to the topic of the research prior to entering the field. More formal interviews were recorded with prior informed consent, while more informal interviews or when it was not physically possible, interviews were noted down in a field notebook as soon as it was possible. For the list of respondents, please refer to Enclosure 2.

2.3.2. Direct and participant observations

In order to understand more implicit nature of social and political dynamics in the interactions between civil society organizations in the field site and other actors attached to watershed discourse, I observed formal meetings organized by governmental agencies, grass-roots organizations and NGOs. Since I was not able to organize focus group discussions with various stakeholders due to time and financial constrains, direct observations of the formal meetings proved to be very useful tool for observing interactions among various actors that would not be possible to collect through individual interviews. Moreover, they served as analytical tool since they enhanced the quality of the interpretation of data and provided me with the tacit understanding of the interactions, meanings, events and context of the study case site (Dewalt and Dewalt 2002: 8).

Moreover, I participated in less formal occasions throughout the field visit such as everyday activities of the villagers such as preparing food, local events such as wedding ceremony, fire break ceremony, casual communications with the villagers, and observations of the landscape. They provided me with an opportunity to gain access to events otherwise difficult to obtain through formal scientific methods, gain trust of the villagers and the implicit meaning of the context (Yin 2003: 94). In cases where I participated in more formal meetings with many stakeholders involved, observations were simultaneously noted down or recorded. In other more informal settings, reflexions from the observations were noted in a field notebook as

soon as it was possible in order to note down as many details as possible (Dewalt and Dewalt 2002: 150).

All direct and participant observations were directly noted down in the field notebook or recorded, while in the situations where it was not possible they were noted down as soon as it was possible. The list of major events that were part of direct observations together with their date, purpose and list of participants can be found in the Enclosure 1.

2.3.3. Documents, newspapers and archives of national scientific articles

I collected agendas, announcements and pamphlets of the various meetings organized by governmental authorities and civil society organizations, administrative documents and progress reports of the current projects implemented in the field site. Analyzing various documents proved to be helpful in validating data from other sources and providing additional data that might be difficult to collect through interviews. However, overreliance on documents as primary data can be misleading since every document is written with particular purpose and for particular audience (Yin 2003: 87). Therefore, they served more to critically interpret them instead of considering them as "facts" on reality. Moreover, I collected national scientific articles on highland ethnic minorities and watershed management from archives available on-line.

Since the majority of documents are in Thai they were all translated and encoded according to the name of the organization, particular author or the governmental unit that produced it. Since most of them are not yet published, they can be found under the Unpublished documents of the reference list.

2.4. Reliability and objectivity

Primary reason for choosing this particular field site was that it was recently upgraded into a new district in Chiang Mai province that previously comprised of three sub-districts. It provided me with an opportunity to explore the interplay between newly established official institutions in the area, NGOs, other researchers in the area, which all came with a new district being upgraded, and the villagers.

In order to reflect on the validity of findings and overcome "subjective" judgements, I used multiple sources of data (Yin 2003: 99) as presented in the previous chapter. The purpose was

not to seek for information that I couldn't find in other sources and use them as "facts", but to cross-validate different sources. Considering that direct observations of the interactions among multiple stakeholders participating in different events were a valuable source of information, in order to overcome the overreliance on my personal interpretations of the events as primary data, in cases where it was possible I simultaneously noted down the interactions in the field book or did it as soon as it was possible. The same procedure was applied with semi-structured or informal interviews.

2.5. Reflexivity and limitations

Being an urban-based researcher coming from Europe, it was very difficult to mitigate "the urban trap" (Chambers 1983). Considering that the study site is quite remotely located from the city of Chiang Mai where I was based during the field work, I was highly dependent on other NGOs who accepted to take me to the villages. Moreover, I needed to wait for the end of the rainy season as the roads to the villages are highly inaccessible during the wet season. This is a typical example of "dry season bias" as the period of wet season is characterized as the most difficult time of the year for the villagers (Chambers 1983). Northern Thailand is the most researched area of Thailand with long history of development projects implemented by both international and national organizations. Accordingly, when considering the "project-bias" during selecting the study site itself, I tended to avoid "the show cases" that were actually presented to me most of the time.

Moreover, due to social dynamics in the villages of Galyani Vadhana where kinship ties although changing are still prevalent, I found it difficult to rely on more than one key informant in the field and organize in depth interviews with villagers that come from other family clan than the family of my key informant. That constrained me from getting insight of the views and perceptions of other Karen villagers and farmers that don't belong to the same family as my key informant. Accordingly, in order to mitigate such condition to some extent, I relied on direct observations and other research conducted in the area. However, it needs to be emphasized that I conducted interviews with the Hmong villagers and farmers which provided me with another perspective on the research topic.

2.6. Ethical considerations

Considering the first ethical concept which is the „prior informed consent" from the onset of collecting data in the field site, I presented the purpose and the topic of the research to

communities and other respondents in order to come to mutual understanding and agreement. Accordingly, during the public even in the village I was introduced to the villagers when I presented my research interest Moreover, during interviewing I provided more thorough information to respondents based on the Information sheet that can be found in Enclosure 4.

Power imbalances between a researcher and the researched are often present during the research and not only determined by the education or wealth but also by the feeling of powerlessness that a wealthy and educated researcher may impose on the marginalized and poor people (Schetvens and Storey 16). Therefore, during the field work I tended to be very respectful towards local customs and culture and be adaptive as much as possible. Moreover, in order to lessen discomfort that might emerge while interviewing, I tended to conduct interviews in surroundings where villagers feel comfortable like in their homes, in the rice fields and in a less formal way.

Moreover, since many of the respondents and especially the villagers let me into their homes and spent their valuable time on answering my questions, I was constantly pursuing the answer to the question on how I can contribute back to the communities. Although, the nature of the research is tended towards the policy change, I understood my limitations as being a young researcher in Northern Thailand where long history of political and social dynamics among different ethnic groups requires much deeper understanding and knowledge and more thorough longer research.

3. Theoretical perspectives

Besides reflecting on social interactive discourse theory and concept of discourse coalition which is part of the research design and subsequently presented in the methodology section, this section will present some of the critical reflections on the notion of science-policy interface and the role of civil society as the holders of public opinion. These reflections served to broaden the analysis of data.

3.1. The politics of environmental degradation

Considering the environmental problems are described with high level of uncertainty, complexity and non-linearity, however one of the principal ways policy makers or practitioners address and make sense of these uncertainties is to tell stories or narratives that simplify the ambiguity, overcome the fragmentation, replace complex scientific debates and

reach the „common understanding“ of a problem or a problem closure (Hajer 1995, Forsyth 2007: 92-94, Roe 1991: 288). In case of environmental risks, the term „environmental narratives“ is coined in order to indicate predefined and universal notions of cause-and-effect or “linear model of science” that have become accepted as incontestable and truth instead of being addressed more flexibly based on the particular political and social context in which they arise (Forsyth 2007: 92, Forsyth 2005: 9, Forsyth 2005a: 5).

However, it is important to consider that the meaning of particular environmental problem can in some cases be the object of political contestation among different actors (Hajer and Versteeg 2006:177). Some analysts have argued that fixed notions of environmental problems can serve political purposes in enforcing notions of social order or authority that may not be as easy to achieve without these visions of risk, allow actors such as government or development agencies to foreclose debate in order to justify their specific policies or agendas, or to offer a managerially convenient summary of cause and effect (Forsyth 2007: 92, Roe 1991).

For example, Leach and Mearns (1996) in their book *The Lie of the Land: Challenging Received Wisdom on the African Environment* showed that much of the environmental crisis in Africa, such as overgrazing, desertification, soil erosion, forest degradation, and subsequent policies that address these issues (e.g. establishment of protected areas, control of grazing, etc.), are often based on powerful and simplistic assumptions that are not always supported by the evolving scientific evidence and debate, and are in fact more structured through political and social context in which they evolve. Moreover, debates surrounding desertification and the policies to combat desertification through tree-planting projects in arid and semi-arid regions were highly questionable for its sustainability and effectiveness highlighting that such projects can have even more adverse effects on land resources (Andersson *et al.* 2011). Then, Forsyth (1996: 387-388) questioned the so-called ‘Himalayan environmental degradation theory’ that had argued that Himalaya degradation and soil erosion in Nepal was a direct result of increased pressure on land influenced by rapid economic change following population increase and modernization and therefore much of the policy emphasis should be placed on erosion control through limiting upland agricultural activities. These are some examples of the narratives since the debates over truth-value of these narratives or storylines are highly questionable and they have persisted despite strong empirical evidences against its storyline.

3.2. The politics of representations

In this emerging multi-level governance, the role of civil society organizations, such as NGOs, social movements, and advocacy networks is given high significance in problem formulation, decision making and policy implementation based on the assumption that their higher participation will result in more legitimate environmental arrangements. Two particular roles of civil society organizations in environmental governance were identified as:

1) Civil society organizations are a source of valuable information and expertise to governments and thus they have information provision role and contribute to problem solving (Bernauer and Betzol 2012: 63, Dryzek 2011: 104);
2) They provide legitimacy to governmental negotiations in policy making in so that they serve as mediators between people and governmental officials and thus contribute to rising people's participation in decision making (Bernauer and Betzol 2012: 63, Biermann and Gupta 2011, Dryzek 2011: 105).

Participation is usually considered as "a realm of civil society organizations activating the public and channelling their voice into the system of political representations" (Trenz 2009: 36), however the main criticism is directed towards the legitimacy of the civil society representatives themselves who claim to speak on behalf of the people with little regard on the way they are placed to be representatives of and for the public (Bernauer and Betzold 2012: 64). Famous Bono's quote "I represent a lot of people (in Africa) who have no voice at all… They haven't ask me to represent them" has been analysed as an example where a statement represent one discourse of Africa, not the real people as Bono claims, that might not be actually beneficial for the people of Africa (Dryzek and Niemeyer 2008: 481). Another example is the role of the European Commission (EC) as a gatekeeper of public participation and dialogue. As argued the role of EC remains outside of the realms of the representation discourse since the role of political representations in relation to civil society remains a non-issue and is by default considered to represent a common public interest (Trenz 2009: 37). Trenz (ibid.) argues that this assumption of the role of civil society organizations as the gatekeepers of public interest by default runs the risk for the civil society organizations to become subordinate to or an "auxiliary" of governance instead of raising their legitimacy. Moreover this assumption can even have an adverse effect on the people they are supposed to represent if their worldview doesn't comply with the worldview of the people they are supposed to represent (Dryzek and Niemeyer 2008).

Therefore, I will consider organized civil society organizations, not as distinct from but as part of the multi-level representative field in political system that is emerging in the context of collaborative watershed management.

4. Model of Analysis

In line with a discourse approach that do not seek to fill the model of analysis with a wide variety of concepts that fulfil certain normative objectives, this model of analysis refers more to examining the social mechanisms, power struggle through which participation of all affected communities in decision making is or is not achieved. Accordingly, in line with research sub-questions, the model of analysis is separated in two following sub-questions.

4.1. Framing of the policy decision making

Hajer (1995:45) argues that it is important to analyse the ways in which certain policies are framed, differences played out, and social coalitions on specific meanings emerge. Moreover, it is argued that the first step in understanding the dynamics of participation in policy processes is to consider how policy making has been framed (Brock, Cornwall and Gaventa 2011:2). The framing is the way in which a policy problem is structured and made sense of with use of taken-for-granted assumption structures (Gurung 2010: 244). Moreover, frames can also function as "a frame of reference" through which new information is interpreted (ibid.). Moreover, as Forsyth (2005a) argues framing becomes influenced by wide-scale discourses that are commonly reported in books, popular discussions, and media as though they are unquestioned facts and therefore framing reflects dominant patterns in society and politics, as well as the definition of technical expertise.

Accordingly, in the context of collaborative watershed management, I sought to examine particular characteristics that frame watershed discourse from the perspective of WDC (watershed discourse coalition) in the study site and subject their assumptions to reflections based on empirical findings.

4.2. Positional statements

As the research used the embedded study case as a research inquiry, the embedded unit of analysis is considered to be the interaction between CSOs and WDC (watershed discourse coalition), whereas a bigger unit of analysis is considered to be the characteristics that frame watershed discourse. Community based organizations, NGOs and academic community are

considered as CSOs, while WDC are all other actors that for various reasons are attracted to the same understanding of the characteristics that frame watershed discourse.

Accordingly, in order to see how CSOs respond to WDC and based on research design, I will analyze particular practices and argumentative statements CSOs use in order to see how they respond to other actors attached to watershed discourse, get involved in particular discourse production and transformation, reframe their interests, communicate arguments and finally change their interests and positions (Hajer 1995: 52-54). The analysis will be separated according to what extent their practices directly challenged or were more in compliance with dominant discourses.

5. Analysis

In line with first sub-question, the first part of the analysis will examine what dominant characteristics are framing watershed discourse in the upper-most part of the Mae Cheam watershed, Northern Thailand. Subsequently the second part will critically examine the role of CSOs as representatives of public opinion through analysis of their communicative and argumentative practices with WDC and activities in order to see how they respond to WDC. Finally in order to reach the purpose of the thesis and based on the findings from analysis, the thesis will finally discuss to what extent a full participation of all affected communities is achieved and if not why.

5.1. Major characteristics framing watershed discourse

5.1.1. Environmental narrative "Forest regulates seasonal flow"

Land use change of ethnic minorities in the upper-most part of the Mea Cheam watershed and the effects of these changes on water availability for the communities in the wider basin was emphasized as the biggest concern of the WDC due to increasing downstream water shortages during the dry season (PAO 1, PAO 2, PASED 1, IMPECT 2, PAO 2012). The most common land use change in the upper-most part of the Mae Cheam watershed is said to be deforestation as a result of population growth, cash crop expansion and illegal logging (PAO 1, PAO 2, PAO 2012, PAO 2010). Moreover, particular emphasis was placed on the negative role of the so call slash-and-burn land clearings for cash crops expansion and of illegal logging on watershed degradation (PASED 2012, PAO 2012, RFD unknown, Direct

observation 3). Accordingly, the purpose of the project in relation to linking land use change and watershed services was twofold and it included awareness raising that the forest is a source of water and watershed rehabilitation and conservation (PAO 1, PAO 2012, PASED 2012, RFD unknown, Direct observation 3). Moreover, beside awareness rising that the forest is a source of water where the upland ethnic minorities were the target group since they are the one located in the upstream areas (PAO 1), main activities also include watershed rehabilitation through forest plantations and watershed conservation through incorporating P'gkajo[5] traditional ecological knowledge into watershed management (PASSED 2012, PAO 2012).

Moreover, a historical perspective on scientific articles on relation between forest and hydrological cycle in northern Thailand shows that the common understanding was that deforestation in upper watershed areas ultimately results in soil erosion, contributes to downstream flooding, and particularly influence the reduction in agricultural productivity of the central plain area as it leads to a decline in the capacity of water resource development projects such as hydroelectric stations, dams and urban water supply (Krairapanond and Atkinson 1998). Therefore, the assumption that the upland agriculture and illegal logging results in deforestation and therefore is the main contributor to the depletion of watershed services for downstream areas during dry season, implies that the role of forest as an engine that regulates seasonal flow is given high significance. Accordingly, deforestation as a result of upland agriculture may disrupt this function of the forest to regulate flow of water during the dry and wet season. Therefore, a lot of effort should be put into limiting upland agriculture and investing in afforestation projects in order to rehabilitate the watershed areas is the common assumption that characterizes watershed discourse in the upper-most part of the Mae Cheam watershed from the perspective of the WDC.

However, there is a great scientific debate in the evolving research on whether these perceptions are supported by the scientific evidence. It is shown that afforestation as a mean to rehabilitate watersheds cannot be taken as a panacea for regulating hydrological cycle since some particular plantations did not only reduce annual stream flow but also reduced the dry season flow or are at the best neutral (FAO 2007, Farley *et al.* 2005). Even, recent research conducted by FAO (2007) questioned the narrative that "more trees equal more water", a

[5] P'gkajo is the name by which Karen people who live in the Mae Cheam watershed refer to themselves and in Karen language it means the children of the forest (AMC 1).

storyline that was previously supported by FAO, and showed that the public misconception in relation to significance of forest in mitigating flooding disregard the importance of scale and the complexity of hydrological cycle.

Moreover, it is argued that it is possible to draw general conclusions in regard to the impacts of forest on the annual flow, however the impacts of forest on seasonal flow of water (e.g. during dry or wet season) is very difficult to predict due to differences in size of each specific watershed site and mosaic of land uses operating there (Calder 2002: 2), unreliable watershed data for many regions of the world (Farley *et al.* 2005) and basically insufficient and inconclusive evidence and especially when considering the increase of the stream flow during dry season (Bruijnzeel 2004: 203). Moreover, recently research on the impact of land use change on watershed services emerged by the natural science expertise that provided policy solutions to the RFD with mixed feelings over the conclusiveness of the result. It is stated that the research was conducted with rather conventional methods based on the single land use context without considering a mosaic composition of different land uses occurring across a landscape in the highlands of Northern Thailand (Thomas *et al.* 2004: 49-50). Therefore, ideas about the hydrological importance of forests persist despite the fact that there is very little evidence on the linear relation between deforestation and water availability downstream.

5.1.2. Development narrative "Alternative agriculture contributes to income generation"

One of the major problems identified in the villages of Galyani Vadhana is how to improve income generation of the villagers while preserving watershed services (PAO 3, Direct observation 3). After the opium substitutions programmes implemented through the introduction of the various cash crops, these programmes became highly incentivized by the government through setting the Bank of Agriculture and Co-operatives (BAAC), and subsequently many villagers borrowed money from the bank in order to continue growing the crops that were introduced to them through various demonstration plots set either by the Royal Development Office or other organizations coming to the district (PAO 3, LCC 2011, Direct observation 3). Subsequently, as many villagers borrowed money from the newly open bank and not only for growing commercial crops, but also for buying cars to go to urban centres, many of the villagers became highly indebted due to inability to sell these crops in adequate price (PAO 3, AMC 1, Direct observation 3). Accordingly, many villagers started to

grow cash crops like corn, soybean or strawberry since these crops have higher market (HCC 1, HP 1, KP 1, LCC 2012, Direct observation 3).

However, after the growing concern of the environmental impact of these commercial crops on water supply, soil erosion and pollution due to increased chemical input and increased demand for water for irrigation during dry season, many projects on promoting temperate commercial crops that don't require high chemical input and can be managed through organic fertilizers were introduced as part of collaborative watershed management (PASED 2012, TAO 2012, LCC 2012, PAO 2012, RFD unknown, Direct observation 3). Moreover, beside temperate commercial crops, great emphasis is placed on promoting off-farm activities like providing incentives for making different types of handicrafts or relying on non-timber products like mushrooms and bamboo shoot for household consumption and selling (ibid.). The purpose was targeted towards promoting sustainable agriculture and sufficiency economy[6] that contribute to income generation and at the same time preserve valuable watershed services through introducing small scale temperate commercial crops and off-farm activities like making handicrafts and collecting non-timber forest products (ibid.).

Accordingly, the main assumption is that collaborative watershed management contributes to poverty reduction by providing opportunities for the villagers to increase income generation through introducing low chemical input temperate cash crops and off-farm activities like making handicrafts and collecting non-timber forest products like bamboo shoot and mushrooms. Therefore the narrative that organic farming and off-farm activities contribute to income generation is another characteristic framing watershed discourse in the study site.

However, since the knowledge of the farmers about the market is very low and the roads to the markets in urban centres are inaccessible during the wet season, it was very difficult for farmers to sell their products in reasonable price (KP 1, AMC 1, TAO 3, LCC 2012). Since majority of the farmers sell their products through a middleman, they are unaware of the price of the fertilizers, seeds as well as the end price of the product and in those cases it is the middleman who calculates the return price for the product which in many cases tends to be very low (ibid.). Moreover, since it is the middleman who grades the product as well, in many occasions the product will not be considered as of high quality or it would be returned to the villagers (AMC 1, HF1, LCC 2012). It was emphasized as well that promoted temperate

[6] Sufficiency economy is a philosophy developed by the Thai King and which was integrated into the national social and economic development plan which promotes a certain life style based on the norms that people should earn just enough for meeting their daily needs (PART 1).

vegetables that don't require high chemical input, such as Japanese pumpkin, gladiola, Chinese tea or cabbage don't have adequate market and farmers are unable to sell it (Direct observation 3, LCC 2012). Moreover, since the price of handicrafts is very low and require high return labour, villagers found it difficult to adapt to this off-farm alternative source of income (ibid.). Therefore, due to indebtedness the villagers abandon growing promoted crops and diversified the production into other crops such as strawberry and grape or return back to growing crops such as soybean or maize (HP 1, KP1, HCC1, Direct observation 4). Therefore, the narrative that promotion of low chemical input temperate crops and off-farm activities as alternative sources of income contribute to poverty elevation persist despite the opposing farmers' experiences.

5.1.3. Identity narrative „Ethnic minorities as hilltribes"

First research on "hill tribes" and substitution for opium production was conducted by the Kasetsart University in 1960s and was initiated by the Thai government after the destruction of forest and watershed was perceived as a direct result of shifting cultivations of "hilltribes" coupled with the rural poverty of the "hilltribes" (Punsri and Subhadrabandhu unknown: 26). Subsequently, as other research and the growing concern for the environmental risks followed, *Thai Forestry Sector Master Plan* was formulated based on the research conducted by the Kasetsart University and RFD (Thomas *et al.* 2004:14). It is argued that this research became very influential in shaping public view on the influence of upland land use change on watershed services, and especially seasonal water flow downstream, and subsequently on watershed policy formulation (Thoamas *et al.* 2004: 14-15).

In well established article on watershed management in Thailand published by a Thai researcher, ethnic minorities in the highlands of Northern Thailand were portrayed as a "frontier society", peasants "colonizing" the forests that were previously uninhabited since they were continuously pushing the forest margins back, building new villages and creating the basis for their livelihood (Krairapanond and Atkinson 1998). Moreover, it was emphasized that although this "encroachment" was tried to be put under the control by the government, from the 1960s it was encouraged as a mean to destroy the basis of the communist insurgency in the highlands during that time (ibid.).

Moreover, in the late 19th and early 20th centuries, "forest peoples" living on mountains were constructed by Bangkok based elites and academia as the "the burden of the nation and trespassers of the state land" (Punsri and Subhadrabandhu unknown: 26). From the

establishment of the National Committee for the Hill Tribes in 1959, through the Cabinet resolution of 1976, the state development policies were directed towards integration of the ethnic minorities into the Thai state as self-reliant Thai citizens and reducing their movement to permanent field (PRAT 1). In particular, 1992 Master Plan on Community Development, Environment and Narcotic Crop Control in Highland Areas was considered as highly discriminatory and with adverse impacts on the livelihoods of ethnic minorities since it forced evictions and relocation, harassments, confiscation of property and even extrajudicial killings all in the name of the war on drugs (UNHCHR 2005:7). Accordingly, the identity narrative of the ethnic minorities emerged as “hilltribes” and “a frontier society”.

5.2. SCOs’ practices and argumentative statements

Throughout the process of the stakeholders’ negotiations over watershed management in the study site, community based organizations, NGOs and academic community used statements and practices that both directly challenged and were more salient with the official discourses presented in the previous sub-section. Accordingly, all practices and argumentative statements are separated into those that directly challenged the official discourse, the ones that challenged them more subtly and the ones that were drawing on official discourses.

5.2.1. Directly challenging official discourse

In cases when representatives of CSOs directly challenged the official narratives by protesting or opposing, they were perceived as a treat by WDC, extremes and subsequently they lost their legitimacy to fully participate in stakeholders’ negotiation. It resulted that the villagers whose perspectives didn’t comply with official narratives were opted out from negotiations as the civil society organizations that were supposed to represent them were perceived as illegitimate by WDC.

For example, when a representative of a community organization wanted to enter negotiations and raise the problem of price fluctuations of the chemicals for strawberries or the low market of the promoted temperate crops, this topic was not allocated enough time and subsequently it was proposed that villagers who grow commercial crops should abandon them and only grow vegetable sufficient for their needs (PAO 2012, Direct observation 3, Direct observation 4). Accordingly, when the official narrative that sustainable agriculture and off-farm activities

contribute to income generation was questioned, the WDC tried to coerce them by referring to the His Majesty the King's philosophy of self-sufficiency and that it is the only way to solve the problem since people cannot influence the market (PAO 2012, PASED 2012, Direct observation 3, Direct observation 4). As a result their participation in problem framing and decision making was weakened in collaborative decision making.

Another example through which they directly confronted the dominant discourse is by autonomously engaging in discourse on self-determining rights of indigenous peoples through creating indigenous people's council of Thailand. The goal is to establish Indigenous peoples council of Galyani Vadhana district where every ethnic group, Karen, Hmong and Lisu respectively, will have its own council based on distinctive cultural and historical characteristics of each of the group according to which they will submit development plans based on self-determination (IMPECT 2). The purpose is to diversify channels for influencing policy decision making instead of working only through administrative governmental units (ibid.). The councils have already been established for Karen and Lisu ethnic group while negotiations for establishing Hmong council were still in progress during the period of the research due to cultural differences among ethnic groups (IMPECT 2, Direct observations 4). Some of the activities of the Aae Mujakhee council (of the Karen people) in the past included protesting against building the road after the new district was established as it would have negative environmental impact, or tracking accountability and transparency of the budget allocated for development of the district (AMC unknown). However, recently the direction of their work changed from directly challenging official discourses to collaborating with governmental officials and NGOs active in the district.

Figure 7: A new road in Galyani Vadhnana District

5.2.2. Challenging official discourse more subtly

However, in other cases when members of CSOs challenged the official narratives in a more subtle way they managed to alter official discourses as the way they approached the problem was acceptable for the WDC. For example, through combining technical knowledge, such as GPS for land demarcation, with traditional knowledge based on careful planning (KP 2, IMPECT 1) they managed to alter the official discourse that rotational forest fallow or more commonly known as the shifting cultivation[7] has negative implications on watershed and contribute to air pollution. Through careful planning of land utilization based on appropriate technology, this type of land management became more acceptable to WDC and their worldview than ethnic minorities traditional way of managing land. Accordingly, during the Tree ordination ceremony organized in the district, rotational forest fallow was integrated into the land management maps and subsequently signed by the district officials (Direct observation 4).

Moreover, some of the more subtle strategies on how to influence dominant discourse were through creating testimonies on historical use of watersheds with the support from Chiang Mai University in order to provide evidence that they have for many centuries adapted to changing environment and were unjustly accused for watershed degradation (PART 1, Sitthikriengkrai 2012). For example, based on traditional belief, Karen people believe in ritual forest such as grave yards or "de por" forest[8] that are strictly forbidden for cutting (AMC 1). With conservation awareness raising programmes these forests became a symbol of Karen conservation movement.

Figure 8: A ritual forest

Finally, through collaborating with the media they wanted to reach the wider

[7] These wild forests are used for growing dry rice for one year after which the land will be left fallowed to regenerate to a new forest (Sitthikriengkrai 2012: 8). After a year farmers will use another plot of land to grow rice and this will continue in the period of five to seven years after which they will go back again to the first plot of land (ibid.). However, as this type of land management was perceived as a way of destroying forest by the RFD officials and due to population increase, most of the farmers abandoned it (ibid.).

[8]" De por" forest are forest where parents of a new born baby attach umbilical cord to a tree which is believed to be a guardian of a baby (AMC 1).

audience in Thailand and alter common perceptions that they are responsible for flooding and air pollution in the city due to shifting cultivations (AMC 1, KP3, Direct observations 5).

5.2.3. Drawing on dominant discourses

However, when CSOs drew on dominant narratives they became even more "acceptable" to participate in collaborations on watershed management. Accordingly on His Majesty King's birthday they organized a Tree ordination ceremony when all officials from the district as well as some officials from provincial level of the government gathered in the district in order to pay respect to the King's birthday (Direct observation 5). The activities that were organized collaboratively among different NGOs and community based organizations included ordination of 84 trees, installation of 84 check dams and children performance (ibid.). During this ceremony the map on different land uses by which they were granted improved titling deeds was approved (TAO 2, Direct observation 5).

Figure 9: A check dam

Through ordination of 84 trees what is a Buddhist custom[9] they symbolically reassured the officials that villagers have the knowledge on how to guard the forest since those trees that are ordained cannot be cut. With check dams installation they showed that they know how to manage water and reduce run off erosion. Moreover, during the ceremony children performed songs about how to crash rice, fish in the pond and community well being (Direct observation 5). The performance

Figure 10: Children's performance

[9] Ethnic groups living in Galyani Vadhana are primarily Christians, while Hmong and Lisu still practice animism.

had symbolic meaning as well referring to knowledge transfer of traditional knowledge from the elderly to the youth in times when younger generations are adopting new life styles thus securing that the new generations will follow sustainable land use and conserve forest (AMC 1).

Accordingly, all these practices relate to shifting power dynamics within multi-level governance to allow grassroots participation and readdress some of the dominant discourses. Moreover, these negotiations were a lot about argumentative struggle on how to influence dominant discourses without directly opposing them. For example, symbols were used many times in order to challenge dominant discourse. In some cases these symbols even became institutionalized as was the case with Karen traditional ecological knowledge since it is officially now recognized as integral part of collaborative watershed management. Moreover, in many cases they drew on science in order to challenge dominant discourses such was the case with the watershed classification based on testimony and oral histories of traditional watershed management.

However, villagers that do not hold the same position or perspective as the actors attached to dominant discourses, as was the case with the farmers, were given very little opportunity to take part in negotiations or were coerced to take the official discourse as their own. Moreover, it is not only CSOs that use argumentative statements or symbols to influence dominant discourses, the members of the WDC used them as well. These were reflected in the catchy one-liners like *"People cannot influence market"* or *"Forest provides water"*.

One pattern emerged and it is the more CSOs spoke the same "language" as WDC, the more they were considered as more "acceptable" actors in stakeholders' collaboration. Accordingly, it can be concluded that the way the watershed discourse was framed had major influence on the way civil society organizations responded to other actors attached to dominant discourse and subsequently who from the villagers and how will be represented by CSOs and included in collaborative watershed management. Therefore, from the worldview of the officials collaboration with civil society organizations in decision making is recognized foremost as a mean to establish public participation only in the issues connected to rehabilitation and conservation of upper tributary watersheds while participation of that part of the villagers whose worldviews didn't comply with official was either excluded or coerced to change to "acceptable" worldview. Accordingly, next chapter will provide a discussion on why such power dynamics and argumentative struggles between SCOs and WDC over participation of all affected communities occurred.

6. Discussion

As showed participation of communities in collaborative watershed management occurred but it was not just from the environmental procedural justice perspective in so that not all affected communities participated in problem framing and decision making in the context of collaborative watershed management in the upper-most part of the Mae Cheam watershed, Northern Thailand. The following reasons might be the case.

- The weaknesses of representational democracy

When discussing on the role of civil society organizations as representatives of local people, it can be clearly concluded that not all worldviews of all affected communities were represented in negotiations. A parallel with the highly criticized Bono's quote that he represents the voices of all people of Africa can be drawn in the case of CSOs as representatives of all voices of ethnic minorities as well. It is not difficult to conclude that politics of representations play a big role in deciding what worldview will be considered legitimate and what not. Since the participation in the upper-most part of the Mae Cheam watershed is defined only in terms of protecting and rehabilitating watersheds, only the communities that share the same worldview will be considered while opportunities for participation of other communities that did not necessarily fall under this category were very low and almost nonexistent.

- Blurred distinction between science and Thai identity building

As already shown, the narrative that water is a main source of water still persists despite the fact that it is not supported by scientific evidence. The historic division between hilltribes, forest people colonizing the forest that were the burden to modernizing Thai state on one hand and lowland modern Thai citizens on another may serve as a position from where this narrative appeared. Moreover, since the establishment of the forestry department, Thai state tried to put this region under greater control that is even more accelerated when this region was declared to be a question of national security due to opium production, communist refugees as well as migration point from the war stricken neighbouring countries. Accordingly, it is very questionable to what degree this narrative emerged as a direct cause of these events. However, it can be argued that the line between the science and politics in Northern Thailand is very blurred. Therefore, in such an underlying factor that already foreclosed the possibility for altering the dominant worldview, full participation of all affected communities is very unlikely to be achieved.

- Institutional problem of “fit” of development projects

Finally, with the implementation of the official administrative structures into the ethnic minorities’ area in the upper tributary watershed, significant transformation of traditional institutions that were prevailing in the area for a long time occurred. Transformation of traditional institutions into official administrative structures did not only disintegrated and created mistrust among villagers and different communities; it also influenced the very relationship within family and kinship ties that were a basic of traditional structures (HCC 1, AMC 1). Accordingly, in such surroundings participation may not be even considered as desirable by some villagers as they found their own way to adapt to changing circumstances.

7. Conclusion

Considering the paradigm shift in natural resource management in the context of global environmental change as emphasized in Agenda 21, great emphasis is placed on how to reconcile the complexities and non-linearity of environmental change while incorporating multiple perspectives of multiple stakeholders in decision making. In the context of multi-level water governance, paradigm shift on integrated watershed management emerged when special attention was given to the role of watersheds as the main engines of the hydrological cycle. However, as these watersheds were recognized as one of the poorest regions in the world, participatory collaborative watershed management development projects emerged as a dominant paradigm aiming to incorporate poverty reduction and environmental conservation into one multi-purpose objective. Participation of all stakeholders and especially of affected communities, and watershed conservation were emphasized as two major pillars for evaluating successfulness of the projects.

Yet, in this emerging complex dominant paradigm little attention has been placed on examining power dynamics and argumentative struggles among many stakeholders involved and what in this context participation of affected communities really entails and whether it is really achieved or not. Moreover, this question became particularly important in the context of emerging role of civil society organizations as representatives of public opinion and mediators between the government and the communities assuming that they enable participation of communities.

As Lebel *et al.* (2008: 141) argue “upper tributary watersheds in mountain areas have a special position, being upstream of virtually everyone else with power“, this thesis argue that

power dynamics and argumentative struggle of different actors in the upper-most part of the Mae Cheam watershed had high influence on the way watershed discourse was framed and subsequently how participation was achieved. CSOs in such environment used practices and argumentative statements that both challenged dominant discourses directly and that were more in compliance with them and they certainly allowed grassroots participation and readdressed some of the dominant discourses. However, the more the worldviews of CSOs complied with the worldviews of actors attached to dominant discourse, the more they were considered as „legitimate“ and „acceptable“ to participate in negotiations. Accordingly, it resulted in that villagers who didn't hold the same worldview as actors attached to the dominant discourse were left out from negotiations. Therefore, participation in the context of collaborative watershed management in the upper-most part of the Mae Cheam was achieved but it was not just in so that not all affected communities participated in problem framing and decision making.

Accordingly, some of the possible underlying factors that can foreclose the debate for participation of all affected communities might be the weakness of representational democracy itself, blurred distinction between science and Thai identity building and institutional problem of "fit" of development projects.

Word count: 14850

Appendix

Appendix 1: Major watershed projects and programmes

1. FAO/UNDP „Support to Watershed Management in Asia“ project started in 1989 involving 10 countries
2. FAO/Netherlands „The Participatory Watershed Management Training in Asia“ was designed for HRD in participatory watershed management by enhancing skills and national capabilities to plan, implement, evaluate and monitor participatory watershed rehabilitation programmes.
3. FAO/UNDP „ASIAN Watershed Management Network“ established in 1994 and operating in 13 countries with a goal to fasciliate farmers’ organizations for watershed management at small watershed, village, district and national level, etc.
4. The U.S. Agency for International Development (USAID) Sustainable Agriculture and Natural Resource Management (SANREM) project operating in five countries;
5. The International Centre for Integrated Mountain Development (ICIMOD) Swiss-funded Watershed Development Project in four Hindu Kush Himalayan countries; and
6. Indo-German Watershed Development Program involving 50 NGOs in 74 watersheds. India, China, and Indonesia have large programs funded internally and with external support in the hundreds of millions of dollars. Both the Philippines and Vietnam have recently gotten multimillion dollar funding for the same end.

Appendix 2: Watershed Classification (WSC) in Thailand

- WSC1- Class 1A watershed comprises protected forest and headwater source areas that should remain as permanent forest cover. This watershed category is usually located at high elevation slopes and susceptible to erosion. Class 1B watershed has similar characteristics as watershed Class 1A but some proportions of this area have already been cleared for agriculture or inhabited by villagers. These areas require special conservation and protection measures through new forest plantations or special agroforestry practices. However in 1987 all practices except for forest rehabilitation occurring in Class 1A were prohibited and all residents to be evacuated or relocated. They are designed to remain as protected forest areas and source of water supply.

- WSC2- Class 2 watershed can be either area for protection or for commercial use where logging and mining can be allowed within legal boundaries, whereas grazing and crop production can be allowed providing certain soil conservation measures are taken up.
- WSC3- Class 3 watershed is less susceptible to erosion than WSC2 and WSC1 and these areas can be used for commercial forest, grazing, fruit trees, or certain crops with appropriate soil conservation measures.
- WSC4- Class 4 watershed is suitable for arable crops, fruit trees and grazing with moderate need for soil conservation measures.
- WSC5- Class 5 watershed is a gentle to flat area used for paddy fields or other intensive agricultural uses with few restrictions.

Enclosures

Enclosure 1, Interview guideline

	Interview guideline for the members of NGOs
1.	Please indicate the name of the organization you are working for.
2.	What is the role of your organization in relation to integrated watershed management in Galyani Vadhana district?
3.	What is the project and related activities you implemented in Galyani Vadhana district?
4.	With whom do you collaborate the most and how?
5.	What was the process of project design and implementation?
6.	How were the communities consulted?
7.	How do you find watershed management important?
8.	How do you see the situation in Galyani Vadhana can be improved in relation to watershed management?
	Interview guideline for the members of local and district officials
1.	What are the major changes occurring in Galyani Vadhana district?
2.	Why is watershed management important in your opinion?
3.	With whom did you collaborate the most during the project implementation?

4.	What can be improved in watershed management?
5.	How do villagers respond to watershed management?
	Interview guideline for the villagers
1.	What are the major changes you identified after the project was implemented?
2.	How would you describe the changes that occurred in the village after the new district was established?
3.	How do you see the situation in Galyani Vadhana can be improved?
4.	How do you see the work of civil society organizations active in the field?
5.	How consulted you were during project design?

Enclosure 2, Coded respondent list

Codes	Respondents
PAO1	Employee at the Mea Cheam watershed unit
PAO2	Policeman entitled for monitoring of the forest encroachment
PAO3	Member of a community development institute responsible for community development and strengthening of TAO institutions
TAO1	Head of the sub-district Chaem Luang
TAO2	Head of the sub-district Ban Chan
TAO3	Assistant to the head of the district Galyani Vadhana
KVH1	A Karen head of the village
HVH1	A Hmong head of the village
AMC1	Secretary to the AMC
AMC2	Cultural leader of AMC
AMC3	Teacher at local university and a student of indigenous peoples rights and traditional knowledge, perma culture practitioner
AMC4	Director of the primary school in Galyani Vadhana district and a member of the student communist movement during the protest against the installation of the FIO saw mill and logging concessions in Galyani Vadhana during the 1980s.
HCC1	A representative for not yet founded Hmong Community Council
LCC1	A representative of Lisu council
PASED1	A director and founder of PASED actively engaged in projects in Galyani

	Vadhana
IMPECT1	Representative on the issues of natural resource management and co-operation of ethnic minorities with state authorities in reducing conflicts over access to natural resources
IMPECT2	Consultant to IMPECT on providing support to the establishment of Indigenous Peoples Council in Thailand
RTF1	An employee of RTF
FIW 1	Founder of FIW
FIW 2	Secretary to FIW
FIW 3	Australian voluntary worker at FIW
PART1	Advisory professor to the project on *Strengthening the Special Ethnic Cultural Zone: the Case Study of Galyani Vadhana District*
PART2	Member of the project team *Strengthening the Special Ethnic Cultural Zone: the Case Study of Galyani Vadhana District*
KP1, KP2, KP3	Villagers from Karen community Karen student
HP1,HP2	Villagers from Hmong community

Enclosure 3, Coded direct observations of the public meetings

1. **Meeting on strengthening community based organizations and TAO** (Direct observation 1)

Location: Chaem Luang sub-district, Karen village

Date: 24 January 2012

Topics: Support to establishing community based organizations at sub-district and district levels

Participants: Members of the Aae Mujakhee council (AMC), villagers from Karen communities, Community Organization Development Institute (CODI) representative, P'ghkajo Association for Environment and Social Development (PASED), local officials (TAO)

2. **The Aae Mujakhee council's meeting** (Direct observation 2)

Location: Chaem Luang sub-district, Karen village

Date: 25 January 2012

Topics: Traditional knowledge transfer to younger generations

Strengthening the council

Preparation for the media

Participants: Members of the Aae Mujakhee council (AMC), villagers from Karen communities, media representatives from Bangkok, Wisdom of Indigenous Knowledge (WIK) and a local official (TAO)

3. Stakeholders dialogues on protection and rehabilitation of Mae Cheam watershed through P'ghkajo indigenous knowledge (Direct observation 3)

Location: The office of the Royal Forestry Department, Chiang Mai

Date: 14 February 2012

Topics: Mediation between communities and other stakeholders

Awareness rising on HIV and drug addiction

Advocacy for Convention on Biological Diversity

Participants: P'ghkajo Association for Social and Environmental Development, policeman, the Royal Forestry Department (RFD) officials, the Aae Mujakhee Council, farmers, Royal project representatives, businessmen, Chiang Mai researchers, RFD scientists on soil and water management

4. Meeting on founding the Hmong council as part of Galyani Vadhana indigenous people council (Direct observation 4)

Location: Ban Dong Sammegon (a Hmong village)

Date: 27 February 2012

Topics: The founding of Hmong council

Land rights

Strawberries

Founding of TAO council

Participants: the secretary of the Aae Mujakhe council, the head of the Hmong village, IMPECT, an IMPECT consultant, Lisu council representative

5. Tree ordination ceremony for His Majesty the King in Galyani Vadhana district

(Direct observation 5)

Location: Community forest, Cheam Luang sub-district

Date: 23 February 2012

Topics: Community development

Signing the participatory land use map

Land rights

Participants: P'gkajo Association for Social and Environmental Development (PASED), Raks Thai Foundation (RTF), Foundation for Indigenous Wisdom (FIW), the Aae Mujakhee Council (AMC), Toyota Thailand Foundation, chairman of CODI, RFD, policemen, etc.

Enclosure 4, Information sheet

Information sheet:

My name is Marija Isailovic and I am a student in International Development and Management, Lund University, Sweden. Therefore, this is a master thesis study that will be published under the Lund University and stored into the LU system for master thesis. The study will last for two months in the field site, when I will conduct interviews in other places as well in order to interview people from other villagers, government officials and members of different NGOs.

The purpose of the study is to examine to what extent the participation of all affected communities in the context of collaborative integrated watershed management in Galyani Vadhana district was achieved. Moreover, I want to examine the interaction among multiple stakeholders in the same context in order to identify ways on how to improve people's participation in problem identification and decision making. Considering the purpose of the study, the findings of the thesis can be beneficial for improving the collaborative watershed management in Northern Thailand.

Moreover, the identity of the interviewees will be disclosed if you wish so and recordings of the interview are not necessary if you don't feel comfortable. All the findings are only for the purpose of the research. If at any point you wish to stop the interview, please feel free to do so and it will not be considered as wrong.

If you don't wish to proceed, I am grateful for your time.

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