

**STRENGTH OF 'WEAK' FORCES IN MULTILAYER ENVIRONMENTAL
GOVERNANCE: CASES FROM THE MEKONG AND RHINE RIVER BASINS**

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Indiana University - Bloomington

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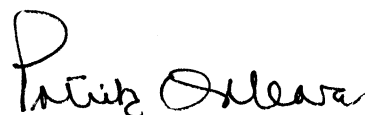
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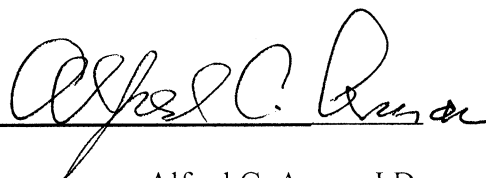
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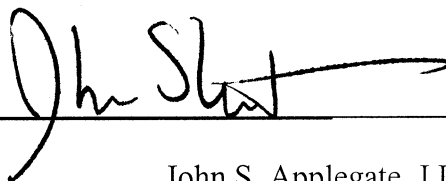
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John S. Applegate, J.D.

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Dedicated to
Ananda Alyce Myint,
my daughter
and her generation
with the mindful spirit and love of her grandmother Daw Phwa Gyi and her late
grandfather U Khin Maung

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TUN MYINT

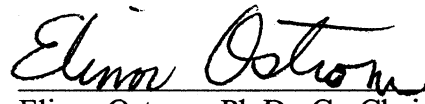
STRENGTH OF “WEAK” FORCES IN MULTILAYER ENVIRONMENTAL GOVERNANCE: CASES FROM THE MEKONG AND RHINE RIVER BASINS

Studies of the international relations have focused mainly on states and their relations as the center of governance processes in the international affairs. Consequently, the dominant theories lack insights to explain the role of non-state actors in practices of international environmental affairs. The emerging power of non-state actors is a challenge for scholars and practitioners in the field. The central puzzles this dissertation addresses are: What is the origin of the power of non-state actors? How and why do they influence institutional transformation of transnational environmental regimes in some cases?

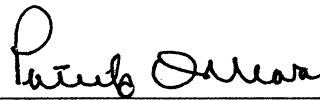
To explain this puzzle, I develop the *Issues, Interests, and Actors Network* (IAN) framework using theoretical insights from the *Institutional Analysis and Development* (IAD) framework and the *Policy Sciences* (PS) approaches. Through IAD and PS lens, I view issues, interests, and actors as institutional drivers as they interdependently shape each other in governance processes. Using IAN framework, I unpack and explain governance processes of the Pak Mun Dam in Thailand in the Mekong River Basin and four cases of pollution cleanup in the Rhine River Basin.

The theoretical insights that I learned from my dissertation research are: (1) the origin of power of non-state actors can be explained by analyzing *actors' knowledge*, their *assets*, and the *degree of political freedom* they have; (2) institutional adaptation can be explained by analyzing evolution of actors' preferences which are shaped by the three above clusters of variables; and (3) greater focus for further research has to be on actors' worlds of *value* production and utilization to understand multilayer governance.

Concerning policy, I learned that: (1) capacity building of actors has to pay attention to whether the capacity being built will be applied due to lack of assets or lack of political freedom; (2) linkages between issues, interests, and actors at a local layer *and* issues, interests, and actors at a transnational layer are crucial linkages to achieve objectives of transnational regimes; and (3) successful institutional transformation of transnational regimes is likely to occur when relevant issues, interests, and actors are linked across multiple layers.

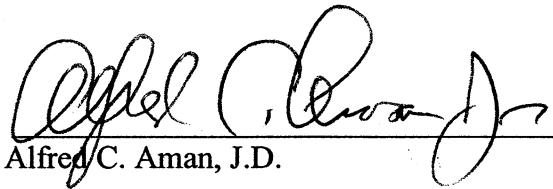


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Table of Contents

ACKNOWLEDGEMENT	V
ABSTRACT	X
CHAPTER 1 INTRODUCTION.....	1
THEORETICAL AND POLICY PUZZLES.....	4
RESEARCH DESIGN.....	6
<i>Why Chemical Pollution in the Rhine and Dams in the Mekong?</i>	7
<i>Rhine Pollution Cleanup Regime</i>	9
<i>Dams in Mekong River Basin</i>	11
<i>Pak Moon Dam in Thailand</i>	11
ANALYTICAL FRAMEWORK	13
<i>Drawing Insights from IAD and Policy Sciences Approaches</i>	15
ORGANIZATION OF THIS DISSERTATION	20
CHAPTER 2 THEORETICAL REVIEW OF THIS DISSERTATION	23
REVIEW OF DOMINANT THEORIES	24
<i>Realist Doctrine of the World Order</i>	24
<i>Functionalist Doctrine</i>	27
<i>Regional Integration Theories</i>	29
<i>Institutionalism for Study of Regimes</i>	30
CHALLENGES IN GLOBALIZATION.....	34
<i>The Hyperglobalists' Thesis of Globalization</i>	35
<i>The Skeptics' Thesis of Globalization</i>	37
<i>The Transformationalists' Thesis of Globalization and Law</i>	38
THE LACK OF THEORETICAL REFERENCE	40
METHODOLOGY.....	43
<i>Field Research in the Rhine</i>	44
<i>Field Research in the Mekong</i>	46
<i>Field Research at Pak Mun Dam</i>	48
CHAPTER 3 INSTITUTIONAL EVOLUTION IN THE MEKONG AND RHINE RIVER	
BASINS.....	51
INTRODUCTION	51
BIOGEOPHYSICAL SYSTEMS OF THE RHINE.....	51
EMERGENCE OF INTERNATIONAL COOPERATION.....	55
THE RHINE ACTION PROGRAM	57
BIOGEOPHYSICAL SYSTEMS OF THE MEKONG	59
INSTITUTIONAL EVOLUTION IN THE MEKONG RIVER BASIN.....	63
THE ORIGIN OF THE MEKONG DEVELOPMENT PLANS AT THE INTERNATIONAL LAYER	66
EMERGENCE OF THE INTERNATIONAL ORGANIZATION FOR THE GOVERNANCE OF THE MEKONG RIVER	
BASIN	70
<i>The Birth of the Mekong River Commission</i>	75
<i>Institutional Structure of the Mekong River Commission</i>	78
<i>Challenges for the Mekong River Commission</i>	78
ISSUES IN GOVERNANCE OF MEKONG RIVER BASIN DEVELOPMENT	81
CHAPTER 4 MULTILAYER ENVIRONMENTAL GOVERNANCE IN THE RHINE RIVER	
BASIN.....	99
INTRODUCTION	99
EVOLUTION OF THE RHINE WATER POLLUTION ISSUE.....	101
<i>Emergence of Rhine Water Pollution Issue as a Governance Problem</i>	102
<i>Emergence of International Cooperation</i>	106

ISSUES, INTERESTS, AND ACTORS IN THE 1976 CHEMICAL CONVENTION	107
<i>Background of the Governance Processes of the Chemical Convention</i>	107
<i>Actors in the Governance Processes of the Chemical Convention</i>	109
<i>Issues and Interests in the Governance Processes of the Chemical Convention</i>	113
<i>Interplay of Issues, Interests, and Actors in Multilayer Governance</i>	123
LINKAGES BETWEEN LAYERS	126
ISSUES, INTERESTS, AND ACTORS IN THE 1976 CHLORIDE CONVENTION.....	128
<i>Origin of the Issue of the Chloride Convention</i>	129
<i>Outcomes from the Governance Processes of the Chloride Convention</i>	132
CHAPTER 5 INFLUENCE OF NON-STATE ACTORS IN MULTILAYER GOVERNANCE OF	
THE RHINE	138
INTRODUCTION	138
INTERNATIONAL WATER TRIBUNAL	138
<i>A Brief History of the Emergence of the International Water Tribunal</i>	139
<i>Scientific Knowledge as a Source of Influence</i>	142
<i>Organization of the International Water Tribunal</i>	144
<i>Outcomes and Impacts of the International Water Tribunal</i>	148
ISSUES, INTERESTS, AND ACTORS IN THE RHINE ACTION PROGRAM	152
<i>Setting the Stage for Regime Transformation</i>	152
<i>Issues, Interests, and Actors in Action</i>	155
<i>Outcomes of the Rhine Action Program</i>	161
ANALYSIS OF THE GOVERNANCE PROCESSES OF THE RHINE REGIME.....	164
<i>Allocation of Values at the Center of Governance Processes</i>	166
<i>Knowledge, Assets, and Degree of Political Freedom in the Allocation of Value</i>	167
CHAPTER 6 ISSUES, INTERESTS, AND ACTORS IN THE PAK MUN DAM STRUGGLE	176
BACKGROUND	176
PAK MUN DAM IN THIRD POWER SYSTEM DEVELOPMENT PLAN	180
KEY ISSUES, INTERESTS, AND ACTORS IN PAK MUN DAM PROJECT	182
<i>Sovereign Control of Thailand's Water Resources</i>	182
<i>The Issue of the Uneven Distribution of Benefits from State Development Projects</i>	183
SOURCES OF PROBLEMATIC ISSUES IN PAK MUN DAM	185
<i>The Issue of Compensation</i>	191
<i>The Issue of Fisheries and Livelihoods</i>	196
<i>Measurement of Compensation</i>	199
THE ISSUE OF POVERTY IN LOCAL AND NATIONAL LAYERS.....	202
CHAPTER 7 INFLUENCE OF NON-STATE ACTORS IN THE CASE OF PAK MUN DAM.....	220
INTRODUCTION	220
STAGES OF PAK MUN DAM STRUGGLE.....	220
CONFLICT OF INTEREST IN DEVELOPMENT	222
<i>Meaning of Development</i>	224
FIRST STAGE: EMERGENCE AND INFLUENCE OF THE ASSEMBLY OF THE POOR.....	228
<i>The Voices of Rural Poor</i>	229
<i>Villagers' Influence</i>	232
<i>Nationalization of the Pak Mun Dam Struggle</i>	235
<i>Emergence of the Assembly of the Poor</i>	238
<i>Exercise of Political Freedom</i>	240
SECOND STAGE: INTERNATIONALIZING PAK MUN DAM.....	242
<i>Linking Local and International Layers</i>	245
<i>Information as a Source of Influence</i>	247
<i>The World Commission on Dams and Globalization of Pak Mun Dam</i>	253
THIRD STAGE: KNOWLEDGE BATTLEGROUND.....	257
<i>Scientific Knowledge and Local Knowledge</i>	259
<i>Knowledge Production and Utilization</i>	261

<i>Findings of Government-Commissioned Research</i>	265
<i>Knowledge in the Final Decision of the Prime Minister</i>	268
ANALYZING THE ORIGIN OF THE POWER OF NON-STATE ACTORS	271
<i>Knowledge</i>	272
<i>Political Freedom</i>	274
<i>Assets</i>	275
<i>Allocation of Values</i>	275
CHAPTER 8 LESSONS AND CONCLUSION	285
WHAT WE KNEW ABOUT INSTITUTIONAL TRANSFORMATION BEFORE THIS DISSERTATION	286
SYNTHESIS AND SUMMARY OF FINDINGS	290
<i>Origins of the Power of Non-State Actors</i>	290
<i>Mechanisms of Institutional Transformation</i>	291
<i>Outcomes and Externalities of Action</i>	293
<i>Knowledge</i>	295
<i>Assets</i>	296
<i>Political Freedom</i>	297
<i>Shocks and Uncertainties</i>	300
THEORETICAL IMPLICATIONS	303
<i>Composite Factors with Multiple Theories</i>	304
<i>Classifying Actors</i>	305
<i>Grappling with Allocation of Values</i>	306
POLICY IMPLICATIONS	308
<i>Lesson on Capacity Building</i>	308
<i>Linkages between Local and Transnational Layers</i>	310
RECOMMENDATIONS TO THAI STATE AND WORLD BANK	311
<i>Rights and Responsibilities</i>	312
<i>Poverty and Development</i>	313
<i>Public Participation</i>	314
AGENDA FOR FUTURE RESEARCH	315
<i>Emerging Cases in the Mekong River Basin</i>	315
CITED BIBLIOGRAPHY	321
APPENDIX A	338
APPENDIX A (THAI VERSION)	349

Chapter 1

Introduction

As we enter into the twenty-first century, the institutional order of the world is in transformation. In all layers of human governance—global, transnational, national, sub-national, local, neighborhood, and household—the ways in which human individuals and associations interact and organize governance processes are changing overtime. The reasons are partially rooted in the changing attributes of the physical world (such as transportation and technological innovations) and the evolving phenomenon of human preferences.

When the end of the Cold War opened up the fundamental problem about world order, the phenomenon of global transformation gained considerable attention from both practitioners and theorists. Scholars have maintained that the global transformation is due to increased momentum of global interdependence, democratization, expansion of trade, technological innovation, and environmental degradation (Held and McGrew, 2000; Keohane, 1995; Krasner, 1995; Sakamoto, 1994). This global transformation is re-configuring the future of the nation-state (hereinafter, state) as well as the future of the international system as a whole. Although states remain central players in international politics, non-state actors (profit and not-for-profit actors) have made strikingly positive advances in the creation of transnational environmental regimes and in their effective functioning once they are in place (Princen and Finger 1994; Lipschutz and Mayer, 1996; Wapner, 1996).

The governance of the environmental resources in the Mekong River Basin and the Rhine River Basin are examples of these transformation processes. How and why are

non-state actors and local communities influencing these transnational environmental regimes? How and why do transnational regimes transform their institutional order to face these challenges? What are the non-state sources of rule-making and rule-reconfiguring forces of transnational environmental regimes? What are the consequences of global transformation to the authority, policy, and laws of states? These questions require observing, capturing, and analyzing patterns of governance that are occurring “outside the system,” as Douglas R. Hofstadter (1979: 36-38) puts it, not in the system of dominant theoretical framework of the international relations that focuses mainly on so-called states and their relations.

From the practitioners’ perspective, the World Bank, in its *1999-2000 World Development Report*, argues that two forces are shaping the global transformation. These are “globalization” (as in “continual integration of countries of the world”) and “localization” (as in increased “desire for self-determination and devolution of power”) (p. 31). Indeed, these two forces are reconfiguring the transnational environmental governance of the Mekong and the Rhine. Scholars contend “globalization” as a whole is composed of the two forces that World Bank reported to have been shaping the world. Therefore, globalization, from the public policy and governance perspectives, is defined as “denationalization,” meaning that the state “no longer has a monopoly on the policies it creates and promulgates, but must increasingly cooperate, bargain, and partner with other states and private entities to achieve its goals” (Aman, 1998: 791-816, 2002: 1697; see also Delbruck, 1993). The riparian states in both the Mekong and Rhine river basins are confronting this phenomenon. Increased participation and pressure from non-state actors and local communities are reconfiguring the ways in which international

environmental regimes, the Mekong River Commission (MRC) and the International Commission for the Protection of the Rhine (ICPR), function in practice.

In recent years, the policy prescriptions and development loan packages of international aid agencies, including the World Bank, to developing countries have recognized the role of non-state actors and local communities as key factors in implementing various policy programs that are agreed and negotiated among states. Some twenty years ago, the roles of non-state and local actors were marginal in practice and in theoretical interpretations of international affairs. Today, these forces are still emerging “outside the system” but are treated as key factors in reconfiguring and shaping the dynamics of transnational environmental regimes. I would further argue that they are key forces in reconfiguring the state-centered institutional order of the world.

This dissertation offers an in-depth analysis of how non-state and local actors are influencing the reconfiguration of transnational environmental regimes in the Mekong and Rhine river basins. In so doing, this dissertation analyzes the case of Pak Mun Dam in the Mekong and four cases of Rhine pollution cleanup regime. Considering the magnitude of global transformation and complexities of both the Mekong and the Rhine regimes in their own diverse institutional orders, this dissertation does not explicitly treat two river basin regimes in comparative aspects. Instead, this dissertation provides in-depth analyses of cases from two river basin regimes that illustrate the processes of the institutional transformation and the phenomenon of global environmental governance in the context of global transformation.

Theoretical and Policy Puzzles

There is abundant literature on the study of top-down impact from centralized supranational and national regimes to non-state actors and local institutions, reflecting the public policy prescriptions and practices during the last half of the twentieth century. Global transformation requires us to think in different ways, however, about the system in which we used to live in order to understand the ways in which transformation occurs. Recognizing the role of these non-traditional forces in the reconfiguration of institutional order within and outside traditional international regimes is not easy for traditional scholars who are trained in thinking about “the state” and its relations with other “states.” The dominance of state-centric thinking is not only confined to realist theorists but also to the practitioners of statecraft. Karl A. Wittfogel (1957, 1981:9), in his study of social orders in hydraulic societies, *Oriental Despotism*, observes:

...the political leaders of the Orient are still greatly attracted by a bureaucratic managerial policy which keeps the state *supremely strong* and the non-bureaucratic and private sector of society *supremely weak* [Italic added].

Much of this view is still true in today’s oriental societies, especially in countries like Lao People's Democratic Republic (PDR) and even to some extent in Thailand, which is considered to be the most democratic country in the region. This view has dominated the theoretical landscape of international affairs until recently. As a result, there is a lack of well-tested theoretical foundations to analyze institutional adaptations of such regimes as the Mekong and the Rhine that are incorporating both the traditional roles of states as well as the roles of “weak” forces that are mainly responsible for transforming these regimes.

This lack of a well-tested theoretical foundation to understand today's complex world has reached a level where practitioners have begun to address the absence of theoretical reference to garner effective governance mechanisms to solve ongoing global problems. A permanent representative of Brazil to the United Nations, Ambassador Gelson Fonseca (1999), wrote:

We are forced to acknowledge that theoretical solutions for the interpretation of our complex contemporary international world have yet to find adequate roots in practical reality. (p. 4)

In an article entitled "Who participate in global environmental Governance?" published in a leading journal on environmental governance, *Policy Sciences*, Matthew R. Auer (2000) amplified this lack of well-tested theoretical understanding about today's global environmental phenomena.

... For the study of global environmental problems, particularly those problems that are simultaneously global and local, the investigator must map the influence of an even broader assemblage of actors. Little is known about how local level institutions or ordinary citizens fit into global environmental policy processes. (p. 155)

This dissertation contributes to the empirical understanding of the origins of the power of non-state actors that influence and transform the ways in which transnational regimes function in a globalized and complex world. This study offers in-depth analysis of empirical evidences from the Mekong and the Rhine for further theoretical development of "institutional adaptation," or institutional transformation of the global governance phenomenon.

In so doing, this dissertation is guided by three related research questions. First, what is the origin of the power of non-state actors who influence institutional transformations in the Mekong and the Rhine? Second, why and how do non-state actors

influence the traditional regime to transform, and what are the consequences for the authority, policy, and law of the state? Finally, what do we learn from empirical evidences of the Mekong and the Rhine regime transformations to construct a theoretical foundation for institutional adaptation by which states and non-state actors act together to achieve projected goals?

Research Design

This dissertation focuses on four cases of institutional arrangements to govern water pollution in the Rhine River Basin and a case of building a hydroelectric dam in the Mekong River Basin as examples of transnational environmental regimes where non-state actors are increasingly influencing the institutional order of environmental governance. This study investigates the interplay of issues, interests, and actors in the governance processes at the collective-choice level of rule-making and cleaning pollutant chemicals in the Rhine and coping with the consequences of dam construction in the Mekong. Because this study focuses on empirical cases of governance processes connecting the collective-choice level to the operational-choice level of environmental governance, this case study allows in-depth analysis of how and why state and non-state actors engage in multilayer transnational environmental governance.

The data gathered for the analysis sheds light on how state and non-state actors engage in governance processes at local, national, and transnational layers. In addition, the data gathered through interviews and archival document research about the “base values” non-state actors use to gain “scope values” and to influence transnational environmental regimes in the Mekong and Rhine also sheds light on the origin of the

power of non-state actors. This should subsequently help field practitioners, such as the World Bank and other international donor agencies, who are concerned with non-state actors' roles, especially local people's participation and capacity building in governance processes of transnational environmental governance. To be more precise, by understanding the sources of the power of non-state actors in transnational environmental governance, the international funding agencies will be able to deploy resources in the appropriate institutional setting to empower non-state actors who are key stakeholders in environmental governance and to promote good governance. Therefore, focusing on the influence of non-state actors in governance processes of dams in the Mekong and water pollution in the Rhine will shed further light on our understanding of the role of non-state actors and local communities in multilayer environmental governance.

Why Chemical Pollution in the Rhine and Dams in the Mekong?

Mekong and Rhine Rivers share one thing in common. They both flow through national borders of riparian states. This biogeophysical nature of the Mekong and the Rhine requires coordination among riparian states if they are to prevent violent conflicts and to enhance good governance of resources. In order to enhance coordination and governance of both the Mekong and the Rhine, riparian states in each river basin established transnational regimes.

In the Mekong River Basin, the Agreements on the Cooperation for the Sustainable Development of the Mekong River Basin, signed in 1995 (hereafter "1995 Mekong Agreement"),¹ established the Mekong River Commission (MRC).¹ It is

¹ MRC succeeded Mekong Committee (MC) established in 1957 and the Interim Mekong Committee (IMC) established in 1978.

composed of four lower riparian countries, Lao PDR, Thailand, Cambodia, and Vietnam, while two upper riparian countries, China and Myanmar, have observer status in MRC. The MRC is a formal “institutional framework for cooperation” among member states (Article 11) and it is designed to monitor and provide necessary technical assistance to the member states in provision of governance for environmental resources of the lower Mekong River Basin. The legal framework of the 1995 Mekong Agreement clearly mandates member states to “cooperate in all fields of sustainable development” including “irrigation, hydro-power, navigation, flood control, fisheries, timber floating, recreation and tourism in a manner to optimize the multiple use and mutual benefits of all riparians” (Article 1).

Although MRC legally stands as a formal institution that is linked among riparian states to deal with the governance issues of the lower Mekong River Basin, the issues and landscape of environmental governance is heavily shaped by non-state actors. This dissertation examines the case of Pak Mun Dam in Thailand—where both states and non-state actors are engaged in environmental governance. There are considerable volumes of literature explaining the ways in which member states coordinate in governance of the lower Mekong River Basin. However, very little about the role of non-state actors in this transnational environmental governance has been studied with the focus on the ways in which they influence institutional transformation.

Similarly in the Rhine, the riparian states established the International Commission for the Protection of the Rhine (ICPR) in 1950. Non-state actors (for instance, local salmon fishermen and shipping industries) have been present since the first meeting of the Central Commission for Navigation of the Rhine (CCR) was held in

1816. However, riparian states did not recognize non-state actors as viable actors in the formation of the state-centered regime and implementation of rules that were negotiated among states until 1987. ICPR is composed of five riparian states—Switzerland, France, Germany, Luxembourg, and the Netherlands—and the European Union.² ICPR serves as an international regime crafted by member states to enhance better governance of the Rhine and sustainable uses of resources. Researchers and observers of ICPR have praised successes of the governance processes to rehabilitate the Rhine from pollution that made the Rhine unpopular, with the status as the “Sewer of Europe” in the 1960s and 1970s (Bernauer and Moser, 1995; Dieperink, 2000; Verweij, 2000). *The UNESCO Courier* called the success of the Rhine pollution cleanup regime as the “Miracle of the Rhine” (Weber, 2000) and suggested it as a model for the future.

Rhine Pollution Cleanup Regime

Governance of the Rhine chemical pollution has been studied from the dimensions of international cooperation (LeMarquand, 1977; Bernauer and Moseur, 1995; Dieperink, 2000), cultural theory (Verweij, 2000), and international river management (Marty, 2001). None of these studies has analyzed and explained the governance of the Rhine from institutional dimensions. To be more specific, none of these studies has focused on the ways in which formal and informal rules of engagement among state and non-state actors evolved and how those rules are transformed overtime. Some have even argued that institutional dimensions in the study of common-pool

² The European Community (EC, now known as the European Union) became a member of ICPR in 1976 as a result of development of the EC Water Regulations that require uniformity among member states, which in turn barred its member states from signing treaties with non-member states such as Switzerland in ICPR. Therefore, EC membership in ICPR enabled its EC member states to have treaties with Switzerland.

resources are inapplicable (Verweij, 2000: 125-128) in the case of the Rhine pollution cleanup regime. These studies have overlooked the key role of institutional adaptations influenced by various non-state actors' participation. The key successes in cleaning up Rhine pollution have been due to changes in the institutional regimes of both local chemical industries (alleged polluters) and drinking water industries coupled with member states' stricter regulatory regimes pressured by local public and non-government organizations (NGOs). These key non-state stakeholders influenced the Rhine regime to transform from a rigid and exclusionary state-dominated legal regime to an inclusive regime that recognized and incorporated the roles of non-state actors.

As a result, the 1976 Convention for the Protection of the Rhine against Chemical Pollution and the 1976 Convention for the Protection of the Rhine against Pollution from Chlorides were transformed into (not replaced by) the Rhine Action Program for Ecological Rehabilitation (RAP) regime in 1987. RAP embraced non-state actors as key partners in implementation of the objectives and goals that were defined in the 1976 conventions. RAP implementation achieved the projected goals to clean the Rhine. What caused the Rhine regime to transform from a treaty-type legal regime to action-oriented policy (soft law) regime? How and why were non-state actors able to advance their interests in regime transformation? What can we learn from the regime transformation and dynamic of participation from states, non-state actors, and local communities in the Rhine Action Program? These are some of the questions I answer in my case analysis of the Rhine cleanup regime in chapters 4 and 5. Taking the successful case of institutional adaptation in the Rhine River Basin as a background case that provides research questions and hypotheses, I analyze the case of Pak Mun Dam in the Mekong River Basin

with the focus on the ways in which non-state actors in Mekong influence governance processes.

Dams in Mekong River Basin

Although MRC is a formal institution composed of member states, it has no legal and political authority to directly govern dams that are built within its jurisdiction. The policy principles of MRC's Water Resources and Hydrology Program clearly state that "decision-making with respect to hydropower development and operations rests with the member countries although MRC has a role to play in monitoring environmental impacts, especially those related to transboundary effects" (MRC, 2001). Because of the externalities from construction of dams that have transboundary effects on all layers, from local to national to international, MRC has policy interests and a stake in the governance of dam projects.

Pak Moon Dam in Thailand

The Pak Mun Dam project was initiated by the Thai National Energy Authority (hereinafter, NEA) in 1970. The NEA transferred the project to the Electricity Generating Authority of Thailand (hereinafter, EGAT) in 1979 for further study. After the study was completed, EGAT presented the Pak Mun Dam project to the Thai Cabinet for approval in 1989. One year later, the Thai government presented the Pak Mun Hydropower Project as a part of a loan package for energy development to the Board of Governors of the World Bank. After a series of reassessments of the government's version of costs and benefits analyses of the project, the World Bank decided to approve a US \$54 million

loan for the Thai Power System Project that includes the Pak Mun Dam. The Thai Cabinet approved the Pak Mun Dam project on May 15, 1990. Construction of the dam began in mid-1990 and was completed in November 1994.

The design of Pak Mun Dam is a run-off-the-river dam and is one-of-a-kind in Thailand, with eight sluice gates (or spillway gates) that can be opened and closed to adjust the water level of the reservoir. It is located on the Mun River at 6 km upstream from its confluence with the Mekong River, in the province of Ubon Ratchathani in Northeast Thailand. It was built and operated by EGAT. According to the initial project design and estimate, the dam and reservoir directly affected 241 households who were resettled from 11 villages. However, the majority of households in the surrounding 65 villages are fishing communities whose livelihoods are closely tied to the Mun River fisheries. According to EGAT's official documents, 6,176 households from 65 villages were compensated by the government for their loss of fishing incomes after construction of the dam was completed.

Although there were protests against the Pak Mun Dam project by urban middle class and rural villagers from Ubon Ratchthani, the intensity of public protests, mainly by affected villagers, increased after the World Bank's involvement. Later, the national and international NGOs in Thailand and the World Commission on Dams took serious interest in Pak Mun Dam and launched their own analyses of the economic, environmental, and social impacts of the Pak Mun Dam. The involvement of affected local villagers was further fueled by increased awareness of the externalities of the Pak Mun Dam by villagers who had never been consulted about the project by the Thai government.

With the increased momentum of the struggle against Pak Mun Dam, villagers eventually launched their own research about the impacts of Pak Mun Dam on their livelihoods and produced substantial knowledge to counter the government's refusal to listen to their protest. Their research, widely known as *Ngan Wijai Thai Baan* (village community research), was officially recognized by the World Health Organization as a good example of research into community health and wellness. The latest episode of governance processes in the Pak Mun Dam struggle ended with the decision of the present Prime Minister Thaksin Shinawatra to keep the dam sluice gates closed for eight months annually for electricity generation, after a half-day meeting between the villagers and the Prime Minister at the government house on December 20, 2002.³

Analytical Framework

Within the Mekong and the Rhine transnational environmental regimes, there are at least three layers⁴ of governing institutions: (1) local institutions composed of individuals, community organizations, and industries; (2) national institutions in each member state composed of ministerial and municipal governments; and (3) transnational institutions composed of national delegations at the transnational layer and other non-state actors such as donors and environmental NGOs. These layers are institutionally

³ "Pak Mool Face Off: No Negotiation, Villagers say," *The Nation*, Bangkok, December 20, 2002. I watched a live discussion between Prime Minister Thaksin Shinawatra and 30 villagers who were elected by village protesters, at street-side protest camp set up by Pak Mun protesters and the Assembly of the Poor near the government house.

⁴ I use the term "layer" in lieu of "level" as in literature describing international governance as "multilevel" governance, echoing Putnam's famous "Two-Level Games." The word "layer" is free from connotation of ranking importance or degree while "level" can convey degrees or importance. Whether a local layer is more important than a national or transnational layer in governance is not a clear-cut issue. The term "layer" is more congruent to "domain." However, domain in and of itself means there is one rule for each domain, while a domain can still be under multiple types of rules.

interconnected in the governance processes of dams in the Mekong River Basin and chemical pollution in the Rhine River Basin. Within each layer, issues, interests, and actors mainly shape political processes. The presence of these issues, interests, and actors in each layer as well as the strength of networks among them is a dynamic political process. I define this whole dynamic process as a “governance process,” which might also be referred as an “action arena.” Governance by state governments has been the traditional subject in the study of international affairs. However, governance nowadays is a phenomenon of managing and networking of issues, interests, and actors to produce actions that have to be transparent in process and effective in achieving the stated goals of regimes.

In governance processes, issues, interests, and actors interdependently shape one another. To illustrate the definition and interplay of issues, interests, and actors, consider the processes involved in driving a vehicle on the road. The drivers (actors) cannot always drive at their desired speed nor in the ways they want. If they were to drive at the speed and in the ways they want, one of the immediate problems (issues) is that an accident would likely occur. If an accident were to occur, there might be injury, medical cost, and increase in car insurance, which are in the interests of all drivers on the road. In this illustration, actors’ desires and choices are constrained by issues that are framed around interests. What govern these issues, interests, and actors are rules that are formally established (traffic regulations) and informal rules (e.g., other drivers’ behaviors, road conditions and weather). In governance processes, these issues, interests, and actors interplay in a complex web of rules. It is important to personify issues and interests as they relate to actors within the web of both formal and informal rules. The dynamic

political processes of governance are generated because of this interplay. If one of these three is absent or weak (e.g., an issue is weak, or there is no actor, or there are no interests), there will be less interplay among them and almost no dynamic political and social processes in the organization of human order.

Drawing Insights from IAD and Policy Sciences Approaches

To explain and analyze governance processes of the Mekong and Rhine river basins, I apply analytical insights from the Institutional Analysis and Development (IAD) approach developed at the Workshop in Political Theory and Policy Analysis at Indiana University and the Policy Sciences approaches developed at Yale University led by Harold D. Lasswell and colleagues. Combining insights from IAD and Policy Sciences approaches, I developed the Issues, Interests, Actor Network (IAN) Framework (Myint, 2002) to unpack governance processes of dams in the Mekong River Basin and chemical pollution in the Rhine River Basin. The framework of analysis is applied to unravel issues, interests, and actors in each layer of the Mekong and Rhine transnational regimes. With the lens of the IAD approach, I focus on the processes shaping the “action arena”⁵ involved in each case (see Figure 1.1).

The focus on issues, interests, and actors is imperative to unravel and analyze governance processes because these serve as the joints or medium in the multilayered dynamic system of governance processes (action arena) as shown in Figure 1.1. In analyzing the processes of issues, interests, and actors network (IAN) in each layer of

⁵ I interchangeably use “action arena” with “governance process” to which I unpack and analyze how issues, interests, and actors interplay within the contexts of physical attributes and rules-in-use. The beauty of the IAD framework is its inclusiveness of both physical attributes and rules-in-use that participants or actors encounter in shaping governance processes to produce their outcomes.

institutional order in the Mekong and the Rhine, the IAN framework helps me elucidate the contexts from which IANs in each layer emerge and explain processes of actions that produce outcomes and externalities.

“Issue,” according to the *American Heritage Dictionary*, is defined as “a point of discussion, debate, or dispute; a matter of wide public concern; culminating point leading to decision.” Based on this definition, I define an “issue” as a problem or a matter that calls for solution. For the definition of “interest,” I consulted the online edition of the *Oxford English Dictionary*, and it is defined as “the relation of being objectively concerned in something, by having a right or title to, a claim upon or a share in.”⁶ Based on this definition, I define “interest” as the state of possessing a rightful and reasoned stake or share in something. All actors are concerned participants whose decision-making capacity and interests are affected by the policies and laws of governing institutions of the dams in the Mekong and water pollution in the Rhine. Therefore, I define “actors” as participants who eventually become stakeholders in the governance process.

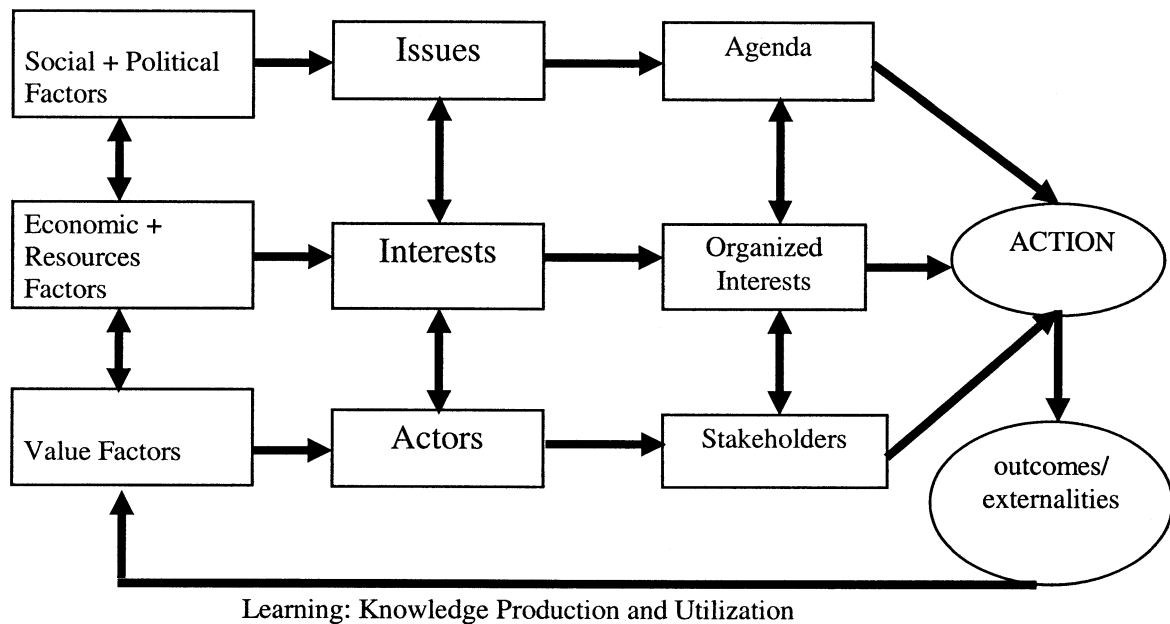
What govern the dynamic interplay of issues, interests, and actors are the institutions that are formally and informally established rules.⁷ Arthur F. Bentley (1908), who pioneered the study of “group interest” to explain the political process of pressure groups on three branches of the U.S. government, asserts, “there is no group without its interests. . . . The group and the interest are not separate . . . if we try to take the group for analysis without interests, we have simply nothing at all” (pp. 211-213). The group interests cannot be ignored for analytical purposes for scholars and practical purposes for

⁶ See <http://calliope.ucs.indiana.edu/oed/>, accessed on September 21, 2001.

⁷ The Institutional Analysis and Development (IAD) framework developed at the Workshop in Political Theory and Policy Analysis provides this language of institutions as rules-in-use. For further details, see Ostrom’s (1990) *Governing the Commons: The Evolution of Institutions for Collective Action* and Ostrom, Gardner, and Walker’s (1994) *Rules, Games, and Common-Pool Resources*.

practitioners. Bentley argues that special interests are “raw materials of politics” and believes that political campaigns of local activists and lobbyists, their acts of pressures and persuasion, conflict and collusion are not to be denounced or deplored but to be described and understood. Furthermore, interests are not only a driving force to lobbyist groups but also to governments. In a democratic governance system, interests of politicians and electoral representatives collectively become the engine of governance. Therefore, the study of governance process must analyze the dynamic interplay of interests in relation to issues and actors.

Figure 1.1: Issues, Interests, and Actors Network in Governance Process



Within each layer of institutional arrangements in the Mekong and the Rhine, the collective desires of individual actors influence governance processes at varying degrees.

In order to analytically approach the ways in which an individual actor's choices or preferences are shaped within a layer of institutional arrangement, the IAD approach lends insightful analytic compartmentalization of governance processes where individuals craft strategies to pursue their interests. The IAD framework dissects three nested levels to analyze governance processes: (1) operational-choice level; (2) collective-choice level; and (3) constitutional-choice level (Kiser and Ostrom, 1982; Ostrom, 1999: 36-39). In governance processes of dams in the Mekong and chemical pollution in the Rhine, issues, interests, and actors shape these three levels within each layer of the regimes, from local to transnational. By analyzing this interplay, this dissertation investigates cross-level policy tensions and connections through which non-state actors influence institutional transformation of transnational regimes.

Complementary to the IAD framework is the Policy Sciences approach. With the Policy Sciences approach, I zoom into the ways in which individuals shape governance processes (or social processes) in pursuing their values in society. The Policy Sciences framework organizes the analytical dimensions of governance phenomenon into three groups: (1) social process; (2) decision process; and (3) problem orientation (Lasswell, 1971; Clark, 2002: 9). Social process helps me elucidate the ways in which *actors*⁸ emerge and influence governance processes of the Mekong and the Rhine regimes to seek their perspective values. Decision processes help me map the ways in which actors' *interests* are shaped and promoted to influence the governance processes of the Mekong

⁸ Policy Sciences prefers using the term "participants" in lieu of "actors." I use the term "actors" to capture broader assemblage of individuals who have intentionally or unintentionally influence the governance processes. For instance, a fourth-century Roman poet Ausonius wrote "Salmon among the fish in the Rhine." Many other writers and poets wrote the beauty of the Rhine far before 1950 when ICPR emerged. Poet Ausonius was referred to when ICPR crafted the "Salmon 2000" project under the Rhine Action Program in 1987. Poet Ausonius probably did not intend to be a participant in Rhine Action Program that emerged in 1987, but his poem helped shape at least the goal of project to restore Salmon. I consider poet Ausonius not as a participant but as an actor.

and the Rhine. Problem orientation lends the analytic lens to dissect the ways in which social and policy problems become political *issues* and how they became public agenda for decision making in the Mekong and the Rhine regimes.

In the governance process, as in the “social process” that Lasswell and McDougal (1954: Ch. I, p.1) articulated, individual actors or “participants” in Policy Sciences “influence one another to pursue values.” In so doing, actors shape and apply governance strategies (rules-in-use) in the action arena and aim to achieve values they hold as projected goals. Lasswell and McDougal (1954) wrote:

When two persons influence one another, we speak of process as social. In a world shrinking at an ever-accelerating rate because of relentlessly expanding, imposing technology, the people of the globe as a whole constitute a world community, which in turn is composed of myriad of smaller communities. Acting as individuals and in concert, the participants in all social processes, large and small, pursue values through institutions using resources. (Part II, Ch. I, p.1)

Social process, Lasswell and McDougal explained, is the mechanism by which individual persons (actors) pursue values in society. These social processes occur within three choice levels that the IAD framework compartmentalizes in governance processes. In essence, Lasswell and McDougal’s assertion conveys that actors are mainly guided by values within the constraints imposed by issues and interests to obtain the values they uphold in society. I draw this notion of social process to frame governance process or action arena in the Mekong and the Rhine.

Policy scientists identified eight value categories (Lasswell and Kaplan, 1950: 87; Lasswell, 1971:18; Clark et al., 2000:12). These are *power, wealth, enlightenment, skill, well-being, affection, respect, and rectitude*. Actors in governance processes use some of these values and seek some of these values based on their preferences in what is called “social transactions” (Clark et al., 2000:13). Actors use some of these eight categories of

values to gain others from governance processes. The values that are used to influence governance process are *based values*. The values that are sought by actors in governance processes are *scope values* referred to in Policy Sciences frameworks. In the governance process, “all human actors are predisposed to complete acts in ways that are perceived to leave actor better off than if he had completed them differently” (Lasswell, 1971: 16; Clark, 2002: 24). All or some of these eight values drive the way in which actors pursue their objectives and goals in governance processes of the Mekong and the Rhine. The breadth of Policy Sciences framework is that it enables me to zoom into the ways in which actors shape and employ strategies to gain the values they uphold, which are not just economic values but also are social, cultural and moral values. Therefore, the insights from both the IAD and the Policy Sciences frameworks provide a road map in my analysis of issues, interests, and actors in the governance processes of the Pak Moon Dam in the Mekong River Basin and four cases of cleaning chemical pollution in the Rhine River Basin.

Organization of This Dissertation

This dissertation is organized into eight chapters. Chapter 2 reviews theories that pave the way for the intellectual journey of this dissertation to examine empirical evidences of theory of institutional adaptation. Following theoretical review, this chapter charts methodology applied to field research in the cases of the Mekong and the Rhine. Chapter 3 is a review of the evolution of international cooperation among riparian states in the Mekong and Rhine river basins. This chapter serves as a contextual background to evolution of the cooperation among states as well as the emergence of institutions at the

international layer. Historical evidences of the Mekong and Rhine regimes demonstrate the strength and weakness of state-to-state cooperation in transnational environmental affairs.

Chapters 4 and 5 present empirical evidences from the successful institutional adaptation in the case of Rhine chemical pollution cleanup regime. The insights from the cases of chemical pollution from the Rhine River Basin lend analytical research questions to shed light on the cases of dams in Mekong River Basin. In Chapters 6 and 7, I explore and uncover the origins of the power of non-state actors in the case of Pak Mun Dam. These chapters explain how the power of non-state actors, especially villagers, over a decade of struggle in the Pak Mun Dam case slowly influenced governance processes of the state of Thailand in specific and political socialization within Thai society in general.

In Chapter 8, I synthesize evidences from both Pak Mun Dam in the Mekong and four chemical pollution cleanup regimes in the Rhine cases. Chapter 8 offers theoretical and policy meanings of empirical evidences presented in the cases. A clear lesson we learn from empirical evidence in this chapter is that, in policy analysis and governance processes, we are dealing with *allocation of values* among a wide assemblage of actors. In allocation of values, we are dealing with the world of values productions and utilizations of actors in governance processes. It is also shown subsequently that focusing on national interests or the interests of state actors alone is not going to provide the necessary understanding about governance of today's complex world. For theoretical interpretation and policy advice, we have to look into actors beyond states in today's international, transnational, and global affairs. The chapter then presents a conceptual model of how three clusters of variables, namely *knowledge*, *assets* (money, human and

natural resources capacity), and *degree of political freedom* serve as the origin of power of non-state actors in these three cases. Chapter 8 draws conclusions from the syntheses of the cases about the origin of non-state actors and how they influence to transform state-centric international regime and to adapt to new challenges. Finally, the chapter further discusses the future research agenda for theory of institutional adaptation as institutions face changes in the order of the world. In so doing, this chapter projects more emerging cases of influence of non-state actors in the Mekong River Basin, such as the Nam Theun 2 dam in the Lao PDR.

Chapter 2

Theoretical Review of this Dissertation

The international system, in which nation-states are the key players, is going through a period of transformation imposed by social, economic, and political changes and challenges. These global changes and challenges are shaping nation-states' futures as well as the future of the international system. What are the forces behind transforming the institutional order of once state-centered world order is an intriguing empirical and theoretical question. This question is a source of the puzzle for this dissertation to investigate empirical evidence of institutional adaptation in the cases in transnational environmental regimes of the Mekong and Rhine river basins.

The dominant international relations theories that explain the ways in which a Westphalian state-centered world order provide insightful theoretical reference to the world order as long as the states are the only actors in shaping the world order. It has long been recognized, at least in historical evidence, that states and the state alone are not the only forces that shape the world order (Haas, 1964; Risse-Kappen, 1995; Charnovitz, 1997; Florini, 2000). Charnovitz (1997) reports at least two centuries of participation of non-government organizations (NGOs) in international governance. The presence and influence of non-state actors in international affairs is more prevalent in today's globalized world. Their presence and influence are perhaps most prevalent in global environmental governance issues (Princen and Finger, 1994; Wapner, 1996; Auer, 2000). The challenge to both practitioners and scholars is to understand how these non-state actors influence institutional transformation of the once state-centric world order.

Review of Dominant Theories

The dominant international relations theories devote much of their analytical attention to the constitutional-choice level of the world order. The analytical emphasis is on making the rules of the game and creating inter-state organizations for maintaining world order. Because of their overemphasis on the constitutional-choice level of world order and their focus on states and their relations, these dominant theories are insufficient to explain linkages across three layers—local, national, and transnational—of governance in the complex world where states and non-state actors engage in governance processes. Subsequently, these theories are insufficient to explain the linkages across three levels of institutional choice levels—operational, collective, and constitutional.

However, the dominant international relations theories provide insightful background for this dissertation. In the following pages, I explain and analyze the strengths and weaknesses of realism, functionalism, neo-functionalism, regional integration theories, and regime theories. By doing so, I show the theoretical journey of this dissertation and the plan to develop a theory of institutional adaptation or adaptive governance based on the cases from the Mekong and Rhine river basins.

Realist Doctrine of the World Order

The state-centered view of institutional order of the world, transcended from realist doctrine of Thucydides, Hobbs, Machiavelli, and Morgenthau, has dominated theoretical interpretations of the post-war world order in international relations. Leading thinkers behind the establishment of the academic study of international relations at the end of World War I argued for a new discipline that would promote world peace. This

call for a new discipline generated what has been known as the first great debate between realism and idealism in the inter-war years to create a subject which was centrally concerned with the problem of war (Linklater, 2000: 1). Hans J. Morgenthau puts forward a comprehensive twentieth-century modern theory of international relations to be known as *realism* in his *Politics among Nations: The Struggle for Power and Peace* published in 1948 (Hoffmann, 1977: 41-45; Gaddis, 1992-1993: 46; Lebow and Risse-Kappen, 1995: 50). The end of World War II opened up a structural vacuum in world affairs. After the humiliation of two world wars, peace became the prevalent desire of nation-states and human civilization while power struggle among states continued. This structural vacuum accommodated the birth of what is known as the Cold War order. The Cold War order, mainly a power-balancing game between the American block and the Soviet block, reinforced the realist view of the world. This group of scholars led intellectual journey of the international relations study as the literature of the field was flocked by the study of relationships among states in the Cold War era.

In a critical assessment of realism, Keohane and Nye (1997: 23-37) assert that realist theorists assume three conditions in theorizing world order: (1) states are coherent units and are dominant actors in international politics; (2) force is a usable and effective instrument policy in international politics; and (3) issues in international politics are hierarchical, as in order of “high politics” to “low politics.” As a result, realist theories that address world order in the international relations literature were mainly constructed downward from states to local communities and individual citizens. Arguably this fundamental fallacy of dominant international relations theories, that world order is mainly controlled by states or imposed by states, contributes to the failure to predict the

future of world order. It was evident that the world community, including international relation theorists, was surprised at the end of the Cold War by the turn of the Soviet Union into a constituent republic by way of the revolution of 1989 (Lebow and Risse-Kappen, 1995: 1-3) and sweeping emergence of democracy granting more freedom of groups and individual citizens in the late 1980s and 1990s around the world.

In October 1991, the Cornell University Peace Studies Program held a conference to search empirical reasons for the end of the Cold War and to address the implications of the end of Cold War for international relations theory. Scholars of the Cold War who attended the conference contributed to the volume of essays, *International Relations Theory and the End of the Cold War*, in which scholars engage in considerable debate on what caused the Soviet Union to turn into a constituent republic after the revolution of 1989. The focus on the change of policy and structure in the Soviet Union was intended for many scholars to investigate what caused the end of the Cold War. The Cold War scholars seem to agree on a conclusion that the changes in the Soviet Union happened due to “pressures from below coming from dissident groups in Eastern Europe, and decisions at the top made by Andropov and Gorbachev” (Doyle, 1995: 85-103; Koslowski and Kratochwil, 1995: 128; Lebow and Risse-Kappen, 1995: 12). Some of them went even further to draw conclusions about changes in structure of the international system based on the lessons of the end of the Cold War by asserting that “fundamental change in the international politics occur when beliefs and identities of domestic actors are altered, thereby altering the rules and norms constitutive of their political practices” (Koslowski and Kratochwil, 1995:128).

Generally speaking, this dissertation addresses the bottom-up influence on institutional transformation in the Mekong and Rhine river basins. However, this bottom-up view alone does not capture other factors that affect structural transformation of international politics because these other factors are influencing the domestic arena from outside the state-centered system in parallel settings. An example is the international and local environmental and social NGOs influencing structural changes in Thailand, which is analyzed in detail in chapters 6 and 7.

The challenge was further renewed for international relations theorists by the emergence of the new world order in the post–Cold War era. Keohane and Nye (1997) conclude “we believe that the assumptions of political realists, whose theories dominated the postwar period, are often an inadequate basis for analyzing the politics of interdependence” (p. 23). Because this dissertation investigates issues, interests, and actors that are beyond the frame of reference of realist theories, namely of states, realist views do not offer an appropriate analytical tool.

Functionalist Doctrine

Alternatives to the realist view of the world are functionalism and neo-functionalism. The concerns for world order were points of motivation for practitioners and thinkers alike and thus were empirical grounds behind the building of theories to explain relationships among states in the study of international relations. The fundamental motivational force behind the thinking about world order is rooted in consequences of the two world wars caused by power struggles among states. Because it is motivated by consequences of two world wars, the objective was to maintain order and

peace in a state-dominated world. It is logical then, in the idealist view, to think how an international system composed of states should best be organized to maintain peace and order. The outcome was the formation of international organizations like the League of Nations and the United Nations (UN) that would more or less act as supranational organizations at the international layer.

David Mitrany (1946: 27-33; 1966: 149-166) argues for the “functional development of international organization” by welcoming the emergence of international organizations to maintain peace. Mitrany (1966: 151) proposes that the international organization can be structured under one of three categories: (1) a general and fairly loose association, like the League of Nations and the UN; (2) a federal union; and (3) a system of functional arrangements. He advocates for international organization to be a system of functional arrangements. In the functionalist view, the focus of actor is on international organizations composed of states, which is not too different from the realist view in the sense that states are still actors for arrangements and functions of international organizations. In a realist world, on the other hand, powerful states make the rules of world order, while in a functionalist world, a collective entity of states makes the rules of world order. Compared to realism, functionalism offers some insights in contextualizing the ways in which member states in the Mekong and Rhine river basins operate as international organizations. Unlike realism, functionalist theory explains that world order is built upward from states to inter-state (international) organization. In either case, the point of origin in organizing world order begins at the states. This dissertation challenges the state-centric notion of the world order, especially in governance of environmental resources that are naturally rooted in local communities and individual citizens.

Regional Integration Theories

At the early stage of post–World War II world order, one of the emergent properties of the international system that began to challenge practical properties of states’ sovereignty was the phenomenon of regional integration. At least this was the case in Western Europe, where states began to “integrate” in their political efforts to build a united continent. Regional integration was arguably one of the major forces that emerged to shape the practicality of international systems of the world that gave birth to some of today’s emerging properties of transforming international systems. For instance, economic and custom unions largely shaped by state-to-state relations without direct influences from non-state actors are examples of regional integration. Regional areas of free trade such as the North American Free Trade Area, regional associations such as the Association of South East Asian Nations, and regional economic unions such as the European Union are all results of regional integration among member states.

To explain these regional integration phenomena, scholars began to construct theories known as regional integration theories as an intellectual pursuit. In an assessment of regional integration theories, Ernst B. Haas (1970), one of the leading scholars in this area, described the study of regional integration as being:

concerned with how and why states cease to be wholly sovereign, how and why voluntarily mingle, merge, and mix, with their neighbors so as to lose the factual attributes of sovereignty while acquiring new techniques for resolving conflict between themselves. (p. 610)

After about fifteen years of study of regional integration theories, Haas (1975) concluded that theories “we have developed for describing, explaining, and predicting

regional integration, however, have a tendency not to predict very accurately” (p. 1). Therefore, Haas further argued, “regional integration theories are obsolescent” and further development of regional integration theories is “no longer profitable as a distinct and self-conscious intellectual pursuit” (p. 1). The reason, Haas asserts that regional integration theories were obsolescent was “because they are not designed to address the most pressing and important problems on the global agenda of policy and research” (p. 17). In a textbook that reviews regional integration theories to explain the phenomenon of the European Union today, Wood and Yesilada (1996) echoed Haas in asserting that “... several theories with varying degrees of staying power, and we conclude that none of them is sufficient to understand fully where the EU is today or to explain how it got that way” (p. 15). It is, therefore, fair to conclude that regional integration theories are insufficient to explain institutional transformation in the Mekong and Rhine river basins.

Institutionalism for Study of Regimes

Scholars such as Stokke (1997: 36) argue that regional integration theories are too ambitious in the way these theories attempt to explain the complex problems of international regime formation. They advocate the compartmentalization of complex issues and institutions into smaller units and encourage the analytical study of each issue and institution. Stokke (1997) calls this type of study “regime theory” analysis. According to Stokke, “regime theory sliced up and simplified parts of neo-functional integration theory into three moves” (p. 36). First, it “lifted issue-specific, institutionalized cooperation out of theoretical context of broader regional cooperation processes.” Second, it “divorced itself from the notion that centralized decision-making is

the optimal response to situations of interdependence.” Third, by “focusing on institutions themselves, rather than on wider process of which they are apart, regime analysis could inquire into the various ways in which regimes are significant to cooperation and discord among states” (p. 36). Regime theory, therefore, provides a conceptual framework to advance studies of international relation further. Some have even asserted that it “has broken new ground in international relation theory” (Rittberger and Mayer, 1993: xii).

Although regional integration theories did not prevail in the theoretical pursuit of explaining and predicting the integration of states, it at least gives birth to the concept of *regime* when regional integration theorists looked into collaboration, instead of integration, among states in a specific issue arena. Ernst B. Haas (1980) was a pioneer in articulating the concept of regime as “norms, rules, and procedures agreed to in order to regulate an issue-area” (p. 358). Later, regime scholars carried on with the study to solidify the definition of regime. In a highly referred collection of articles in a book on regimes, *International Regimes*, Krasner (1983) defines regime as “principles, norms, rules, and decision-making procedures around which actors’ expectations converge in a given issue-area” (p. 1).

Regimes are also interchangeably referred to as institutions. A major departure from realism, idealism, functionalism, and regional integration theories is that regime theory encompasses non-state actors as one of multiple actors in regime formation and function. Because regime theories or institutionalist approaches are concerned with the study of actors beyond states and how these multiple type of actors who shape the form and function of regimes (institutions), this dissertation finds these approaches as useful

frames of reference to investigate further about the regime adaptation or institutional adaptation in the Mekong and Rhine river basins. Regime theories have generated considerable amount of literature that focuses on levels of study from regime formation (constitutional-choice and collective-choice levels) to regime effectiveness and regime design (operational-choice level).

The subject of global environmental governance has been chiefly dominated by the study of environmental regimes. Political scientists' works advanced the study of international regimes. Their emphasis was to understand and theorize how international affairs may effectively be governed by regimes that are designed to achieve stated objectives and goals. Peter Haas in 1989 posed the question: Do regimes matter? Haas' fundamental question maintained the study of regime to address whether regimes make any difference to the international environmental affairs they address. Ten years after Haas raised the question, Young (1999) answered Haas' question:

We can state without hesitation that regimes do matter in international society, so that there is nothing to be gained from perpetuating the debate between neo-institutionalists and neo-realists about the 'false promise of international institutions.' (p. 249)⁹

If regimes do matter, are they effective? Later emphasis on the effectiveness of international regimes is multiplied by the emergence of globally concerned issues such as environmental degradation, trade disputes, disease control, and conflict resolution. These global crises not only require international cooperation among states but also demand actions beyond traditional diplomacy. The dominant study of international affairs is confined to the study of power and diplomatic relations among sovereign states.

However, regime analysts propose to investigate beyond a realist approach to the study of

⁹ See also Mearsheimer, 1994-1995 for 'false promise of international institutions'

international affairs and further advance a transnational perspective to global governance by drawing insights from the experiences of international environmental regimes (Young, 1997). As Michael Zürn asserted in a major review of the progress of research on international environmental politics, study of regime effectiveness has become the “driving force” (1998: 649) in the analysis of global environmental governance.

If regimes do matter, what types of regimes (institutions) work better for transnational environmental governance? In other words, why some regimes are effective and others are not effective is the question that dominates the study for regime design. The search for better regime design is complimentary to regime effectiveness study in environmental governance. The literature on regime design agrees that variations among different scales and different types of regimes produce different outcomes. At the local layer, some resources appropriators (or users) find ways to use resources in a manner that is sustainable over time and some do not (Ostrom et al.,1999). In similar fashion, it is still unresolved why some international regimes are successful and some are not (Young, 1994). In essence, regime designs matter (Mitchell, 1994) for global environmental governance. They matter not only for effectiveness but also for equity and openness in the governance process. That is appropriation of resources among stakeholders in an open process and efficient manners. Keohane (2001) argues that “effective and humane global governance arrangements are not inevitable” (p. 12) but rather regimes (institutional arrangements) must be designed. However, regime design will make sense only to the extent that it involves “understanding of the ways institutions are likely to work in practice” (Young, 2002: 5). Therefore, the design of regimes governing transnational

environmental resources must be sensitive to and reflective of the economic, political, and social contexts within which regimes operate.

In practice, regimes change, transform, and adapt to face challenges of biogeophysical and social changes. The transformation and adaptation of regimes or institutions is an area that is not systematically studied in the field of environmental governance. Although institutional adaptation has not been studied systematically, the existing literature has been addressing the contextual elements in which institutional adaptations are occurring. The literature on globalization has been addressing institutional transformation with the focus on practicality of a state's sovereignty and the structure of the state. This dissertation benefits from the literature on globalization and the changing nature of the state. Therefore, I now want to briefly turn to the ways in which globalization has been framed in literature that devotes discussion to global transformation due to the changing nature of state-centered world order.

Challenges in Globalization

There is no single universally agreed upon definition of globalization. It is generally agreed that globalization, however, is one of the major forces shaping the future of nation-states and the future of state-centered world order. Understanding how globalization is shaping practicality of a state's sovereignty and structure is a useful link to frame research methodology for analyzing institutional transformation in the Mekong and Rhine river basins.

David Held et al. (1999), in assessing the debate about globalization literature, put forward three views of globalization: (1) hyperglobalist view; (2) skeptic view; and (3)

the transformationalist view. These three views explain the position and status of the states in the era of globalization.

The Hyperglobalists' Thesis of Globalization

The hyperglobalists' view of globalization begins with the thesis that globalization is "a new epoch of human history in which traditional nation states have become unnatural, even impossible business units in a global economy" (Ohmae, 1995: 5; cited in Held et al., 1999: 3). This view is based on the economic logic that celebrates emergence of a single global market or "market civilization" as some hyperglobalists would assert (Gill, 1995). For instance, the way in which global capital in-flows and out-flows occur within and across markets of nation-states is a highly cited area where "borderlessness" behaviors of single global market is visible as nation-states are unable to control the movement of capital. Hyperglobalists would argue "that economic globalization is constructing new forms of social organization that will eventually supplant traditional nation-states as the primary economic and political units of world society" (Held et al., 1999: 3).

Globalization in the view of the hyperglobalists is primarily an economic phenomenon where politics is no longer the 'art of possible' but rather the practice of 'sound economic management' (Held et al., 1999: 4). Therefore, for the hyperglobalists, "the rise of the global economy, the emergence of institutions of global governance, and the global diffusion of hybridization of cultures are evidences of a radically new world order which prefigures the demise of the nation-states" (Ohmae, 1995: 11). If we are to live in a hyperglobalists' world, the majority of international laws that regard nation-

states as the fundamental subjects of international laws are no longer useful because globalization has prefigured “the end of nation-state” (Ohmae, 1995). We might be living in a system where the mercy of the “invisible hand” of the market configures “the framework of human action” (Albrow, 1996: 85).

Hyperglobalists are right in seeing the world through their lens that globalization to some extent contributes to denationalization of various nation-states’ policy and law. However, they have gone too far in arguing that globalization has ended the era of nation-states because civilization has reached the era in which market governs human activities as if Adam Smith’s thesis of human activities being governed by the “invisible hand” of the market has been proven by their concept of globalization (Ohmae, 1995). Although hyperglobalists make explicit claim about the demise of nation-states in the global era, they fail to offer an explicit policy prescription for maintaining global order in their acclaimed single global market. One could assume that the market will govern itself and order will be preserved at the outlooks of economic activities and in pursuit of economic growth.

Perhaps the fallacy of hyperglobalists’ argument is rooted in the myopic view of globalization as if it is only a result of economic activities among various types of human activities. Globalization is not just an economic phenomenon but is a phenomenon rooted in multifaceted human activities in all key domains of society—cultural, economic, educational, legal, political, and social. Hyperglobalists’ view of globalization falls short of connecting various dimensions of globalization to all multiple domains of society due to its conception of globalization as a largely singular process equated mainly with economic or cultural interconnectedness (Ohmae, 1990; Strange, 1996).

The Skeptics' Thesis of Globalization

The skeptics argue that globalization is not a new phenomenon and is not historically unprecedented. Their arguments rely on statistical evidence of world flows of trade, investments, and labor that have been occurring between predominantly national economies from the beginning of the Westphalian state-centric world system. They say globalization is an exaggerated “myth” which is no more than integration of national economies that have been happening since the beginning of the nineteenth century (Hirst, 1997). With this view, skeptics contend that hyperglobalists’ thesis of globalization is fundamentally flawed and politically naïve because hyperglobalists underestimate the enduring power of national governments to regulate international economic activity.

Therefore, the skeptics’ world is not a globalized world but rather an internationalized world where states still play a central role of regulating economic activities. In the skeptics’ world, international laws and policies will still be made by the power of sovereign states. The states are key actors in maintaining world order in the skeptics’ world. The skeptics’ view mirrors the realist view wherein states are pivotal institutions in organizing world order. Although the skeptic view might be right in asserting that globalization is not a new phenomenon, they fail to consider the intensity and magnitude of the forces of globalization in all domains of human society. The skeptics’ thesis of globalization also falls short of considering globalization beyond the history and practice of world trade within the economic domain. Consequently, the skeptics underestimate the power of non-state actors that have been crucial, if not the key, actor in processes of globalization.

The Transformationalists' Thesis of Globalization and Law

The transformationalists view globalization as a phenomenon or process that transforms or serves as a “central driving force behind the rapid social, political, and economic changes that are reshaping modern societies and world order” (Giddens, 1990; Held et al., 1999: 7). The ways and speed, in which this process of globalization that reshapes modern societies and world orders in the view of transformationalists, is historically unprecedented. Unlike hyperglobalists and skeptics, transformationalists make no claim about where the future trajectory of globalization is so as to predict where world order or global order is leading. Transformationalists believe, however, that globalization “is reconstituting or ‘re-engineering’ the power, function, and authority of national governments” (Held et al., 1999: 8). Although transformationalists would not dispute the fact that states retain the ultimate legal claim to “effective supremacy over what occurs within their own territories” (Held et al., 1999: 8), they argue that this is juxtaposed with the expanding jurisdiction of institutions of international governance and constraints of obligations from international law. This denotes the fact that states in an era of globalization are unable to make policy and laws based solely on the factors from domestic political and social forces. This phenomenon is transforming the ways in which one state’s ability to act on its own national interests without interfering with the interests of others.

Transformationalists’ thesis of globalization captures the overarching scheme of the process of globalization compared to hyperglobalists’ and skeptics’ theses. They tend to see globalization as a multifaceted, contextual phenomenon of human civilization. In

this respect, they are able to explain the transforming role of states and the concept of sovereignty as being reconfigured rather than being diminished as in the hyperglobalists' view or as "nothing really has changed it" in the skeptics' view. In transformationalists' sense, world order can no longer be conceived purely as state-centric because decision-making authority has become increasingly diffused among public and private agencies at the local, national, regional, and global layers (Held et al., 1999: 9). Nation-states are no longer sole centers or principal forms of governance or authority in the world (Rosenau, 1992). Thus globalization, in view of transformationalists, is transforming the ways in which states and non-state actors influence each other and shape political and governing processes within states and the international arena.

In the transformationalists' world, the central concern, in regard to governance issues within a state, would be how best individual states can re-adjust their economic, legal, political, and social structures to meet the challenge of globalization. However, to be able to draw strategies for governance in a globalization era, transformationalists must at least presume what types of trajectories globalization have in the world order in the future. This is where the shortcoming of the transformationalists' thesis of globalization persists. Because transformationalists failed to project or define globalization in terms of where it leads the world order to, they are crippled in prescribing strategies that various global actors should take. For example, hyperglobalists have implicitly proposed the market and its forces should govern in a single global market. Skeptics would say existing nation-states should lead international order to strive for closures of the gaps between North and South. However, transformationalists accept the fact that globalization is transforming and reconstituting the power and authority of national

governments. They assert that a new “sovereign regime” is displacing conceptions of statehood as an “absolute, indivisible, territorially exclusive and zero-sum form of public power” (Held et al., 1999: 9). Therefore, in the world of transformationalists, the traditional law-making authority of states is weakened and has to yield to the pressure and interests of non-state actors and international institutions. Perhaps this is where transformationalists have the advantage over hyperglobalists and skeptics because this conception is a crucial foundation for understanding new institutions for organization of governance in a complex world. The theoretical journey of this dissertation begins with the transformationalists’ view to explain the ways in which institutions or regimes in the Mekong and the Rhine adapt to face changes and challenges.

The Lack of Theoretical Reference

The weakness of the state’s sovereign power in practice, which is theoretically granted in the UN Charter, and the structure of states inevitably challenge the relevancy of international laws in governance of world affairs today. This is because states are the only actors that have legal personality to make international laws and to enforce them. The challenge to integrate non-state actors as equal actors in governance is more visible in the transnational environmental governance issues where states and non-state actors have to work together to address governance problems effectively. The preliminary findings from the Rhine River Basin suggest that the international legal and policy arrangements that were made by the states alone did not produce projected outcomes (Verweij, 2000: 88; Myint, 2003: 312). On the other hand, the international (legal and policy) mechanisms that encourage cooperation among multiple actors, including states

and non-state actors, instead of focusing on legal compliance among states alone are successful in the long term (Myint, 2003: 312-313).

However, for those statecraft bureaucrats and scholars who view states and their relations as determinants of world order, it is not easy to accept the decline of states' power and the rise of other, non-state actors as a fundamental challenge to the world order. Some scholars have blamed incoherentness and the absence of centralized international environmental legal institutions for the lack of cooperation and compliance in international environmental law (Palmer, 1992: 265). Critics who share this sentiment argue that there should be a global environmental organization to ensure the global coordination and cooperation in environmental issues (Biermann, 2001; Esty and Ivanova, 2001). They propose a type of global environmental organization to increase coordination, cooperation, and compliance of international environmental laws so that stated goals are achieved (Palmer, 1992: 262-265; Esty and Ivanova, 2001). This dissertation challenges the view that cooperation, coordination, and compliance in transnational environmental governance can only be promoted by centralized state-centric authority.

The literature on international institutions and governance does not suggest that the proposed type of centralized authority in law and policy can become a successful institution, let alone a democratic one, to promote cooperation, which is a major requirement for good governance. Even in the domestic governance situation within a state, large and centralized public organizations have a number of problems in performing successful governance. Scholars who struggle with provision and production of public services in a domestic setting call large centralized public organizations that are

designed to provide public goods such as clean air and clean water as “gargantua” (V. Ostrom et al., 1961: 837-838). The problem of these gargantuas is that “gargantua with its single dominant center of the decision-making is apt to become a victim of the complexity of its own hierarchical or bureaucratic structure” (V. Ostrom et al., 1961: 837). The weakness of such public organization stems from the following seven reasons that V. Ostrom et al. discuss:

1. Gargantua may make its administration unresponsive to many of the more localized public interests.
2. Maintaining the cost of command and control within gargantua may be expensive.
3. It may become insensitive and clumsy in meeting the demands of local citizens.
4. It may take an unconscionable amount of time to carry out commands.
5. Bureaucratic unresponsiveness in gargantua may produce frustration and cynicism on the part of the local citizens.
6. Citizens may not have access to sufficient information to render an informed judgment at the polls.
7. Lack of effective communication in the large public organization may indeed lead to the eclipse of the public and to the blight of community.

Because gargantua have these problems, V. Ostrom et al. propose that gargantua should “recognize the variety of smaller sets of publics that may exist within its boundaries” (1961: 837). This proposition is relevant to the current state of global environmental affairs in which states and international institutions are not the only actors but various non-state actors and local communities (small publics) exist to help solve global environmental problems at all layers. This multi-actor presence is the challenge for the Mekong and Rhine transnational environmental regimes in promoting effective governance of both river basins across multiple layers.

The presence of multi-actors in environmental arenas is relatively more visible and intense than in other areas of international law and policy as suggested by various studies (Feraru, 1985: 43-59; Porter and Brown, 1991: 35-64; Lipschutz and Conca,

1993: 336; Princen and Finger, 1994: 69-186). For instance, the international laws of custom duty, tariffs, arm sales, telecommunications, and police forces are international issue arenas where the actors from local groups and NGOs are less visible than in an environmental arena such as river basin, land, and air pollution issues. The literature on the study of environmental regimes suggests that the successful implementation of the majority of international environmental laws and policy resonate in the capacity and interests of local and non-state actors (Auer, 2000). Therefore, the capacity and willingness of non-state actors to cooperate and comply with transnational legal and policy arrangements at the local layer is crucial in the success of national and transnational layers of environmental governance (Princen and Finger, 1994).

Methodology

Methodologically, to analyze and explain the environmental governance of the transnational environmental resources, it is important to understand the institutional linkages among multiple layers of transnational environmental regimes. With the lens of institutionalist theory, transnational regimes such as the Mekong River Commission (MRC) and the International Commission for the Protection of the Rhine (ICPR) can be conceptually separated into at least three layers—local, national, and transnational. In each layer, *issues*, *interests*, and *actors* interdependently drive the governance processes. In order to analyze and explain how they interplay and what linkages between these layers are in the governance process, I apply the framework of “scaling down” and “scaling up,” i.e., a combination of both top-down and bottom-up approaches (Young, 1995: 27-42). Both formal (legal) and informal (norms and strategic rules) institutional

linkages exist between the three layers of MRC and ICPR. Through these linkages, the issues, interests, and actors in each layer are interconnected and emerge as institutional drivers¹⁰ to operate the regime governance process. These linkages among different layers are detected by examining the ways in which issues, interests, and actors emerge and interconnect within three institutional-choice levels at each layer of the Mekong and the Rhine regimes. The data from field research is crucial in order to examine the interconnectedness of the issues, interests, and actors in governance processes.

Field Research in the Rhine

I spent three months in the Rhine River Basin for my field interviews and archival document research based at the Center for International Studies (CIS) at the Swiss Federal Institute of Technology (ETH) in summer 2001. My research on the Rhine focuses on four cases: (1) the case of the Convention for the Protection of the Rhine against Chemical Pollution, signed on December 3, 1976; (2) the case of the Convention for the Protection of the Rhine against Pollution by Chlorides, signed on December 3, 1976; (3) the case of the International Water Tribunal; and (4) the Rhine Action Program for Ecological Rehabilitation (RAP) inaugurated in 1987. The 1976 conventions are international treaty-type legal regimes signed by member states, and RAP is a soft-law-type action-oriented regime that includes non-state actors. My field research aimed to investigate how key issues, interests, and actors played out in the governance of each case and what drove their failure or success.

¹⁰ The term “institutional driver” refers to issues, interests, and actors that create and promote both constraints and opportunities for constructing rules-in-use in governance processes.

In my field research in the Rhine, I applied: (1) semi-structured interviews (Bernard, 1994:209-210, 237-255) with actors and experts across three institutional layers; (2) the interpretation of key legal and policy documents and news media reports; and (3) open-ended interviews and observing participants at the meetings (Bernard, 1994: 136-143).¹¹ During the field research I conducted open-ended and semi-structured interviews with ICPR officials, environmental NGO staffs, decision makers from drinking water and chemical industries, local citizens, scientists, and researchers (experts) who study the Rhine. I audiotaped the majority of these interviews and took notes.

Before I went to the field, I read available project news media reports, documents, and scientific and peer-reviewed journal articles about the Rhine River pollution cleanup regimes to investigate key issues related to governance of three cases in the Rhine and to identify key actors and decision makers with whom I planned to interview once I was in the field. At CIS, I had discussions with other researchers who are also doing research on international river management and the Rhine River in particular. I was assisted by a student who was writing his master thesis about the Rhine management with a focus on the role of chemical industries in Basle, Switzerland. From these discussions, I identified key actors for my interviews. Some of the participants in my interviews also recommended other key actors for me to interview.

In addition to interviews, I visited local villages and towns along the bank of the Rhine and engaged in conversations with local citizens whenever I got a chance at coffee shops, hiking trails, and even on the train as I frequently traveled back and forth from

¹¹ Before interviews began, I always explained about my research and informed participants that their participation was voluntary and they could remain anonymous if they desired. I then showed the study information sheet approved by the Bloomington Human Subjects Committee, which oversees university research ethics. I asked if I could take notes and audiotape interviews. The majority of the participants in the Rhine research allow me to do both. In fact, none of the participant refused my taking notes.

Switzerland to Netherlands. From these informal talks I learned about the Rhine and their livelihood experiences. I learned what citizens in general had to say about the Rhine's cleanliness history, their views of the Rhine's role in their livelihoods, and their views of the projects that were undertaken by the governments and the ICPR. These informal conversations sometimes helped me to clarify some of the issues I learned from other research papers and theses about the Rhine and from my own interviews.

Field Research in the Mekong

In Mekong River Basin, I spent a total of 11 months, three months in summer 2000 and nine months from October 2002 to May 2003 in conducting field research based at the Regional Center for Social Sciences and Sustainable Development (RCSD) in Chiang Mai University. Research methods included (1) semi-structured and structured interviews (Bernard, 1994:209-210, 237-255) with actors and experts across three institutional layers; (2) the interpretation of archival materials and key legal and policy documents; and (3) open-ended interviews (Bernard, 1994: 136-143) and observing participants at the workshops and meetings of the stakeholders at the three layers. The only difference from the Rhine was that I was able to do structured interviews in the Mekong because the same amount of money from my predissertation research grant in U.S. dollars went further in the Mekong than in the Rhine. The second reason was that the successful cooperation among multiple actors in RAP and governance of Rhine chemical pollution in general had already been reported in the scholarly literature (Bernauer, 1995; Bernauer and Moser, 1996; Dieperink, 2000, Verweij, 2000; Weber,

2000). Therefore, I was able to check and compare with the findings from the existing literature.

During my field research in the Mekong, I examined archived key legal and policy documents related to the Pak Mun Dams project. First, I examined critical legal and quasi-legal regime documents, treaties, and policy documents at three layers to investigate how local and non-state stakeholders advanced their interests and actions. In so doing, I analyzed whether the rights, obligations, roles, and responsibilities of the non-state and local actors were specified in these documents. Second, I examined national and ministerial legal and policy documents that were directly related to the governance processes of the Pak Mun Dam. Third, I analyzed local documents such as programs developed by local community associations, local industries, and NGOs, and local newspaper articles. From these sources, I investigated whether local and non-state actors were recognized as important actors in decision-making processes in the governance of the Pak Mun Dam. I also examined what interests drove them to participate in the processes, what issues were most important to them, and who they considered to have the most authority to make decisions on key issues. These are important empirical indicators to determine who and what control governance processes of the Pak Mun Dam.

For the interviews in the Mekong River Basin, I first identified key issues, interests, and actors from reading Pak Mun Dam project documents, Pak Mun Dam–related World Bank documents, media reports, MRC policy documents, meeting minutes, experts’ studies of various aspects of the Pak Mun Dam, and news reports in local newspapers. Some interview participants were recommended by regional scholars who had been studying in the region for decades. During my first predissertation research trip

in 2000, I was able to build a network of scholars who engaged in scholarly researches related to dams in the Mekong, and they assisted and advised me in identifying key actors for my interviews in three layers. Although I was able to identify key actors in the dam industries, the World Bank, NGOs, and local and national government offices from reading archival documents, I had to use my field visits to villages and ask other experts and researchers as well as NGO workers to identify key actors in rural villages.

Field Research at Pak Mun Dam

During the field research in Pak Mun Dam, I was able to conduct, most of the time, both semi-structured and structured interviews with each participant. Some participants agreed to participate in only structured interviews. In the semi-structured interviews, I interviewed key actors in rural villages in Khong Jiam and Phibol Manghasan districts, local and international NGOs, local and national government officials, Pak Mun Dam protesters, journalists who reports about the Pak Mun Dam. Semi-structured interviews are conducted to cross-check the data I gathered from the structured interviews.

In the structured interviews, I asked key actors to score each issue, interest, and actor on a scale from least important to most important in decision making and governance processes of the Pak Mun Dam project. In the structured questionnaires, participants ranked them between “1 = least” to “10 = most.” The ranking scale of 1 to 10 was very appropriate, especially among rural populations in Thailand who think in terms of percentage in scoring or ranking. For example, when participants explained the difference in the times they devoted to fishing and farming, they would say “80% fishing

and 20% farming.” I noticed when I first tested the structured questionnaires with participants using scores of 1 = least to 5 = most, their immediate reaction to the questions was in terms of percentage, which did not correspond readily to the scale of 1 to 5. I, therefore, changed to the ranking scale of 1 to 10, which corresponds with percentage. All of these questionnaires were translated into Thai language. From this structured interview, I learned what the participants themselves perceive or think of various issues, interests, and actors as they participate in governance processes.

The data collected by structured interviews was cross-checked by findings from notes taken from semi-structured interviews, open-ended interviews, and reading archival documents. In addition to analyzing evidences from structured interviews and archival documents, I examined and analyzed evidences from open-ended interviews and observations of meetings, workshops, and protests in the case of Pak Mun Dam and village activities. In most open-ended interviews, I was able to take notes, and a few were recorded on cassette tapes, while some participants requested that I not take notes or record their interviews.

A total of 85 interviews were conducted in the Pak Mun Dam case, of which 30 were conducted as open-ended and semi-structured interviews and 55 were conducted as structured interviews. These participants in my study were individuals from local villages, local governments, national governments, MRC, international NGOs, local-national NGOs who engaged in processes of Pak Mun Dam–related decisions, and journalists who were devoted to reporting on the issues relating to Pak Mun Dam decision processes. Participants in structured interviews filled out questionnaires in front

of me during the field research (see Appendix A: Indiana University–Bloomington Study Information Sheet).

There are some confidential agreements I have signed with individuals who are government officials involved in decision-making processes whose names I will not be able to mention or cite in any form. However, their willingness to talk gave me in-depth understanding of what goes on with their perception and uneasy feelings among government officials, mainly against the dam-affected villagers who are often viewed as “selfish” for not sacrificing the destruction of their livelihoods caused by the Pak Mun Dam for “the national development of Thailand as a whole.” These feelings and views among government bureaucrats and technocrats who designed Pak Mun Dam are influential forces in the decisions of the government when it comes to whether to keep dam sluice gates open all year round. There are a select few individuals in Thai government who are sympathetic toward dam-impacted villagers. However, even these sympathizers rest with their mainstream judgment that the state is a benevolent social and political entity serving the Thai society as a whole. This view holds that the destruction of a few villages by the dam for the benefit of the Thai nation as a whole is justifiable.

Therefore, the struggle for Pak Mun villagers inevitably involves influencing public opinion and convincing a variety of other actors that their protest against the dam is not that they are against the development of Thailand but there are alternative ways of doing development without completely rooting out their rural livelihoods. Observing, capturing, analyzing, and explaining these lines of societal tensions helped me elucidate the ways in which non-state actors and state actors engage in transforming the rules of governance processes in the case of Pak Mun Dam.

Chapter 3

Institutional Evolution in the Mekong and Rhine River Basins

Introduction

This chapter will explore and seek to explain institutional evolution in the Mekong and Rhine river basins with a focus on the interactions between human livelihoods and river ecosystems. By doing so, this chapter will provide a contextual background for the cases that will be analyzed in subsequent chapters. This background will also present a brief history of evolution of the institutional landscape of the Mekong and Rhine river basins. From this institutional landscape, this dissertation examines the case of Pak Mun Dam in the Mekong River Basin and four cases of water pollution cleanup regimes in the Rhine River Basin.

Biogeophysical Systems of the Rhine

The Rhine River originates in the Swiss Alps where two tributaries, the Hinterrhine and the Vorderrhine, merge at the village of Reichenau-Tamin. From that point on, the Rhine weaves through the valleys and villages of the remarkable Swiss landscape until it reaches Lake Constance. This part of the Rhine is called the *Alpine Rhine*. After leaving Lake Constance, the river flows westward to the city of Basel (or Basle in French), best known for its chemical industry. This part of the Rhine is known as the *High Rhine*. The river is wild, active, and dynamic along the Alpine Rhine and High

Rhine until it forms Europe's largest waterfall, called the Rhinefalls, at Schloss Laufen on the border between the villages of Neuhausen and Schaffhausen.

The point where the Rhine leaves Lake Constance (Untersee or Bondesse) is the beginning of what is generally referred to as the Rhine River, which flows toward the North Sea. This is also the beginning of the legal definition or legal boundary of the Rhine River (Article 1, Bern Convention, 1999). Because of the Swiss policy of neutrality and independence from external intervention in its self-governing territories and sovereignty, most of the Rhine in Switzerland is outside the legal regulations of the International Commission for the Protection of the Rhine (ICPR).

From the point where the Rhine departs the city of Basle to where it reaches the City of Bingen in Germany it is known as the *Upper Rhine*. The Upper Rhine was once known for its diverse patterns of furcation into streams for a distance of 190 km (Brenner et al., 2003: 3). However, this so called "furcation zone" was canalized by the Tulla rectification¹² during 1817 and 1876, which permanently changed the physical shape of the river stream patterns (Map 3.1). This canalization process shortened the length of the Rhine in the Upper Rhine stretch to 81 km. As a result, 2,218 islands and rapids that existed until 1825 disappeared, according to the records of the Ministry of Environment and Forestry of Germany (Brenner et al., 2003: 3). An assessment of the status of the Rhine River by a team of government officials and independent experts from Germany, The Netherlands, Luxembourg, France, and Switzerland, whose findings were presented at the Second International Symposium on the Management of Large Rivers for Fisheries (www.lars2.org) in February 2003, concluded that in this stretch of the river

¹² Tulla rectification was named after the German hydraulic engineer in charge, Johann Tulla, who led the engineering of the rectification of the Rhine.

the once braided river system with islands, sand and gravel flats – a highly diverse system of various habitats in a dynamic environment – was transformed into a petrified canal with high current velocities. (Brenner et al., 2003: 125)

The next stretch downstream from Bingen to the mark at 640 km is called *Middle Rhine*. The upper end of the Middle Rhine, mainly the Rhine valley between Koblenz and Mainz in Germany, is best known for cathedrals and vineyards on the beautiful landscape along the Rhine. For this beauty, combined with human institutions and nature's biogeosphere of the Rhine, UNESCO designated the Middle Rhine area as a World Heritage site in 2002 (UNESCO, 2002: 57).¹³

The *Lower Rhine* stretches between Mainz, Germany, and The Netherlands and passes through the most populated and industrial part of Germany before it flows into The Netherlands and finally into the North Sea. In The Netherlands, the Rhine enters lowland areas to form a delta before it reaches the North Sea. In the delta area, the Rhine divides itself into three branches which cover a catchment area of 25,000 km² corresponding to 60% of the total surface area of The Netherlands (Huisman et al., 1998: 13).

The 1,326-km Rhine River is Western Europe's largest river. From its origin in the glaciers of the Swiss Alps, it constitutes the border between Switzerland, Liechtenstein, and Austria until it reaches Lake Constance. It then continues to form the border between Germany and France after leaving the city of Basel to flow through a large part of western Germany, and finally crosses into the Netherlands and pours into the North Sea. The Rhine's total catchment area covers approximately 225,000 km² and encompasses parts of Italy, Luxembourg, and Belgium. The catchment area is home for

¹³ See also <http://whc.unesco.org/sites/1066.htm>, last accessed April 20, 2004.

about 54 million people in addition to other living organisms. Switzerland, Germany, France, and The Netherlands combined encompass over 95% of the Rhine River Basin. The remaining 5% of the basin lies in Belgium, Luxemburg, Austria, Liechtenstein, and Italy (Garritsen et al., 2000: 29).

The Rhine offers a variety of uses for human and other inhabitants in various ways. It is important for water transportation and is still densely used as a shipping route with the world's largest seaport, Rotterdam, at its mouth. Although the problems with the quality of water in the Rhine were already recognized in the fifteenth century, it was not until the twentieth century that the advanced stage of water pollution in the river became a political agenda raised by the lowest downstream country, The Netherlands (Schulte-Wülwer-Leidig et al., 1997; Brenner et al., 2003: 6). Europe's industrialization process had a great impact on the Rhine ecosystem. By the early 1960s, the pollution of the Rhine by organic substances had lowered the level of dissolved oxygen below normal and as a consequence, almost all aquatic life had disappeared from the river. Other threats to the Rhine ecosystem came from chemical industries located on the riverbanks where large amounts of heavy metal compounds, pesticides, hydrocarbons, and organic chlorine compounds were discharged into the river (Schulte-Wuer-Leidig et al., 1997). This obviously caused further ecological problems, notably the disappearance of native fish species and the continual deterioration of the water quality. By the end of the 1960s, the Rhine had earned the unflattering reputation of being the "sewer of Europe" (Schulte-Wuer-Leidig et al., 1997).

A German poet and author, Willy Barock, wrote in 1963 in a poem titled *Niederrhein* (Lower Rhine):

I will no longer sing
mendacious songs of praise for you...
I will bestow an obituary notice upon the death of fish
croaking on the concoction
you drink from plenty of sewers
left and right of your road
The seas stand on end, will not receive you. (ICPR, 1994a: 9)

Indeed, the ICPR's agenda in the second half of the twentieth century were mainly dominated by the provision of institutional arrangements to reduce pollution in the Rhine. The formation of the ICPR in 1950s was the beginning point of the evolution for the institutional provision processes to tackle the Rhine pollution. It is important to understand the evolution of the provision processes for Rhine institutions in order to understand the production process of a cleaner Rhine.

Emergence of International Cooperation

The deterioration of the Rhine's water quality and the degradation of natural resources was the obvious reason that the Rhine's future had to be put into effective international cooperation. Looking at the historical evolution of the relationship between the ecosystem of Rhine and human inhabitants, the end of World War II marked the beginning of a new chapter in the Rhine's history. On July 11, 1950, with initiatives from The Netherlands, the riparian countries of the Rhine downstream of Lake Constance—France, Germany, The Netherlands, Switzerland, and Luxembourg—joined forces by establishing ICPR on an informal basis. As the name of ICPR conveys, the main issue that pushed riparian states to engage in cooperation was the issue of water pollution in the Rhine.

During the first decade after the founding of ICPR, it served as a common forum for discussing questions and seeking solutions relating to pollution in the Rhine. However, in 1963, the ICPR parties concluded that the existing tools for cooperation among governments should be strengthened and, therefore, formalized ICPR's existence by signing the *Convention on the Protection of the Rhine against Pollution* on April 29, 1963, widely known as the *Bern Convention*. The Bern Convention formalized ICPR's work by establishing a permanent joint secretariat to be based at Koblenz, Germany (De Villeneuve, 1996: 444; Garritsen et al., 2000: 40). The Bern Convention became the legal basis for future international cooperation among the Rhine riparian states, and ICPR was entrusted with the following tasks:

- studying the nature, volume, and origins of Rhine pollution;
- proposing to the governments of the Parties appropriate measures to control pollution;
- preparing further agreements between the government of contracting parties;
- undertaking any other task jointly entrusted to it by the governments of contracting parties; and
- drawing up a yearly report on its activities.

The riparian states worked under the 1963 Bern Convention to determine what chemicals were causing the Rhine's pollution. After the data collection stage, ICPR moved further forward to solidify commitments among riparian states. It took more than ten years, from 1963 to 1976, to reach some level of agreement on how to proceed with the cleanup of the Rhine. The first Rhine Ministers' conference on the pollution of the Rhine was held in 1972 to recommend further actions to reduce pollutant chemicals. In 1976, the member states of ICPR concluded two important conventions: (1) the Convention for the Protection of the Rhine against Chemical Pollution; and (2) the Convention for the Protection of the Rhine against Pollution from Chlorides. These two

conventions were the first detailed provisions as to what to do about reducing pollutant chemicals. It took 20 years of evolution of ICPR to be able to provide this important first step toward institutional arrangement to produce a cleaner Rhine.

Meanwhile, in 1976, the 1963 Bern Convention was amended to enable the European Economic Community (EC) to join ICPR. The EC's accession to ICPR became inevitable in view of its newly developing environmental regulations, particularly in the field of water pollution within EC jurisdiction (de Villeneuve, 1996: 445). As a consequence of the new development of an environmental regulation regime within EC jurisdiction, its member states can no longer conclude agreements with non-EC states, such as Switzerland. Therefore, EC's participation in ICPR was important for ICPR's future as well as for the uniformity of EC's environmental regulation regime itself. The EC Commission, since then, fully participates in ICPR and shares its costs. In matters falling under EC competence, it exerts its voting right on behalf of EC member states in ICPR (all ICPR states except Switzerland). However, it is important to note that EC does not function as a member state within ICPR in matters for implementation and administration of ICPR agreements and functions, since these are left to the member states.

The Rhine Action Program

The historic moment for the ICPR's further development as an effective transnational regime was perhaps sparked by the Sandoz chemical accident. In an interview, former secretariat of the ICPR, Mr. Pieter Huisman, referred to Sandoz chemical accident as a "gift from the heaven" in terms of raising awareness of the

seriousness of the rehabilitation of the Rhine and setting environmental policy to transform existing regime designs. On November 1, 1986, a fire broke out at a storage shed for dangerous chemicals of the Swiss pharmaceutical company Sandoz, at Schewizerhalle, near Basel. The firefighters arrived in time to extinguish the fire. However, the water used to extinguish the fire mixed with the dangerous chemicals and eventually reached the adjacent stretch of the Rhine. As a consequence, a 200-km stretch of the Rhine became ecologically dead (Glass and Snyder, 1996; de Villeneuve, 1996: 451). This disaster received major press coverage, and the ICPR members reacted swiftly. As Glass and Snyder (1996) appropriately labeled them, they had been “shocked into action.” On November 12, 1986, the ministers held a joint meeting and assessed the remedial process. At the same time, the Sandoz’s chief executives joined the ministerial meeting and explained what had gone wrong. As the incident triggered a wave of publicity in all riparian countries of the Rhine, political attentions increased and within a very short time more than three ministerial conferences were addressing the issue of Rhine pollution. With environmental issues being high on the political agenda in many countries in the mid-1980s, the Sandoz spill accident in 1986 spurred the ICPR to implement the Rhine Action Program for Ecological Rehabilitation (RAP) in 1987.

The combination of political ripeness, the Sandoz accident, the existence of institutional framework for international cooperation, and the extensive and responsive preparatory work carried out by the ICPR laid the foundation for the emergence of RAP.

RAP had the following four goals to be attained by the year 2000:

- The Rhine ecosystem should be improved to such an extent that higher species, such as salmon and sea trout, can survive in the Rhine.
- The production of drinking water from the Rhine must be guaranteed for the future.

- The pollution of river sediments must be reduced to such an extent that at any time sludge may be used for land fill or be dumped at sea.
- The ecology of the North Sea must be improved as a requirement of the North Sea Program.

Biogeophysical Systems of the Mekong

The Mekong River Basin is the third richest in the world in terms of biodiversity, after the Amazon and Congo rivers among 263 rivers that cross borders of two or more countries (MRC, 2003a). The Mekong, being the world's twelfth longest river, captures a basin area of 795,000 km² (Table 3.1). More than 65 million people in the river basin depend on the Mekong River and its tributaries for food, water, transport, and many other aspects of their livelihoods.

<Table 3.1 about here>

The Mekong River is one of the least exploited rivers of its magnitude in the world. The intensity and the speed of human utilization of the river and its ecosystem resources, however, are in the making (MRC, 2003b). Since the Mekong region reached relative stability with the end of the last remaining civil war of the region in Cambodia in 1991 (Kiernan, 1992),¹⁴ all riparian countries have been increasingly struggling with development policies and environmental governance issues. The challenges, in cooperation for the Mekong River development policies among four lower Mekong River Basin countries—Cambodia, Lao People's Democratic Republic (Lao PDR), Thailand, and Vietnam, led to the reorganization of the decades-old international body and the establishment of the Mekong River Commission (MRC) in 1995 with specific aims for

¹⁴ See also Greg Browder (1998: 64-285) for a detailed analysis of negotiations among Cambodia, Lao People's Democratic Republic, Thailand, and Vietnam in the 1990s leading to the 1995 Mekong Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin.

sustainable development of the region (Browder, 1998: 68-69; Jacobs, 2002: 361). This development phenomenon directly interacts with the Mekong River ecosystems as it serves as the backbone for the livelihoods of more than 65 million people within the river basin. Governing this interaction between human-crafted institutions and the Mekong River Basin ecosystems from the local layer to the transnational layer continues to be a challenge for many development projects such as dams for hydropower and navigation projects for transportation, to name a few.

The Mekong River flows through different cultural, geographical, jurisdictional, and political borders starting from the Tibetan Plateau to the coast of Vietnam, and ultimately reaching the South China Sea. The Mekong runs over 4,500 km toward the south through the Yunnan Province of China, Myanmar (Burma), Lao PDR, Thailand, Cambodia, and Vietnam (see Map 3.2; Osborne, 2000: 17; MRC, 2001). In 1866, four years after the source of the Nile was located, the *Societe de Geographic* in Paris created the Committee for the Exploration of the Upper Mekong (Peissel, 1997: 21). That was the beginning of the French expedition that eventually led to the colonization of what historians call “French Indochina.”

During the French colonial period, explorers attempted to trace the source(s) of the Mekong without much success. Only on September 17, 1994, was one of the two major sources, Dza Nak or locally known as Zanaqu (Black River), documented by a team of explorers led by Michael Peissel (Peissel, 1997: 210,). The other important source of the Mekong is Dza Kar or Zayaqu (White River), and it was identified and documented by the Commission for Integrated Survey of Natural Resources of the Chinese Academy of Science in October 1999, led by Guan Zhihua, Zhou Changjin, and

Tao Baoxing (Zhou and Guan, 2001). The Dza Nak and Dza Kar rivers meet near the point of Ganasongdo at longitude 94° 36' 40" E and latitude 33° 12' 33" N (Zhou et al., 2001) to become the Dza Chu or Zaqu (River of Stone). The Dza Chu is known as Lancang Jiang (Turbulent River) once it enters the Yunnan Province of southern China.¹⁵ When Lancang Jiang leaves China, it becomes the border between Burma (Myanmar) and Lao PDR. The English name Mekong is transcended from the Thai/Lao name Mae Nam Khong, meaning Mother of Waters (Yamashita, 1995: 53; Osborne, 2000: 17). Once the Mekong passes through Burma, Lao PDR, and Thailand and when it reaches Cambodia, the river is known locally as Tonle Thom, meaning Great Water (Yamashita, 1995: 75; Osborne, 2000: 17).

In Cambodia, the Mekong enters the floodplain area of the basin, where its speed and volume cause it to spill over its banks and flood into its tributaries. This intensity of speed and water volume is naturally regulated between the wet and dry seasons by the Tonle Sap River, which is the most important tributary of the lower Mekong in Cambodia. The excess water from the Mekong during the wet season from June to October causes the Tonle Sap River to flow northwest toward Tonle Sap Lake. This causes the volume of the lake to increase five times its size during the dry season (Yamashita, 1995: 75; MRC, 2003a). When the Mekong water level is low during the dry season from November to May, the Tonle Sap River flows southeast from the Tonle Sap Lake back to the Mekong (Yamashita, 1995: 75; MRC, 2003a; *The Economist*, 2004: 28). This flow regime not only regulates the flood naturally but also provides a seasonal habitat for over 100 fish species and maintains the biodiversity of the Tonle Sap Lake

¹⁵ See <http://www.shangri-la-river-expeditions.com/1stdes/mekong/mekongsource/CISNR1999.html>, accessed April 1, 2004.

ecosystem, both of which are crucial for the livelihoods of the human inhabitants in Cambodia (MRC, 2003a).

However, this natural phenomenon of flow regime downstream in the Mekong River can be disrupted by the upstream development projects in China, Lao PDR and Thailand. Cambodian Prime Minister Samdech Hun Sen, in an opening address to the Second International Symposium on the Management of Large Rivers for Fisheries, held in Phnom Penh in February 2003, cautioned:

Given that the change of flow regime is a critical factor in the annual flood levels that sustain the region's fisheries, traditional livelihoods, and biodiversity, the upstream countries' projects in the Mekong River, namely the continued dam constructions and commercial navigation plan, have become a major concern for the downstream countries including Cambodia.¹⁶

After leaving Cambodia, the Mekong enters its delta area, which begins south of Phnom Penh, Cambodia, encompassing southern Vietnam and stretching all the way to the South China Sea. In Vietnam, the Mekong is locally called Song Cuu Long (River of Nine Dragons) with the notion that the Mekong divides into nine branches to enter the South China Sea (Yamashita, 1995: 113; Osborne, 2000: 17). In reality, the Mekong is divided into eight main branches in the delta area of Vietnam (Yamashita, 1995: 113). However, the number "nine" is more auspicious than "eight" in the Vietnamese culture and, therefore, the Mekong is named as River of Nine Dragons in Vietnam.

From its source in the snowy highlands of Tibet to the point where it reaches the border between China, Myanmar, and Lao PDR, this part of the Mekong is classified as the Upper Mekong by geographers (Hanna, 1968: 2). The Lower Mekong refers to the downstream basin area below the border point between China, Myanmar, and Lao PDR

¹⁶ See the address of Samdech Hun Sen at http://www.cnv.org.kh/2003_releases/110203_largeriver_symposium_fisheries.htm, accessed on April 6, 2004. See also "Mighty Mekong is drained by Chinese dams," *The Daily Telegraph* (UK), April 1, 2004.

to the South China Sea (White, 1963: 414; Sewell and White, 1966: 9-10). It is important to note that MRC does not have institutional jurisdiction over the Upper Mekong. MRC is mainly composed of riparian countries in the Lower Mekong. Although there is no institutional cooperation between the Upper Mekong and the Lower Mekong, there is some functional cooperation for such areas as navigation and information sharing among riparian countries in both the Upper and Lower Mekong. The institutional aspect of the Mekong River Basin as a whole has not yet evolved to a level where all key riparian countries cooperate internationally, as is the case in the Rhine.

Institutional Evolution in the Mekong River Basin

The Mekong is a monumental reminder to human inhabitants in the basin that the coexistence between the environment and human institutions resonates in the harmonious relationship between them. A Burmese poet, Min Htet Maung, in his poem titled *I Come to You – Mekong*, describes Mekong's relationship to humanity within the Basin:

. . .Mekong – you ferment much work
through three thousand years of
civilization in your life.
Mekong – you have created history
You gave a legacy of ancient culture
You nurtured religion and customs
And you spawned legends and
traditions for folk-music, song
these are your milestones and diaries
from the flowing of your life . . . ¹⁷

¹⁷ Min Htet Maung's poem, in both Burmese and English translation, was published in the journalism training course materials titled "Man and the Mighty Mekong" organized by the Indochina Media Memorial Foundation held from October 19 to November 16, 2002. The poem was originally published in *Pan Art and Literature Magazine* and *Spectrum Journal* in Yangon, Myanmar. See also <http://www.immf.or.th/articles/mekong.aspx>, accessed April 5, 2004.

The Mekong River indeed is not only looked upon as a physical-natural resource but also as the backbone of the social and cultural livelihoods of human inhabitants. Although the Mekong has a total of five different names on its journey from the Tibetan Plateau to the South China Sea, it is one river that flows through the human-created cultural, political, and jurisdictional boundaries of six riparian countries.¹⁸ The river in fact is not only divided into different names but also dissected into different social, political, legal, and cultural livelihood systems interacting with the river ecosystems. This division demonstrates the institutional diversity within the Mekong River Basin, and it signals the challenges for coordination among various jurisdictional borders and institutional layers.

The initial responses to the challenges for coordination were crafted mainly by the riparian states and their delegations. However, these responses did not capture the complexity of the issues, interests, and actors that emerged in multiple layers from the local to transnational layers concerning the governance of the Mekong. This complexity is not a new phenomenon. What is a new phenomenon is the emerging realization and acceptance of theorists and practitioners in the field that the responses that were shaped by the states alone are not sufficient to address the governance issues. This realization, however, has come a long way from “trial and error” with institutions and has also resulted from the intellectual devotion of generations of thinkers who continue to investigate the successes and failures of institutions governing human-environment interactions in the governance of the Mekong River Basin. However, this does not mean

¹⁸ It can be stated as “seven riparian countries” if we count Tibet as a country.

that this realization has been fully practiced in the field in the governance of resources of the Mekong River Basin.

The institutional development of the lower Mekong River Basin was never isolated from the historical context of the world events. Since the first French missionary arrived in 1624 in what later became French Indochina (Schaaf and Fifield, 1963: 80), historical events and basinwide institutional initiatives were mainly the result of relationships between both internal and external forces that continue to shape the courses of human actions along the Mekong River. The colonial powers, mainly French and British, had left legacies of considerable influence on the evolution of the social and economic institutions in Southeast Asia and the lower Mekong River Basin (Schaaf and Fifield, 1963: 24). Although Thailand, then known as Siam, was not colonized either by the French in the east or the British in the west, it was not able to escape the influence of Western colonialism, especially its economic dimensions (Schaaf and Fifield; 1963: 24-25; Osborne, 2000: 130-131).

The earliest recorded international cooperation concerning the use of the river in the can be traced back to the *Treaty of Friendship, Commerce, and Navigation between France and Siam* (Thailand) signed on August 15, 1856 (Menon, 1970: 68; Jacobs, 1992: 109; Thai Ministry of Foreign Affairs, 2004¹⁹). According to Article 17 of this treaty, Siam agreed to grant France “most favorite nation” status in terms of the movement of ships and docking of ships in Siamese ports along the Mekong River (Menon, 1970: 68). However, the first international effort for the cooperative use of the Mekong River was made in 1926 when France and Siam signed the *Convention between French Indochina*

¹⁹ See at <http://www.mfa.go.th/web/118.php>, last accessed on April 4, 2004.

and Siam Concerning the Relations Between the Two Countries, 1926 (Schaaf and Fifield, 1963: 82; Menon, 1970: 77; Jacobs, 1992: 109). The convention aimed to improve the river communication system (Article 15) and agreed to establish the Permanent Franco-Siamese High Commission to draw up regulations for navigation (Article 9).

However, the significant international cooperation among lower Mekong countries, namely Laos, Thailand, Cambodia, and Vietnam, did not begin until after the end of World War II. With the worldwide wave of decolonization and the emergence of independent states after the war, France was forced to accept the independence of its Indochina colonies. Meanwhile, the establishment of the United Nations (UN) was perceived by many independent state leaders as a worldwide institutional assurance of their sovereignty and independence under the UN Charter, and thus many countries became members of the UN including the riparian countries in the Lower Mekong Basin once they gained independence from the colonial powers.

The Origin of the Mekong Development Plans at the International Layer

At the same time, the UN Economic and Social Council established three regional economic commissions in 1947: (1) the Economic Commission for Europe (ECE); (2) the Economic Commission for Latin America (ECLA); and (3) the Economic Commission for Asia and Far East (ECAFE) (Schaaf and Fifield, 1963: 82).²⁰ In 1949, ECAFE established the Bureau of Flood Control, which later expanded its name to the Bureau of

²⁰ The Economic Commission for Africa (ECA) was established in 1958. See <http://www.uneca.org/>

Flood Control and Water Resources Development (Schaaf and Fifield, 1963: 83). In 1951, ECAFE requested the Bureau of Flood Control (hereinafter, the Bureau) to create a program to study the technical problems of international rivers. These were defined as rivers that pass through or form the border of two or more countries. The Bureau selected the Mekong River for study among Asian rivers. The first 18-page ECAFE study of the Mekong River Basin was published in 1952 in which the word “international” was used in the title of a report for the first time to describe the nature of the Mekong River and its problem (Schaaf and Fifield, 1963: 83; Hanna, 1968b: 4). This pleased many ECAFE officials who were “international” minded. Substantively, the 1952 ECAFE study suggested “possible development of *firm* power between Vientiane and Luang Prabang and the diversion of the flow of the Mekong for irrigating the vast area in North-Eastern Thailand” (Schaaf and Fifield, 1963: 83-84). The 1952 ECAFE study sparked further interest of the UN and of the United States in the Mekong River Basin.

Following the Geneva Accords in 1954 and the emergence of the riparian independent states of Cambodia, Laos, and the Republic of Vietnam, both the UN and the United States put forward projects to promote the development of the Mekong River Basin (Schaaf and Fifield, 1963: 84,) as an experiment for international river development (Sewell and White, 1966). In July 1955, the four lower Mekong countries, namely Cambodia, Laos, Thailand, and Vietnam, after discussion with U.S. representatives, requested the International Cooperation Administration (ICA) of the U.S. government to undertake what was called a “reconnaissance of the Lower Mekong River Basin” (ICA, 1956: Appendix 2-1; Schaaf and Fifield, 1963: 84; Hanna, 1968b: 4). This request was facilitated by the signing of Project Agreements between ICA and four

riparian countries. The ICA then requested the U.S. Bureau of Reclamation in the Department of Interior, on August 31, 1955, to undertake a reconnaissance of the Lower Mekong River (ICA, 1956: Appendix 2-15 to 2-17). The Bureau of Reclamation, by a letter dated September 22, 1955, accepted this study under provisions of the Memorandum Agreement of March 15, 1954, between the U.S. Department of the Interior and the then Foreign Operations Administration, which became the ICA by the time the Mekong reconnaissance study was accepted (ICA, 1956: Appendix 2-18). The U.S. Bureau of Reclamation study, titled *Reconnaissance Report: Lower Mekong River Basin*, which was published in March 1956 by the ICA, issued 29 recommendations most of which urged that further data collection should be carried out in the four lower Mekong countries along with preparations for development projects.

The 1952 UN ECAFE study and the 1956 the United States' Reconnaissance Study of the Mekong River Basin (hereafter, Reconnaissance Study) were two key events in the modern history of the Mekong River Basin development planning that perhaps lifted the profile of the Mekong River Basin to the highest level of international interest. As a result, the United Nations' interest in international river basin development in general, and in the Mekong River Basin in particular, had grown (Schaaf and Fifield, 1963: 86; Sewell and White, 1966: 18). Meanwhile, the United Nations appointed a panel of experts to prepare a report on procedures for integrated river basin development planning in 1956 (Sewell and White, 1966: 18). The Panel of Experts was composed of seven international scholars and independent consultants.²¹

²¹ Members of the Panel of Experts were Mosin Ali, consultant, Planning Board, Karachi, Pakistan; Jean Aubert, inspecteur general des Ponts et Chaussées, Paris, France; Arthur E. Griffin, consultant to Sir Murdoch MacDonald and Partners, chartered civil engineers, London, England; Carlos Lleras Restrepo, attorney, Bogota, Colombia; Egbert de Vries, rector, Institute of Social Studies, The Hague, The

The report of the seven-expert panel was presented to the UN Secretary General on November 23, 1957, and defined “integrated river basin development” as “the orderly marshalling of water resources of river basins for multiple purposes to promote human welfare” (UN ECOSOC, 1958: 1; Sewell and White, 1966: 18). This report influenced then ongoing studies and plans for the development of the Mekong River Basin (Sewell and White, 1966: 18).

At the same time, the ECAFE member countries and the four lower riparian countries completed a comprehensive multipurpose development survey of the Mekong in 1957. This 1957 ECAFE study, titled *Development of Water Resources in the Lower Mekong Basin*, conducted by four special consultants, was presented to the thirteenth session of ECAFE in Bangkok in 1957 (ECAFE, 1957: iii; Schaaf and Fifield, 1963: 86; Sewell and White, 1966: 20). The survey reiterated the 1956 U.S. Bureau of Reclamation’s Reconnaissance Study of the Lower Mekong Basin by calling for further data collection and issuing recommendations similar to those of the Reconnaissance Study (Schaaf and Fifield, 1963: 87). The 1957 ECAFE study was the first to articulate basinwide planning and the need for international cooperation in the Mekong by explicitly recommending:

A comprehensive plan for the optimum development of water resources should cover an entire basin, including tributaries. While planning for water resources development of tributaries is the primary concern of individual countries, such planning needs proper co-ordination. For this purpose, it is necessary to establish an international channel or clearing house for exchange of information and plans and the coordination of projects.²²

Netherlands; Gilbert F. White, Department of Geography, University of Chicago, USA; and Vasily V. Zvonkov, Academy of Sciences, Moscow, Union of Socialist Republics. See also UN ECOSOC, 1958, p. iii.

²² See p. 64 in *The Development of Water Resources in the Lower Mekong Basin*, Flood Control Series No. 12, United Nations, E/CN.11/457 ST/ECAFE/SER.F/12.

Indeed the international cooperation among four lower riparian countries was the main agenda of the thirteenth “historic” (Schaaf and Fifield, 1963: 89) ECAFE Session in Bangkok in 1957 that was held on the tenth anniversary of ECAFE’s establishment. The session participants unanimously supported to proceed with the establishment of the regional coordination committee by adopting the *Statute of the Committee for Coordination of Investigations of the Lower Mekong* among four riparian states – Cambodia, Laos, South Vietnam, and Thailand.

Emergence of the International Organization for the Governance of the Mekong River Basin

The intensification of development planning in the Mekong River Basin began with the establishment of ECAFE, now better known as ESCAP (Economic and Social Commission for Asia and Pacific), of the United Nations. After the 1957 ECAFE study was reported, a meeting of expert representatives from four riparian countries, Cambodia, Laos, South Vietnam, and Thailand, was held in Bangkok in May 1957 to consider follow-up actions and to establish a Coordination Committee for further works (Schaaf, 1963: 90; Sewell and White, 1966: 20). This meeting recommended the establishment of a Preparatory Committee composed of representatives from the four Lower Mekong countries to establish eventually a permanent coordinating committee (Schaaf and Fifield, 1963: 90; Sewell and White, 1966:20; Hanna, 1968b: 5).

The first meeting of the Preparatory Committee was held on September 18, 1957, and the *Statute of the Committee for Coordination of Investigations of the Lower Mekong*, which was passed in the UN ECAFE session in March 1957, was unanimously endorsed

by the Preparatory Committee (Mekong Committee, 1970: II-38). More important, this first meeting of the Preparatory Committee decided to transform itself into a permanent coordinating committee (Hanna, 1968b: 5). The Mekong Committee, officially named the *Committee for the Coordination of Investigations of the Lower Mekong Basin*, therefore, became the first international organization to coordinate development planning in the Lower Mekong Basin.

In the early stage of the Mekong Committee, the initial challenge was not the diplomatic struggle for political will of state leaders to coordinate in various tasks of development planning for the Mekong River Basin; it was the lack of financial and human resources to implement the political will and development plans, desired not only by the four member states but also by the UN and many other nations. On October 29, 1957, two days before the first meeting of the Mekong Committee was held, the French government through the permanent representative of France to ECAFE donated to the Mekong Committee 60 million francs (U.S. \$120,000) for equipment necessary to carry out further studies in the Mekong River Basin (Schaaf and Fifield, 1963: 92; Hanna, 1968b: 6). This was the first donation received by the Mekong Committee from a foreign country.

Soon after this first meeting of the Mekong Committee, various international agencies and national governments followed the French lead. The UN Technical Assistance Board allocated U.S. \$200,000 in February 1958, the New Zealand government donated U.S. \$100,000, and the United States promised to provide U.S. \$2 million in March 1958 (Hanna, 1966b: 6). By the end of 1958, the Mekong Committee had collected more than \$4 million in assistance from various other countries. This

financial resource provided a new beginning for the Mekong Committee and the capacity to move beyond discussions into actions.

In the early stage of planning for the development of lower Mekong River Basin, scholars and observers of the Mekong concluded that the most impressive fact about the Mekong River was not its great length, huge drainage basin, its biodiversity, or its massive flow, but the extent to which the Mekong was untouched by human inhabitants (Schaaf and Fifield, 1963: 72; Sewell and White, 1966: 11). Because it was mainly untouched, there was little information about the physical, economic, and social aspects of the Mekong River Basin. After its first session from October 31 to November 1, 1957, the Mekong Committee requested expert assistance from the UN Technical Assistance Administration to determine the types of data to be collected, the cost of operations for the collection of data, and recommendation of a schedule and phases for further study for development planning (UN/TAA, 1958: 1-2; Schaaf and Fifield, 1963: 92; Sewell and White, 1966: 20). The four member countries of the Mekong Committee wanted experts to review all existing surveys and studies, especially the 1957 ECAFE study and to produce detailed recommendation for further actions to implement the recommendations of the ECAFE study (UN/TAA, 1958: 1-2; Schaaf and Fifield, 1963: 93; Sewell and White, 1966: 20). In response, the United Nations appointed Lt. General Raymond Wheeler, then former Chief of the U.S. Army Corps of Engineers, to lead four other members of the team to Bangkok in mid-November 1957 to assess the progress of Mekong surveys and studies in order to produce a report detailing recommendations for further actions (UN/TAA, 1958: 3; Schaaf and Fifield, 1963: 93; Hanna, 1966b: 6; Sewell and White, 1966: 21).

After the completion of the study, the team submitted a report to Director-General H. L. Keenleyside of the UN Technical Assistance Administration on January 23, 1958. This mission was widely known among Mekong observers as the Wheeler Mission. The Wheeler Mission was known and highly cited for its detailed recommendations and unprecedented appraisal of the Mekong River Basin and its economic potential. It describes the Mekong in its introduction as a “majestic river” that is appraised as “Southeast Asia’s greatest natural resource” and, concludes that “conservation and utilization of its waters will contribute more towards improving human welfare in this area than any other single undertaking” (UN/TAA, 1958: 6; Schaaf and Fifield, 1963: 93-98; Hanna, 1966b: 6-7; Sewell and White, 1966: 20-23). The Wheeler Mission’s report echoed the ECAFE 1957 study by stating that “the comprehensive plan for the basin must take into consideration possible developments of the tributaries” (UN/TAA, 1958: 8).

The most common theme of the 1952 ECAFE study, the 1956 U.S. Bureau of Reclamation’s Reconnaissance study, the 1957 ECAFE study, and the Wheeler Mission’s study (UN/TAA’s 1958 report) is that the data and scientific knowledge about the Mekong River Basin were the two most important resources that were lacking for comprehensive river basin development planning. The Wheeler Mission summed up the crucial role of scientific knowledge and reliable data in river basin development planning in its report as follows:

One of the great handicaps in river programs in under-developed areas is the lack of adequate and reliable data ... The ICA [U.S. Bureau of Reclamation Study team] and ECAFE teams previously reported the lack of adequate and reliable basic data and the shortage of technical personnel in these countries. These reports emphasize the need of prompt initiation of a systematic and uniform program of continuous collection of basic data. Had these recommendations been

carried out, it would have enabled this Mission to formulate a more advanced program towards the comprehensive development of the Lower Mekong Basin.²³

The Mekong River Basin was one of the first river basins in the world where the United Nations was directly involved in developing programs and drawing plans for basinwide social and economic development of riparian countries in the early 1950s (Hanna, 1968: 9). Even at its early stage of planning, in addition to four riparian countries, 21 other countries, 12 international agencies, and several private organizations prepared plans for a development of the Mekong River Basin by the year 1966 (Sewell and White, 1966: 7). The UN Secretary General U Thant in a Columbia Broadcasting System (CBS) radio broadcast on March 14, 1965, praised the Mekong project as “one of the most important and one of the most significant actions ever undertaken by the United Nations.”²⁴

This important effort of the United Nations in the Mekong River Basin between the early 1950s and the late 1960s created an important policy environment for the emergence of the Mekong River Basin development concept. More important, the emergence of the international body, the Mekong Committee or officially known as the *Committee for Coordination of the Investigations of the Lower Mekong River Basin*, was facilitated by the persistent interest of the United Nations and four lower riparian countries.

²³ See *Program of Studies and Investigations for Comprehensive Development: Lower Mekong River Basin*, UN/TAA, 1958, p. 7.

²⁴ See “Taming the Mekong: An Episode in the Twentieth Century,” New York, Columbia Broadcasting System, March 14, 1965, p. 6.

The Birth of the Mekong River Commission

The establishment of the Mekong Committee discussed in the preceding sections was perhaps the embryo stage of the current Mekong River Commission (MRC). MRC has evolved through three stages of institutional making. The first stage began with the establishment of the Mekong Committee (MC) in 1957, initiated by the United Nations. The original committee members were Cambodia, Laos, South Vietnam, and Thailand. The Mekong Committee originated within the Bureau of Flood Control of the UN Economic Commission for Asia and Far East (ECAFE), now known as ESCAP. The Mekong Committee was the first transnational governing body in the Southeast Asia region, and thus it was a pioneer in regional cooperation in Southeast Asia.²⁵

The second stage in its evolution began at the end of the second Indo-China war with the victory of North Vietnam over South Vietnam. Communist victories in Cambodia, Lao, and Viet Nam in 1975 almost led to the end of the Mekong Committee as the three communist states refused to participate in the functions of the committee. Meanwhile, Vietnam invaded Cambodia and ousted the Khmer Rouge by installing a pro-Vietnamese government in Cambodia. As regional cold war tension intensified, the Mekong Committee's mission was in jeopardy. However, with the diplomatic negotiations initiated by the United Nations, the Mekong Committee was transformed into the Interim Mekong Committee (IMC) composed of Lao, South Viet Nam, and Thailand in 1978. The 1978 IMC Statute called for the reactivation of the Mekong Committee when Cambodia rejoined in the future.

²⁵ For an account of the history of the evolution of the Mekong River Commission (MRC) from the beginning of the Mekong Committee in 1957 to the establishment of the Mekong River Commission in 1995, see Chapter 2 and 3 in Greg Browder's Ph.D. Dissertation, *Negotiating an International Regime for Water Allocation in the Mekong River Basin*, Stanford University, 1998.

The third stage of institutional evolution emerged when the Cold War was winding down and political tensions among riparian countries were tapering off in Southeast Asia. This geopolitical shift opened up new prospects for cooperation in the Mekong region. As the rivals in the Cambodian civil war signed a peace agreement in Paris in 1991, Cambodia prepared to reenter the Mekong regime. The negotiation initiated by the United Nations took place in various stages to reconstruct the Mekong regime. This time, all parties agreed that that establishment of a Mekong regime was important for regional cooperation and stability. However, Thailand proposed the total dismantling of the previous two regimes—the Mekong Committee and the Interim Mekong Committee—and initiated establishment of a new Mekong regime.

The Mekong regime at that point faced three important issues that dominated diplomatic negotiations. The first issue was the readmission of Cambodia and the emerging need for reconstruction of this war-torn country. The second issue was the establishment of a new Mekong regime different from the previous two regimes and what form it would take. The parties agreed that the new Mekong regime should have substantial independent authority over the governance of transboundary issues relating to the development and management of Mekong river basin. The third issue was whether to include China and Burma in the formation of the new regime. This issue emerged when Thailand wanted China and Burma to join the new regime since they are upstream riparian countries. However, Vietnam was hesitant to include China in the negotiation (Browder, 1998: 105-107). For the United Nations, the priority was to have agreement among the original four countries so as to strengthen the Mekong regime. Finally, the United Nations ended the deadlock and convened the original four riparian states and

reached political agreement on the establishment of a new Mekong regime. Detailed procedures for a new round of negotiations for the institutional structure of a new regime and its relationship to member states were considered more during the final round of negotiations that took place in October 1992 in Hong Kong.

This series of negotiations led to a political agreement that the lower four riparian countries—Cambodia, Lao PDR, Thailand, and Vietnam—would commit to the establishment of a new Mekong regime. The meeting at Kuala Lumpur in December 1992 was one of the significant events in the Mekong negotiation process because it resulted in a political commitment by the governments of the four countries to reach an agreement on a new constitutional framework for the Mekong Regime (Browder, 1998: 114). This agreement led to intense negotiations among the countries, and finally an agreement was reached to establish the Mekong River Commission (MRC) in 1995 in Thailand.

The MRC was established on April 5, 1995, with the signing of the *Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin* (known as the Mekong Agreement). The Mekong Agreement is the constitutional document for the current MRC legal and policy regime. It contains six chapters with 42 articles. Out of six riparian countries, only Cambodia, Lao PDR, Thailand, and Vietnam signed the agreement. With the final stage of institutional establishment, MRC replaced the Mekong Committee established in 1957 and the Interim Mekong Committee established in 1978. China and Myanmar did not seek to join the MRC, as these countries did not see any benefits in joining the regime.

Institutional Structure of the Mekong River Commission

The MRC is structured with three permanent bodies – the Council, the Joint Committee, and the Secretariat (see Figure 3.1). The Council is composed of one member at ministerial and cabinet level from each MRC member country (Article 15). The Council member must not be lower than the deputy ministerial level of a member country. The Council convenes annually and produces policy guidelines, represents national initiatives, resolves conflicts, and makes policy decisions (Article 18). The Council’s decisions are made by unanimous consensus.

The Joint Committee is composed of one member from each riparian state at no less than the head of department level (Article 21). It convenes at least two regular sessions every year. The Joint Committee is responsible for carrying out the policy decisions of the Council for implementation, conferring with donors, cooperating institutions, and national Mekong committees. The Secretariat, which provides technical and administrative services to the Joint Committee and the Council, is under the direction of a chief executive officer (CEO). The Secretariat office serves as a key liaison institution between MRC and subnational local governments. In addition, the Secretariat office monitors technical and administrative functions and processes for the implementation of the Mekong Agreement and MRC’s policy decisions.

Challenges for the Mekong River Commission

MRC’s objective is “to cooperate in all fields of sustainable development, utilization, management, and conservation of the water and related resources of Mekong River Basin” (MRC Secretariat). In order to achieve these objectives and to implement the Mekong Agreement, MRC has launched three major programs that call for the active

participation of national and local communities. First, in accordance with Articles 5 and 6 of the Mekong Agreement that mandates water utilization and ecological protection, MRC inaugurated the Water Utilization Program (WUP) in 1999. The World Bank's Global Environmental Facility (GEF) finances the WUP for institutional and capacity-building activities among MRC member states. The 1999 MRC annual report maintains that the WUP will be "a major test-case for the potential for regional cooperation on the development and use of the Mekong River Basin resources. Its implementation will also be a major test-case on the effectiveness and relevance of the Mekong River Commission itself." Therefore, the success or failure of WUP is MRC's testimonial venture.

Second, along with WUP, MRC began to launch the Basin Development Planning (BDP) in 2000. BDP is envisioned as both a general planning tool and a process that will be used by the Joint Committee as a blueprint for identifying and prioritizing programs and projects at the basinwide level in order to realize the sustainable development of the Mekong region (1999 MRC report). The Secretariat office is responsible for assisting the Joint Committee with technical and administrative work to accomplish BDP.

The third major program that is being implemented is the MRC Environmental Program (MRC-EP). MRC-EP is to provide scientific data and technical advice to the MRC so that entity can carry out programs and projects in sustainable ways. MRC-EP, therefore, is the key program that addresses the environmental consequences of other MRC programs such as dam projects, irrigation, and water utilization programs.

MRC's three major programs are closely integrated. The difficulties and successes of one program will affect the results of the others. In addition, all of these programs and MRC's goals are to be carried out under the agreements and memorandums

of understanding (MOUs). There is nothing legally binding for member countries except to the constitutional document of the MRC, the Mekong Agreement. The Mekong Agreement in reality does not deal with the detailed programs and implementation of the document's goals. It provides visionary and constitutional frameworks for the member countries. The member countries have to follow the guidelines provided by the Mekong Agreement in carrying out sustainable social and economic development. While the regime's institutional authority respects the sovereignty elements of each member country, it persuades member countries to realize and accept the need to share sovereignty among them, especially in dealing with transnational issues.

The implications of resource-based development in the Mekong Basin are complex and have multifaceted dimensions. While the potential economic benefits of an intensified level of resource exploitation are great, the social and environmental consequences are also very high. There are a number of factors that govern the challenges that MRC is facing behind this complex and multifaceted dimension of river basin development planning. Some of these factors include:

- different levels of development within and between Mekong Basin countries;
- diverse cultural, social and political structures among Mekong Basin countries, which have led historically to skewed access to resources;
- inherent nature of river basin resource development, which produces externalities and create spillover effects on social, spatial, temporal, and environmental arenas;
- dominant patterns of development thinking and planning that put economic growth before equity and sustainability in most countries' macroeconomic policy and mainstream development agenda;
- lack of theoretical and philosophical ground in policy regimes of member countries that the various riparian states in the region assume that what was good for the western world must be equally good for them;
- the rise of non-state actors (for profit and not-for-profit) in changing the landscapes of institutional infrastructures in the Mekong River Basin; and

- donor-dependent thinking among national policy makers and subsequent donor-driven planning for development

With these factors, MRC faces significant challenges on the road to accomplishing its designed programs. The institutional structure and the working nature of programs within the Mekong River Commission demonstrate that the MRC does not view its position as a regional supranational authority. MRC, however, serves as a conciliatory body of transnational governance for natural resources management and environmental management.

Issues in Governance of Mekong River Basin Development

The Mekong River Basin as a whole is facing various policy issues at the local, national, and transnational layers reflecting the broader challenges in governance of development planning as discussed in the preceding sections. It is important to understand how various actors in the Mekong River Basin see issues relating to their livelihoods. During my field research, I investigated by way of open-ended and structured interviews the issues that various actors perceived as urgent and important policy issues in the Mekong River Basin. In the structured interviews, I asked participants to score 1 = least important to 10 = most important on issues that the Mekong River Basin governance faces as they perceived each issue (Appendix A: Indiana University–Bloomington Study Information Sheet). I categorized respondents into two groups: (1) state actors composed of government officials in Lao PDR, Thailand, and officials from MRC who described themselves as *d*, *e*, and *f* in question 2; and (2) non-state actors composed of independent experts, researchers, activists, and workers from non-government organizations (NGOs), employees from hydroelectric power industries, and local villagers who are directly

affected by the dam projects and who describe themselves as *a*, *b*, *c*, *g*, *h*, and *i* in question number 2.

For the purpose of comparing how state and non-state actors view the governance issues that the Mekong River Basin as a whole is facing, I compare the means of these two groups and use a *t*-test to determine statistical significance. The outcomes of the *t*-test are reported in Table 3.2. The important assumption on field data is that participants weight intervals between each score to be integral rather than categorical. This assumption conveys that when respondents answered structured questions, they weighted the difference between 1 and 2, 2 and 3, etc. to be integral and equal.²⁶ Therefore, holding this assumption about the data, I compare the mean of each group to draw inferences on how each group views each issue listed in question 3. Understanding how each group views the importance of issues to be resolved in the context of the Mekong governance is a helpful contextual ground to understand their interests and the positions they take on each issue, especially in regard to the policy debate about the consequences of dam construction.

In addition to assumptions about the characteristics of data, three assumptions are needed to test the mean difference of two independent groups by performing the *t*-test. These three assumptions are (1) the samples are drawn from normally distributed populations with unknown parameters of population means; (2) samples are independent, that is two samples are drawn from different populations and the elements of sample are not related to each other; and (3) population variance of two groups, σ_1^2 and σ_2^2 , are

²⁶ This is an important assumption because if the participants weight each score as categorical, such as “1 = not important, 2 = somewhat important, 3 = important, and 4 = very important, etc.,” then the mean of each issue they score may not be statistically relevant so as to compare means. The rationale is that the degree of difference between “not important and somewhat important” and “somewhat important and important” is weighted differently by respondents.

equal.²⁷ Depending on the Central Limit Theorem, which states that sample distribution for \bar{x}_1 and \bar{x}_2 (x with bars) are approximately normal when N gets larger, usually $n_1 + n_2 \geq 30$ (Griffith et al., 1993: 51-52). In my analysis of the issues in the Mekong River Basin, I had 83 respondents.

According to the output of the t -test reported in Table 3.2, there are four policy or governance issues that state and non-state actors view differently in terms of how important it is that they be resolved in governance processes or development planning in the Mekong River Basin. These four issues about which state and non-state actors seem to have different perceptions are (1) degradation of fisheries due to dam construction; (2) loss of forest and land from dam construction; (3) poverty of population; and (4) environmental education within populations.

<Table 3.2 about here>

First, on the issue of degradation of fisheries, the significance level of probability of t score is 0.021 ($<.05$), which means that less than 5% of respondents support the null hypothesis to suggest that the mean value between state and non-state actors is the same. The remaining 95% of respondents' scores, therefore, seem to support that the mean difference between state and non-state actors is statistically significant to say that state and non-state actors view the issue of degradation of fisheries differently. This significance is also reflected in differences in distribution of respondents as shown in Table 3.3 on the fisheries issue. Table 3.3 shows that 58% of non-state actors scored 8, 9, and 10 while 33% of state actors scored 8, 9, and 10. In a policy term, this seems to

²⁷ It can be expressed in equation as:

$$E(\bar{x}_1 - \bar{x}_2) = \mu_1 - \mu_2, \text{Var}(\bar{x}_1 - \bar{x}_2) = \frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2} = \sigma^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)$$

suggest that the issue of degradation of fisheries caused by dam construction will be weighted differently between state officials and non-state actors. This can lead to conflict between state and non-state actors on the issue of degradation of fisheries relating to measuring the consequence of dam construction.

<Table 3.3 about here>

Second, the issue of poverty can also be interpreted statistically the same way as the issue of degradation of fisheries is interpreted above. The significance level of the poverty issue is 0.009 ($<.05$), which means that less than 5% of the sample cases seem to support that the means of state actors and non-state are the same. This suggests that the ways in which the state actors and non-state actors view the poverty issue in the context of development planning in the Mekong River Basin are different. Many of the state-initiated development projects such as dam construction in the Mekong River Basin are argued in the context of “poverty reduction” policies and programs. As Table 3.4 shows, 67.6% of state actors scored poverty issues as important (8, 9, 10) while 42.7% of non-state actors scored the same. The poverty reduction programs are highly supported and promoted by the Asian Development Bank and the World Bank through loans.

<Table 3.4 about here>

It is important to consider how people who are viewed as “poor” by bank officials and state leaders view the issue of poverty in crafting such poverty reduction policies and programs. The difference in the mean test seems to suggest the states’ development policies imposed on rural villagers may be at odds with the needs and desires of the villagers who see the issues of poverty differently from the state. This is a relevant issue in the Mekong River Basin as some of the high-level MRC officials expressed during the

interviews how the issue of poverty dominates riparian states in terms of development thinking. Former Chief Executive Officer Joern Kristensen of the MRC summed up this issue in the MRC's *State of Basin 2003 Report*:

Although exploitation of the basin's resources could be of tremendous benefit to the peoples of the Mekong Basin, who are among the poorest in the world, it could also cause tremendous hardship if it is not properly planned, managed and monitored.²⁸

Third, the issue of environmental education among local populations is another policy issue that state and non-state actors seem to view differently, as suggested by the *t*-test, with the significance level of 0.009 (<.05), which rejects the null hypothesis. Very often the ways in which non-state actors view the level of environmental education of villagers is different from the ways in which government officials view them. Government officials often view the environmental education of local populations as a problem in implementing development projects while non-state actors view this as less of a problem. Table 3.5 shows distribution of respondents between state and non-state actors on the issue of environmental education. Similar to the poverty issue, the state actors (73.7% scoring 8, 9, and 10) compared to non-state actors (38.2% scoring 8, 9, 10) seem to think the environmental education is a problem in environmental governance. This implies that the problem of environmental education among local populations is an obstacle to promotion of sustainable development of the Mekong River Basin in the view of state officials.

<Table 3.5 about here>

During interviews with government officials both in Lao PDR and Thailand, the rural populations, especially poor villagers and farmers, were often described as

²⁸ See "Preface" in the *State of Basin 2003 Report*, Mekong River Commission, June, 2003.

backward and uneducated people who needed to be developed by the state. Surprisingly, Thai government officials were more negative about the education of villagers in Northeast Thailand (widely known as the *Isan* region) compared to their counterparts in Lao PDR. Government officials in Thailand in general have more formal education and live in a politically open society compared to their counterparts in Lao PDR. Perhaps the communist philosophy of the Lao PDR government, which considers itself as representative of poor and rural villagers, played an important role in the way in which government officials viewed villagers. However, this is not to convey that the Lao PDR government officials' view of their villagers is right and Thai government officials' view of their villagers is wrong.

The Lao PDR government officials' perception of education of the rural villagers is almost counterproductive in that they blind themselves by refusing to see the need for education for rural villagers. As a consequence, they may fail to devote their resources more to rural education. Thai government officials' perception that villagers need to be educated more about their environment is perhaps factually correct in some cases but government officials take this as a reason to deny villagers the rights to participate in decision-making processes about their own livelihoods. This is problematic for policy implementation and will be further investigated in the following case analysis chapters. Therefore, it is necessary to understand how governments of the countries in the Lower Mekong Basin think about and perceive the environmental education of their rural populations.

Fourth, the loss of forest and agricultural land due to dam construction is another issue where state and non-state actors seem to have differences as suggested by the *t*-test,

with the significance of 0.015 ($<.05$). The mean difference is -1.95, the widest among all issues listed in Table 3.2. The perception of government officials and non-state actors, especially villagers, on the complex issues of loss of forest and loss of land goes beyond the loss of trees and space. Table 3.6 shows that 52.5% of non-state actors view the loss of forest and land as an important policy issue, while only 18.2% of state officials view the same scoring at 8, 9, and 10. The remaining 30% of state and non-state actors scores under 8. Based on my interviews and from my observation of village life during field research for this dissertation, I observed that for villagers, the forest is not just trees, land, and space. Their cultural, communal, and emotional attachments to land and the worship of certain forests is one thing that gets very little (or no) consideration in the decision making at the state level. Government officials often think that compensation packages containing the market price of land and loss of income due to these projects should satisfy villagers. This assumption of government officials and consulting firms that helped government officials calculate costs and benefits of dam projects is a source of governance problem. This is analyzed in detail in the investigations of Pak Mun Dam in chapters 6 and 7.

<Table 3.6 about here>

Finally, the four remaining issues listed in Table 3.2, namely water pollution, flood, clear rules among riparian countries, cooperation among riparian countries, and participation of local communities are also equally important issues. However, both state and non-state actors seem to see the importance of them at least in a similar fashion, as suggested by the *t*-test and significance levels that indicate the null hypothesis should not be rejected.

The governance issues discussed in the preceding paragraphs are not exclusive but are crucial to the institutional landscapes relating to dam construction in the Mekong River Basin. This dissertation cannot handle other remaining important policy issues such as endangered species, climate change, land use, land cover, and forest dynamics, which are also associated with dams. These issues are extracted from reading archival documents and local newspaper articles surrounding the reports about the Nam Theun 2 Dam in Lao PDR and Pak Mun Dam in Thailand. In addition to these listed issues in question 3, the questionnaires also gave participants a choice to list “other” issues they saw as important. These issues include navigation; the impacts of China’s planned dam construction; border demarcation disputes, and population control, which also reflect phenomena facing development planning in many other international river basins.

Table 3.1. Mekong River Basin Catchment Area by Riparian Countries

	Yunnan Province, China	Myanmar (Burma)	Lao PDR	Thailand	Cambodia	Vietnam	Mekong River Basin as a whole
Catchment area (CA, sq km)	165,000	24,000	202,400	184,000	155,000	65,000	795,000
CA as % of country or province	38	4	85.5	36	85.4	20	
CA as % of Mekong River Basin	21	3	25	23	20	8	100

Sources: Adopted from MRC (2003b).

Table 3.2. Policy Issues in the Mekong River Basin as Perceived by Both State and Non-State Actors

Issues	Actors	N	Mean	Std. Deviation	t	Sig. (2-tailed)	Mean Diff.
Water pollution	State	21	4.48	2.99	-1.67	.098	-1.27
	Non-State	62	5.74	2.99			
Flood	State	21	7.33	2.87	1.40	.162	1.12
	Non-State	62	6.21	3.24			
Degradation of fisheries	State	21	5.43	3.23	-2.35	.021	-1.76
	Non-State	62	7.19	2.88			
Loss of forest and agricultural land	State	22	4.82	2.86	-2.49	.015	-1.95
	Non-State	61	6.77	3.24			
Poverty	State	21	7.90	2.39	2.74	.009	1.79
	Non-State	61	6.11	3.06			
Environmental education	State	19	7.89	1.97	3.24	.002	1.87
	Non-State	61	6.02	2.85			
Clear rules among riparian countries	State	20	6.90	2.55	-.256	.798	-.183
	Non-State	60	7.08	2.83			
Cooperation among riparian countries	State	21	6.90	2.96	-.177	.860	-.128
	Non-State	62	7.03	2.82			
Participation of local communities	State	21	7.52	2.23	.407	.731	.254
	Non-State	63	7.27	3.11			

Note: Actors are categorized based on participants' answers in question No. 2, where participants are asked to describe who they represent in the cases of Nam Theun 2 (NT2) Dam and Pak Mun Dam. If they marked d, e, and f, they are State actors, and others are Non-State Actors. In question No. 3, participants were asked to score the level of importance, 1 = least important to 10 = most important, of issues that the Mekong governance faced at the time of interview in late 2003 and early 2004 during field research. Both questions No. 2 and No. 3 are worded the same in two sets of questionnaires (one for NT2 Dam participants and another for Pak Mun Dam participants) asking general issues that they believe the Mekong River Basin governance processes have to deal with. Total N, therefore, are combined results from two cases.

Chart 3.1. Key Policy Issues in the Mekong River Basin: Perspectives of State and Non-State Actors Compared

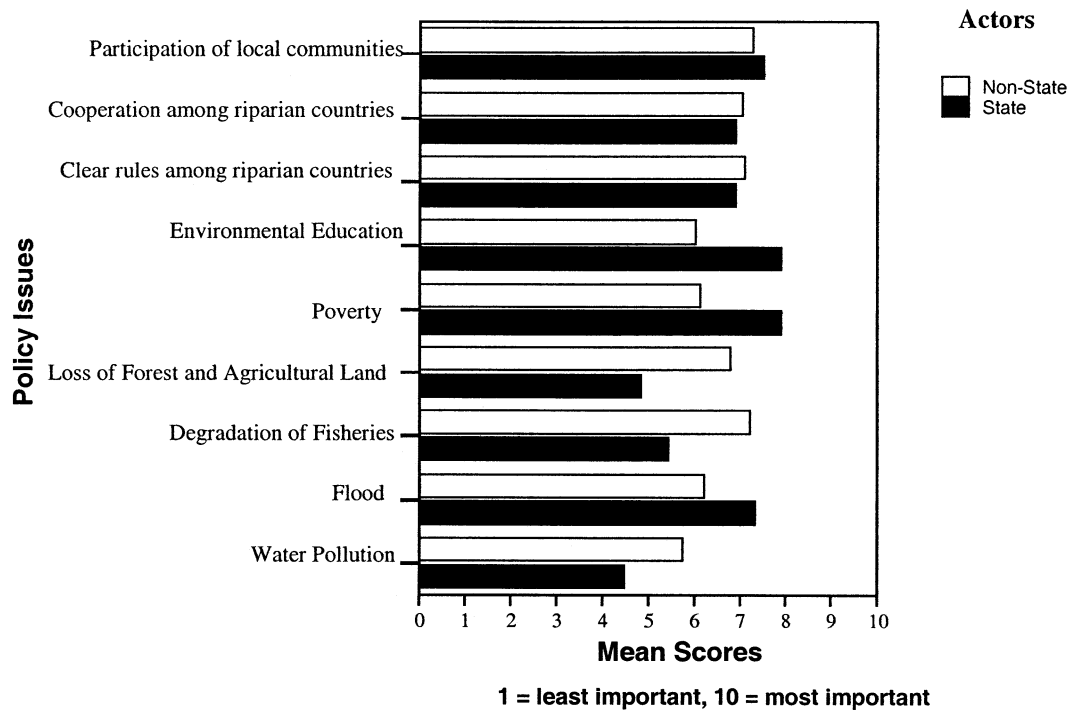


Table 3.3. Responses to the Issues of Degradation of Fisheries: State and Non-State Actors Compared

Key Policy Issues	Responses	Actors	
		% of State (n)	% of Non-State (n)
Degradation of Fisheries	1	14.3 (3)	9.7 (6)
	2	9.5 (2)	0 (0)
	3	14.3 (3)	4.8 (3)
	4	4.8 (1)	1.6 (1)
	5	9.5 (2)	11.3 (7)
	6	4.8 (1)	4.8 (3)
	7	9.5 (2)	9.7 (6)
	8	9.5 (2)	17.7 (11)
	9	9.5 (2)	9.7 (6)
	10	14.3 (3)	30.6 (19)
Total		100.0 (21)	100.0 (62)

Note: Responses are scored 1 = least important to 10 = most important.

Table 3.4. Responses to the Issue of Poverty: State and Non-State Actors Compared

Key Policy Issues	Responses	Actors	
		% of State (n)	% of Non-State (n)
Poverty	1	4.8 (1)	9.8 (6)
	2	0 (0)	6.6 (4)
	3	0 (0)	8.2 (5)
	4	0 (0)	6.6 (4)
	5	14.3 (3)	14.8 (9)
	6	4.8 (1)	4.9 (3)
	7	9.5 (2)	6.6 (4)
	8	14.3 (3)	14.8 (9)
	9	19.0 (4)	8.2 (5)
	10	33.3 (7)	19.7 (12)
Total		100.0 (21)	100.0 (61)

Note: Responses are scored 1 = least important to 10 = most important.

Table 3.5. Responses to the Issue of Poverty: State and Non-State Actors Compared

Key Policy Issues	Responses	Actors	
		% of State (n)	% of Non-State (n)
Environmental Education	1	0 (0)	8.2 (5)
	2	5.3 (1)	4.9 (3)
	3	0 (0)	8.2 (5)
	4	0 (0)	9.8 (6)
	5	5.3 (1)	16.4 (10)
	6	5.3 (1)	6.6 (4)
	7	10.5 (2)	8.2 (5)
	8	36.8 (7)	13.1 (8)
	9	15.8 (3)	9.8 (8)
	10	21.1 (4)	14.8 (9)
Total		100.0 (21)	100.0 (61)

Note: Responses are scored 1 = least important to 10 = most important.

Table 3.6. Responses to the Issue of Loss of Forest and Agricultural Land: State and Non-State Actors Compared

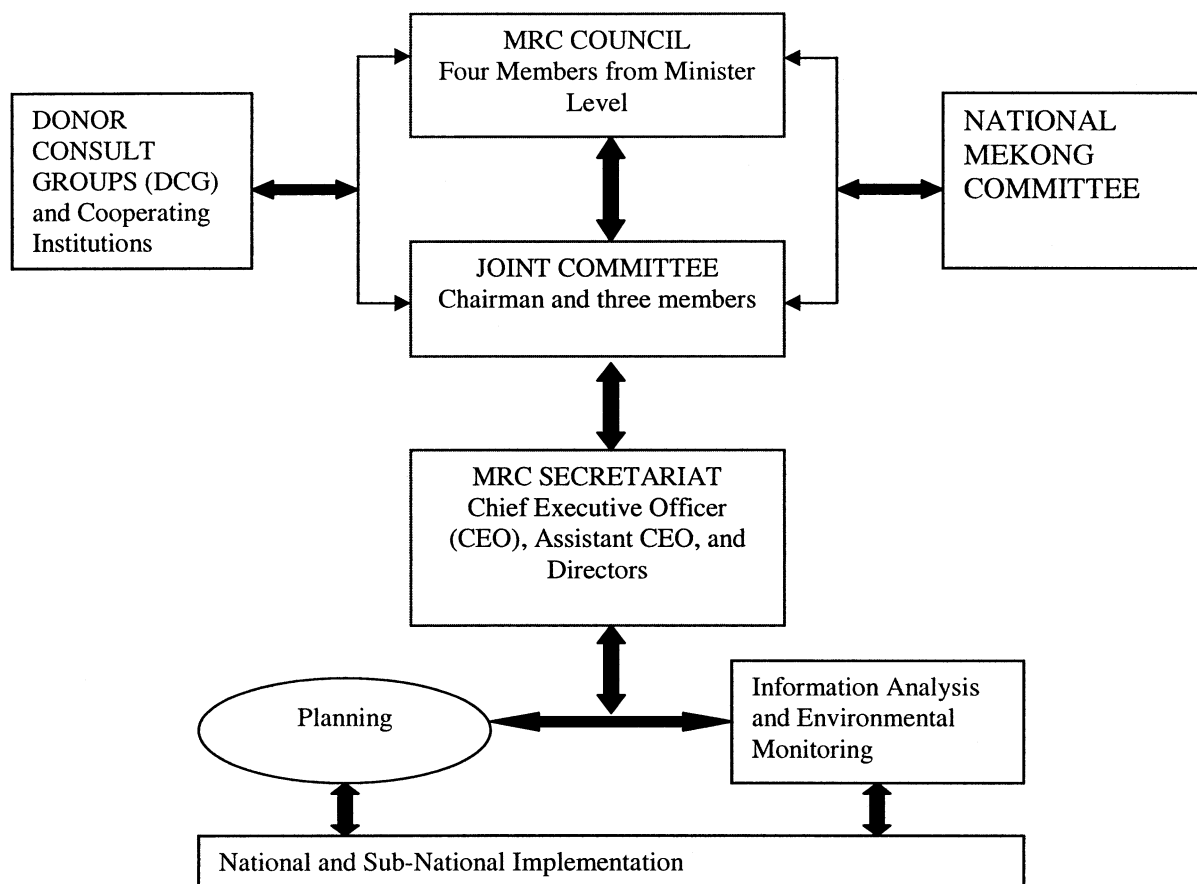
Key Policy Issues	Responses	Actors	
		% of State (n)	% of Non-State (n)
Loss of Forest and Land	1	18.2 (4)	9.8 (6)
	2	9.1 (2)	3.3 (2)
	3	9.1 (2)	11.5 (7)
	4	9.1 (2)	4.9 (3)
	5	9.1 (2)	4.9 (3)
	6	18.2 (4)	6.6 (4)
	7	9.1 (2)	6.6 (4)
	8	9.1 (2)	8.2 (5)
	9	0 (0)	11.5 (7)
	10	9.1 (2)	32.8 (20)
Total		100.0 (21)	100.0 (62)

Note: Responses are scored 1 = least important to 10 = most important.

Map 3.2. Map of the Mekong River

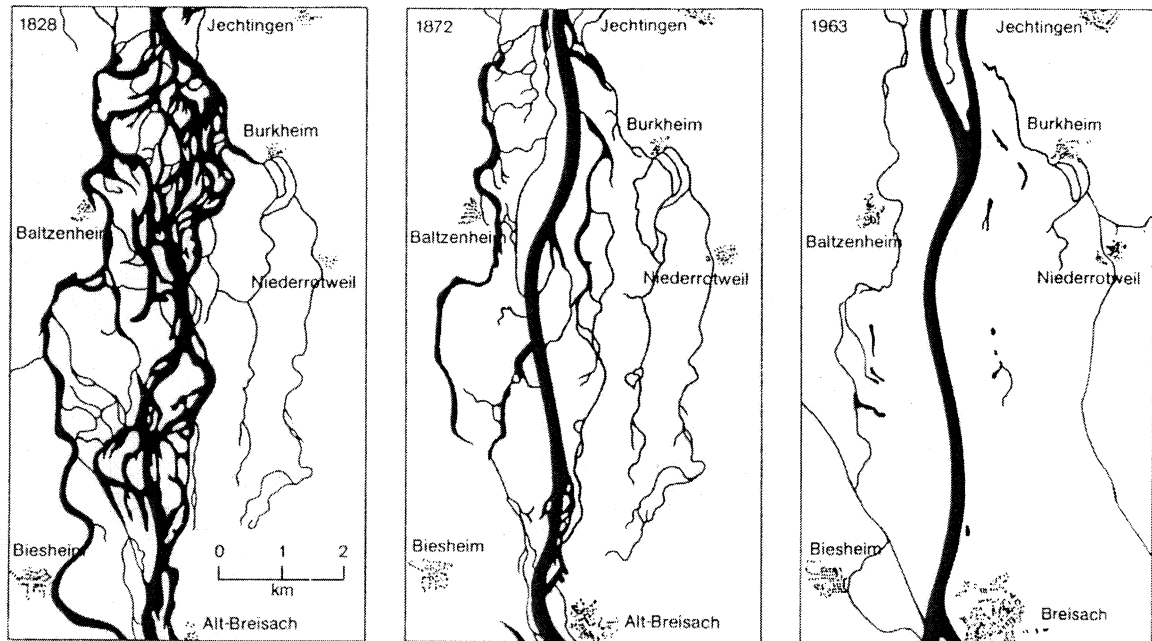


Figure 3.1. The Structure of the Mekong River Commission²⁹



²⁹ This structural diagram is drawn based on Article 12 to Article 33 of the Mekong Agreement and the 1999 MRC annual report in which structural changes that had occurred in 1997 at the secretariat level were explained.

Map 3.1. Evolution of Institutions and Environment in the Rhine River Basin, 1828-1963



The Upper Rhine at Breisach:

1828: before the river development, 1872: after the Tulla realignment and 1963: after further canalization.

Source: Brenner et al. 2003. Permission to use was granted by T Brenner.

Chapter 4

Multilayer Environmental Governance in the Rhine River Basin

Introduction

With the five member countries plus the European Union, the International Commission for the Protection of the Rhine (ICPR) has transformed through an international law treaty-type regime to a soft-law action-oriented regime. There were three major formal mechanisms of the ICPR environmental governance during the 50 years of its existence, from 1950 to 2000. The first two are legally binding treaties: the 1976 Convention for the Protection of the Rhine against Chemical Pollution (Chemical Convention) and the 1976 Convention for the Protection of the Rhine against Pollution from Chlorides (Chloride Convention). The third and the most well known among practitioners and observers of river basin governance is the Rhine Action Program for Ecological Rehabilitation (RAP), inaugurated in 1987 and ended in 2000, which was a non-binding action-oriented program. These three regimes designed for the ICPR environmental governance are the central focus of my analysis using the IAN framework that I am developing. In addition, I analyze the case of the International Water Tribunal (IWT), which was organized by non-state actors and took place outside the formal system of governments of member states and the ICPR regime.

In this chapter, I first discuss the evolution of the issue of the Rhine water pollution to explain how the issues of water pollution became environmental governance

issues in national and transnational layers.³⁰ Second, I analyze the interplay of issues, interests, and actors in the governance processes of the Chemical Convention and the Chloride Convention. The analyses of these two conventions are aimed to shed light on how state-centric international regime operated and to explain how it failed to produce the objectives and goals agreed upon in these legally binding conventions.

In the next chapter 5, I analyze the case of the IWT, which was organized by the International Water Tribunal Foundation (hereinafter Foundation) composed of non-state actors. The analysis of the IWT provides an understanding of how non-state actors from the local layer began to lose faith in state-centric legal mechanisms and how they emerged to influence the formal legal and policy processes at the national and transnational layers. The IWT case also further amplified, as self-evidence, the failure of achieving objectives and goals by the state-centric, legally binding Chemical Convention and Chloride Convention. Then, I analyze the interplay of issues, interests, and actors in the governance processes of RAP, which was an action-oriented soft-law type regime. It was a transformed regime designed from two legally binding regimes—the Chemical Convention and the Chloride Convention. The analysis of RAP shows how issues, interests, and actors across local, national, and transnational layers are linked and how it produced results that had not been achieved by the Chemical Convention and Chloride Convention.

³⁰ This chapter is based on my previously published works (Myint, 2002, 2003) and is a case analysis of the Rhine River Basin regime, which was designed to reduce the pollution in the Rhine River and to rehabilitate it.

Evolution of the Rhine Water Pollution Issue

The evolution of governance issues to become a policy agenda reaching to decisions for river basin development planning has been closely associated with the evolution of the interests and specific preferences of riparian states and non-state actors. If we look at the history of the institutional evolution in the Rhine, the first issue that riparian states reached in cooperation was a navigation issue (Huisman et al., 1998: 63). Because of the geographical and hydrological characteristics of the Rhine, which passed through the region of industrial revolution in the early nineteenth century, the riparian countries first rationalized the Rhine as a nature-provided transportation route for trade in addition to treating it as raw material for industrial-process water. This interest brought then riparian states to engage in the international cooperation in the Rhine River Basin on navigation issue with the creation of the Central Commission for the Rhine Navigation in 1815 (Huisman et al., 1998: 63; Garritsen et al., 2000: 34).

The second important interest that the Rhine countries had was production of hydropower from the Rhine flow. The first hydropower dam was built in 1866 in the High Rhine at Schaffhausen for electricity generation for a cable car across the Rhine that was needed to start canalization works of the High Rhine for navigation (Garritsen et al., 2000: 34). Both the pollution from the ships and the closures of migratory routes for fish by dams, weirs, and locks began to intensify destruction of habitats and the spawning grounds of fish and fauna. The concerns of local fishermen gained importance in riparian states in the late nineteenth century (ICPR, 1994: 6). The degradation of fisheries issue was also partially caused by the increase in catches due to improved fishing techniques and technology. As a result, riparian countries signed the treaty *Saatsvertrag über die*

Lachsfischerei im Rhein, widely known as the *Salmon Treaty* in 1885 (ICPR, 1994: 6).

However, this treaty, although still in force today, could not prevent the decline of salmon in the Rhine. The decline of salmon was also partly due to the increase in pollution of the water along with construction of physical barriers to migration and advances in fishing techniques.

Emergence of Rhine Water Pollution Issue as a Governance Problem

The issue of water pollution was recorded in towns and municipalities along the banks of the Rhine in Europe as early as the 1300s. In The Netherlands, Philip of Leyden (Leiden), who was the first constitutional jurist of Holland, had written in 1390 that the water pollution imperiled the health of both man and animals. His writing influenced municipal authorities to pass municipal provisions to punish water polluters. In the *Kuerboek* (register of city decrees) of the City of Leyden, the provision that appeared in 1406 stated that whoever polluted the water of the Rhine or the canals within the city could count on a fine (IWTF, 1983: Ch. II, p. 1). Similar provisions were found in the Haarlem and Amsterdam registers of city decrees of 1390 and 1413, respectively, and are regarded by historians as the first environmental laws on water pollution in The Netherlands (IWTF, 1983: II, p. 2). The seriousness of water pollution and sanitation in the towns could be found in these provisions, where enforcement rules became harsh, as recorded in Haarlem's register:

Anyone who during daylight hour, deposits manure, sludge, rubbish, or anything of that sort in the Spaerne, the canals, or in the Beeck, shall be liable to a fine of one pound and two thousand stones. Anyone who deposits at night will be liable

to a fine of two pounds and four thousand stones. He who reports culprits shall receive one third of above mentioned sum.³¹

The exigency to keep water clean and to maintain sanitation of towns and public places was sparked, perhaps, by the epidemics, such as the plague, that haunted Europe. In 1349, the plague broke out in Paris and spread over Flanders, the Low Countries, to Britain, Ireland, Norway, Prussia, Iceland, and even to Greenland (IWTF, 1983: Ch. II, p. 2). Various perceptions were blamed as the source of the epidemic. Many people then regarded “executing instruments of evil spirit or their satellites” as the cause, and “Jews were repeatedly accused of having poisoned the wells” (IWTF, 1983: Ch. II, p. 2). One, perhaps unfortunate, perception and sown into the stigma of the tapestry of European civilization came from French court poet Guillaume de Marchant, who echoed the blame on Jews: “...rivers and wells, clear and clean, were poisoned by them at many places...” (Glaudemans and Groen, 1983: 35).

The IWT casebook, published as a tribunal document in 1983, cited that as a result of these accusations against Jews, they were slaughtered in the Alsace, Switzerland, and Germany after the outbreak of the plague in 1348. The IWT casebook cited specific cases as follow:

On January 3, 1349, the whole Jewish community was burnt in Basel in a wooden house, especially built for this purpose on an island in the Rhine. In February 1349, two thousands Jews died at the stake in Strassbourg. In Frisbourg, Rengensburg, Nuernberg, Augsburg, and other towns the Jews were slaughtered. The last pogrom took place in Antwerp and Brussels in December 1349.³²

However, a historical survey of the water pollution in Europe, and the Rhine River Basin in particular, by the IWT found that in addition to household wastes and

³¹ Source: Gemente-archief Haarlem, Haarlem, the Netherlands, inv. Nr. 20. Also cited in Glaudemans and Croen, 1983.

³² See also Marcus (1938: 43–47) for background.

animal wastes, there were then local industries such as dyers, fullers, and bleachers in France, Holland, and Germany responsible for water pollution. In Holland, municipal authorities in Leyden, Haarlem, and Amsterdam confronted dyers by issuing regulations and requiring dyers and fullers to transport their waste water out of town. Even though law suits were initiated against bleachers and dyers by the beer brewers in Haarlem, who needed clean water from the Rhine, the bleachers and dyers had greater economic influence and political connections with the municipal authorities and were able to bypass the regulations (IWTF, 1983: Ch. II, p. 7).

The industrial revolution, which began about 1800 in England and France, led to the expansion of industries, notably chemical industries, and trade along the Rhine further increased the use of Rhine water and the discharge of waste waters back into the Rhine. ICPR's assessment of the impact of industrialization along the Rhine recounted, "from the second half of the 19th century ..., two main industries [had] developed from the formerly great commercial diversity with textile industry in a leading position: heavy industry and chemical industry" (ICPR, 1998a: 3). In addition to industrial expansion, the Rhine was heavily used by transportation ships. In an independent evaluation of the human impacts on the Rhine's physical and biotic systems during the last two centuries, Lelek (1989) stated:

In the past 200 years hardly any other watercourse has undergone as many changes as the Rhine. Formerly a wild salmon stream, meandering through a bright floodplain, the river has since been transformed to a fully navigable ship canal. (p. 469)

The impact of human institutions on the Rhine had already made a huge mark on the Rhine's ecosystem by the beginning of the twentieth century. In addition to physical impacts to the Rhine's geomorphological conditions, the water pollution was one of the

major issues often recorded in the literature of the Rhine. Although the water pollution in Europe in general and the Rhine in particular were concerns for citizens during the time industrialization expanded along the Rhine, it was not a priority policy issue for environmental governance in the minds of state leaders. Priorities then were given to ensure economic growth and maintain the progress of industrialization of the European social and economic life. This trend of human institutions and promotion of their priority interests have indeed, as Huisman et al. (1998: 63) put, inflicted unbalanced “harms” to the Rhine’s ecosystems.

The Rhine pollution level increased dramatically after World War II, as there was a marked increase in industrial activities. From these industries along the Rhine, large quantities of untreated wastewater were discharged, and the Rhine was used literally as a dumping site for industrial wastewater. After World War II, The Netherlands, being the lowest downstream country in the Rhine River Basin, initiated diplomatic talks as early as 1946.³³ It took until 1950 for riparian states, namely the then Federal Republic of Germany, France, Luxembourg, The Netherlands, and Switzerland, to agree on establishing ICPR on July 11, 1950, at Basle. The first and very important task ICPR decided to take on was to collect scientific data to identify what chemicals were causing pollution and from what sources they were coming into the Rhine. ICPR started its investigation of the Rhine pollution in 1953 with common measurements and methods to measure quantity and type of pollution. These data collected by ICPR became materials for substantive discussion to develop international efforts in combating Rhine pollution. The Netherlands believed that the Rhine pollution must be dealt with through

³³ The Netherlands made the first diplomatic attempt to curb the pollution from chloride in 1932 but was unsuccessful in reaching an agreement (Huisman et al., 1998: 65).

international efforts. However, these earlier diplomatic efforts of mostly the government of The Netherlands were not successful in developing concrete institutional arrangements to combat pollution.

In a statement submitted to the United Nations Economic Commission for Europe (ECE) in 1960, upon request from ECE to identify the “most urgent water pollution problems” in The Netherlands, The Netherlands government wrote:

With respect to pollution caused outside the country, the Netherlands is dependent on other States. In particular the very important problem of pollution of the water of the Rhine, which is the main source of fresh water for the Netherlands, cannot be solved by the Netherlands alone, since this pollution is caused by discharge of waste abroad. To control this pollution, especially the rising salt of the water of the Rhine, is of vital importance to the Netherlands. (UNECE 1961: 141)

Emergence of International Cooperation

From the time the agreement was signed in 1950 to recognize the Rhine pollution as an international problem and to establish the international institutional mechanism among key riparian states, ICPR operated as merely a forum to share information. However, the time was ripe in 1963 for ICPR to transform itself from merely a forum among member states to become a legally instituted international body with the aim to effectively address the Rhine pollution. ICPR member countries—Germany, France, The Netherlands, and Luxembourg—took an historic institutional commitment on April 29, 1963, by signing in Bern the *Convention on the Protection of the Rhine against Pollution* to transform ICPR from the status of a forum to the status of an international working body to carry out concrete plans for combating pollution of the Rhine. This convention,

widely known as the Bern Convention, was the legal point of reference for future cooperation among member states .

Scholars who have studied the Rhine pollution cleanup regimes from the dimensions of the international cooperation (LeMarquand, 1977; Bernauer and Moser, 1996; Dieperink, 2000), regime development (Dieperink, 1997), regime effectiveness (Gurtner-Zimmermann, 1998), and dimensions of culture (Verweij, 2000) all seem to suggest with empirical evidences that the soft-law type action-oriented regime provides a higher chance of success in carrying out the objectives and goals at the national and local layers. I have elsewhere argued with empirical evidences that the soft-law type action-oriented Rhine regime facilitated the crucial role of non-state actors, their issues, and their interests to play out in multilayers of governance processes (Myint, 2003). In the following sections, we will further examine how non-state actors' influence worked to transform the Rhine regime from a treaty-type international, state-to-state regime to an action-oriented regime that embraced all relevant actors at multiple layers.

Issues, Interests, and Actors in the 1976 Chemical Convention

Background of the Governance Processes of the Chemical Convention

To explain and understand the ways in which issues, interests, and actors shaped each other to produce outcomes of the governance processes of the 1976 Chemical Convention and to analyze its role in the Rhine pollution cleanup regime as a whole, I apply Lasswell and McDougal's (1954) notion of "social process" by interchangeably using it with "governance process." Policy Sciences' *social process* framework includes

seven analytic elements: (1) participants; (2) perspectives; (3) situations; (4) base values; (5) strategies (6) outcomes; and (7) effects (Lasswell, 1971: 19; Clark, 2002: 33-44).

These seven social process elements can generally be modified into issues, interests, and actors. In the IAN framework analysis that I am developing, *issues* are to be understood in the contexts of *perspectives* and *situations*; *interests* are considered as embedded in the *base values*, *strategies*, *outcomes*, and *effects*; and I take *participants* as *actors* in the overall decision processes of constitutional-choice, collective-choice, and operational-choice levels of the IAD framework (Ostrom et al., 1994: 46-49).

The aim of the 1976 Chemical Convention, officially registered in the United Nations treaty series as the *Agreement for the Protection of the Rhine against Chemical Pollution*,³⁴ was to reduce the pollution of the Rhine by gradually eliminating discharges of hazardous chemical pollutants including heavy metals from chemical industries, community sewage systems, and agricultural land. The means of achieving these goals was to begin with the formation of a black list and a gray list of pollutants that were to be regulated. Articles 1(a) and 1(b) of the 1976 Chemical Convention require ICPR to establish Annex I and Annex II lists of substances that are responsible for the Rhine pollution.

Annex I is the black list that was to include the most toxic chemical substances to be dealt with as a priority to reduce discharge into the Rhine. Annex II is the gray list that included chemical substances that were less toxic compared to Annex I list but still

³⁴ The official languages of this agreement are German, French, and Dutch. I used the English version deposited at the United Nations and registered by Switzerland. *The United Nations Treaty Series*, vol. 1124, I-17511.

needed to be regulated under the national legislations by means of *effluent limits*.³⁵ The secretariat office of ICPR was to draw up a list of chemicals in accordance with the Article 1 of the Chemical Convention.

Initially, ICPR drew up a list of 83 chemicals that needed to be listed in Annex I. The secretariat office of ICPR then had to recommend to member states certain levels of effluent limits to be applied in national regulations.³⁶ These recommendations on effluent limits by ICPR had to be unanimously passed and adopted by the member states.³⁷ However, the implementation processes of the Chemical Convention were met with resistance (Rest, 1979: 85; Kiss, 1985: 637; Bernauer and Moser, 1996: 392; Verweij, 2000: 83). In reality, although the 1976 Chemical Convention was put into effect in 1979, the processes of implementation ended at the point when ICPR drew up a list of 83 chemical pollutants but did not issue the recommendations of effluent limits to member states (Verweij, 2000: 83). Why did the Chemical Convention fail to proceed with what it had proposed to attain the goal of eliminating black- and gray-listed chemical pollutants? It is important to investigate the ways in which issues, interests, and actors interplayed in the processes in order to answer this question.

Actors in the Governance Processes of the Chemical Convention

Actors in the processes of the Rhine pollution cleanup regime in general can be categorized into multiple groups. Actors can minimally be categorized into individuals,

³⁵ “Effluent limit” is the maximum allowable amount of pollutant chemical contained in discharged wastewater of certain amounts (e.g., a specific amount of pollutant per gallon of discharge wastewater). The term “emission standard,” which normally applies to air pollution, was also used. In fact, Article 3, para. 2, and Article 5 of the 1976 Chemical Convention used “emission standards” and “limit” interchangeably. See also Verweij (2000: 236, n. 16).

³⁶ See Articles 3, 5, and 14 of the 1976 Chemical Convention.

³⁷ See Article 14, para. 3 of the 1976 Chemical Convention.

private industries, businesses, non-government organizations (NGOs), and government organizations ranging from community, township, municipal, provincial, ministerial, and national to international layers.³⁸ They share and shape values in official and non-official ways in the social process. For a policy analyst, it must be understood that actors in social processes are not just participants as stakeholders in an explicit sense at the point of an actual action situation, but they include opinion leaders and shapers such as media, writers, poets, and novelists.³⁹

In parallel with the formation of the ICPR forum among the riparian states with the initiatives of The Netherlands government in 1950, the private drinking water companies began to organize themselves as associations to protect their interests. The first such association, known as the International Association of River Waterworks, or Rijncommissie Waterleidingbedrijven (RIWA), was established in The Netherlands in 1951. The counterpart associations in Germany, known as the German Association for Water Protection, or Verein Deutscher Gewässerschutz (VDG), and the caucus of Rhine waterworks, or Arbeitsgemeinschaft Rheinwasserwerks (ARW), were established in 1953. Similarly, the caucus of waterworks for Lake Constance and the Rhine, or Arbeitsgemeinschaft Wasserwerk Bodensee-Rhein (AWBR), was established in 1968. These regional drinking water companies intensified in organizing their interests on the Rhine pollution issues and finally formed an umbrella international organization known as the Foundation of the International Association of Waterworks in the Rhine River

³⁸ Explicit labeling of participants from different layers could reveal their individual identities, which then could be used to figure out their perspectives—the second element in social process. For instance, a specifically named chemical industry organization or a drinking water industry organization can be used to identify participants who were associated with their perspectives.

³⁹ For instance, Rachel Carson who wrote *Silent Spring*, was an individual participant in the social process of U.S. environmental policy, the impact of whose presence in the action arena of U.S. environmental policy as a whole has been recognized in literature. However, she was not a participant in writing the National Environmental Policy Act of 1969 nor was she a decision maker who proposed that Act.

Basin, or Internationale Arbeitsgemeinschaft der Wasserwerke im Rheineinzugsgebiet (IAWR), in 1970 (IAWR, 2001: 10). IAWR became an influential organization in raising the Rhine water pollution issues to the international layer by lobbying national governments. Some scholars who study the Rhine regime development have even asserted that the associations of the drinking water companies in The Netherlands and Germany, namely RIWA, ARW, and VDG, “broke the ground for international cooperation” in the beginning of the ICPR regime development (Dieperink, 1998: 477).

Even before the first ministerial-level meeting was launched among ICPR countries in 1972, non-state actors, especially drinking water companies in The Netherlands, began to organize associations and lobby to push the Rhine pollution into international cooperation among states. During the early 1960s, the Rhine’s pollution issue became a serious economic and political issue, especially for the downstream country—The Netherlands. The farmers and flower growers were losing their lands due to salinization caused by the chloride-based chemicals in the Rhine. The ports in the Netherlands were facing corrosion, and the maintenance costs for the ports began to reach beyond normal wear and tear. Drinking water companies especially in Germany and The Netherlands were finding it costly to clean the polluted Rhine waters that carried upstream chemical industries’ wastewater. Chemical industries in upstream countries, especially in Germany and Switzerland, were unable to reduce pollutant chemicals in their effluent wastewater due to lack of technology and capital.

Meanwhile, the media and NGOs such as Greenpeace and the local World Wildlife Fund were reporting various environmental problems of the Rhine such as loss of fish species and flood plain conditions with the help of scientists and researchers.

National governments were occupied with the economic and political issues such as unemployment problems in France and further intensification of European integration issues, especially in Germany. Among all of these individuals and groups, nation-states alone were the only officially recognized and allowed participants at the official decision-making level of ICPR. The international NGOs, epistemic communities, individual farmers, local NGOs (e.g., Stichting Reinwater in Amsterdam), chemical industries, and drinking water industries were not considered actors in the official decision-making mechanism, although all of them were actors in the social process addressing the Rhine pollution problem. Other participants were novelists and poets who were at that time writing about the Rhine. German poet, Wolf Biermann (1972) wrote:

The Rhine flows below bridges
Its waters full of oil and soot
Lorelei plunges into the Rhine
She will not sing any longer.⁴⁰

Biermann's participation was joined in 1979 by another poet, Allen Ginsberg, who wrote:

Too much industry
No fish in the Rhine
Lorelei poisoned
Too much embarrassment.⁴¹

All of these actors played important roles in the social process of the Rhine pollution issue by bringing it to the attention of the public as a whole.

Why were not all actors other than states considered as important participants in the processes of crafting and implementing the 1976 Chemical Convention? The fundamental assumption in the foundation of this convention is that the member states or

⁴⁰ Original language and translation are on p. 9 in *Salmon 2000*, an undated ICPR bulletin publication for promotion of the Rhine Action Program.

⁴¹ Original language and translation are on p. 9 in *Salmon 2000*, an undated ICPR bulletin publication for promotion of the Rhine Action Program.

national governments of member states have absolute legal, political, social, and economic enforcement power to implement the objectives and processes laid out in the 21 Articles of the 1976 Chemical Convention. If we analyze and interpret the text of the Articles, the signatories of the Chemical Convention plainly assumed, as statecraft bureaucrats are so used to doing, that problems within each member state can be resolved by the power and mechanisms of the member states' government alone at the stroke of a pen into written laws. This assumption of the state as a unitary sovereignty actor is one of the fundamental problematic assumptions that the state-centric view of international treaty making often takes for granted. In reality, multiple actors within states interplay in layers of governance processes. The Chemical Convention simply failed to recognize this fact.

Issues and Interests in the Governance Processes of the Chemical Convention

Issues associated with the governance process of the 1976 Chemical Convention can be traced by dissecting perspectives of the actors and situations in which actors framed their problems. The Policy Science approach identifies *perspectives* based on value demanded by actors, their expectation, and their identities. What are the perspectives of those who are participating; of those who want to participate; of those who demand to participate? What are they demanding in terms of values or organization? What are the perspectives of participants in terms of facts and assumptions about the past and the future? What do they expect to gain from social process? These are the question to tackle what perspectives are in a social process (Lasswell, 1971: 19; Clark, 2002: 33). To understand perspectives further we might examine participants' myths, such as

doctrines, formulas, and miranda or symbols. An expression such as “all men are created equal” is a doctrine that defines a perspective by way of expectation of those who believe in it. The “Salmon 2000” slogan in the case of RAP is indicative of the perspective of the ICPR expecting the Rhine to be clean to a level where salmon can live in it by the year 2000.

Perspectives of actors in the Rhine case can be examined in their scope values, identities, and expectations. For Dutch farmers and flower growers, they were loosing the quality of their soil, which in turn was causing the loss of income (wealth). They knew that they were powerless to stop upstream countries’ discharge of chloride into the Rhine. However, they knew that their government should do something to stop the upstream countries’ discharge of chloride. They expected their government to take care of their well-being by exercising authority (power) to raise the issue to the responsible participants at the international layer, which was mainly France. The Dutch government was pressured by the farmers and their association at the local layer. Thus the government was worried about losing trust and support votes (respect, affection, and power) from its citizens if it failed to act.

The Dutch government’s perspective was to act in proper and official ways to approach and solve the problem. Therefore, the government first sought scientific understanding (enlightenment) about the pollutant chemicals in the mid-1960s. With the mission to enlighten themselves about the Rhine water pollution, researchers in the universities in The Netherlands and scientists hired by the government used their skills to find out facts about chemical and chloride pollution causing salinization. Scientists and researchers first expected to gain critical understanding (enlightenment) about the

chloride issue and consequently expected to gain respect from students and colleagues in the field and further hope for promotion (wealth, power, and influence) by participating in such important, policy-relevant research. Their perspective therefore was to be as accurate and unbiased as possible in presenting the facts and findings.

For drinking water industries, all kinds of pollutant chemicals (not just chloride) discharged by the upstream countries' industries were causing them to find better cleaning technology (skill), which in turn cost capital (wealth), to clean the polluted Rhine water to produce drinking water (Stoks, 2000: 499).⁴² Their perspective was that the increasing cost for drinking water production was a direct result of pollutant chemicals discharged by upstream chemical and other manufacturing industries. They expected somewhat the natural water from the Rhine. They believed any additional pollution besides natural pollutants in the Rhine should be reduced to a reasonable level at which they could keep cleaning costs to a minimum. Their expectation about the Rhine pollution was mainly driven by the cost of production (wealth) rather than anything else. They believed that responsible polluters should be paying their additional costs. Drinking water industries in The Netherlands and Germany, on the other hand, expected their governments to address the problem of transboundary water pollution at the ICPR layer.

The French government, at the same time, was interested in making tougher regulations against all kinds of pollutant chemicals into the Rhine except chloride with the expectations that (1) the chloride problem would not be a focus of ICPR and (2) France would not face as strong political pressure from its industries as Germany would, where the majority of chemical industries were located (LeMarquand, 1977: 121;

⁴² Also stated in an interview with Dr. Peter Stoks of Watertransportmaatschappij Rijn-Kennemerland Waterworks (WRK), Nieuwegein, The Netherlands, on July 5, 2001.

Bernauer and Moser, 1996: 392). The first expectation was shaped by the assumption that if chemical pollution was a focal point of the Rhine pollution problem, then pressure on its government from chloride issues would be weakened (fear of threat to its power and wealth). The second expectation was framed by the assumption that France would not have as large costs as Germany (or face political pressure from its industries) because it did not have as many chemical industries on the Rhine as did Switzerland and Germany. France's perspective can be interpreted as somewhat reflective of the identity of the French being very nationalistic, at least at that time. These perspectives in fact later shaped the strategies of the French government's position when ICPR ministerial discussions began leading to the signing of the 1976 Chemical Convention. For the French government, in order to downplay the intensity of chloride issues for which it was responsible (35% to 40% of the discharge into the Rhine), it was willing to lead further discussions about the Chemical Convention because it would not be strongly affected by it (LeMarquand, 1977: 121). In addition, the Chemical Convention was the opportunity for France to showcase its environmental concerns (or image) to the international community by supporting and promoting it and taking it to the European Community (EC) level.

Germany's position and perspective was also shaped by its economically and politically influential chemical industries. Germany's perspective was that the chemical pollution of the Rhine water should be measured in terms of the EC water standard rather than the Rhine-specific case. Germany's demand reflected that if its chemical industries were to be regulated by the stricter regulation, then all EU industries should be under the same standard of regulation (Verweij, 2000: 83). The assumption of the German

delegation (which was perhaps a calculated assumption) was that German industries would lose their comparative advantage to other EU industries, especially England.⁴³ In addition, if chemical pollution were to be reduced as desired at the time, Germany would bear the most economic burden because it had the largest industries along the Rhine (LeMarquand, 1977: 120-121; Bernauer and Moser, 1996b: 3). These perspectives indeed shaped negotiations and issue-framing leading toward the 1976 chemical and chloride conventions.

When asked why there were separate conventions for chloride and other chemicals, the answer given by Mr. Huisman was that issues of chemical pollution and chloride pollution were separated by the perspectives of three main states—The Netherlands, Germany, and France. The Netherlands government was particularly concerned about salinization of land, corrosion of ports, and the active pressure of citizens, flower growers, and port owners. Another influential reason was that, unlike other chemicals, chloride was a problem that could be identified and for which it was relatively easy to locate the major source of discharge—the Alsatian Mine in northeastern France, which was responsible for 30% to 40% of chloride discharge into the Rhine.

The perspective of The Netherlands, Germany, and France mainly shaped the ways in which the issues of Rhine pollution were sorted at the Chemical Convention and the Chloride Convention. However, it is to be understood that the perspectives of these three member states were initially shaped by citizens, flower growers, port owners, drinking industries, chemical industries, environmental organizations, and concerned scientists. The linkages among local, national, and transnational layers of the Rhine

⁴³ Interview with former secretary of ICPR, Mr. Pieter Huisman, July 5, 2001. Mr. Huisman was at that time secretary of ICPR and an important actor in the discussions at both the Chemical Convention and the Chloride Convention.

regime are, therefore, characterized by the ways in which issues are framed, interests evolved, and actors are engaged across multiple layers.

It is crucial that analysts seek to understand whether or not actors' demands at the surface are what they really want or if they are demanding something in pursuit of other values. They also must determine if participants "do what they say," or act as they portray themselves to believe. These are niches and nuances that are important to capture and interpret about perspectives of actors. For instance, scientists and researchers hired by the Dutch government used their skills to gain critical scientific understanding (enlightenment) about issues associated with chloride pollution. They expected that they would also gain respect (affection) of colleagues in the field. In addition, they in turn desired promotion to the status of tenured professorship, which would give them increases in salary (wealth) and authority (power) in their field of intellectual pursuit. Therefore, the researcher's perspective must be fair and unbiased. Interpreting actors' perspectives in such an interwoven world of values that actors seek is a rather complex task. However, as Clark (2002) puts it "it is a key task" that gives "broad insights into people's actions in the unfolding of events" (p. 45).

In addition to perspectives of actors, another key area in which to trace the ways issues and interests are framed by actors is the situation in which the governance process takes place. The *situation* refers to "zones" in which social interaction takes place. A situation can be characterized by four dimensions: (1) ecological or geographical; (2) temporal; (3) institutional; and (4) crisis (Clark, 2002: 39-40).

First, situations can be identified by ecological and geographic dimensions, referring to spatial dimensions and related features in the area of concern (Clark, 2002:

39). In terms of ecological dimension, as demonstrated in some of the cited poems in the preceding section, the Rhine was losing significant numbers of fish species. It was recorded as early as 1885 that the “excessive” fishing “resulted in the conclusion of a treaty” known as the Salmon Treaty or the International Treaty on Salmon Fishing in the Rhine (still in legal force on paper), although this treaty was never implemented or enforced to achieve the goal of reducing fishing (*Salmon* 2000: 6). Only beginning in the early twentieth century did the Rhine countries start to realize the ecological death of the Rhine by pollution. By the beginning of the 1970s, the level of oxygen in Rhine water was deteriorated by the discharge of the untreated organic wastewater, which resulted in the invasion of certain smaller salt-tolerant crustaceans and the dying out of sensitive insects and fishes such as salmon (ICPR, 1994: 11; Huisman et al., 1998: 66). Beginning in the 1960s, the media and writers described the Rhine as no longer a river but the “sewer” of Europe (ICPR, 1994: 9).

Geographically, major manufacturing industries and cities were located throughout the banks of the Rhine and its tributaries, which also contributed to Rhine pollution from human wastes and utility waters. Generally these diffused sources of pollution coming from residential and runoff water into the Rhine are difficult to locate as opposed to industrial waste discharges, which are point sources where the locations of discharges are known, thus providing the opportunity to identify pollutant chemicals from them. Therefore, when actors engaged in Rhine pollution, the issue of the Rhine water quality was to solve pollution problems at the point sources. ICPR and its mandate cover most of the Rhine’s physical river basin area, beginning from the point at which the Rhine leaves Lake Constance in Switzerland and continuing northward to the North Sea.

ICPR's problem situation is as wide as its river basin in terms of geographic boundaries.⁴⁴ Within this geographic boundary, the classic downstream and upstream nature of the river dominate in framing the ways in which the Rhine pollution is perceived, understood, and solved.

Second, the situation also can be identified by temporal dimension, referring to timing of events and processes (Clark, 2002: 39). In terms of temporal dimension, global environmental issues reached into the political agenda through the signing of the *Stockholm Declaration of UN Convention of Human Environment* in 1972. It is not unrealistic to draw inference that the situation in which Rhine riparian countries finally reached to sign binding treaties on both chemical and chloride pollutions in 1976 had some level of influence from surrounding global events. In fact, the first ministerial conference of the Rhine was held in 1972, the year the Dutch government proposed to have meetings for further discussion about the pollution problem. Certainly the focus of the media on the environmental issues, especially the Rhine pollution, was significantly increased after 1970. Due also to the protests of farmers associations and local NGOs in Amsterdam and Rotterdam in 1972,⁴⁵ the Dutch government was preparing to make the 1976 signing of treaties happen.

Agreed at the 1972 ministerial meeting, ICPR itself organized a survey of water quality between Reinfelden and Rotterdam between June 24 and July 1, 1974, as a preparation for the 1976 treaties. The Flood Plain Institute, a local NGO based at Rastatt,

⁴⁴ Article 1 of 1963 ICPR establishment treaty known as Bern Convention, which was transformed in 1999 at Bern based on the results of the Rhine Action Program.

⁴⁵ Interviews with Mr. Pieter Houseman, July 5, 2001. Mr. Pieter Houisman, who became the secretary of ICPR in 1976, was an active participant in what he calls the "Pressure Group's" activities in Amsterdam and Rotterdam demonstrating against Rhine pollution and subsequently calling the Dutch government to take the issue seriously to ICPR.

Germany, that was founded after the Stockholm declaration where the director herself was a participant, in 1972 Stockholm conference.⁴⁶ All of these pockets of events in the early 1970s indeed were describing the extent to which the situation of the Rhine pollution had been set on stage, resulting in the symbolic and historic event of signing the Chemical Convention and the Chloride Convention in 1976. These were the first ever legal recognitions of riparian countries on the issue of Rhine pollution after a long push by drinking water industries, citizens, and environmental groups. According to Mr. Huisman, for The Netherlands government, the fact that the issues of Rhine pollution were legally accepted as a problem that needed to be solved by international cooperation was a success at the beginning.

Third, the situation can also be determined by what Clark (2002: 39) calls “institutionalization,” referring to the structure of how values are allocated in particular contexts; that is, whether institutions are centralized, decentralized, fragmented, plural, or singular (Clark, 2002:39) in terms of the structure of decision power at all layers. At the ICPR layer, the decision structure is centralized; the French government as a nation is also centralized; other member states of ICPR are more or less federal systems or decentralized legal and political structures. For instance, Switzerland might be called fragmented or a polycentric structure with many decision-making centers.

The structure of the decision-making system had an impact on the social process in terms of which country got treaties ratified first (i.e., how they treated the situation). Switzerland and The Netherlands seemed to score speedy ratification of treaties and ICPR policies because the Swiss national delegation only needed to consult with three

⁴⁶ Interview with Dr. Edith Wenger, Director of Flood Plain Institute, Rastatt, Germany, on June 27, 2001.

cantons that resided on the bank of the Rhine, and The Netherlands as a downstream country had a key stake in implementing what was agreed at the ICPR level as soon as possible (could be regarded as a strategy to get others to do the same). In addition, the Dutch delegation was given full authority by its central government on the Rhine issue, which was a decentralized structure. Throughout, the negotiation processes for the Chemical and Chloride Conventions, the Dutch Ministry of Transport, Public Works, and Water Management played an important role in leading the negotiation. The long-time head of the Dutch delegation, Ms. Neelie Kroes, had been recognized as one of many key actors who led the framing of the Rhine pollution issue into three layers across local, national, and transnational (Verweij, 2000: 92-96) instead of keeping it as either as an international or national problem.

In the case of Germany, the opposition of German industries to the Chemical Convention was strengthened by the federal structure of Germany (LeMarquand, 1977: 122). The provinces within the federal system had major constitutional authority on water resources issues. Therefore, industries located in provinces along the Rhine had access to the sources of policy making for water pollution abatement at both the federal and provincial levels. According to the German federal constitutional structure, the federal government had to receive support from provinces for its international commitments to be signed at either the Rhine or EC level. Otherwise, Germany would not have been able to honor the international agreements because the provinces were key actors in implementation of such agreements at the provincial layer.⁴⁷ This nature of institutional

⁴⁷ The nature of Germany's federal system works two ways between provinces and federal government. In some cases, the federal government tries to achieve national environmental policy by participating in international environmental agreements. The German federal government often uses the European Union

structure of German federal system was a critical determinant of Germany's position in the Chemical Convention.

Fourth, the situation also is shaped by crisis. It is important to understand the extent to which the environmental crisis (reaching the level of the “Sewer of Europe”) and political crisis (miners’ strike in France) shaped, in some way dictated, the situation and consequently framed the nature and intensity of Rhine pollution issue. Consequently, governance issues were subject to prioritization by means of reallocation of values to be pursued. Indeed, in the case of transformation of the Chemical and Chloride Conventions into the Rhine Action Program was mainly triggered by the highly cited Sandoz chemical accident, a crisis that “shocked” ICPR states into “action” (Glass and Snyder, 1996: 48). I analyze this separately in the case of the Rhine Action Program in the next chapter.

Interplay of Issues, Interests, and Actors in Multilayer Governance

At the transnational layer, within three decades of the emergence of the ICPR regime, from 1950 to 1980, the key issue was building trust among national delegations. Trust building among the member states took an enormous amount of time and effort according to Mr. Huisman, who was actively involved in ICPR from 1971 to 1985. Although the 1963 Bern Convention seems to have provided a legal framework for cooperation among member states, this legal framework merely served as a starting point in the trust-building process. Mr. Huisman pointed out, when asked why the Chemical Convention failed to produce desired outcomes although legally defined and agreed upon, that the process was more important than papers and documents but law is needed only in

layer policy discussion and agreements as an opportunity to pressure its provinces to set national environmental policy.

the crucial time of conflicts.⁴⁸ By this he conveys that the processes of events that led to the signing of the Chemical Convention in the case of the Rhine itself are as important as the measurement of success of the convention as they contributed to trust building and provided at least a platform to address the problem.

Another important issue why the 1976 Chemical Convention was not successful was because of the lack of political will at the national level, especially in Germany and France. Environmental issues at the time were not so important to the national economies while the industrialization was at its peak for building stronger economies in member countries. According to Mr. Huisman, getting all countries to come together at the meeting and to discuss Rhine pollution was already significant enough at the beginning. However, this happened not entirely due to the national will but to what he calls local “pressure groups” who were key players in raising issues of the Rhine pollution publicly within each member state.

When it came to negotiation about the implementation of vision and goals of the Chemical Convention, the central issue at the negotiation meetings was the issue of whether the industries were capable, in terms of resource and technology, to implement pollution reduction. It was generally agreed among delegations that implementation of an effluent limit might be one way of reducing pollutant chemicals. If industries were to discharge wastewater into the Rhine that contained pollutant chemicals exceeding the effluent limit, then the effluent fee would be assessed. However, for many industries, paying that effluent fee was not a major burden (Verweij, 2000: 116). The major issue was the capacity to reduce content of pollutant chemicals entirely so as to achieve the

⁴⁸ This was the answer when I asked if he was disappointed about the failure of the 1976 Chemical and Chloride Conventions.

projected goals. In the view of ICPR, pressured by The Netherlands, the solution was not about levying effluent limit fees but about cleaning the Rhine by reducing discharge of 83 blacklisted chemicals.

Meanwhile, the German delegation was suggesting implementation of the then EC-wide effluent limit. German industries were behind the German delegation proposing to establish an EC-wide standard. If the effluent limit was applied to only the Rhine basin industries, they would be at a disadvantage to other EC chemical industries in the common market, which were not in the Rhine basin areas, such as the British chemical industries for instance (Dieperink, 2000: 353; Verweij, 2000: 83). Therefore, the EC regional approach was discussed in line with the German position. In addition, the EC-wide environmental legislation for aquatic environment was in the process of negotiation in parallel with the 1976 Chemical Convention for the Rhine. The EC passed Council Directive on May 4, 1976, on the pollution caused by certain dangerous substances that were being discharged into the aquatic environment within the community.⁴⁹ According to this directive, EC members could no longer conclude agreements with non-EC members such as Switzerland (de Villeneuve, 1996: 445). This makes further sense when one contemplates why the EC joined ICPR as a full-fledged member in 1976 before signing the Chemical and Chloride Conventions. Because EC became a member of the ICPR, it was feasible to discuss the regional approach for effluent limits as suggested by the German delegation.

⁴⁹ Council Directive of May 4, 1976 [1976 O.J. (L129) 23].

Linkages between Layers

All of the discussions and policy making at the ICPR layer were done exclusively by member states' delegations. The relevant issues and actors besides states' leaders were not in the whole process of the negotiation and implementation. Neither NGOs nor the industries were invited and regarded as important actors in the process at national and transnational layers. National delegations were the only actors who were discussing and structuring policies at the transnational layer. Consequently, issues, interests, and actors were not linked across layers (Table 4.1). The ICPR regime was functioning with a state-centered approach as if states were the most important players in the transnational environmental governance.

<Table 4.1 about here>

Some actors attempted to break traditional lines of thinking about solving Rhine pollution problems by states alone. A good example of such an actor is the head of the Dutch delegation, Ms. Neelie Kroes, whose efforts to bring private and non-government actors into the equation of the Rhine pollution problem across local, national, and transnational layer were recognized by some of the actors at that time, such as Mr. Pieter Huisman and current Deputy Secretary of ICPR Dr. Anne Schulte-Wülwer-Leidig⁵⁰ and also recorded in the literature (Verweij, 2000: 92-99, 102). However, those alternative, minority voices were not recognized until the crisis hit—the Sandoz accident in 1986.

In addition, having to establish the binding nature of regime design to implement objectives was an indicator that member countries did not trust each other, or there would

⁵⁰ Comments about the innovative thinking of the Dutch delegation on proposing new ways of approaching the Rhine issue was recognized by practitioners. This was apparent in my interviews with Mr. Pieter Huisman and Dr. Anne Schulte-Wülwer-Leidig of ICPR on July 25, 2001, at the ICPR headquarter in Koblenz, Germany.

have been serious free-rider problem. The potential problem of such a binding international law micromanaging implementation at the local layer was articulated by the current Deputy Secretary of ICPR Dr. Anne Schulte-Wülwer-Leidig during our interview, as follows:

You need international convention to establish legal basic for cooperation. Therefore, a framework is necessary to set the rules of the game to organize the most important things so that there will be a reference when problems arise. But the environmental issues such as Rhine pollution change so fast at the local [layer] that you need a lot of possibilities and options to change your smaller goals, to implement the measures, and to change these goals.

However, the 1976 Chemical Convention was not flexible enough to meet these challenges that occurred at the local layer. The 1976 Chemical Convention considered states as unitary actors who would have all sorts of powers and capacity to implement the convention at the local layer. Non-state actors did not have their inputs in formal processes of making these rules at the transnational layer. As a result, there are various missing links among actors and across layers. The linkages between national and transnational layers were stronger than the linkages between local and transnational layers (Table 4.1). This is because the transnational regime, ICPR, was initially crafted by states and their delegations with the assumption that state actors' participation grants consequently local and non-state actors' participation.

Granting formal participation of local and non-state actors at the transnational layer is structurally harder for a legally binding transnational regime because states are only actors who are granted legal personality in international affairs. The assumption is that the states will have sovereign power to execute international environmental law within its boundary while, in reality, states do not have practical sovereignty power within their boundaries. As a result, local-layer issues, interests, and actors were not

allowed to participate in governance processes at the international layer. A clear lesson from the 1976 Chemical Convention is that the environmental governance cannot be successful without participation of all relevant issues, interests, and actors across three layers of transnational regime. This will be much clearer when we investigate and dissect the governance processes of the 1976 Chloride Convention in the following section.

Issues, Interests, and Actors in the 1976 Chloride Convention

The main difference between the Chemical Convention and the Chloride Convention was the way in which state actors placed the issue on the policy landscape of the governance processes of the Rhine regime in a general sense. While in the Chemical Convention, actors located their issues and interests on the overall general policy map of pollution of the Rhine by chemicals, the Chloride Convention placed issues, interests, and actors at one specific geopolitical place—the Alsatian mines in northeastern France. In other words, the Chloride Convention focuses the sources of Chloride discharge as the center of governance for Rhine pollution in lieu of the overall pollution of the Rhine as the center of the problem. This placement of the chloride pollution issue on Alsatian mines as the center of the Chloride Convention put the French government into a defensive position in regard to the chloride issue. The French defended its interests with unyielding attitude as we will observe in the following analysis.

Origin of the Issue of the Chloride Convention

The issue of chloride was initially negotiated at the first ministerial meeting of ICPR countries in 1972 with the aim to craft an international mechanism to combat the chloride pollution problem. The chloride discharges into the Rhine and its pollution were harmful to the interests of several Dutch water companies, flower growers, the port of Rotterdam, and the livelihoods of the river ecosystem. The Dutch government took this issue to the ICPR to recognize it as an international problem and to solve the problem by means of the international mechanism. The initial study of the chloride pollution found that the Potasse de'Alsace or Alsace Potassium Mines in northeastern France were responsible for 35% to 40% of the then total discharge of 400 kg/s into the Rhine. Consequently, the legal and policy focus of the Chloride Convention was the discharge of chloride from the Alsatian mines.

The main legal and policy objective of the Chloride Convention focused on eliminating discharge of chloride from Alsace Potassium Mines in France.⁵¹ The French government agreed to reduce the discharge to an annual average of 60 kg/s.⁵² In order to implement this agreement, the French government was to estimate costs and draw up a plan for reduction of chloride discharge into the Rhine. The final estimated cost was 132 million French francs. After four years of negotiations over the estimates of the cost-sharing mechanism, the final agreement was reached in 1976 that The Netherlands would finance 34% of the project cost, Germany and France each would pay 30% of the cost,

⁵¹ See Article 2 of the *Convention on the Protection of the Rhine against Pollution from Chlorides* signed on December 3, 1976, in Bonn, Germany.

⁵² See Article 2, paragraph 1 of the Chloride Convention.

and Switzerland would pay the remaining 6%.⁵³ This differential obligation method (Sand, 1991: 345) applied in the Chloride Convention in the Rhine River Basin faced difficulties in its implementation process.

According to Articles 2.1 and 2.2 of the Chloride Convention, the discharges from the Alsatian mines were to be cut to an annual average of 60 kg/s in three phases with an initial cut of 20 kg/s in the first period. Articles 2, 3, and 4 outline the detailed processes of reducing the chloride discharge into the Rhine. In this process, the salts that were not discharged into the Rhine were to be injected into the Alsatian earth within ten years.

Article 2.2 states:

In order to achieve the objective indicated..., the French government ... shall install injection system in the subsoil of Alsace in order to reduce over a period of ten years the discharges from the Alsace Potassium Mines by an initial quantity of 20 kg/s of chloride ions.

According to Article 14 of the Chloride Convention, the agreement was to enter into force on the first day of the second month after the notification sent to the Swiss government by other contracting parties accepting to implement the procedures set out in Annex 1 of the Chloride Convention. For a number of years, the French government was reluctant to place Alsatian salt and the Rhine issue on the agenda of parliament for ratification. The French government faced two issues at the national parliament. The first issue was a rising unemployment in France and the second was the labor strikes in Alsatian mines. As a result, France delayed honoring the agreement at the outset, after signing it. This caused direct conflict with The Netherlands as it was facing heavy pressure from local water supply industries and the port of Rotterdam. The Dutch

⁵³ The cost and the percentage of contribution from each member state were written into Article 7 of the Chloride Convention. Details, including the account number of the French government, to deposit these contributions were listed in Article 8 of the Chloride Convention.

government recalled its ambassador from Paris in 1979 as a sign of protest to the French government. At that point, the relationship between France and The Netherlands was at its worst, due to the Chloride Convention.

Seven years after signing the Chloride Convention, the French government reasoned that it needed further study and scientific data to take further steps to implement the Chloride Convention. In a series of letters exchanged among ICPR countries on the Chloride Convention, the French government wrote to other members of ICPR on April 29, 1983:

Bearing in mind the time periods specified in article 2, paragraph 2, Annex 1 of the Convention may be changed by agreement of the Contracting Parties in light of the conclusions presented by the scientific committee, whose establishment was announced by the French Party during the sixth ministerial conference, in its report of July 1982, and any conclusions it may draw in the future from the additional studies it has recommended. These changes should not entail any nuisance, inconvenience, or other consequences for the territory of each of the Contracting Parties.

All other member countries had to accept this letter amending the Chloride Convention. The Dutch government replied rather seriously on May 4, 1983, as follow:

... provisions contained in your letter are acceptable to the Government of the Kingdom of the Netherlands and that your letter together with this reply and identical letters exchanged between the French Government and the three other Governments ... shall constitute an Agreement among the five Governments concerned. This agreement shall be deposited with the Government of the Swiss Confederation and shall enter into force when all the Governments which are signatories to the Convention have notified the Government of the Swiss Confederation of the completion of the procedures necessary for the entry into force of the provisions of this letter and of the identical letters exchanged between the French Government and the other signatory Governments, and when the Convention itself has entered into force.

While the language and tone of the French government in its letter is rather non-legalistic, the language and tone of the letter from the Dutch government indicates some level of distrust of the French, as we see consequential legalistic language in the Dutch

letter. This reflects the acrimony between French and Dutch governments over the chloride issues for the French's initial failure to honor the agreement. Therefore, the Dutch government reiterated to pronounce the letters that were exchanged to become a part of the language of the Chloride Convention. These letters became a part of the treaty and were deposited at the United Nations as a part of the Chloride Convention.⁵⁴

Outcomes from the Governance Processes of the Chloride Convention

The 1976 Chloride Convention is the least favorite topic that leaders of ICPR today want to talk about. When asked about the 1976 Chloride Convention, Dr. Anne Schulte-Wülwer-Leidig, the current deputy secretary of ICPR, indicated it was “the worst experience” of the ICPR regime because it caused many obstacles for other issues that were far from the chloride case. As if the whole ICPR regime was stalled, no other issues could be discussed due to the intense diplomatic conflict on the chloride issue. The key problem with chloride, once again, was the lack of political will within member states, especially in France. On top of that, the low levels of trust and cooperation among the member states also prevented any progress with the Chloride Convention.

During my interview with Mr. Pieter Huisman, he stressed that the Chloride Convention was a failure as an international law but he praised that it contributed to processes that were a part of trust building and institutional evolution. When he was an insider, being secretary of ICPR, he felt that the Chloride Convention was a disappointment and a complete failure of ICPR. He then explained that as he left the position and looked back to history, he said that crises were sometimes needed in view of

⁵⁴ See the United Nations, Treaty Series, vol. 1404, I-23469.

overall regime development, because the crisis between The Netherlands and France on the chloride issue “tested” the trust between two countries and among ICPR members. Mr. Huisman’s reflective assessment of the Chloride Convention and the ways in which it challenged the issue of trust among ICPR member states is consistent with the findings of researchers who study the international cooperation aspect of trust and reciprocity on the chloride issue of the Rhine (LeMarquand, 1977: 119–120; Bernauer, 1995; Verweij, 2000: 84).

The Chloride Convention dominated international relations among member states of ICPR between 1970 and 1985. As in the case of the Chemical Convention, states were the only actors in the decision making at the formal level of the transnational and national layers. Actors other than states were not recognized as actors in the formal decision-making structures of ICPR and national governments. Non-state actors again were influencing from outside formal structures of the decision-making mechanism of ICPR. As a result, there were missing links among multiple actors and layers of the Rhine regime on the chloride issue.

<Table 4.2 about here>

Table 4.2 shows actors who were decision makers at each layer. The actors in each layer were not institutionally linked, especially between local and transnational layers, as we can see that none of the actors from the local layer is listed in the transnational layer. In fact, reading the text of these two conventions confirms that the only actors these conventions considered as responsible decision makers at the transnational and national layers were the states. The fundamental assumption was that states were unitary actors who had all powers to carry out the conventions within each

state. This nature of international legal mechanism for the Rhine was responsible for creating the missing links among multiple actors and multiple layers, especially local and transnational layers. This missing-link problem or the problem of unclear position or role of non-state actors, especially from the local layer in the transnational layer, encompasses both theoretical and policy challenges demonstrated in the case of both the Chemical Convention and the Chloride Convention.⁵⁵

The clear lesson from the failure of the Chemical and Chloride Conventions is that the linkage between local and transnational layers needs to be established by transnational regimes to achieve objectives and attain goals. The strong link that exists between local and national layers should not assume that the local layer is automatically linked to the transnational layer. In fact, it has to be assumed that the strong link between local and national layers can hinder the achievement of objectives and goals of transnational regimes. Therefore, this strong link has to be loosened up by bringing the local layer into the international layer.

In the next chapter, I analyze the interplay of issues, interests, and actors in the processes of the International Water Tribunal and the Rhine Action Program. The IWT emerged outside formal legal systems of the Rhine riparian countries as a response from non-state actors to the failing state-centric legal mechanisms as we have observed in the cases of the Chemical and Chloride Conventions. We will observe the IWT as empirical evidence demonstrating how the missing-link problem between states and non-state actors across multiple layers of the transnational regime played out in governance. In the

⁵⁵ Literature on “scaling issues” (e.g., Young, 2002) in global environmental governance in part attempts to explain this problem as a scale problem, but I see this as a linkage problem between local and transnational layers at least in the case of the Rhine regime.

Rhine Action Program, we will observe institutional transformation from the international treaty to action-oriented program design that linked multiple actors across layers.

Table 4.1: Issues, Interests, and Actors Network in Chemical Convention

Institutional layers	Issues	Interests	Key actors
Transnational	<ul style="list-style-type: none"> •Chemical pollution of the Rhine •Building international cooperation •Industrial compliance 	<ul style="list-style-type: none"> •Downstream pressure •Cost of effluent limit •Regional approach for cost sharing 	<ul style="list-style-type: none"> •ICPR •Germany and Switzerland •The Netherlands •National delegations
National	<ul style="list-style-type: none"> •Lack of political will •Lack of trust to other member states •Perceived as international problem 	<ul style="list-style-type: none"> •Cost of regulation •Pressure from chemical industries •Pressure from water supply companies (The Netherlands) 	<ul style="list-style-type: none"> •Ministerial •Municipal •Industries
Local	<ul style="list-style-type: none"> •Drinking water supply •Public health •Sewer image 	<ul style="list-style-type: none"> •Cost of compliance •Cost of drinking water •Health risk •Recreation 	<ul style="list-style-type: none"> •Chemical industries •Water supply industries •Communities of interests •Local NGOs

Table 4.2: Issues, Interests, and Actors in 1976 Chloride Convention

Institutional layers	Issues	Interests	Actors
Transnational	<ul style="list-style-type: none"> •Conflict between NL and FR •International cooperation •ICPR's role challenged 	<ul style="list-style-type: none"> •Cost of operation •Downstream pressure •Defining responsible party to pay for cleanup 	<ul style="list-style-type: none"> •ICPR •France •The Netherlands •National Delegations
National	<ul style="list-style-type: none"> •Lack of political will •Unemployment and labor strike in France •International problem 	<ul style="list-style-type: none"> •Damage to farm land •Pressure from water industries •Pressure from Alsatian mine workers •Status of ICPR regime 	<ul style="list-style-type: none"> •Diplomats •Ministries •Municipals •Water supply and mining industries
Local	<ul style="list-style-type: none"> •Drinking water supply •Public health •Agriculture 	<ul style="list-style-type: none"> •Cost of water purification •Loss of agricultural land from salinization in NL 	<ul style="list-style-type: none"> •Local farmers •Alsatian mining industry in FR •Water supply industries in NL •NGOs

Chapter 5

Influence of Non-State Actors in Multilayer Governance of the Rhine

Introduction

This chapter will analyze how the Rhine's state-centric international conventions were challenged by non-state actors and how the Rhine regime transformed its forms and functions from state-centric to multi-actor-centric regime. First, this chapter analyzes the case of the International Water Tribunal (IWT) to show the influence of non-state actors on both state and for-profit industries in the Rhine. Second, the chapter explains how the International Commission for the Protection of the Rhine (ICPR) transformed itself from an international, legalistic convention-type regime to the action-oriented Rhine Action Program (RAP), which incorporated both states and non-state actors to clean the Rhine. By so doing, this chapter explains how non-state actors influenced institutional transformation in the multilayer governance of the Rhine.

International Water Tribunal

The IWT was not initiated or established by states. It was initiated and launched by non-state actors. In the midst of ongoing deadlocks on both the Chemical Convention and Chloride Convention at the operational level of the Rhine regime, environmental organizations, water scientists, and conscious citizens along the Rhine, especially in the Netherlands, began to be creative and thinking outside the existing formal governance system about the issue of Rhine pollution.

A Brief History of the Emergence of the International Water Tribunal

After almost half of a decade since the signing of the Chemical and Chloride Conventions in 1976 to combat the Rhine water pollution, citizens lost their hope in the ICPR and national governments in reducing the pollution of the Rhine by means of these conventions. Collaboration among citizens, non-government organizations (NGOs), and independent water scientists and researchers began to emerge as influential actors outside of the formal framework of formal laws and legal institutions. One of these groups is known as the International Water Tribunal Foundation (hereinafter Foundation). The Foundation launched the IWT in 1983, indicting chemical and manufacturing industries that were responsible for the pollutant chemicals in the Rhine.

The ideas and concepts of the IWT originated in 1976 when the Dutch environmental organizations, including the Netherlands Society for the Preservation of the Wadden Sea and the Reinwater Foundation, established a coordination committee known as the Rhine Appeal Committee “to bring the catastrophic level of pollution in the Rhine to the attention of the public” (IWTF, 1983: Ch. I, p. 4). In 1977, the Rhine Appeal Committee organized a cycling tour from Switzerland to the Netherlands to bring the extent of the Rhine pollution issues to the attention of citizens. By 1980, after diplomatic deadlock of the Chloride Convention in 1979 and subsequent impediment of the Chemical Convention, the future of the Rhine water pollution was bleak at the hand of ICPR and member states. In response, the Rhine Appeal Committee and environmental organizations began to search for alternative mechanisms to combat the Rhine pollution. The idea of the IWT was put forward by 11 Dutch environmental groups in the spring of

1981. The formation and establishment of the Foundation was announced formally on April 29, 1983, in accordance with the Dutch laws granting citizens the right to organize such an action. As a result, the the Foundation was established to carry out organizational aspects of the IWT.

The Foundation's initial discussion focused on the pollution of the Europe's surface water in general and rivers in particular with three basic questions (1) How bad is the state of surface water in Europe? (2) Who is responsible for the present state of surface water? and (3) What can be done by governments, industries, municipalities, NGOs, etc. to improve the situation? Beginning with these questions, the Foundation prepared to launch the IWT with the support of 85 environmental organizations across the Rhine catchment areas.⁵⁶

The Foundation took the task of organizing an independent non-state oriented IWT standing outside of the formal system of then existing national and international layers of law and legal organizations. In setting up IWT, the Foundation based its action on two types of arguments which are (1) ethical arguments; and (2) judicial arguments.

On the ethical ground, the Foundation wrote in its tribunal documents:

On what grounds does the Foundation base its right to hold such a Tribunal? A number of laws specifically mention water pollution. A number of official bodies, including courts, are charged with enforcing those laws. Such efforts as they make in this direction meet with little success.

By this reason, in the case of Rhine water pollution, the Foundation was referring to the failures of both national laws, regulations and the 1976 Chemical and Chloride Conventions. The Foundation continues to argue:

⁵⁶ A brief background of IWT and the nature and procedures of IWT was explained in a letter written by the Treasurer of IWT Foundation, Dr. J. Dogterom, to Vereniging van de Nederlandse Chemische Industrie (Dutch Chemical Industries Association) in Den Haag on November 9, 1982.

Does this failure give the International Water Tribunal Foundation the right to organize an independent 'court,' which will pronounce 'judgment'? From a legalistic point of view, the Tribunal has no place in any existing jurisprudence. . . Its intention in organizing the Tribunal is to transcend everyday legal wrangling and to have evidence presented in the clear light of human ethical duty towards the environment; and of the moral culpability of actions to the detriment of that environment. The law courts shirk these issues, seeking refuge in the niceties of legal wording and in the complexities of modern chemical science.⁵⁷

The Foundation was, therefore, to set up the International Water Tribunal independently by the voluntary labors of concerned citizens, university scientists, independent scholars, graduate research students, and NGO workers. The Foundation took the issues of water pollution to highlight the failure of laws and legal institutions and to bring the ethical dimension of polluting environment in general and rivers in particular of Europe.

The second reason stated for the establishment of the International Water Tribunal is rooted in the effectiveness issue and function of existing laws. The founding members of the Foundation believed that the laws in and itself is a part of the problem for deterring the progress of pollution cleanup regime. In the judicial reasoning for the emergence of the International Water Tribunal, the Foundation argues:

One of the reasons for setting up the International Water Tribunal is the failure of regular law courts to deal properly with cases of water pollution. . . The existing international rules and agreements are full of good intentions, and, at first reading, raise hope for the future. However, the founding members of the International Water Tribunal have become increasingly alarmed by the way in which such international rules can apparently be adjusted to fit industry's need to rid itself of polluting substances.⁵⁸

To support the argument that the existing laws and legal institutions were not combating the pollution, the Foundation needed credible scientific data and facts about the number

⁵⁷ See p. 1 of Chapter VI: Ethics and Environment, argued in the Casebook of the International Water Tribunal documents presented to the tribunal held October 3-8, 1983.

⁵⁸ See p. 1 of Chapter VII in Casebook, International Water Tribunal, October 3-8, 1983.

of chemicals and the quantity of each chemical contents in the Rhine water. The first and foremost strategies they applied was their scientific capacity to collect data from the Rhine to sort out what industries in what countries are discharging what amount of pollutant chemicals into the Rhine.

Scientific Knowledge as a Source of Influence

The Foundation carried out “Fliessende Welle” (floating wave) survey research⁵⁹ to investigate the pollutant chemicals in the discharges of the wastewater in the Rhine from September 13 to October 1, 1981. The “Fliessende Welle” research team was composed of 29 individual collaborators and contributions from three universities and seven scientific institutes and community associations.⁶⁰ They recorded 1,092 observations at over 71 industrial locations along the Rhine, from Rheinfelden, Switzerland, to the Hook of The Netherlands (IWTF, 1983: Ch. IV, p. 3). At each point-of-discharge location, the Foundation team observed both at the upstream point to identify what chemicals were contained in the Rhine water and at the downstream point of the discharge point to identify if the numbers of chemicals and the quantity or amount of chemicals increased.

Using the research finding of the “Fliessende Welle” survey team, the Foundation initially indicted 19 industries in the International Water Tribunal. IWT was presented details with the names of industries responsible for pollutant chemicals in their industrial

⁵⁹ According to the research methodological explanation in the IWT Casebook, p. 3 of Chapter IV, “Fliessende Welle” surveys aim at identifying pollutant chemical content data and quality of one specific quantity of water considered a “package,” which is moving downstream from the discharge point.

⁶⁰ See list of scientists and researchers on p. 1 of Chapter IV of Casebook, International Water Tribunal, October 3-8, 1983.

wastewater discharges.⁶¹ Before the tribunal began on October 3, 1983, the Foundation sent invitation letters to industries that were to be indicted at IWT, asking if they would defend their cases at the IWT hearing. None of the industries the IWT indicted decided to participate in the proceedings and refused to recognize its legal status. Letters written back-and-forth between the Foundation and the indicted industries provide some evidences indicating how formal laws and legal institutions seem to serve as a problem rather than solution. If we examine the letter from Federatie der Chemische Nijverheid van België (FCN) or the Federation of Belgium Chemical Industries, we find the federation preferring the laws made by governments. The federation wrote to IWT:

The responsibility of limiting the impact of industry on the environment to an acceptable level is the responsibility of the government. Government in the broadest sense of the world includes not only the European agencies, the national and regional governments and parliaments, but also the provincial and local councils and their associated administrations. Their concern for the environment expresses itself through legislation, regulations, standards, and permits, which have been drawn up on the basis of continuous evaluation of knowledge on scientific, technological, and ecological levels, and the social economic contexts. . . . The Laws and regulations in a democracy are drawn up in a democratic manner, and any deviation from this process shall be strongly criticized by authorities in questions.⁶²

This response from the Federation of Belgium Chemical Industries to IWT sums up the fundamental problems with the ICPR international treaties and government regulations which tend to serve the interest of polluting industries as they are most influential lobbying organizations in open and democratic societies. The industries in the Federation of Chemical Industries in Belgium seem to prefer “liability” to be imposed on

⁶¹ See Chapter VIII of the *International Water Tribunal Casebook*.

⁶² See p. 25-27 of chapter IX in *International Water Tribunal Casebook*, October 3-8, 1983. The English version is translated from Dutch. The Shell Nederland Chemie B.V. also responded not to participate in IWT hearings on similar grounds; see Shell’s letter to IWT on p. 38 of chapter IX in the *International Water Tribunal Case Book*. Similar responses claiming that their industries’ practices are legal under the existing laws also are made by Akzo Zout Chemie Nederland bv (see chapter IX, p. 42), Windmill Holland bv, (see chapter IX, p. 44) and others (see details in Chapter IX of Casebook).

them rather than taking “responsibility” outside and beyond the laws, as long as they can influence in the law-making processes.

Therefore, it can be interpreted that laws give them permission to pollute as long as they are polluting within the law which they perhaps influenced the making of in democratic processes. This is one of the fundamental problems that resonated in ICPR’s 1976 Chemical Convention and Chloride Conventions. The organizers of the IWT aimed to shed light on the problems of law and legal institutions designed by member states to combat the pollution of the Rhine.

Organization of the International Water Tribunal

The organizers of IWT were well aware of the stake and status of IWT in its processes to influence states and industries. Their credibility is at stake and their procedures of reasoning and indicting industries have to be fair and just at their best.

With that in mind, the Foundation wrote:

The initiators realized that the body arranging the procedures would have to be independent . . . The Tribunal was to be a means of presenting evidence of water pollution to an independent jury of experts who would decide to what extent such pollution was incompatible with universally accepted ethical principles. The persons requested to sit in this international jury were to be independent. The plaintiffs were to be given the opportunity of presenting their charges to the jury and the defendants, likewise, were to be offered a fair and just chance of defending themselves.

In order to carry out IWT in an organized manner, the Foundation established four branches of coordinating groups: (1) the Board composed of three members; (2) the Organizing Committee composed of ten members, including three members of the Board; (3) International Committee composed of twenty two members from six countries; (4) Working Committee composed of five working groups with fifty three members.

Members of these groups were recruited based on their willingness and proven expertise in the role for which they are recruited.⁶³

The Board oversees and takes formal responsibility when problems and disagreements arise among various working groups and individuals who are involved in the organization of IWT. The Organizing Committee makes final decisions on issues related to the IWT. The Organizing Committee meets every two weeks and discusses issues arising out of various working groups as well as issues related to implementation of IWT. The International Committee serves as an advisory body in recommending specific actions to be taken in organizing IWT. It meets every two months. The recommendations made by the International Committee are discussed in the Organizing Committee meetings and very often they become final decision.

The Working Committee has five topical subgroups: (1) Editorial Committee; (2) Publicity Working Committee; (3) Judicial Working Committee; (4) Working Committee on Scientific Research; and (5) Translation Committee. All of these groups were ultimately responsible for and working toward successfully implementing IWT.

IWT itself is composed of three parties: (1) the plaintiffs presenting cases; (2) the defendants defending the cases filed against them; and (3) the jury who will judge the cases and render judgments. The IWT invited and accepted complaints from concerned citizens, civic associations, and local environmental organizations. The complaints were selected based on scientific facts and the merit of the case. Once a complaint was registered as a merit case, IWT sent the case to the defendant, inviting the defendant to defend by way of written statement or appearing at the tribunal hearing.

⁶³ See Appendix I-1 of the *International Water Tribunal Casebook* (1983) for names of members and further details about the organization of each group.

The independent body of the IWT Jury, composed of nine members with various backgrounds and areas of expertise (see Table 5.1), rendered final judgments after tribunal hearings in October, 1983. Chapter X of the *International Water Tribunal Casebook* presents the Jury's judgments on nineteen cases. None of the cases rendered judgments were represented or defended by defendants most of which were industries responsible for pollutant chemicals. Although these judgments were not legally binding or defendants were not punished for their acts, the impacts that IWT rather aim for is to reveal the image of industries within the public. Therefore, IWT indicted defendants in the court of public opinion, whose preferences for better environment and awareness of the importance of environmental protection were the "law" that IWT hoped to rely on for its cases. Indeed, the independent Jury of the IWT judged the cases before the tribunal based on this public law.

<Table 5.1 about here>

The IWT was able to maintain its scientific capacity, public relations capacity, and coordination among various individuals and working group. The works of the IWT is enabled by funding from various organizational and individual donors. The ideas and works of IWT would not have been implemented without financial resources contributed by five ministries of The Netherlands government, the city of Rotterdam, and various non-state sources (See Table 5.2). The cost of launching IWT was US \$786,377, of which the highest expenditure was on salaries of core staff, the second highest expenditure was on scientific research, and the third highest expenditure was on publicity and press.⁶⁴

<Table 5.2 about here>

⁶⁴ See details of expenditures and receipts in an IWT publicity brochure printed by Drukkerij Rob Stolk bv, Amsterdam and published by the International Water Tribunal Foundation. Publication date unknown.

In addition to scientific credibility, legal and institutional credibility are major concerns for organizers of IWT. If we observe interplay of issues, interests, and actors, five ministries from the Dutch government are the only state actors in the IWT case. All other actors are non-state actors (see Table 5.3). This made IWT's legal and institutional credibility a major issue as we have observed in preceding discussions. Indeed, the industries that were indicted by IWT refused to participate because IWT did not have any legal and institutional standing in their minds. However, IWT organizers saw the lack of formal legal status as a strength to highlight the failure of formal law and legal institutions from outside the formal system.

<Table 5.3 about here>

The emergence of this well-coordinated and organized IWT demonstrates empirical evidence in its own course of the Rhine pollution case, illuminating the failures of formal legal mechanisms. It should be noted that the Dutch government contributed to the funding of IWT's work. This means the Dutch government funded the Foundation to attack its own legal system and the international law so as to open further strategies to combat Rhine pollution. The Dutch government perhaps learned from the lesson of the Chloride Convention in particular after the diplomatic crisis with France that the conventional state-to-state relations and international structure of legal mechanisms to combat Rhine pollution needed to be challenged from outside the formal system rather than within. In addition, those Dutch government officials who decided to contribute to the funding of IWT perhaps understood the thickness of bureaucratic processes involved in decision processes of the state structure and saw no other way to change internally.

Outcomes and Impacts of the International Water Tribunal

At the operational level, the International Water Tribunal categorized nineteen cases into four theme groups in its final judgment: (1) six cases were on the issue of heavy metals; (2) nine cases were on the issue of chlorinated hydrocarbons; (3) two cases were dealing with radioactive wastes; and (4) two cases were dealing with miscellaneous issues. The majority of cases were linked to the discharges into the Rhine either directly or through its tributaries.

In its report on achievements of IWT, the Foundation claimed that IWT had direct concrete results in a number of cases.⁶⁵ The report cited two particular concrete results. The first one was the case of waste discharges from Roussel-Uclaff in Vertolaye in France which is subsidiary of Hoechst AG, a pharmaceutical company. The Foundation reported that even before IWT took place, Roussel-Uclaff responded in 1982 that it would make its chemical discharges public at the IWT and within four weeks it stopped dumping waste chemicals.⁶⁶ The second case was the Bayer AG in Leverkusen in Federal Republic of Germany which stopped producing polychlorinated biphenyls (PCBs) by the end of 1983 as a response to its IWT indictment. In addition to direct results of IWT, the report also listed some of the industries that decided to take measures to reduce pollution discharges during the implementation of IWT. These cases may or may not be result of IWT as claimed by the Foundation, but they coincided with the launching of IWT.⁶⁷

⁶⁵ The report on the outcomes of IWT was published in a Foundation brochure that was printed by Drukkerij Rob bv, Amsterdam and published by the Foundation office located at Damrak 83-1, 1012 LN Amsterdam, the Netherlands. Publication date unknown.

⁶⁶ The Foundation stated that the Hoechst AG thought it was going to be summoned to the International Court of Justice (ICJ) in The Hague, Netherlands. This misunderstanding and mixup of IWT with the ICJ perhaps was the reason Hoechst AG responded, because, unlike IWT, ICJ is a statutory international body. See IWT pamphlet about the International Water Tribunal (undated).

⁶⁷ *Ibid.* at "The Results" section.

If these responses from industries were a direct result of IWT, then the question is why did these Rhine industries respond to the citizen-initiated IWT? It is possible that the industries considered their image would be damaged and they could face boycotts by customers especially at the risk of IWT's media attention. This public shaming tactic works only when the public is aware of the issue and willing to exercise preferences in civic life.

Perhaps the significant outcome of IWT was proliferation of the Rhine pollution by chemicals which was overshadowed by the international diplomatic deadlocks over the chloride issues. IWT accomplished its campaign against the proliferation of the Rhine pollution by its scientific research that produced credible facts about the pollution of the Rhine by various pollutant chemicals from pointed industrial sources. Its credibility and publicity was increased by the interests of concerned citizens and the work of media. The Foundation reported:

A total number of 125 journalists mainly from Europe but also from other continents visited the public hearings and a large and interested public attended the daily sessions throughout the week. Because of the extensive Press coverage millions of people in Europe learned a lot about water pollution and its causes. This has certainly made the work of political lobbyists (e.g., in European Parliament) easier.⁶⁸

The aforementioned outcomes of IWT have had a major impact on the evolution of the dynamic of governance processes of the Rhine pollution. IWT was purposely designed to highlight the weakness of international laws and subsequent national laws in combating water pollution in Europe in general and in the Rhine in particular. If IWT were to launch within the framework of existing laws and indict industries within the

⁶⁸ See IWT Foundation brochure that was printed by Drukkerij Rob bv, Amsterdam and published by the International Water Tribunal Foundation office located at Damrak 83-1, 1012 LN Amsterdam, the Netherlands. Publication date unknown

regulations as suggested by the industries, such as the Federation of Belgium Chemical Industries suggested above, there might not be a case for IWT. The research on compliance of industries in the Rhine has reported that industries were ahead of regulations and they were complying, in some cases, beyond what the law requires (Verweij, 2000: 110-116). However, this is not to conclude that the Rhine water got cleaner to a level where, for instance, the salmon could live in the Rhine. The Foundation amplified this problem as follow:

A law agreed on internationally has to be transformed into national legislation and can only then be enforced. That national governments are tardy in doing so does not relieve citizens, and certainly not industries, of their responsibility to create aquatic environment with the utmost care. The use of the term “responsibility” rather than the legally more relevant “liability” is an indication that not just damage accessible in money terms is concerned but rather the harm done to the whole of our habitat.

It became obvious to concerned and active citizenries and water scientists that some level of thinking and actions “outside the box,” or outside the system, is needed to tackle the Rhine water pollution. Taking actions outside the system requires well-founded factual and intellectual reasoning, and the founding members of the Foundation seem to be well aware of that. If we examine the research procedures and methodology used in scientific survey mission—Fliessende Welle—and the composition of institutions and individuals in the scientific survey team, we will find that credibility of the facts and knowledge about pollutant chemicals are the keys in the mind of IWT founding members.

The case of emergence and function of IWT demonstrate the influence of non-state actors in Rhine pollution cleanup regime as it at least demonstrated that the ICPR 1976 conventions and national laws were not producing the outcomes they were designed to achieve. As we have observed in the cases of the Chemical Convention and Chloride

Convention, non-state actors were not considered as important actors in constitutional-, collective-, and operational-choice levels at multiple layers of the ICPR regime.

The case of IWT is demonstrated empirical evidence that the issues, interests, and actors in multiple layers of transnational regimes in governance of the Rhine pollution play important, if not equal, roles in transnational environmental governance. Even though member states are still central players in determining institutional design at the constitutional-choice level of the transnational layer, the influence of non-state actors in the case of the Rhine provides evidence that the sources of institutional transformation of the Rhine regime originate in the demonstrated power of non-state actors. The ICPR officials and national leaders of the Rhine riparian governments realized the influence of the non-state actors as in the case of IWT on transformation of the Rhine regime.

Although the IWT achieved its goal of proliferating the plight of the Rhine pollution and demonstrating the failure of then existing formal laws and legal institutions, it was not the mechanism that triggered the actual cleaning of the Rhine pollution. IWT lacked widespread participation and recognition of important actors such as states and industries.

The conclusion of IWT in late 1983 set a policy environment where the transformation of the Rhine pollution regime was eminent in the minds of both state leaders and non-state actors. The “policy window” (Dieprink, 2000: 350) for the change and new ideas was wide open in the context of the Rhine regime. Within this context, the Rhine Action Program emerged to reshape the institutional mechanism to combat the Rhine pollution. In the following section, I analyze the case of RAP where state leaders finally recognized the important and influential role of non-state actors in at least in the collective-choice and operation-choice levels of three layers of the Rhine regime.

Issues, Interests, and Actors in the Rhine Action Program

After the Foundation concluded its indictments of industries responsible for the Rhine pollution, the policy environment for the governance of the Rhine was introduced to the new idea that non-state actors play an important role in effective implementation of the vision and goals of ICPR. At this point and time of the Rhine regime, the fundamental issue was not about how serious the Rhine pollution was or whether member states were willing to and capable of combating Rhine pollution but it was how it should implement the goals of cleaning the Rhine.

Setting the Stage for Regime Transformation

The issue of how the goal of cleaning the Rhine should be implemented was triggered to a level of urgency to produce actions beyond discussion by the Sandoz Chemical accident (Glass and Snyder, 1996). The Sandoz accident brought together member states as well as chemical industries such as Sandoz that were responsible for the discharge of industrial wastewater into the Rhine. As a result of meetings between state delegations and industrial leaders initiated by the ICPR Secretariat Office in Koblenz, the mechanism beyond international treaties among member states was discussed among meeting participants to prevent future accidents like Sandoz and to commit to the rehabilitation of the Rhine.

ICPR crafted RAP for ecological rehabilitation with the slogan “LACHS 2000” (or “Salmon 2000”) denoting the return or reintroduction of salmon into the Rhine by the year 2000. With the symbolic call for the return of salmon, RAP not only aimed to clean

up the river but also required member states to eliminate physical barriers such as weirs and locks for fish passage. Therefore, the reintroduction of the salmon presupposes high water quality and restoration of hydrological and morphological conditions (ICPR, 1994). Since the return of salmon requires the restoration of a complex set of conditions, ICPR has elaborated on at least four goals, as we discussed in chapter 3, in the Ecological Master Plan.

There were four stages in implementation of RAP. The first stage, from 1987 to 1989, was to develop the details of the program. At this stage, information about past trends and the current state of pollutant chemicals was to be collected and assessed. The second stage, from 1989 to 1995, was the implementation stage of RAP. The third stage, from 1995 to 2000, was to conduct evaluation of the program, and the fourth stage was to issue recommendations for future processes in further rehabilitating the Rhine and controlling floods with eventual aims of sustainability. ICPR's role was to monitor these stages being implemented within each member state by ways of requiring member states to report annually to ICPR and the public.

The goal of RAP was to clean the Rhine water to a level of swimable and fishable condition. The Dutch delegation again came up with the suggestion for the slogan of "Salmon 2000." The poetic image of the salmon and the Rhine in relation to human institutions has been a long-developed perspective of citizens as researchers of the Rhine often encounter in the literature that describes the beauty and the utility of the salmon in the Rhine in addition to navigation and hydroelectric power. Tying the issue of livelihoods of salmon for the need of humans to have cleaner Rhine water is crafting a rather clever perspective, as it seems to convey bias-free nature by taking it outside of

human turf and making the issues to be perhaps closest to neutral among all actors. The symbolic message of RAP was to clean the Rhine for salmon which in reality aimed for human needs and desires. This is perhaps the art of public policy makers especially from The Netherlands government, which was desperate to have the Rhine clean, since it was the most downstream country.

The return of higher trophic-level species such as salmon was perhaps the most ambitious of RAP's four goals, since salmon are migratory fish and require good water quality and specific river habitats for spawning, nursery, and migration. The return of salmon was further complicated by the fact that they require unobstructed passage in the river for upstream migration, a condition that had been eliminated due to the weirs, locks, and dams regulating the river. Salmon are also dependent on river species that require varied habitats for food and are sensitive to pollution.

To restore the Rhine as the backbone of the ecological system for migratory fish, two things had to be done. First, obstacles along the migratory route such as weirs, locks, and dams had to be removed or modified to allow for upstream access to spawning grounds. Second, the river must allow for varied habitat to provide resting places during migration, feeding grounds, spawning areas (gravel banks), and nursery sites. The preservation and restoration of the reaches of the Rhine required a restoration of hydrologic and morphological conditions to the entire Rhine valley (Schulte-Wulver-Leidig, 1994). To meet these challenges, ICPR adopted a new form of institutional arrangement by establishing action-oriented RAP, which balanced between the time-consuming processes of provision of institution and the continuing costs of producing a cleaner Rhine.

Issues, Interests, and Actors in Action

RAP was a major transformation of the Rhine regime in approaching the pollution issue. Maintaining all existing legal mechanisms, including the Chemical Convention and Chloride Convention, as statements of goals, RAP introduced a new approach as an action program to implement those goals. When I asked Dr. Anne Schulte-Wülwer-Leidig to assess the differences between the two legal conventions and RAP, she stated:

The RAP had an active plan that was a new approach to start with the Conventions and to go on with political process. The legally binding conventions make the work slower than action programs which are voluntary, because if you have too many lawyers, you are against progress and the real problem....

However, she continued to explain the role of international law as follows:

Law is necessary as a framework for cooperation and therefore you need international convention so that there is a legal basis for the cooperation. Therefore a framework is necessary for setting rules of the game.

In 1986, when new ideas were discussed and the past experiences were evaluated, including future prevention of industrial accidents like Sandoz, it was the right moment for ICPR to initiate RAP as a departure from past trends. The Dutch government played a leading role on two important issues in regard to RAP: (1) to set the goal of cleanliness of Rhine to a level where salmon can live; and (2) to transform the legal-oriented regimes to action-oriented or a soft-law type of regime to include non-state actors at least as observers. The first initiative was unanimously accepted by member states while the second initiative of including non-state actors in a state-to-state regime of ICPR met with some opposition. It was at the ministerial meeting of ICPR member countries in 1994, during the implementation stage of RAP, that Dutch Minister Ms. Jorritsma, advocated for the inclusion of non-state actors including citizens' groups and industries in the Rhine

Regime (Verweij, 2000: 102). The Dutch delegation proposed to recognize the role of non-state actors and to grant at least observer status to them at the annual ministerial meetings. The Dutch proposal was to be further discussed as RAP was being crafted and implemented.

The significant characteristics of this new approach in RAP was to let each member state figure out how they would implement processes of reduction of pollutant chemicals in order to fulfill the commitments they had made in two legal conventions we discussed in preceding chapter. The progress of how the member states carried out reduction of pollutant chemicals was annually reported to ICPR, and ICPR made the information available to the public. In addition, ICPR also began in 1985 reporting the status of the Rhine pollution with the names of industries that were discharging pollutant chemicals (ICPR, 1985-2004).

In the formulation and implementation processes of RAP, the participation of all relevant actors in the Rhine basin was invited to put forward their issues, and their important roles were recognized. The analysis of RAP by applying IAN framework shows that the ICPR regime as a whole improved its mechanism of governance by incorporating actors across all layers to share information and to comment on program implementation processes. As shown in Table 5.4, actors from local layers were incorporated into national and transnational layers in RAP policy formulation and implementation processes at least by opening the door to local industries, NGOs, and participants to comment on the work of ICPR. These linkages among actors are clearly reflected in linkages among issues and interests. The issues and interests of local, national, and transnational layers are linked in RAP as opposed to the previous two

legally binding regimes. For instance, the ICPR regime recognizes the fact that the implementation of reduction of chemical pollution in the Rhine requires participation and resources capacity of local industries and NGOs in RAP. With this realization, local and non-state actors were encouraged to participate in various working groups of RAP. In the Rhine's history, RAP was the first of its regime type that began to enhance multilayer governance by incorporating participation of non-state actors into what used to be *international* state-centric regime.

<Table 5.4 about here>

The implementation of RAP was to be self-executed by member states although the ICPR secretariat could referee when states failed to produce an annual report or progress. As a way to serve as referee, ICPR made these national reports available to public, media, and NGOs so public awareness and participation could be promoted. For the solution to solve reduction of discharges of different pollutant chemicals, RAP identified 22 chemicals as priority pollutant chemicals to be reduced significantly from being discharged into the Rhine.⁶⁹ It targeted to achieve at least 50% reduction of pollutant chemicals overall from the 1985 pollution level of the Rhine by the year 2000. For the physical barriers to the fish passage in the Rhine, the rule was made that the weirs and locks had to be reduced in size to open an area at least six to ten feet wide in addition to the navigation route. None of the rules agreed to under RAP were binding at the transnational level; national governments were responsible for carrying out the implementation of the agreed upon rules. By decentralizing authority to implement rules as such, national governments were held responsible at the court of public opinion and

⁶⁹ Statusbericht Rhein, ICPR Publication 1991: 118-119; Verweij 2000: 115.

non-government watch groups. However, ICPR had the authority to make rule changes and recommendations as needed and requested by states following specific procedures, such as a state can request a delay to produce its annual report. All of these rules are made by consultations with scientists, consulting firms, and inputs from industries.

In the decision-making processes of RAP, ICPR cannot take any legal actions if states fail to comply with ICPR soft laws or rules they are prescribed to implement. However, ICPR can issue annual reports categorizing which countries are meeting the target they agreed to implement. ICPR serves as referee if states or industries are not complying with prescribed rules by way of press release, announcements, reports, and recommendations. In fact, ICPR is now legally assigned under the 1999 Bern Convention to do monitoring.⁷⁰ However, states can take legal action against industries and individuals if they fail to comply with effluent limits and regulations. The assigned agency or department that is responsible for monitoring the implementation of RAP programs has to issue warnings to industries if they fail to comply with domestic regulations.

Meanwhile, drinking water industries also use both public shaming and praising methods against chemical industries if upstream chemical industries are caught in their water-quality monitoring stations and if those industries fail to cooperate and comply with the requests. According to Dr. Peter G. Stoks, head of the Water Quality Department of WRK⁷¹ Water Works in the Netherlands, their intake monitoring stations capture water from the Rhine at almost real time and can analyze the content of chemicals in the water. Thus they are able to determine which chemicals come from what upstream industries.

⁷⁰ Article 2 of Bern Convention 1999.

⁷¹ Interview with Dr. Peter Stoks, July 6, 2001. WRK (Watertransportmaatschappij Rijn-Kennemerland) Water Works is a Dutch water supply industry located at Nieuwegein, Netherlands.

When they find an unusual increase in the amount of pollutant chemicals from a specific upstream industry, they directly contact the upstream industry and try to persuade it to take action before going through the formal channel of national delegations and ICPR to solve the issue. When asked what the downstream water industries would do if upstream industries fail to respond to their communication and request, Dr. Stoks responded that they would issue a press release and publish the findings in the media so as to get the attention of the upstream industries.

At the same time, the drinking water industries also recognize and praise upstream chemical industries that strive to achieve eventual cleanup of the Rhine by improving technology or spending resources. For instance, in 1992, WRK⁷² recognized German chemical industry AG Bayer by publicly issuing the WRK Rhine Prize for “its efforts to limit the discharge of waste products into the Rhine (RIWA, 1998: 6; Verweij, 2000: 118).⁷³ During my interview, Dr. Stoks further explained that by communicating directly to upstream chemical industries that were responsible for pollutant chemicals and solving the problem by bypassing national governments and the ICPR mechanism, they are mutually serving themselves to minimize states’ regulations of the market.

This public shaming and praising mechanism worked, because environmental awareness among citizens was high in Europe as the media and NGOs intensified raising the environmental issues to policy level. In Germany, the Green Party, which had started its movements in the 1970s, gained momentum and public support in the 1980s. It gained all-time high support for the first time from citizens in 1983 when it won 5.2% of the

⁷² IAWR (Internationale Arbeitsgemeinschaft der Wasserwerks in Rheineinzugsgebiet) is the umbrella organization of drinking water supply industries of which WRK is a member.

⁷³ Also in the interview with Dr. Peter Stoks, he explained how scientific data were important sources of power for WRK and drinking water companies to convince the upstream industries.

votes in national election seats in the Bundestag.⁷⁴ When I asked why industries were willing and capable of bypassing states and reducing pollution as expected by ICPR's RAP, Dr. Anne Schulte-Wülwer-Leidig answered:

You have the environment which does not have its own power. The industries were very strong. Citizens started expecting and saying that you have to protect the environment. There was the beginning of the Green Party Movement in late 1970s and beginning of 1980s. The first person from the Green Party in our Parliament was elected in 1983. With this movement, there was another possibility for the environment. Due to the Sandoz accident, the good name of the chemical industry and its reputation were damaged. They have to rebuild it again afterwards. The industries have done a lot to protect their reputation. Sandoz Company paid compensation before lawsuits were filed, and they tried to be good. There were good discussions with industries and they were financially able to do so.

Drinking water companies are not the only actors who monitor the wastewater discharges of upstream chemical industries. ICPR is also responsible for maintaining at least eight monitoring stations that watch pollutant chemical content on a daily basis. The Rhine water taken from each station⁷⁵ is examined in assigned labs to separate chemicals and to determine sources of them. If these monitoring stations find a specific chemical suspected from a particular industry, ICPR can then inform the member state where the industry is located. The member state's assigned agency has to carry out issuing warning or taking action. Member states are also responsible to make sure the right staff are hired to carry out the job; appropriate resources are allocated to be able to carry out execution

⁷⁴ German electoral law requires a party to garner at least 5 percent of the votes for its members to be seated in parliament. The most recent electoral victory for the Green Party in Germany was in the general election in 1998, when the Green Party in coalition with the Social Democratic Party (Sozialdemokratische Partei Deutschlands, or SPD) won the popular vote. The SPD holds the reigns of power in the German government and the Green Party serves as a junior coalition partner.

⁷⁵ Although the name "station" sounds as if there would be a physical presence of lab and analyzing it on the spot, in fact the person who is assigned to work at the "station" takes water with a bucket and sends it to a scientific lab at a university or designated lab. Then data are transferred to a computer network of data monitoring. However, private drinking water industries have direct, live monitoring stations by frogs whose behaviors were remotely observed via computer. If the frogs' breathing or wellness patterns show some sign of impact from water pollution, then the industrial lab samples and analyzes the water for its chemical content.

of implementation. ICPR cannot prescribe exactly how much a state must spend on monitoring activities of 22 priority chemicals. Coordination and cooperation among various actors were increased in RAP as issues and interests of actors beyond states were recognized by the ICPR regime. The policy mechanism of RAP facilitated these state and non-state actors to coordinate and cooperate across at least three layers of the Rhine regime.

Outcomes of the Rhine Action Program

In 2003, ICPR published its report on the outcomes of RAP, titled *Upstream – Outcome of the Rhine Action Program*, claiming RAP as a “landmark” institutional approach to solving pollution problems. Dr. Mathias Krafft, current president of ICPR, noted that the success of ICPR, and RAP in particular, has sparked worldwide interest in its work by citing an increased number of requests for data and information (ICPR, 2004). Several areas of achievements as a result of the implementation of RAP were reported in this report. It is clear from ICPR’s report as well as researchers’ observations of the Rhine’s condition that the pollution from the point sources has been reduced to less than 50% of its target from the 1985 level (ICPR, 2003: 10). Non-state actors’ participation is legally written into the new 1999 Rhine Convention, ratified by all member states in 2003, updating the 1963 Bern Convention,. For the first time in ICPR’s history, the 1998 Plenary Assembly officially granted observer status to nine NGOs (ICPR, 1998: 1).⁷⁶ The 1999 Rhine Convention provides a legal framework to include

⁷⁶ These nine organizations are Birdlife International/NABU, the European Association of Chemical Industry (CEFIC), the International Syndicate of Waterworks in the Rhine Catchment Area (IAWR), the World Wildlife Fund (WWF), Greenpeace, the syndicate of Re-naturation of the High Rhine, the European

non-state actors in at least information sharing and participation in implementation of action programs.⁷⁷

Even before ICPR made its official claim in the aforementioned report on the success of RAP, independent researchers and observers had already applauded the success of RAP (Bernauer and Moser, 1996: 404-405; de Villeneuve, 1996: 451-452; Gurtner-Zimmermann, 1998: 241; Verweij, 2000: 12-121). The *UNESCO Courier* in June 2000 called the success of RAP the “Miracle of the Rhine,” reporting the findings of scientists that salmon and other species of fishes had returned to the Rhine’s water (Weber, 2000). The environmental media watching ICPR’s programs reported RAP as a “model for the future,” (Glass and Snyder, 1996). Modeling after the success of the transnational cooperation among the Rhine countries, the EC issued a water directive on June 29, 2000 (ICPR, 2000).

Why was RAP successful in achieving a cleaner Rhine compared to the previous two treaty-type regimes—the Chemical Convention and the Chloride Convention? In the previous two treaty-type regimes, there were no formal or informal linkages between actors across three layers. At the transnational layer, the regime had no support from member states since they did not trust each other. At the national layer, there was a lack of political will to push the pollution of the Rhine into the national political agenda, especially in upstream countries. At the local level, the local and non-state actors were less organized across all layers since there was no political incentive because they could not directly influence or pressure national governments other than their own. Actors across three layers were disconnected, issues across three layers lacked political supports,

Association of the Water Suppliers and Waste Water Treatment Plants (EUREAU), Alsace Nature and the Hochwassernotgemeinschaft Rhein (see details in *Topic Rhine*, ICPR, No. 16, 1998).

⁷⁷ Article 14 of 1999 Bern Convention, adopted on April 12, 1999 and became into force in 2003.

and interests of stakeholders were constrained by the rigid institutional boundaries in the treaty-type regime. RAP transformed the previous two treaty-type regimes into an action-oriented regime to connect these missing links.

If we compare the actors in RAP to the previous two treaty-type regimes, we observe that local and non-state actors are incorporated all the way up to the transnational layer (Table 5.4). The interconnected network of issues, interests, and actors in the RAP are significantly increased in ICPR regime. As the name conveys, the non-binding action-oriented design that enables RAP to include relevant actors, to consider key interconnected issues put forward by state and non-state actors, and promote interests of these actors. Bernauer and Moser (1996), in their analyses from the dimension of international cooperation, concluded that “in the Rhine case, informal approaches to problem solving have been more effective than formal approaches” (p. 389). A similar conclusion was made by de Villeneuve (1996) who concluded that “agreements based on shared policy views and on imagination have more impact than hard-fought, precise legal obligation” (p. 36). Based on the empirical evidence, policy-relevant conclusions can be drawn such that the non-binding institutional arrangements facilitate all relevant actors to engage in governance processes in a more open and relax environment.

<Table 5.5 about here>

What ICPR did by initiating RAP and considering participation of non-state actors in the governance of Rhine pollution was empirical recognition of the power of non-state actors in the governance of the transnational Rhine regime. Realizing the state-to-state international legal regime as important in its own evolution in trust building and making the Rhine pollution issue as international issue, ICPR departed to RAP for

implementation of goals that were initially articulated in international legal conventions. The coordination and cooperation between state and non-state actors across multiple layers were promoted in RAP. It is the power of non-state actors that is crucial in influencing transformation of the Rhine regime and making the implementation of RAP a success.

Analysis of the Governance Processes of the Rhine Regime

The Rhine regime has evolved a long way from its foundation in 1950 and formalization of its pollution problem in 1976 to the realization of results of its efforts in 2000 which is all owed to processes of events and its institutional transformation or adaptive capacity of the Rhine regime. The issue of water quality of the Rhine was not a primary political and social concern in the context of the pre-1950 Rhine regime. In 1950, the government of the Netherlands took the water quality issue as a serious agenda for international affairs and initiated the establishment of ICPR. Even though the issue of water quality of the Rhine had existed since industrialization began along the banks of the river, no political institutions raised this issue to be solved by means of the international cooperation until the Dutch government politicized it. With the interest in the cost of the purification process for the water supply companies, damages to the seaports, and agricultural land in The Netherlands, the Dutch government was positioned to take the Rhine water pollution issues to the international political agenda among the Rhine riparian countries. As the lowest downstream country, the Dutch government has its legitimate interest to raise it to the international level.

As we have observed in preceding sections, it is not that informal and action-oriented policy of RAP made the regime successful in implementing its goals, as concluded in some of the Rhine literature (De Villeneuve, 1996: 454), but the dynamic interplay of issues, interests, and actors forced the regime to find workable solutions in the context of the Rhine regime. RAP happens to facilitate this dynamic rather more effectively than the Chemical and Chloride Conventions. The dynamic interplay of issues, interests, and actors were set on stage by at least three important conditions: (1) the environmental knowledge and awareness among the European citizens was not only high (Bernauer and Moser, 1996: 413) but the citizens were willing to exercise their political preferences as we have discussed the election of the Green Party candidates in German Bundestag in the 1980s; (2) the industries in the Rhine were not only technologically capable of detecting and reducing the pollutant chemicals in the wastewater discharge but they were able to invest in environmental technologies within the context in which socioeconomic development of the riparian countries were stabilized (Bernauer and Moser, 1996: 413) beginning in late 1980s; (3) the high level of political freedom of the European citizens played a significant role in facilitating the dynamic interplay of various actors with varying degrees of interest and issues, as we have observed in the actions of IWT.

During the period leading to adoption of the Chloride and Chemical Conventions, issues, interests, and actors were not linked and dynamic synergy of governance across multiple layers was not organized to govern the pollution issue effectively. We have observed IWT emerging outside formal legal systems, industries bypassing the states and formal diplomatic channels to find solutions based on mutual interests, and citizens

losing faith in formal legal mechanisms to combat the Rhine pollution. All of these synergies were not realized by the Rhine regime during the period before RAP was established. RAP captures these synergies from the dynamic interplay of issues, interests, and actors and facilitates them to work more effectively.

In sum, the dynamic interplay of issues, interests, and actors was possible not only because non-state actors were scientifically capable and had resources in terms of money and human skills but also because the Rhine policy environment as a whole had a relatively high degree of political freedom where non-state actors such as IWT were able to organize and launch their political action. If no such political freedom had existed for non-state actors in the member states of the ICPR, the political action of non-state actors such as IWT would not have been possible, even though they might have been able to spend money and had scientific capacity to elucidate the pollution of the Rhine.

Allocation of Values at the Center of Governance Processes

Overall, the storm center of the governance processes of the Rhine regime from 1950 to 2000 that we observed and analyzed in this chapter is located at the problem of allocation of values among actors.⁷⁸ The dynamic of issues, interests, and actors are rooted in the base value production and utilization of actors in order to achieve the scope values. The allocation of values among actors occurred through evolution of issues and interests in governance processes or what Policy Sciences approaches would call “social processes” (Lasswell and McDougal, 1954). In governance processes, what actors are dealing at the ultimate decision-making stage is problems associated with the allocation

⁷⁸ The problem of allocation of values is not a static problem it is evolving problem as actors’ interests were shaped and reshaped and priorities of interest shifted and resifted through time.

of values. The processes of allocation of values are more dynamic in open societies as we observed in the Rhine where degree of political freedom is relatively high compared to societies where dictatorial regimes or largely centralized authoritarian regimes control political freedom.

What we learned from the analysis of the processes leading to the final outcomes of the Rhine regime as a whole from 1950 to 2000 is that the fundamental challenge of allocation of values dominated the governance processes of the pollution of the Rhine. Actors tried to control issues and manage interests at their best to serve themselves while issues and interests in turn constrain their choices. Within the world of issues, interests, and actors interplay in governance processes, values are produced, used, and finally allocated. I captured the interplay of issues, interests, and actors in the processes of the allocation of values throughout previous and this chapter.

Knowledge, Assets, and Degree of Political Freedom in the Allocation of Value

What are the factors that dictate the dynamic interplays of issues, interests, and actors in the case of the Rhine? The observation and the analysis I have made on governance of the Rhine pollution cleanup regime suggest that there are three factors that collectively enable non-state actors to influence in transformation of the state-centric Rhine regime.

The first factor is the *knowledge* as in how actors know what they know about the Rhine pollution in particular and the issues of human-environment interaction in general. Information and scientific data is a key domain of knowledge but information without human's use and touch is not knowledge. Therefore, I mean by *knowledge* as *how* people

know *what* they know. Very often it is relatively easier to locate what people know but it is always difficult to understand how people know what they know. How people know what they know dictates their beliefs, thinking, and their decisions in making choices. I do not mean “how people know” as to equate with just the procedural learning processes of knowing such as from survey research or scientific monitoring of water pollution but I mean it in threefold: (1) how do they know what they know; (2) what they make out of what they know; and (3) why they make out the way they make out of what they know. For instance, there are so many European citizens who learned information about the pollution of the Rhine. However, not everyone uses that learned information to enlighten themselves about finding solutions for the cleaning of the Rhine. In this sense, information has not reached a level of knowledge if it is not used. For those who use the learned information through either scientific research or monitoring or through media, the information has reached a level of knowledge in the context of their use. The important point to stress further is that the actors’ decision to use that information to enlighten and use for shaping their preferences through finding solutions is not a value-free process. To make a clear distinction between information and knowledge, information in and of itself is more value free than knowledge is in a relative term. Therefore, knowledge of citizens helped shape their preferences in political issues with the rise of green politics in Europe, and it has influenced the dynamic interplay of issues, interests, and actors in the processes of governance of the Rhine River Basin.

The second factor is their *assets* in terms of material and human resources which capable them to take action. Knowing alone does not automatically ensure there could be action to solve the problem or an issue that actors know about. It costs capital and human

resources to put knowledgeable actors to become capable actors to take actions. When actors possess knowledge and have assets they are capable of taking actions. Whether they want to take action is mostly a matter of value orientation or their setting in priorities of choices. However, this capacity will not turn into action if rules restrict or forbid or freedom to act is controlled by someone else.

Therefore, the third factor is the *degree of political freedom* actors have for exercising their preferences. The riparian countries along the Rhine River Basin have a relatively high degree of political freedom under mostly democratic systems of governments. This political freedom at least allows actors to use their knowledge and assets to shape their political and social preferences and to make choices. The political freedom is a part of natural freedom that exists *a priori* before human beings are born into the world of human-made rules. Generally, for most human beings, they are born into the world of human-made rules in terms of formal laws or cultural norms whether they like these rules or not. For instance, a human beings born in the United States is dubbed as an American citizen, and she or he is bound to live under the Constitution of the United States whether he or she likes it or not. His or her natural freedom to create a constitution and decide on his or her own citizenship is limited. The limits of freedom are not only human made but also the rules of nature limit human freedom. For instance, all humans are mortal and no one is going to be able to eliminate this rule, thus the natural freedom is also limited in its own course. This presence of political and natural freedom boundaries applies to any human being born on this planet at their respective countries or specified territories. Therefore, actors' capacities are constrained by the political freedom whether the capacities of actors are allowed to be utilized to launch into actions. What we

have observed in the preceding chapter and this chapter is that these three variables—*knowledge, assets, and degree of political freedom*—collectively enable non-state actors to influence transformation of the Rhine regime.

Table 5.1 - Members of the Jury of the International Water Tribunal

Name	Background	Country of citizenship
Mrs. M. Auken, M.A	Member of the Danish Parliament for the Socialist People's Party; Member of Nordic Council	Denmark
Professor Dr. H Bick	Professor of Ecology at the University of Bonn; Former Present of the Council of Experts for Environmental Problem of German Government	Federal Republic of Germany
The Earl of Granbrook	Member of the House of Lords; Member of Royal Commission on Environmental Protection; Member of Natural Environment Research Council	United Kingdom
Mrs. S. Fernex	Housewife; Active in local and regional Environmental Organizations in Alsace, France	France
Mrs. Dr. L. Hartenstein	Member of the German Parliament for the German Socialist Party; President of the SPD Parliament Fraction Working Committee on Environmental Problem	Federal Republic of Germany
Professor Dr. M. Hirsch	Former Judge to the 'Bundesverfassungs-Gericht' in Karlsruhe	Germany
Professor Dr. J. H. Koeman	Professor of Toxicology at the Agricultural University of Wageningen, the Netherlands; A Founding member of Dutch Society of Toxicology	The Netherlands
Dr. R.J.H Kruisinga	Physician; former Dutch Minister of Defence; former Secretary of State of Public Health; former Member of Executive Board of the World Health Organization	The Netherlands
Mr. Denis de Rougemont	Author; Philosopher; Founder of the European Cultural Foundation in Switzerland	Switzerland

Source: Appendix VII-1, IWTF 1983.

Table 5.2 Sources of Funding for International Water Tribunal 1981-1984

Sources	1981	1982	1983	1984
Ministry of Housing, Regional Development and the Environment			203,000	54,500
Ministry of Transport and Public Works	37,500	30,000		
Ministry of Agriculture and Fishery			55,628	
Ministry of Health and Environmental Protection	20,000	15,000		4,250
Ministry of Culture, Recreation and Social Work		22,500		
City of Rotterdam		50,000		
WWF- the Netherlands			7,500	
Commission of the European Communities			5,118	
Various local authorities	2,500	12,428	24,925	5,000
Various non-government organizations		8,750	36,000	
Green Party of Germany			15,128	1,662
TOTAL	60,000	138,675	347,299	65,432

Sources: International Water Tribunal. The amount of funding is in U.S. dollars.

Table 5.3 Issues, Interests, and Actors in the International Water Tribunal

Institutional layers	Issues	Interests	Actors
Transnational	<ul style="list-style-type: none"> • ineffectiveness of existing legal mechanisms • worsening pollution • scientific and legal credibility of IWT 	<ul style="list-style-type: none"> • cost of compliance • public image • citizens' well being • power imbalance between state and non-state actors • cost of being responsible industries • cost of scientific evidence and IWT • weak regulations and influence of industries 	<ul style="list-style-type: none"> • IWT Foundation • Industries • University and research Institutes • Citizens and environmental organizations • Five ministries of Dutch government • independent scientists and citizens • Commission of European Communities
National	<ul style="list-style-type: none"> • lack of political will • dominant role of chemical industries in lobbying • viewed as international problem 	<ul style="list-style-type: none"> • cost of being responsible industries • cost of ecosystem degradation and water resource • political office • weak regulations and influence of industries 	<ul style="list-style-type: none"> • National environmental organizations • Five ministries of Dutch government • City of Rotterdam • independent scientists and citizens
Local	<ul style="list-style-type: none"> • citizens bypassing states to organize international action for Rhine pollution • industrial influence on regulations of states and municipal governments • 	<ul style="list-style-type: none"> • loss of Rhine and European surface water as drinking water and recreational resource • weak regulations and influence of industries 	<ul style="list-style-type: none"> • IWT Foundation • Industries • University and research Institutes • independent scientists and citizens • Citizens and environmental organizations

Table 5.4 - Issues, Interests, and Actors Network in the Rhine Action Program

Institutional layers	Issues	Interests	Actors
Transnational	<ul style="list-style-type: none"> •Transparency of all Rhine issues •NGOs participation and public education •Monitor member states' implementation •Maintain mutual trust 	<ul style="list-style-type: none"> •Ecological loss •Revitalization of the Rhine ecosystems •To maintain and increase coordination among actors 	<ul style="list-style-type: none"> •ICPR •EU •National Delegations •NGOs •Industries
National	<ul style="list-style-type: none"> •Building fish passages by removing weirs and locks •Enforcement of domestic regulations 	<ul style="list-style-type: none"> •Reduce long-term cost •To maintain national integrity and value 	<ul style="list-style-type: none"> •Ministerial level •Municipal governments •Industries •National NGOs
Local	<ul style="list-style-type: none"> •Demand for recreational activities •Demand for drinking water 	<ul style="list-style-type: none"> •Ecological health of the Rhine •Environmental awareness and value of the Rhine 	<ul style="list-style-type: none"> •Organized water supply industries (IAWR) •Organized chemical industries

Table 5.5 Comparison of actors across four cases of ICPR regimes

Institutional layers	Actors in Chemical Convention	Actors in Chloride Convention	Actors in IWT	Actors in RAP
Transnational	<ul style="list-style-type: none"> • ICPR • National Delegations • Germany, Switzerland, and the Netherlands 	<ul style="list-style-type: none"> • ICPR • National Delegations • France and the Netherlands • Diplomats 	<ul style="list-style-type: none"> • IWT Foundation • Industries • University and research Institutes • Citizens and environmental organizations • Five ministries of Dutch government • independent scientists and citizens • Commission of European Communities 	<ul style="list-style-type: none"> • ICPR • EU • National Delegations • Local and Transnational NGOs • Industries
National	<ul style="list-style-type: none"> • Ministerial • Municipal governments • Industries 	<ul style="list-style-type: none"> • Ministerial • Municipal governments • Water supply and Mining industries 	<ul style="list-style-type: none"> • National environmental organizations • Five ministries of Dutch government • City of Rotterdam • independent scientists and citizens 	<ul style="list-style-type: none"> • Ministerial level • Municipal governments • Industries • Transnational and Local NGOs
Local	<ul style="list-style-type: none"> • Local farms • Chemical industries • Water supply industries • Communities 	<ul style="list-style-type: none"> • Local farmers • Alsatian mining industry in France • Water supply industries in the Netherlands • Local NGOs 	<ul style="list-style-type: none"> • IWT Foundation • Industries • University and research Institutes • independent scientists and citizens • Citizens and environmental organizations 	<ul style="list-style-type: none"> • Organized water supply industries (IAWR) • Organized chemical industries • Organized Local NGOs

Chapter 6

Issues, Interests, and Actors in the Pak Mun Dam Struggle

Background

The Pak Mun Dam is located near Ban Hua Haeo (village of Hua Haeo) in Kong Chiam District of Ubon Ratchathani Province in northeast Thailand. It is constructed between 5.5 km and 6 km from the confluence with the Mekong River on the border with Lao People's Democratic Republic (Lao PDR). The dam is roller-compacted or run-of-river type and has eight sluice gates that can be opened and closed to adjust the flow of the river and the volume of reservoirs. If necessary, all eight sluice gates can be opened to let the river flow almost naturally. The Pak Mun Dam is the first of its type constructed in Thailand to facilitate the landscape of the Mun-Chi river basin, which is prone to floods.

The Pak Mun Dam project emerged initially as a part of a hydropower development plan in the Mun-Chi River Basin of northeastern Thailand. The Mun-Chi River Basin covers approximately 118,000 km², which is nearly one-third of northeastern Thailand (AID, 1965: 3; CCI, 1975: 12). There are 38 major tributaries along the Mun and Chi rivers (AID, 1965: 47). The natural resources and water from the rivers in the northeast, therefore, are vital for the livelihood of human inhabitants. For some village communities, rivers and their ecosystems are mainstreams of their cultural, economic, and social livelihoods. They would describe themselves as “river people.”

As we discussed in chapter 3, with the emergence of the Mekong Committee in 1957, the development planning in the Mekong River Basin was initiated by various studies. Among those studies, the 1958 Wheeler Report recommended to include the

studies of major tributaries of the Mekong River so as to consider basinwide development planning. As a response to the Wheeler Report, the government of Japan undertook the study of major tributaries of the Mekong in 1959. The government of Japan published the report, titled *Provisional Report on the Whole Reconnaissance Works of Major Tributaries of the Mekong*, in 1961. It proposed to select two “promising” major tributaries from each lower Mekong riparian country for further development planning.⁷⁹ The Japanese team’s report did not consider the Mun River in northeast Thailand as one of those eight promising tributaries proposed for further study.⁸⁰

The first study for the Mun-Chi River Basin development plan was conducted by the U.S. Department of Interior upon the request of the Royal Irrigation Department of the Thai government in October 1964. The report of the study was titled *Reconnaissance Report of Findings and Recommendations on Mun-Chi River Basins Water Resources* and published in March 1965 by the Agency for International Development of the U.S. State Department (AID, 1965). This reconnaissance study focused mainly on water storage for irrigation projects. Due to geomorphological conditions of the basin and of the site in particular, the Pak Mun Dam site was not viewed exclusively as a feasible hydroelectric power development project in the study. However, the report indicated a possible hydroelectric dam project at the point where the Lam Dom Noi River and Mun River merge before reaching the confluence with the Mekong (AID, 1965: 49; see also

⁷⁹ See the names of eight tributaries selected by the Japanese team at p. AP-3 -4 of the *Provisional Report on the Whole Reconnaissance Works of Major Tributaries of the Mekong*, February 1961, Tokyo, Japan.

⁸⁰ It is somewhat puzzling that the Mun River was not recommended as a possible candidate for development. The Mun and Chi rivers in Northeast Thailand combine to make the largest river basin in Thailand, and the Mun River is the second longest river in Thailand.

Maps 6.1 and 6.2). This indicated location is approximately where the Pak Mun Dam is located on the Mun River.

Although projects with small reservoirs (“tanks,” as they are called) for irrigation had been developed since the late 1890s, the development planning for hydroelectric power dams in northeastern Thailand began in 1962 with the establishment of the North-East Electricity Authority (NEEA) to take over the leadership of the region’s power supply system under the National Energy Authority (NEA). During the period between 1964 and 1966, NEEA developed Ubol Ratana Dam in the Mun-Chi⁸¹ River Basin, which was the region’s first hydroelectric dam located in Khon Kaen province (Map 6.1).

<Maps 6.1 and 6.2 about here>

The development of the Pak Mun Dam was initiated by a feasibility study conducted by the French consulting firm SOFRELEC in 1967 and was completed in 1970. This study was carried out under an agreement between NEA and the Association pour l’Organisation des Mission de Cooperation Technique (ASMIC) of France (CCI, 1975: 2). The SOFRELEC study indicated a possible project with an installed capacity of 108 MW (megawatts) for a run-of-the-river project located near the mouth of the Mun River before flowing into the Mekong. It concluded that the annual average energy production of 376 GWh could be possible and could meet the 1975 power demand in northeast Thailand (CCI, 1970: 2).

⁸¹ Mun River is spelled in at least four forms in English: Mool, Moon, Mune, and Mun River. Generally, Mun is pronounced as “Moon.” I use “Mun” to correspond with the official documents of EGAT. Chi River can also be spelled as Shi or Chee River. Documents that were produced by the Japanese study teams used “Mune” and “Chee.” See pages AN-4 and AP-2 of *Provisional Report on the Whole Reconnaissance Works of Major Tributaries of the Mekong*, a report by the government of Japan, Tokyo, February 1961.

On May 1, 1969, the Electricity Generating Authority of Thailand (EGAT) was established by the promulgation of the Electricity Generating Authority of Thailand Act B.E. 2511 (Buddhist Era) to centralize and consolidate the functions and responsibilities of regional energy authorities, including NEEA. With this institutional rearrangement, EGAT later took over the operation of hydroelectric power development plans in northeast Thailand from NEA. In 1979, ten years after EGAT was established, the Pak Mun Dam project was completely transferred to EGAT from NEA for its development planning and operation. From 1970 to 1990, EGAT initiated and developed three hydropower dams, namely Chulabhorn, Huai Kum and Pak Mun dams in the northeast region. EGAT today is the state-owned energy company operating under the direction of the Ministry of Energy in Thailand.

At the international layer, in 1971 the Committee on Coordination of Investigation of the Lower Mekong Basin (known as “Mekong Committee”) reviewed the 1967 SOFRELEC study to evaluate the Pak Mun Dam Project. In addition, the Mekong Committee conducted its own “desk study” to “simulate operation of the Pak Mun and other projects (in the Mekong) as an integrated system” (CCI, 1975: 5). This study was carried out under the vision and spirit of the Mekong basinwide development planning that the UN Economic Commission for Asia and Far East (ECAFE) proposed earlier on the planning stage of the Mekong River Basin Development. Possibly due to the lack of stability in the region and the rise of nationalistic views and deepening of the practice of national sovereignty over natural resources, the vision of basinwide development was not realized among the four lower Mekong countries. The interest on internationalization for the development of the Mekong was deferred by the interest of

national sovereignty over its own natural resources. Since then, major development projects in tributaries of the Mekong have been carried out within the national institutional frameworks of riparian countries. As we discussed earlier in chapter 3, the attempt to internationalize the development of the Mekong was stalled when the Mekong Committee was temporarily dissolved and replaced by the Interim Mekong Committee in 1978.

Pak Mun Dam in Third Power System Development Plan

Thailand continued with its plan to develop Pak Mun Dam project without much input from the Mekong Committee. From 1978 to 1989, EGAT reviewed previous studies and conducted a series of further studies to finalize the project development. These studies focused on the impacts of the dam if it were to be built at the water retention levels of 108, 110, or 112 meters msl (mean sea level). The height of water retention level of the reservoir determines how large an area will be flooded and what the impact is going to be in terms of social, economic, and environmental aspects.

In 1985, EGAT finally concluded that the storage level of 108 meters msl would be most desirable so as to reduce the number of villages and households to be relocated and the impact of the dam on ecologically important rapids in the river. In addition, EGAT moved the location of Pak Mun Dam to 1.5 km further upstream from the confluence with the Mekong compared to the previous studies, which located the dam closer to the confluence. By moving the dam, EGAT argued, it mitigated the environmental impacts on the Kaeng Tana and Kaeng Saphue rapids in the Mun River which were important tourist attractions in the Kaeng Tana National Park. The final

design of the dam was approved as a 17-m high and 300-m long roller-compacted concrete dam with eight sluice gates. The power-generating house was estimated to provide 136 megawatts (MW) at peak-hour generation capacity by four 34 MW units.

The important part of the dam design, in addition to the power generation aspects, that EGAT added was the “fish ladder” that was supposed to serve as a passage for fish migration from the Mekong to the Mun River via reservoir. The fish migration between the Mekong and the Mun River is a vital characteristic of the Mun River ecosystem that links the river and its tributaries to the livelihoods of villagers. Therefore, in addition to the fish ladder as a part of the Pak Mun Dam project, EGAT also added a fisheries development center with the intention to maintain the fisheries aspect of the Mun River.

The Pak Mun Dam project was selected to be included in Thailand’s Third Power System Development Plan in November 1987. EGAT submitted the Pak Mun Dam project to the Thai cabinet for approval in April 1989. The project was approved by the cabinet on May 15, 1990. In 1990, the World Bank expressed its interest in supporting construction of the Pak Mun Dam as part of Thailand’s Third Power System Development. The World Bank argued that it supported the project because the Pak Mun Dam project was: (1) “economically viable, and the economic ‘power’ benefits gained from the dam [would] fully justify its cost”; and (2) the Pak Mun Dam project “complied with the World Bank standards in effect at the time of appraisal in 1990” (World Bank, 2000: 1). In December 1991, the World Bank finally approved a US \$54 million loan for Thailand’s Third Power System Project, of which US \$23 million was designated for the Pak Mun Dam. The construction of the dam began in 1991 and completed in 1994.

Key Issues, Interests, and Actors in Pak Mun Dam Project

When EGAT proposed the Pak Mun Dam project to the cabinet, it presented two main issues as rationale in support of the project. First, EGAT stated that at the time the project was considered as a part of the Third Power System Development in 1987, the northeastern region of Thailand was facing a shortage of fresh water for irrigation and utilities during the dry season, and it was argued that the shortage would be accelerated into the future. Second, at the time EGAT proposed the Pak Mun Dam to the cabinet, the electricity demand in the northeastern region was 670 MW, of which local plants could generate only 20% with low reliability (EGAT, 2002).⁸² This second reason of increase in electricity demand was projected to increase along with the economic growth that Thailand was enjoying in the late 1980s and 1990s. These two main reasons were readily convincing to the cabinet, as it was projecting Thailand's economic development at the time to become one of then emerging "Asian tigers." The project, primarily, was intended for contributing to the national economic development, which simultaneously demands electricity. The Pak Mun Dam, therefore, according to the project calculation of EGAT was the state's development project that aimed to contribute to the national development of Thailand as a whole.

Sovereign Control of Thailand's Water Resources

In addition to these two main stated reasons in its project completion report, there is one issue which perhaps is the most overarching issue above all others stated in the

⁸² In addition to these two main reasons, EGAT listed five additional reasons for the support of the Pak Mun Dam project. However, those additional five reasons were speculation of some potential, positive "externalities" from the project if it were to be developed. See p. 5 of *Completion Report: Environmental Impact Mitigation*, Report No. 93101-3830, published by EGAT in October 1996.

project document—the sovereign control of Thailand’s fresh water resources. During my interview with the EGAT official on November 11, 2002, EGAT officials pointed out with a powerpoint slide show that Thailand has 25 major river basins with a total water volume of 126,110 million cubic meters (MCM). Out of this total volume of fresh water, 75,030 MCM were discharged into the Gulf of Thailand, 37, 810 MCM were discharged into the Mekong River, and 13, 270 MCM were discharged into the Salween River along the border with Myanmar. Out of the 37, 810 MCM discharge into the Mekong, the majority was discharged through the Mun-Chi River Basin and once it leaves the Mun River, the water becomes international water to be shared with Lao PDR.

Therefore, from the EGAT officials’ point of view, the Pak Mun Dam issue was not merely for electricity production and conservation of fisheries for the local population but also about Thailand’s sovereign control of its water resources before it leaves Thailand. The dam maybe at the outset of the policy debate was viewed simplistically as a means to produce electricity and store water for irrigation, but the issue of sovereign control of Thailand’s freshwater resources within its borders, although unwritten, was the most ingrained reason for both Thai state politicians and EGAT officials.

The Issue of the Uneven Distribution of Benefits from State Development Projects

As Thailand’s sustained economic growth began in the mid 1980s with the substantial double digit growth, the country’s natural resources, especially forests, land, and water were common targets of state development projects. These development projects, often shaped in the interests and in the name of the state rather than local populations, generated perhaps unintended inequalities between rural and urban

populations (Saneh, 1983; Hirsch, 1990: 2). In the early 1990s, the rural population, whose livelihoods depend solely on the forest, land, and water resources, began to mobilize to protect their interests. Bruce Missingham (2003: 55), in his ethnographic study of the Pak Mun Dam struggle with a focus on the rise of the rural and urban poor movement led by the Assembly of the Poor against state development projects in Thailand, observed:

The state, controlled by capitalists and high-ranking state officials, has promoted the hegemony of economic growth and industrial development to the exclusion of other social goals. Within this context, the rural and urban poor, who actually constitute the majority, have been excluded from the benefits of economic development

This rising inequality between rural and urban populations at the outset of the state development projects in early 1990s began to set alarm among the rural population in Thailand whose foundation of livelihood systems was under increased pressure for urban livelihood systems. In the 1990s, several NGOs representing especially rural poor—mostly farmers, fishermen, hill tribe ethnic groups, and urban slum dwellers—emerged as voices of the poor in Thailand (Baker, 2000: 5-11). The Pak Mun Dam project was one of those state development projects implemented at the reawakening era of rural voices in the 1990s.

In a larger context, three conditions facilitated and supported the re-emergence of rural voices: (1) the relaxation of the Cold War era repression against rural peasant voices in Thailand (Baker, 2000: 5); (2) the global trend and support for decentralization and localization of decision-making authority over natural resources as a way to protect globalization's pressure on rural communities; and (3) uneven distribution of benefits from projects like Pak Mun Dam, which produces electrical power for mostly urban

consumers and less for rural communities while extracting from forest, land, and water resources historically tied to rural community livelihood. Among these three conditions, the third condition was the most cited and reasoned one to justify the struggle of the Pak Mun villagers (AOP, 1995; Sulak, 2002: 47-49; Missingham, 2003: 54-57). Therefore, the foundation of the agitation of rural poor against state development projects is fundamentally the issue of inequality between rural and urban communities as a result of state development projects. This issue of inequality set off alarms and gave rural communities legitimate reasons to question the benefits of state development projects to their communities.

Sources of Problematic Issues in Pak Mun Dam

The original cost of the dam construction was estimated to be 3,880 million Baht (US\$ 155.2 million) when the cabinet approved the project on May 15, 1990. However, the project's total cost was reevaluated in June 1991 by the Office of the National Economic and Social Development Board (NESDB). NESDB approved the actual total cost to be 6,600 million Baht (US\$ 264 million) on August 27, 1991, which was a 73% increase in nominal terms from the original estimate (EGAT, 1996: 5). NESDB's approval was done during the period the construction were already underway. The two different authorities approving two different versions of the total cost of the project signals two important institutional issues. First, the Pak Mun Dam project lacked systematic procedures and studies of cost and benefit before it was approved by the

cabinet and before construction was started.⁸³ Second, appropriate and enforceable procedural rules to evaluate the project cost and benefit did not exist. If those rules existed for project evaluation, the later approval by total cost calculation by NESDB would have been “illegal” after the project was passed by the cabinet a year before.

<Table 6.1 and Char1 6.1 about here >

The two important institutional issues can be explained by tracing policy issues associated with the Pak Mun Dam and by examining the political context in which these issues were decided. First, the lack of systematic cost and benefit analyses of the project can be traced by analyzing issues that had dominated the Pak Mun Dam project that were the basis of a decade-long struggle between the Thai state and villagers. Table 6.1 and Chart 6.1 list issues reported and discussed by various news articles and among Pak Mun villagers as important and problematic issues in regard to the impact of Pak Mun Dam on their livelihoods. There are at least nine problematic issues extracted from news articles and project archival documents. I listed those in the question 7 of Appendix A, asking respondents to indicate their perspectives on each listed issue. The data were collected from 47 (state = 8, non-state = 39) respondents who gave scores from 1 = least problematic to 10 = most problematic to express their perspectives on each of those nine issues. As Table 6.1 and Chart 6.1 show, non-state actors responded with higher scores, indicating all nine issues as problematic due to the Pak Mun Dam. Among these nine issues in Table 6.1, a mean difference *t*-test shows that (1) loss of forest (significance at

⁸³ EGAT's reason for the difference was that the original project cost was based on the 1987 price and the reevaluated project cost was based on the 1991 price (EGAT, 1996: 5). If the cost and benefit were done right, the future cost of the project would have been estimated in the original calculation. The cabinet failed to cross-check the validity of the total project cost it approved by asking two basic questions: (1) Why was project cost estimated in 1987 price terms while the cabinet was examining the proposal to approve it in 1990? (2) If the cabinet was not the final authority to examine and understand benefits and costs and approve it, then why did it need to have the cabinet's approval?

0.055); (2) impact on river bank vegetation (significance at 0.016); (3) impact on fisheries and wildlife (significance at 0.016); and (4) impact on rapids (significance at 0.015) are statistically significant and viewed differently by state authorities and non-state actors including villagers and local environmental groups.

The distributions of responses from both state and non-state actors to these four issues are observed respectively in Table 6.2 to Table 6.5. Table 6.2 shows that 46.2% of non-state actors (with a score of 10) believe that the loss of forest due to the Pak Mun Dam is most problematic while only 14.3% of state actors (with a score of 10) believe that it was most problematic. On the issues of the impact on river bank vegetation (Table 6.3) by the Pak Mun Dam, 64.1% of non-state actors believe it was most problematic (score of 10) while only 28.6% of state actors believe it was most problematic (score of 10). Similarly, the impact on fish and wildlife (Table 6.4) is another issue where 69.2 % of non-state actors believe as most problematic (score of 10) while only 25.0% of state actors believe it was most problematic (score of 10). On the issue of the impact on the rapids (Table 6.5), 71.1% of non-state actors and 42.9% of state actors believe it was most problematic (score of 10). The issues of the loss of fish and wildlife and the issue of impact on rapids are linked ecologically because rapids are fish spawning grounds and thus destruction of rapids can have impact on fisheries. In addition, rapids are culturally significant landmarks as some of them are considered as religiously significant for local communities. Indeed, as I analyze this further in the next chapter, among these four issues, the loss of fisheries and wildlife and the impact on rapids which are intricately linked to the livelihoods of villagers are the most problematic issues in the Pak Mun Dam case. The Pak Mun Dam struggle centered on these issues illuminates the larger issue of

state development projects that are often legitimately questioned as “What is the development and for whom?”⁸⁴

<Insert Table 6.2 to 6.5 about here>

The World Bank, later in defending its funding decision of the Pak Mun Dam, admitted that there was a lack of systematic cost and benefit analyses of the project which consequently led to the emergence of these problematic policy issues. The World Bank argued that three factors were the “weak points” of the project: (1) lack of baseline data about natural fluctuation in abundance of fish populations as well as the cumulative impact on aquatic resources; (2) lack of knowledge about the linkages between fisheries of the Mun River and livelihoods of villagers who were affected by the dam; and (3) lack of public consultation with the villagers (World Bank, 2000b: 2). This admission of the World Bank was made in response to the Pak Mun Dam case study that the World Commission on Dams (WCD) published as a first draft in June 2000 and the final draft in October of the same year. This study fundamentally challenged the worthiness of the Pak Mun Dam project. The Pak Mun villagers have been writing letters pointing out these “weak points” to the World Bank dating back to the first letter in March 1991, before the World Bank made its final decision to fund the project and long before WCD found them in its stylistic report.

Second, the absence of appropriate and enforceable procedural and operational rules to evaluate project cost and benefit has to be understood within the context of decision-making structure or institutional arrangements for provision of development projects of the former Thai political system. The lack of clear rules for project evaluation

⁸⁴ See “World Bank visits Pak Mun Dam site – Villagers reject Bank’s offer of Development,” Southeast Asia Rivers Network (SEARIN), February 5, 2000. Also see “The dark side of development,” *Bangkok Post*, May 2, 2002.

is associated with the former political decision-making system under which the Pak Mun Dam approval processes went through during the 1990s. According to the then existing Constitution of Thailand, state project decisions were supposed to be made by the cabinet which is headed by the prime minister and whose members were appointed by the prime minister (Boonsri, 1997: 130-131). There was no rule prescribing to seek public consultation or no mandatory requirement to have independent evaluation of the project. EGAT did not even have to disclose the information about the number of villages and households to be resettled due to the Pak Mun Dam. As a result, there was a lack of institutional pressure and political interest in careful review of the project proposal by the cabinet which mostly entrusted bureaucratic and technocratic state agencies like EGAT and NESDB to shape and lead implementation of the projects such as Pak Mun Dam. Therefore, EGAT became a central, responsible, bureaucratic, and technocratic governmental agency that developed and implemented the Pak Mun Dam project.

In addition to the lack of institutional arrangements for provision of development projects like Pak Mun Dam, the political climate was one important factor under which the Pak Mun Dam project was approved and implemented. In 1990, the Thai cabinet led by then Prime Minister Chatichai Choonhavan was facing a shortage of political support for his cabinet appointments from the Thai military, which was then one of the most powerful institutions of Thai politics. In the past, more than 60% of the Thai cabinet was composed of ex-military officials and; however, Prime Minister Chatichai had appointed former business executives to comprise 60% of his cabinet. This was the first move that did not receive enthusiastic support from the Thai military. In addition, Prime Minister Chatichai appointed former military General Chavalit Yongchaiyuth and former army

commander Arthit Kamlang-ek, who were known as “pro-business types,” as minister and deputy minister of defense, respectively. These appointments exasperated especially younger ranks in the military who were also trying to move up to the higher positions and who considered the appointments of business executives and former generals as a threat to their prospects of promotion. This power struggle between military bureaucrats and the politicians led to Thailand’s ninetieth military coup since 1932, which ousted Prime Minister Chatichai’s government and ended the then democratic government in Thailand on February 23, 1991. The 1991 military coup was led by then Generals Suchindra Kraprayoon and Sunthorn Kongsompong and it was the second coup among ten successful coups since 1932 in Thailand that ousted a democratic government. In this political context, EGAT began preliminary work and construction of the Pak Mun Dam in early 1991, immediately after seeking the cabinet’s approval in mid-1990.

During the short-lived military-handpicked government from February 23, 1991, to September 1992, the struggle of villagers against the Pak Mun Dam was overshadowed by the larger struggle against the military domination of Thai politics. In addition, the political freedom to protest against the government was suppressed by both martial laws and bullets during the military government regime. Between 1992 and 1997, the unstable political climate continued, and Thailand witnessed collapses of four successive governments without being able to fulfill their terms due to corruption issues and lack of coalition partners. The issue of Pak Mun Dam dominated the election politics of these four successive governments in significant ways (Baker, 2000).

However, Thailand’s political development took its firm and decisive turn toward democracy in 1997 with the promulgation of the latest constitution which is perhaps the

most democratic constitutional system in the history of Thailand, at least according to the language in the text. The 1997 constitution not only proclaims a firm ground for democracy but also promotes decentralization of decision-making power for the state development projects that have direct links to local communities and the natural environment. Section 56 in Chapter III of the 1997 Thai Constitution states:

Any project or activity which may seriously affect the quality of the environment shall not be permitted, unless its impacts on the quality of the environment have been studied and evaluated, and opinions of independent organization, consisting of representatives from the private environmental organizations and from higher education institutions providing studies in the environmental field, have been obtained prior to the operation of such project or activity, as provided law.

Legally, this change in constitutional-choice rule, after the project was completed, did not have any impact on the processes of the Pak Mun Dam struggle, although the new constitution “legitimizes” and lends moral support to the plight of Pak Mun villagers. Therefore, if the Pak Mun Dam project had been passed in the post–1997 Constitution period, there might have been systematic studies of the cost and benefit of the project which would have included aforementioned problematic issues in sensitivity analysis.

The Issue of Compensation

In addition to the lack of systematic studies of benefits and cost of the Pak Mun Dam project, there were miscalculations with regard to the impacts of the dam on resettlements and impacts on livelihoods of village communities. The initial calculation of resettlement estimated that the dam and reservoir directly would affect only 241 households in 11 villages that included 136 households below 108 m msl, 94 households between 108 and 108.5 m msl, and 11 households near the construction site (EGAT,

2000: 15). However, after completing the construction in 1994, EGAT data show that due to flood and loss of land (EGAT, 2002b) a total of 1,883 households from an additional 31 villages located upstream of the dam were compensated for resettlement with the approval from the Committee for the Compensation of Land Rights and Properties set up by the cabinet in May 1990. This approval was granted after the fact that the villagers had protested and demanded to be compensated for their loss of houses and land.

Furthermore, in terms of the impact to villagers' economic livelihood especially on the loss of their fishing income, EGAT claimed that it compensated 6,176 households including those 1,883 who were compensated for loss of house and land (EGAT, 2002b; see Table 6.6). These compensations were not calculated and included in the original project cost and benefit analysis that EGAT had done in its project proposal to the cabinet in 1989. They were approved in an almost ad-hoc manner as the protests by the villagers against the dam grew. Table 6.6b shows the pattern of approvals of claims for losses of fishing income. These compensations were made to villagers in at least six approval stages from the time the dam construction was completed in 1994 to the year 2002.

<Table 6.6 about here>

The compensation process in and of itself was not well organized by any rules of order. The requirement for a villager to qualify as a fisherman was at least three references from fellow village members. According to the data obtained from EGAT officials' meeting minutes during the second interview on January 8, 2002, at the early stage, 2,140 fishermen from 36 villages submitted their claims to the sub-committee for compensation on June 2, 1994. At that stage, the compensation package ranged from 8 baht per person to 96,000 baht per person (US \$ 1 = 25 Baht, 1994) as recommended by

the subcommittee. However, villagers demanded 10,000 baht per person. The committee agreed to offer the compensation as demanded by villagers and proposed to EGAT on October 23, 1994, for 2,140 fishermen to be compensated. After this proposal to EGAT, an additional 1,826 fishermen from another 17 villages claimed that they should also be compensated or receive the aid money for livelihood transition. Therefore, a total of 3,966 fishermen from 55 villages were at that point asking for compensation or an aid package to be compensated up to 90,000 baht per person, which was recommended to EGAT by the committee set up for compensation.

Some villagers received 10,000 baht and some villagers got more than 10,000 baht. This created conflict of interest on the dam among 3,966 fishermen. Then the new committee for compensation recommended that all villagers should be compensated equally at 90,000 baht per fisherman. The recommendation had to be approved by the cabinet and, finally, the cabinet approved it with the plan that each fisherman be compensated 30,000 baht cash and another 60,000 baht in the form of share in cooperation to be set up in two periods, thus making fishermen receive the package of two 30,000 baht packages every three years through a six-year period. This was approved by the cabinet on June 27, 1995, a year after the completion of the dam construction. The Ministry of Agriculture was designated to oversee the cooperation set up under this agreement. These almost ad-hoc responses to the villagers' rightful demands for compensation show that EGAT was not well prepared for the resettlement and compensation processes.

The field data from structured interviews with both EGAT officials and villagers during my field research suggest that EGAT did not have clear guidelines for

resettlements and compensation policy before the dam construction started. During my field research, I interviewed villagers and government officials about the compensation procedures and packages. In the structured interview, 45 respondents (state = 7, non-state = 38) scored 1 = ‘absolutely disagree’ to 10 = ‘absolutely agree’ on five statements about the compensation processes and packages listed in question 12 of Appendix A (see also Table 6.7). These statements were extracted from project documents as well as media reports about the compensation process relating to Pak Mun Dam. Table 6.7 shows the outcome of the mean difference in the *t*-test, and Chart 6.3 shows the mean score for both state and non-state actors. As Table 6.7 shows, the differences between state and non-state actors’ perceptions on all of the statements are not statistically significant and therefore, we cannot conclude statistically whether the issue of compensation was the center of dispute between state and non-state actors.

<Table 6.7 and Chart 6.2 about here>

However, we can draw some inference to further explain the issue of whether there were rules or guideline for the compensation process by looking at the distribution of the scores of 45 respondents categorically among the state, villagers, and NGO actors (Table 6.8). Table 6.8 shows that on the issue of whether there were clear guidelines to determine who was going to be affected by the Pak Mun Dam project so that compensation processes could take place within the established rules, 27.3% of villagers and 60% of the NGO actors “absolutely disagree” with the statement “there were clear guidelines to determine who would be affected by the Pak Mun Dam” (Q12.a in Appendix A), while 0% of the state actors expressed that they “absolutely disagree” with the statement. Among the villagers, 42.4% scored below 5 in the range of 1 = “absolutely

disagree” to 10 = “absolutely agree” with the statement. This percentage could be higher because some villagers interpreted the ad-hoc orders of guidelines from the government after the construction of the dam was underway and during the protests as the guideline to determine who were affected. NGO actors scored highest to express the most disagreement with the statement. The interpretation of the responses of non-state actors (villagers and NGOs) will have to weigh somewhere between the medium score of villagers and the medium score of NGOs to reflect closest to the reality because while villagers tend to (as they are used to) follow orders of government officials with less criticism, and NGOs tend to accept them with most criticism.

<Table 6.8 about here>

EGAT and government officials, however, interpreted the issue of compensation differently, as they used it to discredit the protesters and villagers as opposed to evaluate the issues associated with compensation processes, such as whether EGAT needed to improve or establish standard rules of compensation for future development projects. Pointing to the compensation data in Tables 6.6a and 6.6b, EGAT claimed that it had made unprecedented and generous compensation to the dam-affected population to fulfill the demands of protesters (EGAT, 2000: 16). It further claimed that the “generous compensation package” caused “discontent among non-affected villagers and has led them to seek inclusion in the list of affected people,” (EGAT, 2000: 16) pointing to numerous stages of compensation claims EGAT received as shown in Table 6.6b. The *Bangkok Post* interpreted this EGAT’s assertion as an accusation to the Pak Mun Dam protesters as if the villagers had become “greedy people with endless claims.”⁸⁵ Echoing

⁸⁵ See “Struggle for Basic Rights to Livelihood,” *Bangkok Post*, April 27, 2000, a report by Sanitsuda Ekachai.. Also in my interview with EGAT officials, they expressed their perception that the reason the

EGAT, the World Bank in its independent evaluation of the Pak Mun Dam in 1998

wrote:

The history of the Pak Mun Dam project is largely a history of the struggle over fair compensation, as resettlement had very minor impacts on incomes, except from fishing. EGAT actually committed to exceed the World Bank resettlement policy,⁸⁶

From the inception of the project, when the project was made public, villagers and some sympathetic urbanites in Bangkok and Ubon Ratchthani cities staged protests against the Pak Mun Dam. The protests were against the dam and its potential destruction of their livelihoods that were linked to the fisheries of the Mun River ecosystems. An independent survey conducted by the Project for Ecological Recovery (PER), an environmental NGO in Thailand, during 1989 and 1992 found that 81% of 291 families from 11 villages relied on the Mun River fisheries for their livelihoods in 1990 (PER, 1993: 1-2), a year before EGAT began Pak Mun Dam construction. The remaining 19% of families earned their income from both rice farming and fishing.

The Issue of Fisheries and Livelihoods

Investigation of project-related documents found that EGAT did not seriously consider the issue of the linkage between fisheries and livelihood of villagers as an important part of the project. One of the key project documents considered by EGAT and given to me during the interview with EGAT officials, titled *Environmental Impact Mitigation: Pak Mun Hydroelectric Project* and published in 1996 at the completion of

protesters continued to increase demands “one after another was because of money even after final compensations were made at their demand level.” See also p. 16 of EGAT’s responses to the World Commission on Dam, July, 2000.

⁸⁶ See p. 4 of the *Recent Experience with Involuntary Resettlement: Thailand – Pak Mun Dam*, Report No. 17541, June 2, 1998, Operation Evaluation Department, the World Bank.

the dam construction, devotes three pages to fisheries issues out of a total of 41 pages mostly decorated with pictures and boxes. In these three pages, EGAT considered the fisheries issue from the technical and engineering aspects and did not mention explicitly any linkage between fisheries and the livelihoods of villagers. With an initial consideration on the fishery issue, EGAT decided to build the fish ladder to facilitate fish migration between the Mekong and the Mun Rivers via the reservoir and added the fisheries development center before it submitted the proposal to the cabinet. However, EGAT's intention falls short of consultation⁸⁷ and negotiation with villagers, including those villagers from 11 villages who were classified early on by EGAT as being directly affected by the Pak Mun Dam. Engineers at EGAT concluded that potential destruction to the fish migration between the Mun and Mekong rivers by the dam could be solved by installing the so-called fish ladder, which would serve as fish passage. EGAT argued that the fish ladder would keep migration of fish undisrupted and claimed that local fishermen would increase their catch because "Pak Mun Reservoir had formed a *natural* hatchery for fish culture" (*italic added*) as it was going to provide new habitat for fish (EGAT, 1996: 25-27).

However, in lieu of admitting the project's initial failure of consideration on the issue of linkage between fisheries and livelihoods of villagers, the EGAT and dam supporters downplayed the protesters' plight mainly caused by the dam's destruction of fisheries by portraying their protests as a mere outcry for fair compensation as we observe in the World Bank's 1998 evaluation report. The World Bank, a funding agency,

⁸⁷ Although both EGAT and the World Bank claimed that EGAT consulted with villagers who were scheduled to be relocated before construction, the villagers' perspective was that EGAT just informed district (Tambon) leaders and village headmen via local radio announcement. This is even the case with the villagers at Ban Hua Haeo where the dam is located.

and EGAT, the builder of the Pak Mun Dam were both cognizant of the fact that villagers were demanding to stop construction of the dam from the very beginning of the project proposal for their fear of losing their livelihoods, which depended on the Mun River and its fisheries.

By downplaying the villagers' protest to a level of protest just for compensation, the EGAT and the World Bank attempted to reframe the larger issues of the Pak Mun Dam. The larger issues were (1) Pak Mun Dam does not meet the original calculation of benefits and cost analyses both the World Bank and EGAT claimed to have mastered scientifically before the construction; (2) it did not solve the problem of fish migration although EGAT designed and constructed the Pak Mun Dam with a "fish ladder" with the promise for better fishing incomes; and (3) it did not consult with the villagers or conducted a survey of the villagers' livelihood linkages with the Mun River during the development and implementation of the Pak Mun project (World Bank, 2000b: 2). On top of those, EGAT did not even want to admit to these facts simply because admitting their mistakes is translated as humiliating (losing face) at the stake of being a professional and technical bureaucratic organization. The *Bangkok Post* newspaper wrote on April 27, 2000:

It is too optimistic to expect an easy concession from a giant corporation such as the Electricity Generation Authority of Thailand. Given the importance of face here, it is likely that the authorities might resort to a crackdown on protests. It is also more likely that the crackdown would be reported as a legitimate measure against violent, anti-development, law-breaking mobs – thanks to the state indoctrination that makes the public believe that dams are symbol of progress.

Measurement of Compensation

The problem of the compensation issue indeed played a central role in the case of the Pak Mun Dam struggle, not in a way EGAT would like to portray the problems of Pak Mun Dam, but it played a central role in highlighting the methodological problem of how a fair compensation in projects like Pak Mun Dam can be calculated. This methodological problem is the source of difficulty in resolving compensation issues in the case of Pak Mun Dam. The World Bank and EGAT's version of compensation packages mainly contain economic items such as the price of land, house, loss of income, and the cost for physical transition and resettlements (see Table 6.6a).

The difficulty in measuring a compensation package is mainly rooted in the social and cultural aspect of a project's impacts more so than in economic aspects on which the focus was placed in the World Bank supported EGAT's calculation of compensation packages. The destruction of family structure, community structure, social, cultural, and religious livelihoods that villages drawn from their connection with the Mun River ecosystems and each other for centuries were hard to quantify and difficult to be compensated by any standard of calculation for compensation packages. These losses caused by the dam were far more personal to the villagers than the loss of income described in the testimonies and stories of villagers reported in news media and during my field research in open-ended interviews with villagers and conversation with them during meals and evening visit⁸⁸ to families in the villages.⁸⁹

⁸⁸ Evening visits were useful to meet most members of households in the villages because men especially are out in the field or at work during the day. In addition, villagers usually visit each other in the evening for tea time conversation where they share livelihood-related issues.

⁸⁹ See *The Return of Pladaek*, a documentary video produced by villagers at Mae Moon (Mun) Manyuen village, the Assembly of the Poor, 2001. See also *Pak Mun: Life and the River after the Dam Gates Open*, produced by the Assembly of the Poor and the Southeast Asia Rivers Network, 2002.

Perhaps, the desirable measurements and methods of compensation for these social, cultural, and religious values might have been to include villagers in the decision-making processes related to resettlements and fisheries issues right from the beginning of the project development. If the villagers had consented to the dam and if they felt that they were included in the decision-making processes, there would have been a sense of “fair” compensation. If they had been able to contribute to the decision making for their own resettlement, they might have felt that the decision was theirs rather than imposed single-handedly by outsiders. However, Pak Mun villagers were not consulted during the project development and implementation processes.

Both EGAT and the World Bank claimed that they have consulted with the villagers from the beginning of the project.⁹⁰ Consultation process is often confused (intentionally or unintentionally) with one-way distribution of information from the state to villagers. This is the fact in the Pak Mun Dam case. After the construction, the World Bank (1994: 10) claimed that EGAT consulted with Pak Mun villagers by holding numerous meetings between government officials and villagers. However, villagers explained during my field research that those meetings were where they received information about the dam and the order to relocate their villages. The language written in the World Bank’s aforementioned document on page 19 reflects the villagers’ stories. There were not any serious two-way discussions between government officials and villagers, especially about villagers’ livelihood connection with the Mun River fisheries and the cultural life of villagers.

⁹⁰ See World Bank, 1994, pp. 10–11 and 19. Contact is Peter Stephens at (202) 458-0344, or fax (202) 522-3405.

From my field data, Table 6.9 reports distribution of responses from state, villagers, and NGO actors on the question of whether there were consultations with villagers for resettlement and compensation issues before the Pak Mun Dam was constructed (see Q12 (b) of Appendix A). A total of 45 respondents (state = 7, villagers = 33, and NGO = 5) were asked to score 1 = “absolutely disagree” to 10 = “absolutely agree” with five issue statements concerning compensation and resettlement processes. One of these five statements, which were extracted from project documents and media reports stating that “villagers were consulted from the beginning of the Pak Mun Dam project.”⁹¹ Table 6.9 shows that 42.3% of villagers and 60% of NGO respondents “absolutely disagree” with the statement. At the same time, 28.6% of state respondents “absolutely disagree” with the statement. Missingham (2003: 73-76), for instance, also conducted interviews with Pak Mun villagers and reported similar stories of villagers explaining about the meetings and information they received as one-way distribution from the government to villagers. The World Bank in its response to the WCD’s study and criticism of the Pak Mun Dam in June 2000 admitted that “there was lack of consultation with affected persons in the formulation of the Resettlement Plan and in the development of fisheries” (World Bank, 2000b: 2).

<Table 6.9 about here>

⁹¹ This issue statement is made by the World Bank in its publication on Pak Mun: The Facts, The Background, Questions and Answers (undated document) published by the External Affairs Office of the World Bank. The EGAT officials also repeated their claim reinstating this statement during my interviews on November 12, 2002 and February

The Issue of Poverty in Local and National Layers

The northeastern region of Thailand (widely and culturally known as *Isan*) is the poorest region of Thailand. The fact that villagers were not consulted in the processes of resettlement policy making in the development of Pak Mun Dam project is not a very surprising fact for careful observers of Thai society. In fact, their ways of life were not respected and their plight caused by the Pak Mun Dam was not recognized by a majority of urbanites. This problem of disrespect and disregard of the poor villagers and their rightful demands for an existence of livelihood resonate in one of the fundamental social problems of Thailand in a larger context. A respected academic and social scientist, Dr. Prawes Wasi, referred to the problem of the poor in Thailand as a structural problem of society. He argues:

Thai people in general do not have sympathy with the poor, because they have been trained to have discriminatory attitude to the poor.⁹²

The source of the problem of disrespect to the poor in Thailand, according to Dr. Prawes Wasi, is resonated in the social learning of Thai citizens. He explains the source of the Thai attitude toward the poor as follows:

Children in a poor family might help their parents carrying bamboo baskets⁹³ when they were young. However, when they grow up and study in school, they face mocking from their friends for their parents' social status. This stimulates them to be ashamed of walking side by side with their poor parents who don't have even good cloth to wear. It indicates that Thai schools whether on purpose or not have accumulated the idea of discrimination against the poor. (Wasi et al., 2001: 30, translation from Thai text)

⁹² Dr. Prawes Wasi was quoted in an news article "Activists fish for solutions to conflict over Pak Mool (Mun) Dam," *The Nation*, a report by Nantiya Tangwisutijit and Pennapa Hongthong, April 4, 2000.

⁹³ Carrying bamboo basket which has been regarded as the symbol of rural poor is in contrast to carrying a mobile phone which is a symbol of wealth and status in Thailand.

Perhaps the intention of the Thai state in building the Pak Mun Dam was to help in the development of the country and to alleviate poverty so as to lift up the poor in Thailand. The problem, however, is that the development projects such as Pak Mun Dam in Thailand are conceptualized, represented, and implemented in terms of the state.

In policy making and implementation of state development projects such as Pak Mun Dam, the concept and conduct of “development” often is characterized and represented in terms of state interests and national development, not necessarily of local interests and local issues of community livelihoods in Thailand. Consequently, state development projects have the linkage problem in terms of public policy formulation and governance between local and national layers in the processes of decision making during the project formulation and implementation stages. The local-layer actors such as rural villagers and poor are often not considered as important actors in decision-making processes of state development projects. The poor are often regarded as needed to be developed by state and hence the definition of “poverty” and “development” are often defined by the state not by those villagers whose ways of life are often assumed by the state as needing to be “developed.”

The linkage problem between local and national layers in the Pak Mun Dam project perhaps is rooted in the socially ingrained mental-culture and structural problem of state-like thinking of public servants and citizens who view the state as a benevolent actor who would take care of the well-being of its subjects, including the local poor. If one pays a visit to middle- to upper-class homes in Thailand, one would not miss seeing elaborately-framed pictures of family members (especially men) dressed and decorated in respective professional state uniforms of ranked soldiers, police, and/or civil servant

uniforms decorated with royal recognition hanging on the walls of living rooms. Pictures with the uniform of state are also often used in campaign posters and billboards of politicians and election candidates who run for government offices in Thailand to show that they are a part of the benevolent actor. These images in Thai homes or on the billboards along the roads and highways in Thailand during the election campaign period represent the ideas and the pride citizens conceive about their state. It is not surprising that state development projects are first and foremost to represent the development as defined by state layer issues, interests, and actors not by the local layer issues, interests, actors. Consequently, the struggle of Pak Mun villagers who are the poor of Thailand is often not highly recognized and supported by the society at large. Thailand's *The Nation* newspaper editorial on May 15, 2001 summed it up:

For decades, the Pak Mun and other dams – which affect people's livelihoods by taking away their land and resources – have been symbols of [the state's] unjust economic development policy. The poor and powerless have always been told to sacrifice for the good of the nation. But we seem to forget that the poor, who happen to be the majority in this country, are also a part of our nation.

To some extent, the poor villagers in Pak Mun Dam area were even blamed and portrayed by EGAT for their protests against the dam as the protest against the development of Thai society as a whole. Because EGAT is a part of the state or state actor belonging to the imagination of citizens as benevolent actor, EGAT was successful among majority of the urban middle class in portraying the Pak Mun villagers as greedy and selfish people who do not want to sacrifice for the development of the nation. The *Bangkok Post* newspaper on April 27, 2001 observed:

EGAT has been successful in making the public view the Pak Mun controversy as a compensation wrangle. By doing so, it can paint the villagers as greedy people with endless demands. The crust of the matter isn't about money. It's about the local people's basic rights to protect their livelihood sources and self-reliance. It's

about the ruling elites' belief in technology and progress at the cost of ordinary people and the environment.

Therefore, the major challenge for villagers and those who understand and support the struggle of villagers against state's big project like Pak Mun Dam is rooted in fundamentals of the imagination and working definition of state perceived by citizens and statecraft bureaucrats. The state, believed by its statecraft bureaucrats and majority citizens as being sole owner of sovereign power over natural resources within its territory, is a very powerful human-made entity in social science. Some individuals and groups in society know that they can use the images of the state to advance their interests and values. In so doing, they even try to paint their very egoistic interests as representative interests of the whole society of the state. Thailand's *The Nation* wrote on April 4, 2000, commenting on villagers' struggle for Pak Mun Dam:

Those on top of social structure always justify themselves to take advantage of others in the lower position.⁹⁴

Dr. Prawase Wasi goes further to explain why this logic of exploitation of the poor is ingrained in Thai society as he was quoted in *Bangkok Post* newspaper article about Pak Mun Dam on May 2, 2002. He explained:

The social perception [of poverty] is one elementary structural problem. Thai people have been ingrained with the false belief that poverty is a result of bad karma in previous lives, which they can redeem by doing good things and sacrificing for other people. The social fibre has been used by the elite to justify their taking advantage of the poor.⁹⁵

In sum, the issue of poor and poverty in the context of Thai society at large played a fundamental role behind the struggle of Pak Mun Dam. The centrality of the issue of the poor was manifested by the emergence and influence of the Assembly of the Poor

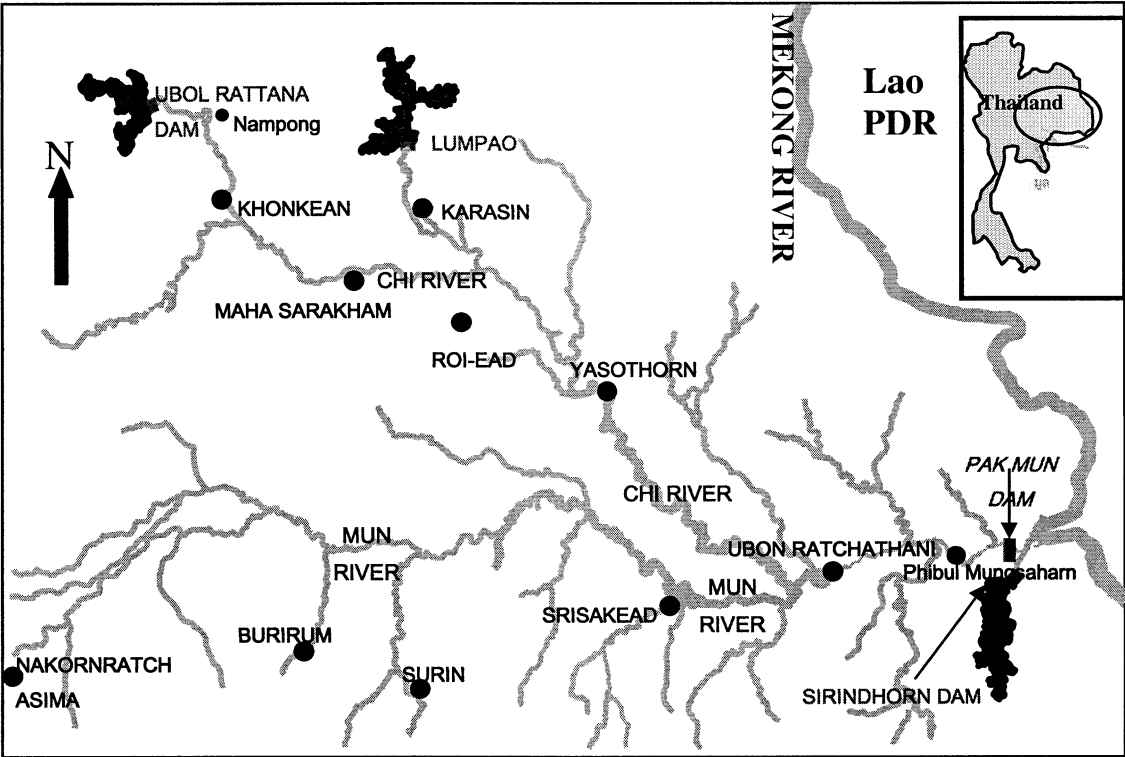
⁹⁴ See "Activist fish for solution to conflict over Pak Mool (Mun) dam," *The Nation*, April 4, 2000, Bangkok.

⁹⁵ See "The Dark side of development" *Bangkok Post*, May 2, 2002, Bangkok.

which is a network of various community NGOs composed of mostly the poor and their supporters in the struggle against the Pak Mun Dam. The Pak Mun Dam struggle which is described as “Thailand’s longest-running and most organized grassroots movement”⁹⁶ has been led by the loosely networked group of citizens known as the Assembly of the Poor (AOP). It is, therefore, important to examine the stages of Pak Mun Dam struggle and the emergence of key actors, including the AOP in the following chapter.

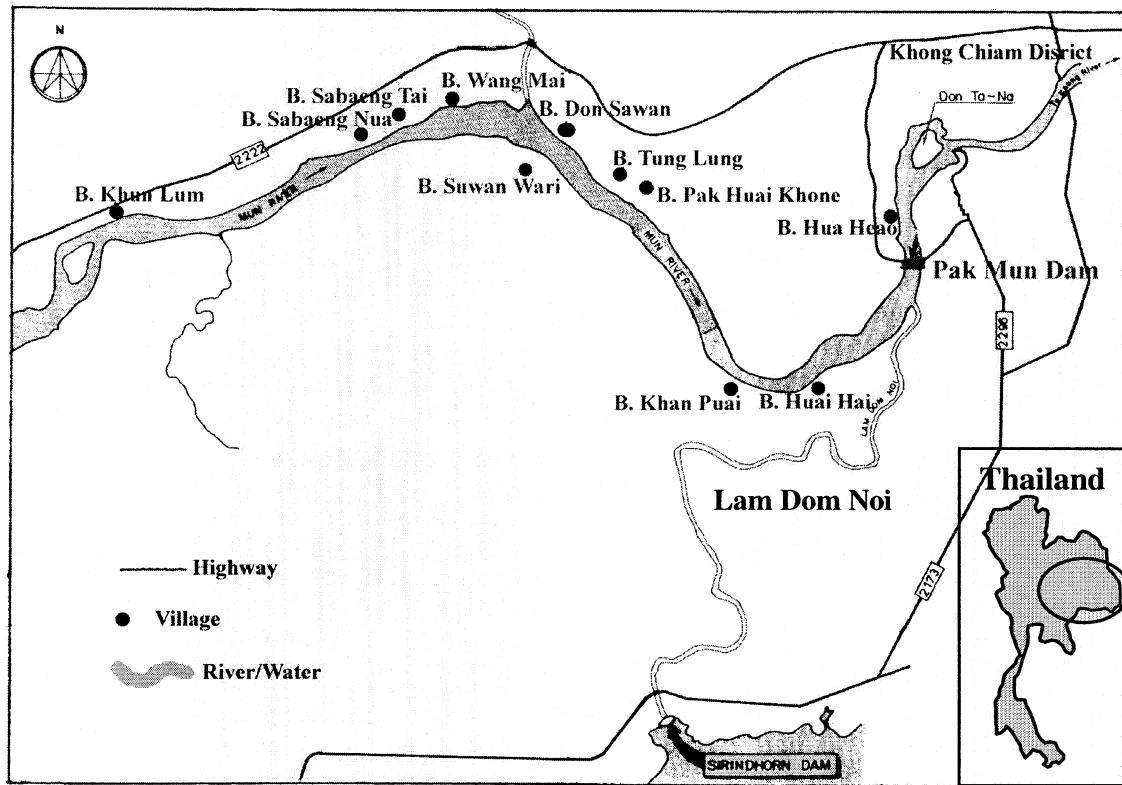
⁹⁶ See “It was lunacy to dam the Moon (Mun)”, *Bangkok Post*, May 18, 2000, a report by Sanitsuda Ekachai..

MAP 6.1. Mun-Chi River Basin of Northeast Thailand



Source: Electricity Generating Authority of Thailand.

Map 6.2. Eleven Villages that EGAT Claimed to Have Direct Impacts



Source: Electricity Generating Authority of Thailand, B. stands for “Ban” meaning Village.

Table 6.1. Problematic Issues in the Pak Mun Dam Project: Perspectives of State and Non-State Actors Compared

Issues	Actors	N	Mean	Std. deviation	t	Sig. (2-tailed)	Mean Diff.
Loss of agricultural land	State	7	4.86	3.891	-1.912	.097	-2.938
	Non-state	39	7.79	2.783			
Loss of forest	State	7	4.29	3.352	-2.250	.055	-3.048
	Non-state	39	7.33	2.985			
Impact on riverbank vegetation	State	7	6.00	4.000	-2.494	.016	-2.692
	Non-state	39	8.69	2.341			
Impact on fish and wildlife	State	8	6.38	3.378	-2.501	.016	-2.446
	Non-state	39	8.82	2.327			
Impact on rapids	State	7	6.57	3.823	-2.534	.015	-2.481
	Non-state	38	9.05	2.053			
Lack of environmental education among locals	State	7	6.86	4.059	-.041	.969	-.066
	Non-state	39	6.92	3.296			
Poverty in the local communities	State	7	6.29	3.988	-.610	.560	-.977
	Non-state	38	7.26	3.351			
Impact on cultural and heritage of locals	State	7	6.57	3.409	-1.384	.207	-1.876
	Non-state	38	8.45	2.596			
Local communities do not gain benefits	State	8	7.00	3.546	-.263	.798	-.359
	Non-state	39	7.36	3.383			

Chart 6.1. Problematic Policy Issues in Pak Mun Dam: State and Non-State Actors Compared

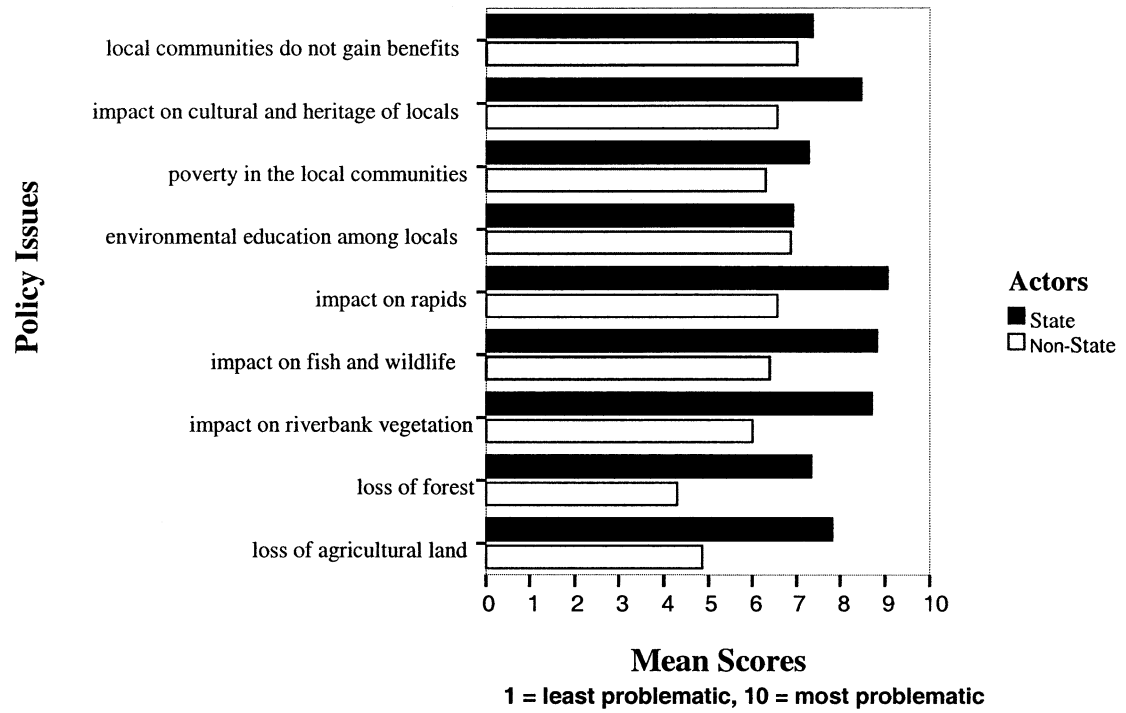


Table 6.2. Responses to the Issue of Loss of Forest Due to Pak Mun Dam: State and Non-State Actors Compared

Key policy issues	Responses	Actors	
		% of State (n)	% of Non-State (n)
Loss of forest	1	28.6% (2)	2.6% (1)
	2	14.3% (1)	7.7% (3)
	3	0% (0)	5.1% (2)
	4	14.3% (1)	0% (0)
	5	14.3% (1)	17.9% (7)
	6	0% (0)	7.7% (3)
	7	14.3% (1)	2.6% (1)
	8	0% (0)	7.7% (3)
	9	0% (0)	2.6% (1)
	10	14.3% (1)	46.2% (18)
Total		100.0% (7)	100.0% (39)

Note: Responses are scored 1 = least problematic to 10 = most problematic.

Table 6.3. Responses to the Issue of River Bank Vegetation Due to Pak Mun Dam: State and Non-State Actors Compared

Key policy issues	Responses	Actors	
		% of State (n)	% of Non-State (n)
Impact on riverbank vegetation	1	28.6% (2)	2.6% (1)
	2	0% (0)	0% (0)
	3	0% (0)	5.1% (2)
	4	14.3% (1)	0% (0)
	5	0% (0)	2.6% (1)
	6	0% (0)	7.7% (3)
	7	14.3% (1)	5.1% (2)
	8	0% (0)	0% (0)
	9	14.3% (1)	12.8% (5)
	10	28.6% (2)	64.1% (25)
Total		100.0% (7)	100.0% (39)

Note: Responses are scored 1 = least problematic to 10 = most problematic.

Table 6.4. Responses to the Issue of Impact on Fish and Wildlife Due to Pak Mun Dam: State and Non-State Actors Compared

Key policy issues	Responses	Actors	
		% of State (n)	% of Non-State (n)
Impact on fish and wildlife	1	12.5% (1)	0% (0)
	2	0% (0)	2.6% (1)
	3	12.5% (1)	7.7% (3)
	4	0% (0)	0% (0)
	5	25.0% (2)	2.6% (1)
	6	0% (0)	0% (0)
	7	0% (0)	2.6% (1)
	8	12.5% (1)	7.7% (3)
	9	12.5% (1)	7.7% (3)
	10	25.0% (2)	69.2% (27)
Total		100.0% (8)	100.0% (39)

Note: Responses are scored 1 = least problematic to 10 = most problematic.

Table 6.5. Responses to the Issue of Impact on Rapids Due to Pak Mun Dam: State and Non-State Actors Compared

Key policy issues	Responses	Actors	
		% of State (n)	% of Non-State (n)
Impact on rapids	1	14.3% (1)	0% (0)
	2	0% (0)	2.6% (1)
	3	14.3% (1)	2.6% (1)
	4	14.3% (1)	2.6% (1)
	5	0% (0)	2.6% (1)
	6	0% (0)	0% (0)
	7	0% (0)	2.6% (1)
	8	14.3% (1)	7.9% (3)
	9	0% (0)	10.5% (4)
	10	42.9% (3)	71.1% (27)
Total		100.0% (8)	100.0% (39)

Note: Responses are scored 1 = least problematic to 10 = most problematic.

Table 6.6. Compensation for Resettlement and Fishing Income Loss

Table 6.6a Assistance for Resettlements of 1,883 Households		
Item for compensation	Number of Households	Amount in Thai Baht
Compensation for lands, houses and properties	241	232,635,253.80
Assistance money for provision of new residences		52,382,000.00
Assistance money for provision of new farm plots		92,680,858.00
Improving of public utilities in the affected villages		113,734,000.00
Occupation promotion and training		8,500,000.00
Total for resettlement	241	499,932,111.80

Table 6.6b Compensation for the Loss of Fishing Income			
Stages	Date	Number of Households	Amount in Thai Baht
First approval	June 19, 1995	571	51,390,000.00
Second approval	November 16, 1995	2,361	212,490,000.00
Third approval	April 1, 1996	247	22,230,000.00
Fourth approval	September 26, 1997	695	62,550,000.00
Fifth approval	April 27, 1998	92	8,280,000.00
Sixth approval	January 25, 2002	2,210	132,600,000.00
Total for fishing income		6,176	489,540,000.00
Grand Total for Compensation and Resettlement Assistance		6,417	989,472,111.80

Source: EGAT, data obtained during the interview on November 11, 2002 at the EGAT Headquarter Office in Bangkok.

Table 6.7. Perception on Resettlement and Compensation Issues: State and Non-State Actors Compared

Issues	Actors	N	Mean	Std. deviation	t	Sig. (2-tailed)	Mean Diff.
There were clear guidelines for settlement and compensation	State	6	6.00	2.449	.445	.658	.711
	Non-state	38	5.29	3.763			
Villagers were consulted from the beginning	State	7	5.57	3.780	1.047	.325	1.624
	Non-state	38	3.95	3.727			
Compensation were fair	State	7	5.57	4.276	1.489	.179	2.519
	Non-state	38	3.05	3.066			
Compensation measures contain only economic values	State	6	7.67	2.582	.949	.348	1.509
	Non-state	38	6.16	3.738			
Livelihoods, cultural and social values are not compensated	State	7	6.29	4.386	.607	.562	-1.056
	Non-state	38	7.34	3.274			

Chart 6.2. Perspectives on Compensation Processes and Packages: State and Non-State Actors Compared

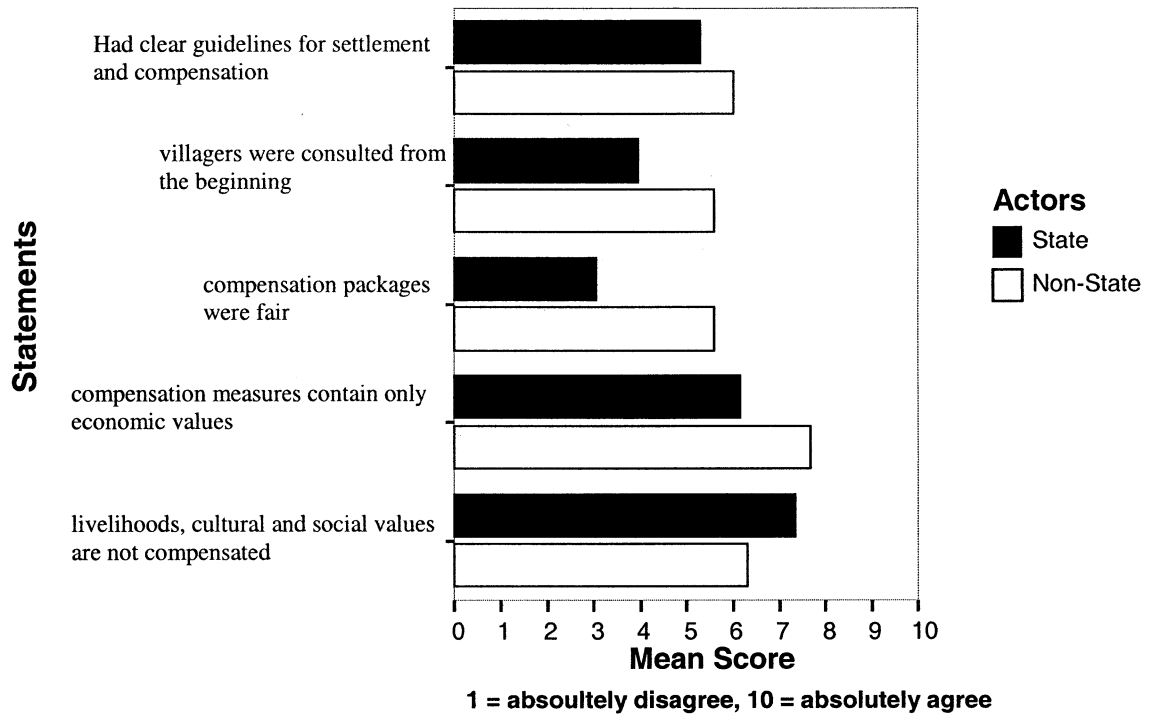


Table 6.8. Responses to the Issue of Guideline for Compensation: State, Villagers and NGOs Compared

Issue statement	Responses	Actors		
		% of State (n)	% of Villagers (n)	% of NGOs (n)
There were clear guidelines to determine who would be affected by the Pak Mun Dam project.	1	0% (0)	27.3% (7)	60.0% (3)
	2	0% (0)	3.0% (1)	0% (0)
	3	0% (0)	9.1% (3)	0% (0)
	4	33.3% (2)	3.0% (1)	0% (0)
	5	33.3% (2)	12.1% (4)	0% (0)
	6	0% (0)	6.1% (2)	0% (0)
	7	0% (0)	3.0% (1)	0% (0)
	8	16.7% (1)	0% (0)	20.0% (1)
	9	0% (0)	6.1% (2)	20.0% (1)
	10	16.7% (1)	30.3% (10)	.0% (0)
Total		100.0% (6)	100.0% (33)	100.0% (5)

Note: Responses are scored 1 = absolutely disagree to 10 = absolutely agree.

Source Data from field research (2002-2003), see Q12 (b) of Appendix A.

Table 6.9. Responses to the Issue of Consultation with Villagers: State, Villagers and NGOs Compared

Issue statement	Responses	Actors		
		% of State (n)	% of Villagers (n)	% of NGOs (n)
Villagers were consulted from the beginning of the Pak Mun Dam Project	1	28.6% (2)	42.4% (14)	60.0% (3)
	2	0% (0)	15.2% (5)	0% (0)
	3	0% (0)	9.1% (3)	0% (0)
	4	14.3% (1)	0% (0)	0% (0)
	5	0% (0)	6.1% (2)	0% (0)
	6	14.3% (1)	0% (0)	0% (0)
	7	14.3% (1)	0% (0)	0% (0)
	8	0% (0)	6.1% (2)	20.0% (1)
	9	0% (0)	0% (0)	0% (0)
	10	28.6% (2)	21.2% (7)	20.0% (1)
Total		100.0% (7)	100.0% (33)	100.0% (5)

Note: Responses are scored 1 = absolutely disagree to 10 = absolutely agree.

Source Data from field research (2002-2003), see Q12 (b) of Appendix A.

Chapter 7

Influence of Non-State Actors in the Case of Pak Mun Dam

Introduction

The Pak Mun Dam struggle led by project-affected villagers during the 14 years from 1989 to 2002 has passed through seven prime ministers and nine coalition governments including the 1991 military coup council, the National Peace Keeping Council (NPKC), appointed government. The villagers and members of the Assembly of the Poor (AOP) who led the Pak Mun Dam protests would rather like to describe their struggle as the struggle against the project managing agency, the Electricity Generating Authority of Thailand (EGAT), instead of a struggle against Thai governments or prime ministers. Because EGAT is a state-owned agency with relatively stable technobureaucratic leadership compared to those elected prime ministers and coalition governments, who come and go with the election cycle, villagers are correct in describing their struggle as the struggle against EGAT in particular but the Thai state in a larger context. This chapter explains and analyzes how villagers and their network of non-government organizations (NGOs) influenced the processes in the Pak Mun Dam struggle.

Stages of Pak Mun Dam Struggle

There are three stages in the development of the Pak Mun Dam struggle. The first stage is the emergence of the protests against Pak Mun Dam by villagers. This is the

stage where villagers defined their rationale and pronounced their policy disagreement with the Pak Mun Dam by protesting against the project. During this stage, actors against the dam emerged and forged their identity to press forward the influence in the struggle. In this stage, as we will analyze in the following section, AOP emerged as a network of poor (and people who were sympathetic to the poor) who shared common grievances as consequences of state development projects to fight for decommissioning of the Pak Mun Dam. Taking the Pak Mun Dam as the exemplary case for urban and rural poor against state development projects, AOP began to influence the transformation of the rules of state in decision-making processes for development projects.

The second stage was the media war between EGAT and protesters to gain media support and publicity in defending and defining their interests and perspectives. The second stage, therefore, involved both further nationalization of the cause as well as globalization or internationalization of the cause by lifting the profile of the Pak Mun Dam struggle to a global environmental movement. Pak Mun Dam protesters gained increased public sympathy and support as the media continued to report the plights of villagers having to leave their families and villages for cities in search of new jobs as they no longer were able to fish for a living. During this stage, protesters focused their struggle on defining their interests and defending their positions on Pak Mun Dam issues which became a symbolic case for the plight of the poor who suffered from the consequences of state development projects. AOP and its supporters took the publicity campaign of the Pak Mun Dam beyond the border of Thailand and internationalized their campaign by using NGO networks, the Internet, and other modern telecommunications.

This stage, as we will analyze further in this chapter, eventually lifted the profile of Pak Mun Dam from local and national layers to the international layer.

The third stage was the stage where actors intensified the knowledge battle for their interests and position. In the knowledge battle, actors supporting the Pak Mun villagers' plight and EGAT's unwavering stand for the dam sharpened their perspectives to push further for the fate of Pak Mun Dam on whether to decommission it or to keep it as an intended state development project. The knowledge battle was the level of reconfirming and supporting actors' interests, perspectives, and positions taken during the previous two stages. In the third stage, intellectual debate, policy evaluation, and appraisal for both sides were conducted in order to push further on whether to decommission the dam in the point of views of villagers and to keep the dam in the case of EGAT and the Thai government. In this stage, actors intensified the use of both tacit and scientific knowledge to influence the decision in favor of their interests and issues.

Conflict of Interest in Development

There are four main actors in the Pak Mun Dam struggle in terms of the ways in which issues and interests are framed and decisions are carried out in regard to the struggle. These four actors are the Thai government and EGAT; the World Bank; Pak Mun villagers; and the network of local, national, and international NGOs. The successive Thai governments, EGAT, and the World Bank are often on the same side of the conflict, defending the dam, while villagers and networks of local-national-international NGOs are against the dam. In order to observe and understand the influence of key actors in the Pak Mun Dam struggle, it is important to unpack the villagers'

struggle against the Pak Mun Dam within the context of how issues, interests, and actors evolved and shaped the struggle.

The EGAT along with the government and the World Bank are proponents of the Pak Mun Dam project. Their perspective of the Pak Mun Dam was that the project would contribute to economic development of the nation as a whole and thus would help alleviate poverty in Thailand which is the policy interest of the World Bank according to its Pak Mun Dam related policy documents. In the World Bank's point of view, it simply seems to believe that the Pak Mun Dam will help deliver "development" by eliminating "poverty" once the dam produces electricity to meet increasing demands. Then the World Bank's country director for Thailand, Mr. J. Shivakumar, wrote a commentary response to the Pak Mun Dam protesters in *Bangkok Post* on September 1, 2000:

While the Pak Mun project has helped consumers of power and the nation as a whole through additional power production, it is apparently hurting a number of poor and vulnerable local people. . . Yes, there are tradeoffs. If you grow trees on your land, you may be unwittingly putting your neighbor's vegetable garden in the shade. But having all parties at the table improves the chances of finding the best solution for everyone involved.⁹⁷

This World Bank's perspective, so eloquently stated by Mr. J. Shivakumar, was indeed the fundamental view of EGAT officials in regard to the Pak Mun Dam project.

However, this message was somewhat disheartening to Pak Mun villagers and protesters who were urged to join in solving the problems that were imposed single-handedly by EGAT with the partial financial support from the World Bank. On top of that, this World Bank's message enraged Pak Mun villagers because the statement indicated that the destruction of their livelihoods by Pak Mun Dam was justifiable, in the World Bank's perspective, as the dam produces benefit for "consumers of power and the nation as a

⁹⁷ See "Pak Mun: Attack Poverty, Not One Another," by Mr. J. Shivakumar, *Bangkok Post*, September 1, 2000.

whole.” This perspective, in the view of village protesters, not only conveys disrespect to their ways of life or the livelihood systems of villagers, but it suggests that their ways of life are unimportant as opposed to that of the nation as a whole. The fact that villagers were not even invited or consulted during the project development, which forced them to relocate their villages and destroyed their source of food and culture, is evidence in itself that villagers were not considered as important actors in state decision making of development projects. The general feeling and perspective among Pak Mun Dam protesters was that the Pak Mun Dam project took away their rights to make decisions about their livelihood and its development.⁹⁸

Meaning of Development

In an open-ended interview on November 12, 2002, in Bangkok, when asked what he would say to the government to indicate that the government viewed the villagers’ preferred way of life was stuck in time, if not backward, and therefore, the government wanted to develop villagers’ livelihood through projects like Pak Mun Dam, an elder participant in a protest, Mr. Fong, replied “why don’t government let villagers decide what they want to do with their lives?”⁹⁹ This view is shared among the majority of protesters who joined in the Bangkok protests and also repeated by Pak Mun villagers during my field research at villages in Phibol Mangsahan and Kong Jiam Districts in Ubon Ratchathani Province. In essence, villagers were not necessarily arguing with the World Bank and EGAT on the importance of electricity for development or necessarily

⁹⁸ See “Struggle for Basic Right to a Livelihood,” *Bangkok Post*, April 27, 2000.

⁹⁹ Interview with Mr. Fong was conducted at the protest site near the Government House in Bangkok, November, 12, 2002. Mr. Fong is in his late 60s and is known as Poh Fong. The term “Poh” is a respectful term literally meaning “Father” that villagers in *Isan* region use to address village elders.

rejecting development that would bring facilities to villages that urbanites enjoy in their daily living; however, they were protesting against the processes by which the Pak Mun Dam development project was conducted by the state. Therefore, from the protesters' point of view, the Pak Mun Dam case is the struggle of Pak Mun villagers against the state development project to gain their rights to make decisions about their livelihoods and fair control over local natural resources that have often been claimed by the state.

If we observe the historical evolution of the development path in Thailand, it is often viewed by the elite leaders of the Thai state that development that is good for the western countries and others must be equally good for Thailand. It is not the case that the villagers do not desire to develop their livelihood and move forward with the changes of life. It is the case, as Mr. Fong pointed out, that villagers want to define their own development or at least they want to participate in defining what the development is for Thailand. The perceived meaning of development between villagers, whose livelihoods were directly affected by the Pak Mun Dam, and the perceived meaning of development of the Thai state supported by the World Bank is almost fundamentally different. As the Thai state launched development projects such as the Pak Mun Dam, the priority is on reducing poverty. Because the emphasis was on defining and reducing poverty, state development projects have not carefully considered what development is and what type of development is right for the Thai state.

The villagers, in fact, view their struggle as a "conflict of what development means." For villagers "development means happiness, harmony, and peace within community that can co-exist with the Mother Nature's Mun River" (Sretthachau and Deetes, 2004: 13). The Mun River to them does not only mean water and fish; it serves as

the backbone of their cultural, economic, political, and social lives. The fishers hold cultural and social activities and ceremonies seasonally. One of the well-known ceremonies that is seasonally held on the bank of the river is called *Nao* or *Wan Nao* ceremony.¹⁰⁰ These festivals to me are more than religious and cultural ceremonies. They are the social spaces and places where people share information about weather and seasonal behaviors, fish migration patterns, catch information, and market activities. The information they share in these spaces are important to both fishers and those who make and sell fishing gear. For the fishers, where the fish spawn and where the migration occurs is very important. For fishing gear makers, it is important to get information from fishers who would offer information on what size or shape of fish are seen in the season so they can make fishing gear that will sell best in the season. In sum, all of these activities are their traditional activities and way of life intricately tied to the ecosystems of the Mun River. The villagers wanted these social and cultural meanings in their lives to be considered in the meaning of development.

For the World Bank and EGAT, the definition of development is based on the definition of “poverty” associated with their “poverty reduction” campaign. Poverty, by the World Bank and Thai government standards, is defined primarily as the lack of money and material. Therefore, development is measured in terms of money and materials (economic values) which are often reflected in the benefit and cost analyses of the World Bank project documents. This measurement is emphasized in the World Bank’s report of Pak Mun Dam on compensation packages for relocated villagers and the

¹⁰⁰ *Nao* or *Wan Nao* ceremony is held after the traditional New Year celebration (songkran festival) on the river banks or rapids. Fishers and villagers worship the Buddha, fish together for food and offer food to the monks, make merits and build a sand pagoda. It is the ceremony that pays respect to Mother Nature and the Mun River which provide fish and sources of livelihood for the communities.

cost-benefit analysis of the dam (World Bank, 1998b: 4-8; EGAT, 2002). For instance, the World Bank's frequent use of the word "generous"¹⁰¹ to describe compensation packages in the Pak Mun Dam case gives its view of what it values in life. This description of the compensation package as "generous" was insensitive to those villagers whose houses were involuntarily removed, whose villages were relocated by force, whose communities were broken, and whose livelihood was uprooted by the Pak Mun Dam. By the World Bank and EGAT's definition, the Mun River's values that serve as cultural, political, and social fabric of villagers' livelihoods were left out of the consideration for the development. Therefore, the definition of development between the state and villagers was perceived differently. This different perception of development is a center of gravity in the Pak Mun Dam struggle.

Since the Pak Mun Dam struggle signifies the struggle for the meaning of development between villagers and the state, it has become a symbol for the larger movement of rural poor to protect their livelihood development in Thailand. This struggle of villagers against the state development project involves a network of actors beyond villagers and the state. It involves a host of actors within Thailand and within the global environmental movement. In the following sections, I analyze how they coordinated with each other to influence governance processes with various issues and interests to influence the decision processes in three stages of the Pak Mun Dam struggle.

¹⁰¹ For instance, at least seven times in three pages, from p. 5 to p. 8 of the World Bank's report titled *Recent Experience With Involuntary Resettlement, Thailand – Pak Mun Dam* by the Bank's Operation Evaluation Department in 1998. Report No. 17541.

First Stage: Emergence and Influence of the Assembly of the Poor

The first stage of the Pak Mun Dam struggle from 1989 to 1997 is perhaps the embryonic period for the birth of AOP and the nationalization of the Pak Mun Dam struggle in Thailand. The visible and vulnerable actors when the Pak Mun Dam project was announced were the Pak Mun villagers whose livelihood was to be altered due to the impact of the dam. Before the dam construction began in 1991, villagers demanded to stop the Pak Mun Dam project for the reason that their livelihood would be destroyed because they relied on the Mun River fisheries

As early as the Pak Mun Dam project was made public, the villagers submitted a letter to the then prime minister in June, 1989, opposing the project. There was no response from the government. In February 1991, it was reported that thousands of villagers protested in Ubon Ratchathani, the provincial capital, against the Pak Mun Dam project. Within a month after the first protest, villagers formed Love the Mun River Group. The group was the initiative of the villagers, and its membership was composed entirely of villagers.

In March, 1991, villagers and Pak Mun Dam protesters submitted to the World Bank's Thailand country representative in Bangkok a petition with over 12,000 signatures protesting the Pak Mun Dam project and the involvement of the World Bank (Ishida, 2002: 62). In September 1991, representatives of the villagers sent a letter to the president of World Bank. At the same time, Love the Mun River Group was reestablished and renamed the Mun River Villagers' Committee for Restoration of Life and Community (hereafter Mun River Villagers' Committee). The Mun River Villagers'

Committee led the first stage of the Pak Mun Dam struggle until 1995, when it established AOP, a network of rural and urban poor and their associated NGOs.

The Voices of Rural Poor

In the early 1990s, Thailand's rural and urban poor began to address the issue of unequal distribution of the benefits from the state development projects. Thailand's state development projects and policies initiated along with the political changes in the late 1960s and 1970s reached a test of time in the 1990s, as once systematically silenced rural poor voices during the Cold War started to regain political space to raise the issue of uneven development. Scholars and observers of Thailand's development path began to raise questions regarding the uneven developments between rural and urban livelihoods and unsustainable development between environment and institutions (Sanee, 1983; Hirsch, 1990; Bello et al., 1998; Baker, 2000; Ratana, 2003). With the support from middle-class academics and the media during the campaign against the then military government in 1991-1992, the rural poor sought the opportunity and extended their struggles against state development projects beyond the local layer. Among those various struggles spanning from agricultural and land conflicts related cases to dam schemes, the Pak Mun Dam struggle took center stage in rural and urban poor protests against the state development projects in the 1990s.

Diverse movements of rural villagers and urban poor in the early 1990s were precursors to the emergence of AOP.¹⁰² In May 1991, during the short-lived military council-appointed government, networks of People's Organizations in the Northeast

¹⁰² Also see some archival information on the Internet at <http://www.thai.to/aop/data001.html> and www.searin.org, last accessed on September 3, 2004.

Thailand protested against the Agricultural Council Bill which was designed to extend more power to the agribusiness companies in Thailand. The protesters' voices were heard and the government dropped adoption of the bill into a public policy. A year later in June 1992, the Isan Farmers' Assembly demanded that the government cancel its plan of the Internal Security Operation Command on Land Allocation Scheme for the Landless People (LASAP, better known as *Khor Jor Kor*) in forest reserves. The *Khor Jor Kor*, designed to promote reforestation, evicted rural villagers from their settlements in "degraded" forest reserves and planted fast growing eucalyptus trees to feed the fast-growing pulp and paper industries in Thailand. Villagers protested against *Khor Jor Kor* by organizing an 80-km-long march from the Nakorn Rachasima Provincial Hall to Lam Dan Yai in Pak Chong District. This long march was joined by nearly ten thousand villagers. Some observers have asserted that this rural campaign against *Khor Jor Kor* was a "turning point for rural mobilization and protest" in northeastern Thailand (Missingham, 2003b: 338 n. 1). In February 1992, the government dispatched then the Deputy Minister of the Ministry of Interior Anek Siddhiprasart to chair dialogue with village protesters. The government finally agreed to abolish LASAP and the agreement was signed by the deputy minister following the June and July 1992 protests.

Meanwhile, Pak Mun villagers had been staging protests against the dam construction at both the dam site and at the Government House in Bangkok before construction began in 1991. Table 7.1 shows the chronology of the demands and protests of Pak Mun villagers from the very beginning of the protests to January 2003. During the first stage of the Pak Mun Dam struggle from 1989 to 1997, the issue of the Pak Mun Dam evolved around the compensation issue. The villagers' initial demand to stop the

construction of the dam was not even a question in the minds of EGAT officials and the government as the construction of the dam continued during the villagers' protests. Villagers, therefore, kept their protests and shifted the focus to the compensation and resettlement issues instead of demanding a stop in construction. By shifting to compensation issues, since they could not stop the construction, the village protesters were successful in publicizing the fundamental issue of the Pak Mun Dam project, which was that the project lacked a systematic study of the impact the dam would have on the livelihoods of villagers. The issue of the destruction of their livelihoods by the dam was what villagers were fundamentally concerned about as they had demanded to stop the project before the beginning of the dam construction in 1991.

<Table 7.1 about here>

As the displacement and destruction of villagers' livelihoods by the Pak Mun Dam was morally appealing to the general public, the villagers' protest gained attention from the media. The government was forced to consider compensating Pak Mun villagers whose livelihoods were disrupted by the loss of fishing income.¹⁰³ Consequently, EGAT and the government had to map out the plan for compensation. Table 7.2 shows an ad-hoc plan and rules for compensation to displaced villagers drawn out in June 1994 after completion of construction of the dam in May 1994. As I explained in chapter 6, this timing of drawing up a compensation plan after the fact indicates that there was no systematic, comprehensive study of the costs and benefits of the project prior to cabinet

¹⁰³ The support and sympathy from the public was further extended by the publications of various independent and NGO researchers on the consequences of Pak Mun Dam on villagers' livelihoods. For instance, see *Just another Dammed River? Negative Impacts of Pak Mun Dam on Fishes of the Mekong Basin* by Tyson R. Roberts (1993) who was a research associate of the Smithsonian Tropical Research Institute; also see *Villagers Occupied World Bank's Dam Site in Thailand in Desperate Attempt to Protect the "Kingdom of Fish"* by Probe International, a Canada-based NGO (1993); and *Fish, Forests and Food: Means of Livelihood in Mun River Village Communities* by the Project for Ecological Recovery, a Thai NGO (1993).

approval. Table 7.2, which illustrates the stages of drafting the compensation rules, is taken directly from EGAT's document titled *Information and Opinions toward the Assembly of the Poor's Demands on the Case of the Pak Mun Dam*, which was presented to the Central Committee in Resolution Findings for the Assembly of the Poor and published June 12, 2000.¹⁰⁴ Table 7.2 shows that the Pak Mun Dam protesters pushed the compensation issues in five progressive stages to increase the amount of compensation and the number of cases until the last stage, when EGAT called it final. Eventually, the formal agreement from the government to compensate fishers was secured in writing by villagers in January 1995.

<Table 7.2 about here>

Villagers' Influence

The influence of villagers and their network of organizations, mainly referred to as NGOs, have been downplayed by EGAT and the Thai government officials from the very beginning of the Pak Mun Dam project. Government officials singled out leaders of NGOs, who mainly came from the urban middle class, above village protesters to discredit both the influence and the plight of project-affected villagers. Then chief of the Central Intelligence Office of Thailand was quoted in *Thai Rath* newspaper on March 12, 1993, as saying:

I don't believe that the anti-Pak Mun movement has any political agenda. The NGO groups led by Wanida Tanwitthayaphitak, have a nation-wide network. These people usually come out to call for equal human rights and to protect the environment. Their only purpose for taking rural people to rallies is to increase monetary support from international sources.

¹⁰⁴ The language of the original document is Thai. My assistant and I translated the whole document into English.

Portraying villagers' legitimate protests as merely projects of NGOs to showcase to international donors to seek funding so as to keep their NGO jobs had significant impact on the image of villagers' protests, because two Thai language newspapers widely read by Thai citizens, *Thai Rath* and *Matichon*, echoed official views in their framing of Pak Mun Dam related reports (Ishida, 2002: 103). This accusation of NGOs using villagers and their causes to seek funding for their own existence as NGOs had significant impact on the image of NGOs itself. Most important, the argument worked in a certain extent to discredit the legitimate cause of villagers as they were portrayed as being used by NGOs. This pressed on villagers' sentiment. Their conscious nerves were challenged further to prove that their protests were for the real cause of the destruction of their livelihood by the Pak Mun Dam. Reportedly, in 1993 and 1994, Pak Mun protesters increased their protests with some dramatic actions, such as seizing the dam construction site near Ban Hua Haeo and organizing a long march from the villages to the provincial capital (see also Table 7.1).

There are three reasons, according to the village organizers, why they "dramatized" their protests in 1993 and 1994: (1) to increase public awareness that they were protesting for a real loss of livelihoods, not for compensation money that the government and EGAT accused of them; (2) to increase media attention by dramatization of protests; and (3) to set the tone that they were not going to give up their fight easily. In reading the newspaper articles about the Pak Mun Dam struggle between 1989 and 2001 that appeared in *Thai Rath*, *Matichon*, and two English language newspapers, *Bangkok Post* and *The Nation*, I could see the increase in news reporting in 1993 and 1994, during

the first stage of the protests (Table 7.3 and Chart 7.1).¹⁰⁵ This increase in media reports indicates that villagers accomplished their objective of publicizing their cause. On top of that, EGAT officials during an open-ended interview admitted that the media reports and the public sympathy forced EGAT to concede to villagers on the issue of compensation that eventually led to the crafting of ad-hoc rules for compensation by establishing a committee in December 1993 (Table 7.1). When asked if EGAT planned to compensate for the loss of the fishing income of villagers, this official explained that there were no baseline data to determine who would be affected by the project and therefore EGAT did not plan to compensate for the loss of fishing income. This explanation was consistent with the World Bank's comments on the study of Pak Mun Dam by the World Commission on Dam (WCD), which will be discussed later in this chapter (World Bank, 2000b: 2).

<Table 7.3 and Chart 7.1 about here>

Not all of these protests pressuring the government to accept at least their demand for compensation, if not to stop the project before construction, were easily accepted by the government. In some cases, protesters were threatened, intimidated, and arrested, and protests were violently broken up by the police. In addition to the villagers' own accounts, the media analysis of the Pak Mun Dam struggle conducted by Ishida (2002: 112-118) for his doctoral dissertation at the School of Journalism and Mass Communication, University of Iowa, likewise reported extensive coverage of violent clashes between police and Pak Mun protesters in *Thai Rath*, *Matichon*, *The Nation*, and *Bangkok Post*. The first wave of violent clashes occurred during the final stage of the

¹⁰⁵ This data is taken directly from Ishida (2002: 84).

dam construction in 1993 and 1994, when protesters seized the construction site to halt the construction. Villagers, after realizing they would not be able to stop the dam construction, began to occupy the construction site as a symbolic and direct statement against the dam to dramatize their protests and causes. Media reports, testimonies of villagers, and documentary films as well as literature on the Pak Mun Dam struggle have described in detail accounts of the protests elsewhere.¹⁰⁶ These protests, even though they were not powerful enough to stop the project, influenced the government and EGAT to finally agree on the compensation issue.

The government's agreement, at least signed on paper, to compensate displaced villagers and those of project-affected villagers for their loss of fishing income due to the construction of Pak Mun Dam became the first ever recorded case in Thailand where the state agreed to pay compensation for the consequences of a state development project (AOP, 2000). Subsequently, the Pak Mun Dam villagers' struggle became a symbolic case among the protesters for other types of cases.

Nationalization of the Pak Mun Dam Struggle

In parallel with the Pak Mun Dam struggle, there were issue-focus-group struggles where rural and urban poor claimed having suffered the loss of their livelihoods due to state development projects. These cases early on were triggering protests in separate regions of Thailand by different issue-focus groups. In literature on rural movements in Thailand, these issues were described and discussed as "grievances" that protesters present to the Thai government as complaints against the state development

¹⁰⁶ See Baker (2000); Ishida (2002: 112-118); and Missingham (2003, Ch. 3 and 4). And also see documentary film about the Pak Mun Dam protest, titled *Rebel with a Real Cause*, and *The Return of Pladaek* produced by the Assembly of the Poor, 2000 and 2001.

projects (Praphat, 1998: 71-78; Baker, 2000: 16-23; Missingham, 2003: 323-326). There were a total of 125 grievances or issues emerging out of at least seven major-issue focus groups in the early 1990s. These seven major-issue focus groups were: (1) forest and land (2) dams; (3) slum communities; (4) work-related illness (5) alternative agriculture; (6) small fisheries; and (7) government schemes (Baker, 2000: 16; Missingham, 2003: 325). A regional breakdown of 125 issues indicates that the northeast region of Thailand bore 75 issues (Baker, 2000: 16; Missingham, 2003: 325), including the fisheries and livelihood destruction issues due to the Pak Mun Dam, counting more than half of the total grievances. Among all of these issue-focus groups, the Pak Mun Dam struggle emerged as the most publicized and visible group because it won the formal agreement of the government to compensate their livelihood loss.

The coordinators of the rural poor movement in Thailand had been mobilizing different issue-focus groups to coordinate as a network in representing the grievances of the poor against state development projects. The case of Pak Mun Dam generated the interest and focus of the rural movement from leaders of rural communities and local and national NGOs during the first stage of the struggle. A case in point was the “Forum of the Poor” organized by coordinators of different issue-focus groups and NGOs in October 1991 when Thailand hosted the World Bank’s annual summit in Bangkok. At that summit where the World Bank had planned to announce the funding of Pak Mun Dam, protesters across Thailand with the support from international participants held a parallel conference known as “Forum of the Poor”¹⁰⁷ (Ishida, 2002: 63; Missingham, 2003a: 82).

¹⁰⁷ Some reports describe it as “People’s Forum,” while others call it “Forum of the Poor.” For instance, Ishida (2002: 63) refers to it as “Forum of the Poor,” while Missingham (2003: 82) called it “People’s Forum.” According to a local participant in this event, it should be called “Forum of the Poor” because the

Various issue-focus groups joined the forum and heated discussions were coordinated and led by Thailand's environmental NGOs such as the Siam Environmental Club, the Students' Environmental Organizations, and the Project for Ecological Recovery. This event was the first occasion where the Pak Mun villagers and protesters had a chance to present their version of the potential consequences of the Pak Mun Dam to the World Bank officials before the completion of the dam construction (Missingham, 2003a: 83). After listening to villagers at the summit, the World Bank at least delayed the announcement of the loan to Thailand, which finally was announced in December 1991 as a loan for the third power system development project, which included Pak Mun Dam.

Coordinators of various issue-focus groups and NGOs learned over time from such events as "Forum of the Poor" that coordination and networking among them would be necessary as a new social force to represent all grievances under which Thailand's poor in general suffered from state development projects. This became clear during the first stage of the Pak Mun Dam struggle in 1995 that it would be necessary to forge an identity of various movements. By so doing, rural poor could collectively influence the state development policies and increase the bargaining power of the rural and urban poor in decision-making processes of state development projects, which directly affect their livelihoods. This set the stage for the emergence of the Assembly of the Poor. Taking the Pak Mun Dam as exemplary case to highlight the suffering of rural villagers under the state development projects, the poor from various issue-focus groups joined together to forge coordinated efforts for their causes.

issues raised and articulated are mostly by the poor and for the poor. This event was organized in coordination with some international participants who joined to protest against the World Bank.

Emergence of the Assembly of the Poor

In 1995, the alliance of two major rural networks of farmers known as the Assembly of Small-Scale Farmers of the Northeast (ASFN), established in 1992, and the Northern Farmers Network (NFN), established in 1994, broke into factional splits. ASFN has been an exemplary force behind rural farmers' voices raising grievances on their loss of income and security of their livelihoods due to the state development projects. The factionalism split left a vacuum of political venue for the struggle of rural poor and set the stage for the emergence of a new, coordinated network for their grievances.¹⁰⁸

In order to define their political space and political bargaining power, over 250 delegates of villagers and NGOs launched a conference entitled *Assembly of the Poor: the Consequences of Large Scale Development Projects* at Thammasat University in Bangkok, December 10-15, 1995.¹⁰⁹ This conference was spearheaded by the Mun Villagers Committee and it put the Pak Mun Dam struggle as the milieu of their gathering and their solidarity. In so doing, the conference agenda included a trip to the Pak Mun Dam after the opening day of the conference. Representatives from the aforementioned seven major-issue focus groups and villagers' organizations such as the Northern Farmers Network, the Network of People Affected by Dams, the Isan Farmers Assembly, a network of urban slum dwellers, and the Assembly of Small Farmers of the Northeast, and national and international NGOs attended the conference (Misshingham, 2003a: 38-29; AOP, 2003). On the final day of the conference, December 14, 1995, the participants issued "The Mun River Declaration" at the Ban Dan Kao in Kong Jiam District of Ubon Ratchatani. The Mun River Declaration proclaimed:

¹⁰⁸ See detailed accounts of ASFN and NFN in Baker (2000: 13-15) and Misshingham (2003a: 33-38).

¹⁰⁹ The opening day of the conference was carefully chosen to coincide with the International Day of Human Rights and thus there were international participants at the conference.

... People must involve in setting up the country's development direction. The people must be real beneficiaries of development. And the poor must participate in decision making involving development projects that will affect them...¹¹⁰

This declaration set out a clear rationale of villagers who had been protesting against the Pak Mun Dam that their struggle is larger than what EGAT wanted to portray as a struggle for compensation.

One of the most important decisions that participants agreed to during this conference was to establish a loosely structured network proclaimed as "The Assembly of the Poor." AOP consists of loosely connected networks of various issue focus groups and NGOs that champion the cause of rural and urban poor to advance their political rights and to influence the direction of state development policies and projects. AOP declared its character and rationale for existence as follows:

The Assembly of the Poor is a network of people who share the same destiny that is being victims of over four decades of Thailand's economic and industrialization development policies. The rural agricultural sector as the backbone of the country's economy was being ignored... On the social capital of the rural sector, human and natural resources have been drawn from every direction to feed the unlimited growth of the urban sector... One rural community after another has been forced to sacrifice their resources and has been abandoned to face subsequent hardship by themselves.¹¹¹

With this character and rationale, AOP found the case of Pak Mun Dam as an exemplary case to use as a backdrop for their larger struggle, which is to influence the changes in state development policy and projects. The emergence of AOP in Thailand was facilitated by the political awareness and relative degree of political freedom of Thai rural and urban poor to challenge state development projects.

¹¹⁰ Translated by Boonthan T. Verawongse of the Assembly of the Poor.

¹¹¹ See "Assembly of the Poor" documented by Prasittiporn Kan-Onsri, Coordinator of Friends of the People (FOP) and translated by Boonthan T. Verawongse on the web at: <http://www.thai.to/aop/data001.html>.

Exercise of Political Freedom

Within a year after AOP was established, Thailand was in institutional transformation when the reform movement gained momentum in 1996. The Thai government was drafting the new constitution to maintain stability of democracy and to end the potential danger of another military coup and authoritarian regime in the future.¹¹² AOP took the opportunity to mobilize rural farmers to participate in the constitution-drafting process by supporting the reform leaders. AOP and its members, mainly farmers, marched in Bangkok during the reform debate at the parliament demanding justice for loss of land due to dam construction including Pak Mun Dam.

In response to this pressure and the outpouring support from the public for reform, the parliament passed a Constitution Amendment Bill in May 1996 (Uwano and Burns, 1998: 10). This bill established a Constitutional Drafting Assembly (CDA) composed of 99 members—one member from each province (76 members) and others selected from experts in public law, political science, and public administration screened by universities and approved by the parliament. Some of the advisors of AOP were chosen to be members of the CDA. According to one influential member of the CDA, who also was considered as an advisor to AOP, Section 56 of the 1997 Thai Constitution was written into the constitution to directly address issues and grievances raised by AOP members. Section 56 guarantees the right of an individual person to participate in environmental affairs and decision making and requires state development projects to pass the evaluation of an independent organization.¹¹³

¹¹² This reform process was triggered by the Black May incident in 1992, when civilian protests against the military coup were repelled by violence by the military council, which eventually ended by the direct interference of the king.

¹¹³ Section 56 of 1997 Thai Constitution reads:

Before political rights and freedom were written and defined into the constitution in 1997, citizens in Thailand enjoyed at least implied political freedom and rights under the emerging democracy. When villagers and urban poor in Thailand began to raise their voices against state development projects, *The Economist* (1991) made this observation in its report on the role of the World Bank in the Pak Mun Dam case:

Thailand is, at least by Asian standards, a relatively open society. People and newspapers tend to have their say. A far bigger project to build 1.9 billion dam in the Chinese province of Sichuan (half of which will be financed by the World Bank) has been given the nod with scarcely a critical word. Myanmar [Burma] is planning a huge dam on the Salween River, electricity from which would be sold to Thailand. Open criticism of either of project is impossible in China or Myanmar. (p. 35)

Indeed, Pak Mun villagers benefited from a fairly open political system where political dissents are relatively tolerated. The significant degree of political freedom in Thailand was important assurance for the rural population to exercise their civic rights.

However, whether the state listened to and took practical consideration to the voices of rural and urban poor in policy and decision making is the challenge that villagers encounter, and this is a central policy contention of the Pak Mun Dam struggle. For observers and scholars, this leads to investigate further whether political freedom grants any influence of villagers in state development policies.

The right of a person to give the State and communities participation in preservation and exploitation of natural resources and biological diversity and the protection, promotion and preservation of the quality of life, shall be protected, as provided by law.

Any project or activity which may seriously affect the quality of the environment shall not be permitted, unless its impacts on the quality of the environment have been studied and evaluated and opinions of an independent organization, consisting of representatives from private environmental organizations and from higher education institutions providing studies in the environmental field, have been obtained prior to the operation of such project or activity, as provided by law.

The right of a person to sue a government agency, State agency, State enterprise, local administration or other State organization to perform the duties as provided by law under paragraph one and paragraph two shall be protected.

If villagers had been alone in an isolated struggle against the Pak Mun Dam project, it is unlikely that their voices would have been heard and taken into account in the decision-making processes of EGAT and the government. However, with the help of modern communication technology and the emergence of organized local and national NGOs, villagers were not alone in the Pak Mun Dam struggle. As we have observed, Pak Mun villagers had led to nationalize the Pak Mun Dam struggle by articulating and acting to forge the identity of the struggle under AOP. Their deliberate nationalization of a relatively local case is evidence in itself that villagers understood that political freedom to express their perspectives and to protest against Pak Mun Dam would have limits of influence if they stayed local in their struggle. Therefore, protesters strategically amplified the voices of villagers and lifted the profile of the Pak Mun Dam struggle to the national layer during the first stage by forging their protests to the identity of a national struggle for rural and urban poor against the state. With the momentum from the first stage, AOP and villagers took the Pak Mun Dam case to the global environmental movement arena by internationalizing the case.

Second Stage: Internationalizing Pak Mun Dam

The second stage of the Pak Mun Dam struggle was the internationalization (or globalization) of what was initially a local struggle. The internationalization of the Pak Mun Dam struggle expanded the political platform of attack for protesters against the state's development projects, which have directly affected the livelihoods of nearby villagers. During the second stage, from 1995 to 2000, under the banner of AOP, villagers and supporters took the Pak Mun Dam case to the international level. This was

essentially enabled by the involvement of the World Bank in partially funding the project. The World Bank's involvement provided a legitimate and wider political platform beyond the local and national contexts. The involvement of the World Bank provided villagers with an international channel through which they attacked EGAT and the Thai government for their loss of livelihoods. Thereby, villagers did not have to confront the Thai state in direct attacks, which might have involved the risk of public discontent and even political repercussions of being branded and discredited as "greedy" or unpatriotic for rejecting the development of Thailand as a whole, which was the supposed aim of the Pak Mun Dam.

During the course of their protests, villagers invited World Bank officials to visit their villages to see the impact of Pak Mun Dam on their livelihoods. At those occasions, villagers took the opportunity to attack EGAT and the Thai government's development projects and policy via the World Bank. One of those occasions occurred on January 31, 2000, when the World Bank Country Director J. Shivakumar visited Pak Mun Dam and had a meeting with the villagers. At that meeting, after listening to the testimonies of villagers who explained their loss of livelihoods, Shivakumar, told the villagers that development implied moving forward, not backward, and he continued:

We have come here as your friend and we owe it to you to help achieve a better life... Going back to the past may not be a better way to deal with the future.¹¹⁴

This message was the exact opposite of the desire of villagers who wanted to decommission the dam, which was technically possible because the dam is roller-compact type with eight sluice gates that can easily be opened or closed. After the

¹¹⁴ See *World Bank visits Pak Mun Dam site – Villagers reject Bank's offer of Development*, Southeast Asia Rivers Network, February 5, 2000, Chiang Mai.

meeting, one of the elders of the villages, Mr. Thongcharoen, reflected on the remarks of Mr. Shivakumar as follow:

We felt very bad when the World Bank told us to forget about the past and look forward to the future. We only want removal of the dam, we want to restore the Mun River and return to the way of life that we once had. The river and the fisheries are the future of all these villages and the Bank is telling us to forget about that.¹¹⁵

Shortly after this meeting, villagers wrote a letter to World Bank President James Wolfensohn. They described the meeting they had had with the country director and gave reasons why they were rejecting his assertion that villagers were going backward by urging the decommission of the dam. The villagers' letter, which was sent on February 14, 2000, states:

When we learned that the Director of the World Bank's Thailand Office was coming to visit, we were excited. Many of us gathered to hear Mr. Shivakumar speak and told him about our problems... Mr. Shivakumar came to tell us that he would like to deliver us "development." That he would like to help us to "move forward"... He told us to look to the future and forget about the past...

The letter continues to explain further:

We cannot do as Mr. Shivakumar asked us because we cannot forget about the past. The past is our lives, our culture, our heritage, our families, and our fisheries. The past is development as conceived of by the World Bank and EGAT. The past is what has led us today to protest so that we can reach a future that we can be happy with.¹¹⁶

Villagers clearly understood that it would be like "playing music to buffalo's ears" if they were arguing with EGAT and the Thai government by talking about rejecting "development" as they did to the World Bank. These rhetorical battles to fine tune their positions and perspectives about the Pak Mun Dam were intensified during the second

¹¹⁵ See *World Bank visits Pak Mun Dam site – Villagers reject Bank's offer of Development*, Southeast Asia Rivers Network, February 5, 2000, Chiang Mai.

¹¹⁶ See *Letter to the President of the World Bank from Affected Villagers by Pak Mun Dam*, February 14, 2000, Southeast Asia Rivers Network, Chiang Mai.

stage of the struggle as the villagers and AOP expanded their channels of attack against EGAT beyond Thailand's border.

To understand the influence of the villagers in transforming both the thinking and policy of EGAT as well as successive Thai governments during the Pak Mun Dam struggle, it is necessary to understand how villagers and AOP moved the profile of the Pak Mun Dam struggle from local and national layers to the international layer, thereby making their case as not only a local concern but also one with global ramifications. In the following section, we will observe and analyze how the case of Pak Mun Dam also became the case for a concerned international community.

Linking Local and International Layers

The second stage began with the formation of AOP in 1995 and it roughly ended in 2000 when WCD released its research findings on Pak Mun Dam. If the first stage of the Pak Mun Dam struggle began coincidentally during a political crisis in Thailand as a consequence of Thailand's latest military coup to overthrow a democratically elected government in 1991, the second stage of Pak Mun Dam struggle squeezed through a period of economic crisis as a result of the currency devaluation of the Thai baht in 1997.

Although the Pak Mun Dam struggle passed through a larger political and economic crisis in Thailand, the villagers were able to keep their focus, perspectives, and position against state development projects affecting their livelihoods. Table 7.3 and Chart 7.1 show that between 1995 and 1999 Pak Mun Dam received the lowest newspaper coverage during the long struggle. As public interest in Pak Mun Dam was overshadowed by the 1997 economic crisis, the newspapers and media in general paid

less attention to the Pak Mun case. In addition, the media and public assumed that the Pak Mun Dam case was over when the government and protesters reached agreement for compensation for project-affected villagers on March 23, 1995 (Table 7.1). Although the compensation issue was resolved in view of the agreement, it was a tool for protesters to advance their protests. They believed that the dam had to be decommissioned if they were to regain their lost livelihood.

Pak Mun Dam protesters continued to increase their momentum by appealing to the public and sympathetic media. The increased participation from international observers and international NGOs began to support the position of villagers as civil society in general were highly connected and networked loosely via Internet campaigns. There are two prominent internet campaigns launched at the international layer. The first was launched by the California-based International Rivers Network and the second by the Canada-based Probe International, both joining the campaign against the Pak Mun Dam.¹¹⁷ These international campaigns served mainly as forums of information dissemination and a loosely networked campaign against the dam-related policies of both the World Bank and EGAT during the course of the Pak Mun Dam struggle. They operated within the global environmental movement, linked internationally to local and national environmental NGOs. However, their substantive campaigns relied directly on the political action of local communities in Pak Mun Dam and NGOs in Thailand. Thereby these international campaigns played a crucial role in both dissemination of information about Pak Mun Dam to the global community and lending moral support to the villagers and NGOs activists in Thailand. This global political socialization served as

¹¹⁷ See their respective websites: International Rivers Network at <http://www.irn.org/programs/pakmun/>, and Probe International at <http://www.probeinternational.org/pi/Mekong/index.cfm> Last accessed on September 29, 2004.

a springboard between local NGOs in Thailand and the global environmental movement. They facilitated in cultivating a global-level social capital¹¹⁸ for the Pak Mun Dam struggle.

Information as a Source of Influence

During the second stage, the voluntary network and coordination between villagers and urbanites from various social and economic backgrounds grew stronger as academics, journalists, social workers, and NGO activists worked together. At the second stage, advisors to AOP realized that villagers needed to move beyond stating their perspectives by way of staging protests if they were to aim for the decommission of the dam. Information sharing and applying what they knew became important aspects of building a strategy at AOP meetings.

As villagers tried to gain urbanites' understanding of their rationale for protests against Pak Mun Dam, they connected their livelihoods with those of urbanites so that they could better explain their suffering as a consequence of the Pak Mun Dam project through the use of metaphoric language. During my interviews, villagers cleverly referred to the Mun River as their "bank" and to fish as "money," as they can catch fish seasonally just as urbanites can withdraw money from a bank. The birth of this metaphoric referral to the Mun River as a bank by the majority of villagers who joined protests and who never had an account or withdrawn money from automatic teller machine was rather telling about how adaptive (desperate in a sense) villagers are to connect their livelihood

¹¹⁸ Social capital here refers to "features of social organizations such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefits" (Putnam, 1995: 67) under *polycentric arrangements*. I emphasize *polycentric arrangements* to distinguish from centralized and controlled arrangements of organizations that can also be organized with forced networks, pressured norms, and bribed social trust within, which are common under authoritarian and dictatorial regimes.

issues with those of urbanites. I learned during open-ended interviews that urbanite supporters, mainly academics and NGO leaders within AOP, regularly held meetings with protesters to inform each other of the government policies and to discuss further strategies. At one of those meetings, some urbanite advisors had suggested that villagers use “bank” as a metaphor for the Mun River and “money” as a metaphor for fisheries and the ecosystem services of the river so as to effectively communicate with urbanites in illustrating the Mun River and their livelihood connection when they talked to reporters. After having spent time in Bangkok for numerous protests and having seen urbanites withdrawing money from the automatic teller machines, villagers understandably liked the metaphor and intensified the use of bank as a metaphor for the Mun River. At the same time, newspaper reporters whose main readerships were urbanites found this to be a useful illustration to report the villagers’ plight.

Villagers’ willingness and capacity to learn how to adapt and transform their protests enabled them to utilize available resources to sharpen their arguments. During my field research, I learned that villagers and coordinators of AOP adopted the use of postcards as their campaign tool to seek international support in addition to organizing press releases, publications, Internet campaigns, and production of documentary videos.¹¹⁹ With their permission, I attended several weekly strategic meetings of the Southeast Asia Rivers Network (SEARIN), which was one of the most active NGOs in helping Pak Mun Dam project-affected villagers and a leading NGO within the network of AOP.

¹¹⁹ Using postcards in political campaigns is a relatively new tool in Thailand and definitely new for villagers.

After spending some time with them, I became a familiar face, and they would share information and engage with me in discussion about their activities and sometimes ask my opinion. At one of the meetings when they were brainstorming for phrases in English for postcards to be printed with the pictures of various species of fishes, I was asked if I had any suggestion. I gave two phrases as suggestions – *damming the flow of Mun River is damming the flow of life* and *rapid development or rapids destruction?* The latter was referring to the planned blasting of rapids in the Mekong River by riparian countries to improve the channel for navigation and also to the blasting of rapids in the Mun River to clear the way for the dam construction. After about two weeks, SEARIN staff handed me a pile of postcards with the phrases I suggested printed on them. I was rather impressed with their skill of using resources and information they have in order to keep their perspectives and positions clear and intentional on the Pak Mun Dam. This personal episode I had with SEARIN staff and the villagers’ creative use of “Mun River” as their “bank” indicated to me that the people who were working directly with villagers within AOP and supporting their cause clearly understood that having information was the beginning stage and using it to articulate their position and to reach out to the outside world were crucial for their cause.

Information became crucial in crafting strategies for the internationalization of the Pak Mun Dam struggle. Within the network of AOP, different NGOs began to utilize information about the ecosystem services of the Mun River and its connection to their livelihoods in order to show the negative consequences of the dam and to reason that the Pak Mun Dam project would result in unjust destruction of villagers’ livelihoods. They networked with each other for information dissemination and provided information to

researchers and news reporters. The information included the failure of the fish ladder¹²⁰ that did not accommodate the migration of fishes from the Mekong and the Mun River, the loss of income, disintegration of families as relatives left for cities such as Bangkok to find jobs to replace fishing. One of those well-known academics who extensively wrote about the Pak Mun Dam and its consequences on fisheries both in academic forum and newspapers, including the *Bangkok Post*, was Dr. Tyson Roberts, a Smithsonian Institute research associate based in Thailand. Dr. Roberts was known among AOP advisors as a scientist whose knowledge about fisheries on the Mekong and Mun rivers supported their claim that the fish ladder did not serve as passageway for the migration of fish. At the same time, he argued, the presumed reservoir of the Pak Mun Dam would become an “unnatural habitat” (Roberts, 1993, 1995, 1996) that would kill many species of fish, contrary to EGAT’s claim that there would be more fish in the reservoir.

The advisors and NGO leaders within the network of AOP targeted international media, international NGOs, and research organizations to disseminate information about the plight of the villagers. Ishida (2002: 104-112) who analyzed the media’s framing of Pak Mun Dam issues found that two English-language newspapers, namely the *Bangkok Post* and *The Nation*, covered Pak Mun Dam stories mostly in favor of the villagers’ perspectives. These two newspapers played an important role in the internationalization of the Pak Mun Dam struggle, because the readers of these two newspapers are mainly foreigners who reside in Thailand and affluent Thai who are connected to other countries

¹²⁰ The comment on fish ladder of ichthyologist, Dr. Tyson R Roberts, was quoted in *Bangkok Post* on July 25, 2000:

“Can you imagine a female fish with half-a-billion eggs swimming up the ladder? As far as I know, no pla buek (giant catfish), the most important migratory species, has ever used it. And yet, that’s the least of the problems. Worse, the ladder does not allow fish to move downstream, and thus its life cycle cannot be completed.”

through business or the Internet. From my archival research, I found two international campaigns against Pak Mun Dam, one by International Rivers Network and another by Probe International, that had archived articles about Pak Mun Dam in their campaign websites as sources of information to support and justify their perspectives against the dam project. Among those archived articles, roughly 90% were reported in the *Bangkok Post* and *the Nation*.

As the movement continued to push further than street protests, the NGO activists and villagers became deeply cognizant of the fact that having information is just a potential to become an influential actor. They understood that knowing how to use information would define how they could influence the decision processes. A number of Thai NGOs¹²¹ that were part of and coordinators with AOP began to intensify the use of information in crafting policy issues and raising the issues of villagers to the international layer by distributing information about their plight to the international community. The NGOs, ranging from research organizations such as Thailand Development Research Institute (TDRI) to environmental campaign-oriented organizations such as Project for Ecological Recovery (PER), which published Pak Mun articles in its *Watershed* magazine, and SEARIN, which produced documentary films and campaign materials, were influential actors in terms of information distribution and knowledge production about the Pak Mun Dam struggle.

Information distribution to the international community mostly occurred in an informal network and via the Internet and newspapers articles. During my field

¹²¹ Leading Thai NGOs within the Assembly of the Poor network which took initiatives on dissemination of information about villagers' plight at the Pak Mun Dam to international media and international non-governmental environmental organizations include the Southeast Asia Rivers Network, the Project for Ecological Recovery, Friends of the People and Thai academics who served as informal advisers to the Assembly of the Poor.

interviews, respondents indicated that how they used information via their networks and coalitions to frame their issues was an important factor by which they influenced the decision processes of the Pak Mun Dam–related issues. Respondents were asked to indicate the sources of their power in influencing the decision-making processes of Pak Mun Dam. The factors extracted from project documents, reports, and news articles were listed in question 5 of the structured interview sheet, including the option where respondents could state any other sources they have used to influence the opinions of others (Appendix A). Respondents scored from 1 = least influential to 10 = most influential factor for them in the Pak Mun Dam decision processes. Table 7.4 shows the mean difference *t*-test between state and non-state actors on each factor. The use of “demonstration,” or protest, as an influential factor was statistically significant ($0.011 < .05$), which shows the obvious fact that non-state actors, especially villagers, view protests and demonstrations as influential factors, as opposed to state actors, who do not use protests or demonstrations. Other factors were not statistically significant in terms of the mean difference *t*-test.

<Tables 7.4 and 7.5 about here>

However, it is informative to examine the distribution of respondents’ perspectives on knowledge, which received the highest mean score of both state and non-state actors. As shown in Table 7.5, 12.5% of state actors and 5.1% of non-state actors scored at the lower end of the scale, at 1 and 2, for knowledge as an influential factor, while 72% of state actors and 61.6% of non-state actors scored at the upper end of the scale at 9 and 10. This is reflection of respondents as they used information to influence the decision processes. The use of information increased the attention to and support of

the Pak Mun villagers from international NGO community. *The Economist* (2000: 38)

observed on the case of Pak Mun Dam and its international attention:

It is more than a thorny issue. Protests against the dam have been held outside Thai embassies in other countries and at the World Bank's offices in Washington. But it is also an ominous sign of a widening fissure between urban and rural Thailand, with potentially dangerous political consequences for the government.

Furthermore, the case of Pak Mun Dam led by AOP was featured in the United Nations Development Programme's (UNDP) Human Development Report 2000 as an exemplary case where villagers and traditionally marginalized communities influenced state development policies. Thailand's *The Nation* newspaper on August 27, 2000, proclaimed in reporting the UNDP's showcase of AOP as follows:

The protest of the Assembly of the Poor (AOP) has gone global as the UN Development Programme (UNDP) has picked it as a model for grass-roots struggles for sustainable development.

The World Commission on Dams and Globalization of Pak Mun Dam

Perhaps the hallmark of the international profile of Pak Mun Dam case was set by the release of the study of WCD¹²² in 2000. As we can also observe in Table 7.3 and Chart 7.1, the media report about the Pak Mun Dam case dramatically increased during the year 2000, especially after the WCD released the Pak Mun Dam study. The WCD study found that Pak Mun Dam did not produce the electricity that was projected by EGAT.¹²³ This is a major policy attack on EGAT, and EGAT responded to the WCD study by issuing a counter pamphlet titled "WCD-Its Untransparent" in which EGAT

¹²² The World Commission on Dams (WCD) was initiated by the World Conservation Union, widely known as IUCN, and the World Bank in 1997 to review the role of large dams in development. The WCD selected the Pak Mun Dam case as one of eight case studies first released in June 2000 and finalized as an official version in October 2000. Further details, also see at www.dams.org.

¹²³ The disagreements on calculation of electricity production and other findings between the WCD and EGAT were reported in the WCD study version of "Final Draft – October 2000" from page 110-129.

questioned both the method of calculation and validity of WCD's claims. EGAT's major argument against the WCD study focused on the credibility of the study by questioning the processes and the motive of the WCD study and the ways in which preliminary findings of the WCD study were published in its website in "draft" format before the final report was actually issued. While WCD claimed it released a draft version for public comment, the media in Thailand, especially *Bangkok Post* and *The Nation*, sought the opportunity to further discredit EGAT by using these preliminary findings as hard and true facts.

The Assembly of the Poor intensified using the WCD draft, finding that it supported their decade of argument that Pak Mun Dam destroyed villagers' livelihoods. The media's use of the information released by the WCD draft report angered EGAT officials. EGAT's doubt about WCD's motive of releasing its draft report without final validation of the findings was a legitimate concern for EGAT, as it has been dealing with the case for a decade. WCD General Secretary Achim Steiner wrote a letter to the AOP Coordinator Prassittiporn Kan Onsri on June 9, 2000, stating:

In recent weeks the draft version of the report has been cited in press articles, press releases and correspondence to international organizations on numerous occasions and issues. This has occurred despite the fact that this is a draft report, circulated for review and comment which the Commission has neither accepted nor released as a final version to date. On each page of the draft there is a clear statement that is a draft of the report which is not for citation or circulation.

It was not because the findings of the WCD study was a groundbreaking finding that the profile of Pak Mun Dam case was raised among the media and international public but because the findings were reported in a stylistic study by the organization called the *World Commission on Dams*. The project-affected villagers had been arguing since the beginning of the project construction that the Pak Mun Dam disrupted fish

migration between the Mekong and Mun rivers and thereby destroyed their livelihoods, which offset any benefits that can result from electricity production. The WCD report just confirmed what the villagers had been arguing for their cause during a decade of protests and campaigns. The *Bangkok Post* on September 28, 2000, questioned:

Why did we have to wait 15 years for the WCD findings to believe the villagers' cause is valid and their problems real? Why? Because Thai society primarily looks down on the poor. Poverty is considered a sin. The education system teaches us to look down on our cultural roots and village simplicity while making Western affluence our ultimate dreams.

The advisers of AOP were aware of the fact that *who* presents information also matters in making it influential in decision-making processes. Being cognizant of the fact that the villagers' legitimate arguments fell on the deaf ears of the successive Thai governments and EGAT, the AOP advisers sought the opportunity to have the case of Pak Mun Dam selected for the WCD study. They also knew that the WCD's study report would carry undeniable weight to pressure EGAT and Thai government at least to consider the legitimate voices of villagers. One of the key persons who proposed the Pak Mun Dam case to WCD was SEARIN Director Chainarong Sretthachau,¹²⁴ who not only served as an AOP adviser but also had taken action in the front line of the Pak Mun Dam struggle in support of the villagers. In fact, the majority of the authors of WCD's Pak Mun Dam case study were Thai academics and professionals who, one way or another, had served as AOP advisers (Amornsakchai et al, 2000). One of the key chapters of the earliest version of the WCD study issued in February 2000, *Social Aspects of Pak Mun*

¹²⁴ During open-ended interview, Mr. Chainarong Sretthachau described how he and colleagues argued to get the Pak Mun Dam case to be selected under the WCD study before the WCD was officially launched in May 1998. Also see p. xxii of *Dams and Development: A New Framework for Decision Making*, a report of the World Commission on Dams, November, 2000.

Dam,¹²⁵ in regard to the Pak Mun Dam villagers' argument was written by a Professor Chayan Vidhannapudi at the Faculty of Social Science of Chiang Mai University, who also served as adviser to SEARIN and AOP.

It is an undeniable fact in the history of the Pak Mun Dam struggle that the WCD study helped villagers and AOP in their efforts to internationalize the profile of their struggle and to increase pressure on the Thai government and EGAT. It provided a policy gun for the bullets villagers had for the policy arguments to push their issues further. With the support of the WCD study, the villagers and AOP decided to drop the demands for compensation and renew their larger demand to decommission the Pak Mun Dam. The *Bangkok Post*, on April 27, 2000, carried the news of the villagers' decision to drop the compensation issue and to step up their demand for decommission as follows:

No matter how things turn out, the Pak Mun villagers' decision to drop compensation demands for the return of the *Isan* people's bloodstream marks an important step in Thailand's grassroots movement... Right from the start, the Pak Mun villagers told EGAT officials that fishing is their main source of livelihood. That the dam will block fish migration and destroy fish abundance, that they did not want the dam because any compensation could not match the losses.

On May 15, 2000, AOP sent an open letter asking the government to open sluice gates so the Mun River could flow freely. In support of AOP's demand, the international campaign for Pak Mun Dam led by the International Rivers Network sent a letter on May 19, 2000, to then Prime Minister Chuan Leekpai stating:

The World Commission on Dams Pak Mun Dam case study shows that the Pak Mun project is not performing well economically, . . . With independent evidence now overwhelmingly supporting the villagers' claims that the dam has caused more harm than good, we believe that it is time your government took action to address the villager's demand . . . open the gate and restore the Mun River.¹²⁶

¹²⁵ See Chayan Viddhananaphuti, 2000, *Social Aspects of Pak Mun Dam*, in WCD Case Studies: Pak Mun Dam, draft for discussion prepared for the stakeholders meeting on February 23, 2000.

¹²⁶ See International NGO letter to Thailand's prime minister, May 19, 2000, also posted on the Internet at <http://irn.org/programs/pakmun/supp.000519.html>. Last accessed on September 22, 2004.

In response to the villagers' pressure and AOP, Prime Minister Chuan Leekpai's government issued a resolution on July 25, 2000, ordering to open all eight sluice gates of the dam for four months per year during the supposed fish migration season from May to August beginning in 2001. At the same time, the resolution established a committee to oversee research on the livelihoods of villagers to compare the differences between the periods of the gates being open and closed. This opened up the opportunity not only to the government and EGAT but also to AOP and concerned academics to conduct research to prove their perspectives of Pak Mun Dam. The trial opening of the dam sluice gates initiated knowledge production to compare the consequences before and after the dam sluice gates were opened. This was the beginning of what I would call the "knowledge battle" among key actors in the Pak Mun Dam struggle about which I explain further in the following section.

Third Stage: Knowledge Battleground

The third and final stage of the Pak Mun Dam struggle is the stage where information production and utilization was intensified to the level of a knowledge war among key actors. Information production and utilization was intensified to reinstate and support policy arguments stated in the previous stages. In this stage, knowledge became or was considered an influential factor for the actors to sharpen their arguments and to appeal to the wider public to gain support. The third stage roughly began with the opening of Pak Mun Dam sluice gates in June 2001 and ended in January 2003 with the

final decision of the prime minister.¹²⁷ The major reason for opening the sluice gates was to re-examine the linkage between villagers' livelihoods and fisheries of the Mun River. It has been argued by the villagers that the dam destroyed fisheries by blocking the fish migration between the Mun and Mekong rivers. The research therefore focused on the impact of dams on the fisheries and ecosystems of the river, and thereby on the livelihoods of villagers. It is on this ground that the knowledge about livelihoods, fisheries, ecosystems, and the consequences of dam construction became focal issues.

The reason AOP and villagers demanded the opening of the dam gates was to prove that the free flow of the Mun River would revitalize both the livelihoods of villagers and the ecosystem of the Mun River. While they had been demanding to decommission the dam from the beginning, the government and EGAT had long claimed that the consequences of the dam have been compensated and therefore, the dam was justified in its operation for electricity. However, Prime Minister Thaksin Shinawatra's cabinet reached a consensus on April 17, 2001, to open all eight sluice gates as a trial for four months in the first period beginning on June 14, 2001.¹²⁸ Later, the new resolution was issued on December 11, 2001, to keep the dam gates open for one more year until November 2002. The extension was to facilitate academic research on the consequences of the opening of the dam gates to be conducted by the government-commissioned academic institutions. In so doing, the rationale was that the problem of the Pak Mun

¹²⁷ In January, 2001, Thailand had a new general election the first time under the 1997 Constitution. Prime Minister Chuan Leekpai lost and current Prime Minister Thaksin Shinawatra won in the election. Prime Minister Thaksin run election on the platform that he would try to solve Pak Mun villagers' problem and poverty in Thailand.

¹²⁸ This resolution is continuum of Prime Minister Chuan Leekpai's cabinet resolution issued before Prime Minister Thaksin Shinawatra was elected in January 2001 election.

Dam project would be eventually decided by the cabinet and the prime minister based on the scientific academic research findings.

Scientific Knowledge and Local Knowledge

With the opening of the sluice gates on June 14, 2001, the government commissioned the Ubon Ratchathani University to conduct studies to assess the impact of opening the dam's eight sluice gates. By commissioning academic researchers to conduct research, the government expected to make a decision based on the scientific knowledge they gained from this research. The eventual decision to be made was whether to keep the dam in operation for electricity or open the sluice gates permanently so the Mun River would continue to flow. At the same time, EGAT assigned the Science and Technology Research Institute of Thailand and Khon Kaen University to assess economic, social, and environmental consequences of the Pak Mun Dam gate opening.

As the government- and EGAT-commissioned research teams conducted studies on the impact on villagers of the opening of dam gates, villagers also took the initiative to conduct their own research so as to show the differences in their livelihoods between the open and closed periods. The research conducted by the villagers is known as *Ngan Wijai Thai Baan* (hereafter Thai Baan research), meaning villagers' research. SEARIN and AOP assisted the villagers in conducting Thai Baan research. In reasoning for the need to conduct the research, one of the village researchers stated:

We are the ones who suffer from all negative impacts. We are the ones who are directly affected. Our lives have been destroyed by the dam, but when fish and nature are restored to the river, our lives are restored too. We are trying to make other people see and understand in the impacts of what has happened since the dam gates have been opened. And we thought of documenting the impacts of opening the dam gates by doing our own research. If outsiders conduct the

research, we are afraid that they will not see the full picture, and will not consider all issues of the impacts from the dam because they are outsiders who live in cities and do not understand our lives. They do not know about fish, the ecosystem, and the Mun River like we do. Therefore, we decided to do our own research.¹²⁹

This reasoning was a direct challenge to the conventional *scientific* knowledge that is produced by university academics and scientists whose works mainly monopolize project-related consulting documents and, in this case, government- or EGAT-commissioned research projects. Professor Chayan Vaddhanaphuti of Chiang Mai University in a preface to the published English version of Thai Baan research wrote:

Local knowledge has long been the subject of interest among scholars of different disciplines as well as practitioners of development, but local knowledge production has always been in the hands of outsiders who claim to have a certain methodology to understand it. In most cases, local villagers who possess and practice their knowledge often play a secondary role, treated as informants or respondents in the process of investigation. Despite increased interest in local knowledge in development practice, it is often treated as inferior to scientific knowledge. The latter is often seen as superior and a key to villagers' problems.

This sets the tone for the fundamental ground of a knowledge battleground during the third stage of the Pak Mun Dam case. At the very least, this perspective on knowledge production and utilization unravels the underlying forces within surrounding politics or institutional dimensions of knowledge production and utilization. In other words, it conveys that scientific knowledge is not necessarily a *value*-free set of facts and products of a society. Therefore, careful observers have to understand the processes by which knowledge is produced, and have to pay attention to how and for what purposes it is used in social processes where actors engage in organizing orders and making choices in life.

¹²⁹ See p. 13, *The Return of Fish, River Ecology and Local Livelihoods of the Mun River: A Thai Baan (Villagers') Research*, The Assembly of the Poor and Southeast Asia Rivers Network, 2004.

Knowledge Production and Utilization

Over a decade of the Pak Mun Dam struggle between villagers and the state, successive cabinets had established various committees to solve the problems associated with the demands of the villagers. These committees handled issues associated with land allocation and resettlement to the compensation issues. It was not until the third stage of the struggle that the government agreed to ponder on the fundamental issue that villagers had been demanding: decommission the dam and restore the Mun River. Although scientific knowledge had been produced since the Pak Mun Dam project was initiated in the 1970s, the existing knowledge did not seem to contain enough information to help the government make a decision on the question of whether the dam had caused the destruction of the villagers' livelihoods and whether that loss was more or less than the projected benefits of the dam. This is a conclusion that can be inferred from the underlying reasons behind the cabinet's resolutions that ordered the dam gates to open and at the same time commissioned research teams to conduct further research. The stories of villagers' suffering reported by the media and the independent research gathered by individuals and organizations were not good enough information to help the government make decision. Why? The answer to this question is embedded in the institutional dimensions of knowledge production and utilization, or simply the politics of knowledge.

During the dam gate opening period between June 14, 2001, and November 4, 2002, the government, EGAT, and the villagers were on their missions to conduct research on the consequences of the dam gate being open. Meanwhile, independent researchers and media were also involved in reporting stories of villagers returning to

their villages from Bangkok and other cities where they had gone in search of other jobs during the dam operation period. In one count, there were at least 20 research papers and reports conducted by various individuals, organizations, and academic institutions in search of evidences for the benefits and costs of the dam.¹³⁰ Among those, the Ubon Ratchathani University's research and the villagers' Thai Baan research received close attention from the observers and media. The research of the Ubon Ratchathani University was a leading government-commissioned official research specifically mandated to study the consequences of the opening of the dam gates and, therefore, it was closely watched by observers.

However, the Thai Baan research gained attention from observers and the government because of the path-breaking, self-organized action research villagers did on the history of the rural struggle in Thailand. The fundamental assumption behind Thai Baan research was that the knowledge villagers had needed to be packaged in a way that would make government and EGAT officials pay serious attention in their decision making rather than rely on the press releases and statements villagers had made in the past at their protests. The villagers' conducting research and packaging their local knowledge in parallel with the academics' research conducted by government-commissioned universities and institutes was an unprecedented action in Thailand's social movement. As such, Thai Baan research not only gained funding from donors¹³¹ but also received the attention of the National Health Foundation of Thailand and the

¹³⁰ See p. 4 of *The Assessment of the Knowledge Fundamental for Decision Making in Case of Pak Mun Dam*, by The Committee to Screen the Findings Concerning the Cases of Pak Mun Dam, Ubon Ratchathani, 2002.

¹³¹ Some of the campaign activities including the Thai Baan research of the Southeast Asia Rivers Network were partially funded by Oxfam America, Rockefeller Brothers Fund, the International Rivers Network, and the Swedish Society for Nature Conservation.

World Health Organization, both of which jointly awarded this research effort the National Health Foundation Award for community cohesiveness and welling-being.¹³²

More important, Thai Baan research was considered as alternative knowledge to the official government-commissioned research in the report on the *Assessment of the Knowledge Fundamental for Decision Making in the Case of Pak Mun Dam* prepared in January, 2002, by the Committee to Screen the Research Findings Concerning Pak Mun Dam's Cases (hereinafter "the Screening Committee").¹³³ The Screening Committee was established by Deputy Prime Minister General Chavalit Yongchaiyudh, who chaired the national committee to follow up on the problems associated with Pak Mun Dam. The deputy prime minister was assigned to prepare recommendations to the cabinet after reviewing the Screening Committee's assessment.

The Screening Committee's assessment was issued in January 2002 and centered on four bodies of research:¹³⁴

1. EGAT-sponsored Khon Kaen University's assessment of the impact on economic, social, and environmental impacts reported in August 2000 and presented to EGAT.
2. Government-commissioned Ubon Ratchathani University's study on the guidelines to restore the ecosystem and community livelihoods that were affected by Pak Mun Dam, reported in September 2002 and proposed to the national committee to follow up on the problems associated with Pak Mun Dam.

¹³² See *Matichon* newspaper (in Thai), December 16, 2002.

¹³³ The names of these committees in English are rough translations from Thai. For original names in Thai, please see the bibliography section of this dissertation.

¹³⁴ These reports were published in Thai and the titles listed are rough translations. The committee also considered other reports and independent research in its discussion in the assessment. See details in "Introduction" in the draft version of the *Assessment of the Knowledge Fundamental for Decision Making in the Case of Pak Mun Dam*, issued by the Committee to Screen the Findings Concerning the Cases of Pak Mun Dam, January 2002.

3. EGAT's report on the progress of the economic, social, and environmental mitigation plan to develop the quality of life for people and community along the lower part of Mun River, prepared by Science and Technology Research Institute of Thailand in November 2001 and subsequently in 2002.
4. Thai Baan Research, titled *Mae Mun: The Return of Fisherman*,¹³⁵ was conducted by Pak Mun villagers with assistance from the Assembly of the Poor and the Southeast Asia Rivers Network.

The fate of the Pak Mun Dam, or more precisely the fate of Pak Mun villagers, was to be decided from the knowledge produced by these four bodies of research. Originally, the gates were supposed to be opened for four months beginning from June 14, 2001, under the cabinet resolution. However, as discussed, Prime Minister Thaksin Shinawatra decided to extend the period until November, 2002, to give at least one year for research. The role of these packages of knowledge was crucial and therefore it is important to understand how they were produced and how they were used in the decision-making processes.

The main policy issue that forced the government to seek the knowledge production to understand the consequences of building the dam on villagers' livelihoods was to reconcile two main arguments. On one hand, World Bank and EGAT had long argued that the Pak Mun Dam was justifiable for the loss of villagers' livelihoods since the project compensated adequately for villagers' land and income loss and the dam was producing electricity to meet the increasing demand in the northeast region while it also increased water for irrigation (EGAT, 1996: 5; World Bank, 1998b: 4-8). On the other hand, the villagers have also been arguing that their livelihoods were destroyed by the Pak Mun Dam because it disrupted fish migration between the Mun and Mekong rivers

¹³⁵ An English version of the Thai Baan research report was published with the title, *The Return of Fish, River Ecology and Local Livelihoods of the Mun River: A Thai Baan (Villagers') Research*, in 2004 by the Southeast Asia Rivers Network and the Assembly of the Poor.

and destroyed their cultural, social, and communal space along with the ecosystems of the river (Sretthachau and Deetes, 2003: 13-14). Prime Minister Thaksin Shinwatra, who eventually would make the decision whether to decommission the dam or let the dam operate at least four months per year, had to reconcile these two contending arguments.

From the government's perspective, the Pak Mun Dam was claimed to be a multipurpose development project because it would generate electricity, increase availability of water for irrigation, and create a reservoir to serve as habitat for fish (EGAT, 1996: 5). Thereby, the Pak Mun Dam would increase utility of the river for all actors in Thailand. From the villagers' perspective: (1) the dam would destroy fisheries by blocking migration; (2) the land in the region was not suitable for agriculture; and (3) fishing was a century-old, traditional profession and a major thread in the fabric of their livelihood while providing a better local economy than agriculture. Thereby, they argued, the Pak Mun Dam would destroy not only their economic well-being but also the communal, cultural, and social aspects of their lives, because their livelihood as a whole was intricately tied to the ecosystems of the Mun River (Sretthachau and Deetes, 2004: 13-27). Therefore, the produced knowledge and research to be presented to the Screening Committee needed to answer which argument was closer to reality when it compared the period when the dam was in operation for electricity to the period when the dam gates were open for the study.

Findings of Government-Commissioned Research

Among the three EGAT- and government-commissioned research efforts mentioned above, the media, observers, and government considered the Ubon

Ratchathani University study as the most comprehensive package of knowledge. The Ubon Ratchathani University had been assigned by the government, with the mandate from the prime minister on June 13, 2001, to prepare for “the project to survey and study the guidelines to revitalize the ecosystem and community livelihoods which were influenced by Pak Mun Dam” (Screening Committee, 2002: 11). The main objective of the study was to answer four questions: (1) What is the status and the role of the dam in electricity generation? (2) What are the actual and potential irrigation benefits of the dam? (3) On an ecological, agricultural, and fisheries basis, how does the dam affect community economic and social relation? and (4) What options might exist to manage the dam? (Screening Committee, 2002: 11; Ubon Ratchathani University, 2002: 1).

The Ubon Ratchathani University study found that on the status of the electricity generation:

Regarding impacts on the stability of the lower Northwest region’s electric power distribution system; system stability (that is, maintaining voltage fluctuation at plus or minus five percent) can be maintained without the Pak Mun Dam.¹³⁶

This finding, described in succinct details in the report, counters the argument of EGAT that the Pak Mun Dam was a necessary and crucial project to meet the increasing demands of electricity consumption. On the issue of actual and potential benefits from the irrigation provided by the Pak Mun Dam, the Ubon Ratchathani University study summarized that:

¹³⁶ See p. 4 of the *Executive Summary* of the Project to Study Approaches to Restorations of the Ecology, Livelihood, and Communities Receiving Impacts from Construction of Pak Mun Dam, Ubon Ratchathani University. The electricity power distribution network of the Northeast region of Thailand is fed by five domestic power plants and four power plants in Lao P.D.R as of November 2002, in addition to the electricity receives from the Central region’s electricity power distribution network. Pak Mun Dam generates 123 MW on average power output and it is below the projected 136 MW. The executive summary report was prepared by the principal researcher Mr. Taweekun Sawantranon for the question on electricity production and the status of Pak Mun Dam.

The Department of Energy Development and Promotion estimated that it would be possible to supply water to 14,757 rai [5,834 acres]. However, in 1998-1999 (prior to the experimental opening of Pak Mun Dam), farmers requested water to supply approximately 2,525 rai [998.3 acres], or 17 percent of the planned area. During the dam opening in 2001-2002, farmers requested water supply to 2,052 rai [811.3 acres], or 14 percent of the planned area.¹³⁷

The report continued to explain why the region was not suitable for agriculture. It explained the soil condition and types in three districts that were affected by the Pak Mun Dam. In Phibol Mangsahan and Sirindhorn districts, the soil is relatively more fertile than in Khong Jiam district. Even in these two districts, the report concluded,

use of irrigation to increase rice field area does not fit in with rice farming methods used by farmers in this area. Farmers do not ask for water to grow a second (dry season) crop of rice. Instead, they ask for water for rice seedling production and rely on rainfall for cultivation of the transplanted rice crop. Therefore, it could be said that irrigation charges, lack of soil fertility in the study area, and methods used by farmers are obstacles to developing agriculture in the area using irrigation.

In Khong Jiam district, where the dam is located and:

...which consists of rocky outcroppings, forest, and sandstone hill formations, is not particularly suitable for any commercial crops. Water pumping stations are not found in this area. Irrigation is not a relevant factor.¹³⁸

These findings of the Ubon Ratchathani University on the electricity production and irrigation, both of which were two main projected benefits in EGAT's project documents and EGAT's policy arguments, were both consistent with the villagers' perspectives.

In terms of fisheries, the study found that household income from fishing increased from 3,045 baht per year in 2000 to 10,025 baht per year after the opening of the dam gates in 2001. This increase in household fishing income still has not matched

¹³⁷ See p. 7 of the "Executive Summary" of the *Project to Study Approaches to Restorations of the Ecology, Livelihood, and Communities Receiving Impacts from Construction of Pak Mun Dam*, Ubon Ratchathani University.

¹³⁸ See p. 6 of the *Executive Summary* of the *Project to Study Approaches to Restorations of the Ecology, Livelihood, and Communities Receiving Impacts from Construction of Pak Mun Dam*, Ubon Ratchathani University.

25,742 baht per year before the construction of dam started in 1990 (Ubon Ratchathani University, 2002: 11). Therefore, the report concluded that:

Economic growth, especially growth from industrial development that requires electric energy has not yet developed as forecasted. The Dam does not yet play at full-capacity in irrigation. It is appropriate to direct benefits from the Mun River Basin to community-based economics by ceasing use of the Dam for electricity generation for now, until electricity demand changes from current conditions.

This conclusion is consistent with the findings of the Thai Baan¹³⁹ research conducted by the Pak Mun villagers. Villagers were delighted to see the government-commissioned study recommending what they had been arguing along the struggle. However, these sets of knowledge produced by the both government and villagers faced the challenge of the politics within which Prime Minister Thaksin Shinawatra made decisions, as we will see in the following section.

Knowledge in the Final Decision of the Prime Minister

These findings were reported at the end of the trial opening period of the dam in October 2002. At the same time, the decision of Prime Minister Thaksin Shinawatra was due to be made when all the research reports were completed. The morale and spirit of villagers and AOP was at that time at the highest point in the history of the Pak Mun Dam struggle. They were very hopeful that the prime minister would follow the recommendation of the government-commissioned research findings, which was to open the dam gates for at least three more years or until the demand of electricity increased.

At the same time, AOP intensified their public protests at the government house with the renewed evidences supporting their position. These findings of the government-

¹³⁹ For the detailed report of Thai Baan research findings, please see Sretthachau and Deetes (2004).

commissioned study not only legitimized their long struggle but also increased credibility of their Thai Baan research. Prime Minister Thaksin Shinawatra made a surprise visit to protesters at their protest camp near the government house on December 8, 2002, and spent 7,000 baht buying lunch for protesters and scooping ice cream personally to offer to villagers. Villagers, in return, handed their Thai Baan research report to the Prime Minister.¹⁴⁰ At the same time, Prime Minister Thaksin Shinawatra told villagers that he would conduct a meeting with them on December 20 at the government house to find out more about how the Pak Mun Dam affected their lives. Meanwhile, he told them that he would also look into all the research findings and visit the dam site and affected villages after the meeting with the villagers at the government house. After that, he said he would make a final decision.

On December 20, 2002, Prime Minister Thaksin Shinawatra met with 30 representatives of villagers at the government house for four straight hours over lunch. It was not only an historic moment in the Pak Mun Dam struggle, but it was also an historic moment in the history of Thailand.¹⁴¹ He invited villagers, the four research teams mentioned above, and officials of EGAT. The meeting was broadcast live on a major television channel from the beginning to the end. At the meeting, EGAT presented a brief history and summary of the current situation. After that, EGAT argued for the dam by stating that opening the sluice gates could lead to power shortages within three years.

¹⁴⁰ See "Protesters get free lunch from Thaksin," *The Nation*, December 9, 2002.

¹⁴¹ The only comparison with this event in Thailand was when the King of Sukhothai era personally looked into grievances of villagers 700 years before. See "Thaksin's approach recall Sukhothai era," *The Nation*, December 21, 2002.

Admittedly, by invoking the sunk-cost syndrome,¹⁴² EGAT also revealed that the project was still 4 billion baht in debt.

During the meeting, the prime minister declared, while opening his notebook and marking the date, that he would visit Pak Mun Dam on December 24 and accepted the villagers' invitation to ride a boat along the Mun River and to see various villages. On December 24, he visited the dam and held some more discussion with the villagers. The final decision was made on January 14, 2003, with the recommendation of his ad-hoc appointed panel of review on the case. His panel of review made a recommendation based on three agencies—the Second Army, the Border Patrol Police, and the National Statistics Office. These agencies were selected in an ad-hoc fashion after the meeting with the villagers. They conducted a survey within less than a week on the opinions of hand-picked villagers who lived along the bank of the river. All of a sudden, the knowledge that had been produced by the four main research teams was ignored in the very last moment of decision making. The prime minister decided to use (1) the survey of three agencies he had selected; (2) his meeting with the villagers, and (3) his personal viewing of the dam and villages from helicopter and from the boat as the bases for his final decision.

The final decision of the prime minister was to uphold the cabinet's decision of opening the dam sluice gates for four months per year and generating electricity in the remaining eight months. This decision was not very surprising to the observers and members of AOP, as they had predicted that the prime minister was buying time and massaging politics to reduce tensions and to build his image in the public as if he were a

¹⁴² Sunk cost syndrome represents a strong tendency to hold on to previous investments even if this is a rationally bad choice. For further explanation on sunk cost syndrome, please see Janssen et al. (2003) and Janssen and Scheffer (2004).

compromising leader among different actors. *The Nation* editorial on January 17, 2003, wrote:

The latest decision on the Pak Mool (Mun) Dam only confirms that the government will not accept the results of any study, even its own, if they fail to support its predetermined decision.

The Nation continued to animate its editorial:

When Thaksin held talks with villagers affected by the Pak Mool Dam at Government House, there were mixed reactions. Some hailed it as the single most generous gesture any government or prime minister had ever made in regards to an attempt to resolve the controversial issue. Others, however, were skeptical as they suspected Thaksin might just want to pull another publicity stunt to show the government still cares about the poor.

Indeed, as I have presented throughout this chapter and preceding chapters, the voices and wisdom of the rural poor have not yet been considered worthy as a decision factor in Thai society. However, the decade-long struggle that the villagers had upheld did not go in vain. They at least won, for four months, opening of the dam gates, and their voices had been heard. Their struggle has been marked as a scar on Thailand's political development as well as on the development journey of Thai society. As illustrated, their voices, actions, and knowledge have become a force for transformation of institutional order in Thailand. The Pak Mun Dam case perhaps was the most significant case of rural villagers' influence in Thailand's development history, as we observed villagers' influence reaching to the level of the second-most powerful leader of the Kingdom.

Analyzing the Origin of the Power of Non-State Actors

Why did the initial benefits and cost analyses that EGAT conducted as feasibility studies not include the analysis and knowledge of the linkages between villagers'

livelihood and the Mun River's Fisheries? Prioritization of policy issues influence the selection of the area of knowledge needed to be produced for decision making. The state's development policy to reduce poverty in Thailand was an overarching rationale for developing the Pak Mun Dam project. Poverty reduction policy influenced the state development thinkers and World Bank to develop the Pak Mun Dam because energy is considered an important input to the economic development processes. From the economic interest of the state being export oriented, Thailand has never dreamed of being a fish-exporting country in the global community and therefore fisheries are merely considered for domestic consumption. On the other hand, Thailand has increased production of rice and fruits for both domestic consumption and export. Thailand, therefore, views electricity and irrigation as two important areas of policy issues and interests for its economic development decisions. This prioritization of issues and interests answers why EGAT and the government did not pay much attention to the knowledge about fisheries and livelihoods of villagers.

Knowledge

When it comes to the decision making for the Pak Mun Dam, the impact on fisheries was not valued to the same degree as their desire to produce electricity and irrigation for agriculture. Consequently, the knowledge about linkages between the Mun River fisheries and the villagers' livelihood was minimally produced and considered by both EGAT and the government in the initial decision making about the Pak Mun Dam construction. The project documents primarily described and explained the electricity production capacity of the dam and availability of water for irrigation as two valued

outcomes in its benefits and cost considerations (EGAT, 1996: 5). The fisheries, on the other hand, were mentioned as side-effect benefits from the reservoir being a “new habitat” for fish.¹⁴³ Because the electricity and irrigation were two main interests as “benefits” expected to be generated by the Pak Mun Dam project, the initial knowledge production in the project documents paid very little attention to the linkage issues between the livelihood of villagers and the ecosystem of the Mun River.

The government knew that villagers’ livelihood systems were intricately tied to the fisheries and the ecosystem of the Mun River. If the knowledge about the linkage between villagers’ livelihood and the Mun River fisheries were calculated into the initial cost and benefit analysis of the project and villagers were involved in that calculation, it is most likely that the Pak Mun Dam would not have been built. This became clear when the WCD study concluded that “if all the benefits and costs were adequately assessed, it is unlikely that the project would have been built” (World Commission on Dam, 09/2000: 117). This conclusion text was cited and reported in Thai newspapers, and it became a clear and concise point for villagers and AOP to cite in their argument. The villagers and their supporters knew that the knowledge about their livelihoods and fisheries was not considered by the government and, therefore, they demanded at the end of the second stage to open up the sluice gates to conduct an impact study which had not been done before.

As I have discussed, the villagers and AOP pressured to open the dam sluice gates to conduct the research so that they could produce knowledge and provide knowledge-based reasoning to further argue for the permanent opening of the dam. The

¹⁴³ From EGAT’s perspective, the fish ladder and fisheries development center, establish to introduce and raise fishes in reservoirs, were mitigation for the fisheries’ problems imposed by the Pak Mun Dam.

villagers knew that knowledge was their last weapon to prove that they were right all along in the struggle, especially after the WCD study had supported their position. Therefore, knowledge about fisheries and villagers' livelihood, which was left out of the initial decision process, haunted EGAT and the Thai government. Villagers and AOP utilized this power of knowledge through three stages of struggle over a decade and their influence was unprecedented in the social movement in the history of Thailand.

Political Freedom

The Pak Mun Dam struggle between the villagers of northeastern Thailand, supported by a network of concerned Thai citizens who included activists, academics, and urbanites alike, had given birth to what *Bangkok Post* called, "Thailand's longest and most organized social struggle" in its history. In addition, it had also given birth to one of the most important elements of democracy—a civil society—better known in Thailand in the context of Pak Mun Dam as *Samacha Khon Chon*, or the Assembly of the Poor. Pak Mun Dam, therefore, is not only a physical symbol of engineering architecture with a one-of-a-kind run-of-river dam type constructed with eight sluice gates, but it is also a symbol of modern social movement for political freedom in the post-1997 constitutional period in Thailand.

There had been projects as bad as the Pak Mun Dam that were part of the state development scheme in Thailand before the Pak Mun Dam. Those projects also caused destruction of villagers' livelihoods elsewhere, but the Pak Mun villagers and AOP were able to defy the Thai state's power and reshape development thinking of the state. This happened because Thailand in the 1990s was a more open and democratic country that

had granted a relative degree of political freedom to its citizens. Without this freedom, Pak Mun villagers would not have been able to demonstrate their grievances, would not have been able to conduct Thai Baan research and define their movement, and would not have been invited by the prime minister to discuss their livelihood issues at the government house. They even influenced the definition of political freedom in the 1997 Thai Constitution, as I discussed in the emergence of a reform movement in the post-1992 era and section 56 of the constitution.

Assets

Both the power of knowledge and political freedom were capable of influencing the Thai state because the knowledge users—villagers and AOP—organized their human and material resources to launch into action. The action now known as the longest and most organized social movement in Thailand did not emerge cheaply. It took villagers, academics, international campaigners, media, and donors, all of which I call *assets*. Human and material resources are sources of influence that villagers and AOP utilized very well in the Pak Mun Dam struggle.

Allocation of Values

Why did these non-state actors engage in more than a decade-long struggle knowing all along their heads were hitting a social and political concrete wall of state, the most powerful entity in their society? If we take the lens of Lasswellian Policy Sciences framework, it was the values that these actors believed in and upheld in their own interpretation of life and social process. Therefore, the whole scene of the Pak Mun Dam

struggle can be interpreted as the struggle that was wrestling with the allocation of values in society. The processes of the allocation of values have long been monopolized by the Thai state. The forces of rural movements and AOP that were centered on the Pak Mun Dam struggle represent the challenge to this monopoly of state in Thailand. Therefore, as analysts, we need to view the problems associated with the allocation of values as the center of these governance processes or social processes. As I have discussed, in influencing the processes of the allocation of values, villagers and the Assembly of the Poor strategically used their knowledge, bravely applied their political freedom, and successfully mobilized their human and material resources—assets.

In sum, the sources of influence of non-state actors in the Pak Mun Dam case are at least three clustered factors that villagers used so well to advance their issues and interests into the Thai political socialization processes. These three factors are (1) the *knowledge* they possessed; (2) their *political freedom*; and (3) the *assets* they used in defending their livelihood and defended for their livelihood. In using these three sources of their influence or power in governance processes of the Pak Mun Dam struggle, villagers and the Assembly of the Poor, which is a loosely structured network of NGOs, illustrated the strength of weak forces as did the International Water Tribunal (IWT) in the case of the Rhine.

Table 7.1. History of the Pak Mun Dam Struggle between Villagers and EGAT

Date	Demands
April 13, 1989	Ubon Ratchathani Natural Resource Conservation Group and Kaeng Sapur Protection Group submitted a paper requesting a reconsideration on the building of the dam to the government, claiming that the dam would cause flooding over Kaeng Sapur, Don Tart Temple, and Kaeng Tana and ecological destruction. “Kaeng” means combination of “rapid” and “cascade” form.
June 16, 1989	There was a walkout by opposition groups in the meeting between ministers, EGAT, and related groups in the case.
February 11-14, 1990	Kong Jiam District and Pibol Mangsaharn District’s residents gathered at Kaeng Sapur to protest and submit a reconsideration paper to Ubon Ratchathani Province’s Governor demanding the government to hold back the building of the dam.
April 30, 1990	President of Chiang Mai University Student Association and coordinators of Natural Resource and Environmental Conservation Committees of 16 institutes demanded the government and EGAT be responsible for mistakes that had been done up until the government permission on the building of the Pak Mun Dam.
May 15, 1990	The government through the cabinet resolution gave permission to start the construction of Pak Mun Dam.
May 16-17, 1990	700 residents gathered at Kaeng Sapur and announced that this cabinet resolution in building the dam was unacceptable.
March 19, 1991	The list of the opponents’ name was submitted to the World Bank office in Thailand.
March 16, 1992	Representatives of Pak Mun and non-government organizations (NGOs) gathered in front of the Cabinet House, calling the minister of the Prime Minister’s Office to be responsible and to stop the blasting of rapids within Kaeng Tana National Park.
August 13, 1992	NGOs claimed that the building of Pak Mun Dam would cause the spread of โรคพยาธิใบไม้ในเลือด disease and would destroy fish species.
February 27 – March 28, 1993	<p>NGOs and around 1000 residents gathered at the construction site of Pak Mun Dam to obstruct EGAT workers and submitted to EGAT three conditions:</p> <ul style="list-style-type: none"> - to survey water level again and make sure that it would not reach the 108-meter level - to promise that fish species would not be lost - to make a clear plan on compensation payment <p>EGAT agreed to follow the conditions on 18 March 1993 and on 20 March 1993 to set up a center to file complains at Amphur (district) Kong Jiam</p>

Date	Demands
October 12, 1993	<p>Assembly of the Poor (AOP, which was called the Committee on Life and Pak Mun Community Restoration back then) submitted a paper outlining 12 demands to the governor of Ubon Ratchathani and calling for the government to make compensation payments for the loss of income from the fishery for two years, counting from the beginning to the end of construction of the dam, 35,000 baht a year.</p> <p>The negotiation went on until the first payment was paid in June 1994: 2140 names of residents were submitted, the total sum of the compensation payment was 13.971 million baht (the lowest was 8 baht and the highest was 96,079 baht). It was later adjusted to 10,000 baht more for each and the total sum of the payment was increased to 27.57 million baht.</p>
December 15, 1993	The Committee for Assistance (Compensation) Consideration to Project-Affected People was set up by the Prime Minister Office's order No. 205/1993.
October 14, 1994 – March 23 1995	Around 1,000 residents seized the administrative office of Ubon Ratchathani province and called for EGAT to call off the previous regulations on compensation payment. The demand was to make payment to 2,390 residents for 35,000 baht each for three years. The negotiation ended when the government set up a committee to give assistance to the development of a fishery, chaired by Director-General of Fishery Department Plodprasop Suraswadi, with NGOs and residents as members. 90,000 baht was agreed upon, 30,000 in cash and the other 60,000 came in a long-term fishery development cooperation form.
March 23, 1995	The protesters were satisfied, stopped the protest, and promised no more protest. On the last day of the protest (23 March 1995), Minister Korn Dhaparangsi of the Prime Minister's Office witnessed activities to mark the end of the Pak Mun Dam protest. (After the protest, there were still many demands on payment submitted to the government until the last payment was paid on 25 January 2000, which made the total payment of 489.54 million baht to 6,176 residents.)
December 10, 1995	Assembly of the Poor (AOP) was established by various NGOs.
April 10, 1996	AOP submitted a paper demanding that the government resolve the problems that had occurred due to the building of the dam, with one condition that was agreed upon by both sides that there would be no further demand for compensation payment.
January 17-19 1997	<p>AOP called the government to assist in solving 121 cases of problems from different groups. For some from the Pak Mun Dam, the government was called to allocate land for agriculture (20 rai [~8 acres] per family) for residents (altogether 3,301 families) whose fishery had to stop because of the building of the dam. Three negotiation sessions were held with the government—29 April 1997, 2 September 1997, and 21 April 1998—with these conclusions:</p> <ol style="list-style-type: none"> 1. In principal, there would be no compensation made backward for the dam that had already been built. 2. Agricultural-related cases would be analyzed case by case by committee for the approval from the Ministry of Agriculture.
March 23, 1999 – May 10, 2000	AOP seized part of construction site and built approximately 400 temporary shelters, requesting the government to compensate for their opportunity cost of 15 rai per family. A request was also made for protection from disease associated with water parasites along the Mun River.

Date	Demands
May 10, 2000	AOP submitted a request exclusively asking the government to open the sluice gate for one year so fish could breed.
May 15, 2000	AOP seized Pak Mun Dam's generator plant, stopping any operation by its officials and workers in order to negotiate with the government.
July 25, 2000	Government resolution dated 25 July 2000 ordered all eight gates to be opened for four months (May to August) so fish could travel upstream to breed. They also set up a committee to oversee the research project on fishery resources and ecological rehabilitation of the Mun River.
April 3, 2001	AOP submitted the following demands; <ol style="list-style-type: none"> 1. to permanently open all eight sluice gates; 2. to resuscitate all cascades and natural resources of the Mun River; 3. to revive life and community affected by the building of the dam by <ul style="list-style-type: none"> - compensating an 8-year opportunity cost for the fishery (576,000 baht per family), - compensating an 8-year opportunity cost for using natural resources along the river (432,000 baht per family), - paying an 8-year water consumption cost for not being able to use water from the river (9,600 baht per family); 4. to offer life-long healthcare for free to those affected by the building of the dam; 5. to set up a community center as a place to exchange intergenerational knowledge after the original place was obstructed by the building of the dam; 6. to offer debt delay and relief to those families affected by the building of the dam; 7. to compensate for damages caused by the fire of November 2000 calculated from real damages; and 8. to dismiss all law suits against residents.
June 14, 2001 – November 4, 2002	EGAT opened all sluice gates according to the government resolution of 17 April 2001 and 11 December 2001
December 20, 2002	Prime Minister Thaksin Shinawatra met with 30 representatives of Pak Mun villagers to hear their own voices.
January 14, 2003	Prime Minister Thaksin Shinawatra made the decision to uphold the cabinet's early resolution to open the dam gates four months per year. That was the final decision for the Pak Mun Dam case.

NOTE: Pak Mun Dam was first approved on its disciplines by the cabinet on April 8, 1989. The cabinet later gave permission to start its construction on May 15, 1990.

Source: A document (in Thai) obtained from the Southeast Asia Rivers Network (SEARIN), the Assembly of the Poor (AOP), and the Electricity Generating Authority of Thailand (EGAT). Translated by Sirithon Wairatpanij and myself.

Table 7.2 Compensation Rules for the Loss of Fishing Income

Stages	Rules for compensation	Number of villages	Residents (cases)	Total amount (million baht)	Comments
First	<p>Qualification for compensation:</p> <ul style="list-style-type: none"> - must be a resident of affected area - compensation request submitted before 11 April 1994 - ownerships of fishery equipment <p>Rate in compensation calculated from</p> <ul style="list-style-type: none"> - amount of fishery equipment occupied - ratio of effects studied by academics - level of fishery considered by reps of fishery and reps from villages 	36	2,140	13.70	Resolutions of the cabinet-assigned committee dated June 2, 1994; highest received 96,079 baht, lowest received 8 baht
Second	Every resident would receive 10,000 baht, and lower for those who had been assisted before (first assistance above)	36	2,140	27.57	Resolution of the Committee 10/1994 dated October 23, 1994

Stages	Rules for compensation	Number of villages	Residents (cases)	Total amount (million baht)	Comments
Third	No more than 90,000 per case. Those who wanted assistance had to submit paper by 17 February 1995 and be residents of Amphur Pibol Mangsaharn or Ampur Kong Jiam or Amphur Sirindhorn and qualified as fisherman based on the following: (1) licensed on fishery, (2) possess fishery equipment, (3) expertise in using equipment, or (4) knowledge in boat rowing, or (5) able to swim, or (6) know fish species, or (7) had fishery as an occupation, and (8) certified by reps of fishermen and 7 in 10 officials that the resident is a fisherman - 90,000 will be paid, 30,000 in cash and 60,000 in a co-op form for career development (which cannot be withdrawn within six years)	55	3,966	356.94	Resolution of the committee on agricultural and fishery development for the affected residents 5/1995 dated May 3, 1995, and the cabinet resolution dated June 27, 1995 (and again of 9/1997 dated September 26, 1997)
Fourth	60,000 baht per case to those qualified to the rules explained in the third stage (above) but submitted paper after 17 February 1995 and would be held final	55	6,176	489.54	Resolution of the committee on agricultural and fishery development ...of 1/1999 dated April 19, 1999 and resolution of the cabinet meeting dated 25 January 2000

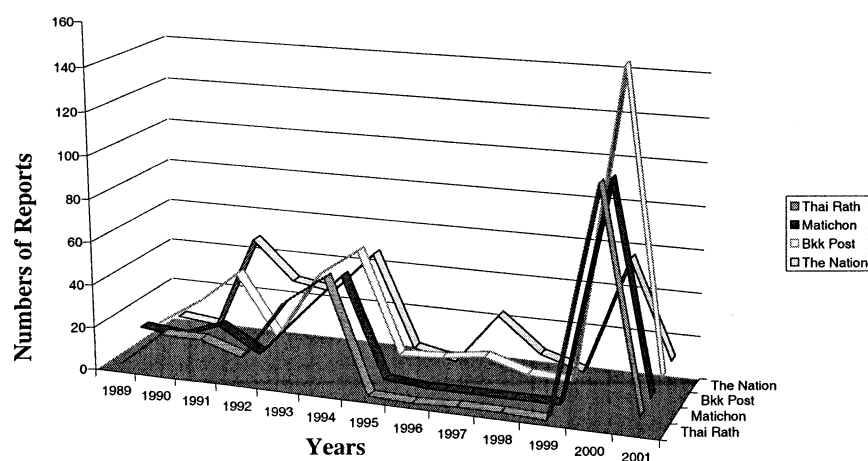
Source: EGAT's document titled *Information and Opinions toward the Assembly of the Poor's Demands on the Case of the Pak Mun Dam*, which was presented to the Central Committee in Resolution Findings for Assembly of the Poor published on June 12, 2000.

Note: 1994 currency exchange rate was US \$1 = 25 baht.

Table 7.3. Media Reports of Pak Mun Dam Struggle in Four Major Newspapers (1989-2001)

Year	<i>Thai Rath</i>	<i>Matichon</i>	<i>Bangkok Post</i>	<i>The Nation</i>
1989	2	13	9	6
1990	18	11	21	4
1991	18	18	37	48
1992	12	7	9	30
1993	39	28	40	27
1994	53	48	54	47
1995	1	2	7	4
1996	0	0	8	0
1997	1	0	11	24
1998	1	0	5	8
1999	0	0	4	2
2000	106	103	148	57
2001	7	8	11	12

Chart 7.1. Media Report of Pak Mun Dam Struggle (1989-2001)



Source of Data: Ishida (2002: 84).

Table 7.4. Sources of Influence for State and Non-State Actors

Factors	Actors	N	Mean	Std. deviation	t	Sig. (2-tailed)	Mean Diff.
Scientific knowledge	State	8	8.13	3.044	-.025	.981	-.029
	Non-State	39	8.15	2.601			
Votes	State	8	5.00	3.464	.716	.491	.949
	Non-State	39	4.05	3.170			
Media and publicity	State	8	6.13	3.441	.369	.721	.484
	Non-State	39	5.64	3.082			
Independent research	State	8	7.13	2.100	-.245	.811	-.208
	Non-State	39	7.33	2.609			
Coalition or network	State	8	7.50	2.000	-.524	.610	-.423
	Non-State	39	7.92	2.432			
Demonstrations	State	8	4.50	3.780	-2.656	.011	- 3.167
	Non-State	39	7.67	2.923			
Financial capital	State	8	3.75	3.694	-.819	.434	- 1.147
	Non-State	39	4.90	3.177			
Public understanding	State	8	7.13	2.748	-.490	.635	-.516
	Non-State	39	7.64	2.529			
National law	State	8	5.00	3.207	.206	.841	.256
	Non-State	39	4.74	3.185			
International law	State	8	5.13	3.944	.170	.869	.253
	Non-State	39	4.87	3.238			

Table 7.5. Perception of Knowledge as Source of Influence

Key influential factor	esponses	Actors	
		% of State (n)	% of Non-state (n)
Knowledge	1	12.5% (1)	5.1% (2)
	2	0% (0)	% (0)
	3	0% (0)	5.1% (2)
	4	0% (0)	0% (0)
	5	0% (0)	7.7% (3)
	6	0% (0)	2.6% (1)
	7	12.5% (1)	2.6% (1)
	8	0% (0)	15.4% (6)
	9	37.5% (3)	15.4% (6)
	10	37.5% (3)	46.2% (18)
Total		100.0% (8)	100.0% (39)

Note: Responses scored 1 = least influential to 10 = most influential.

Chapter 8

Lessons and Conclusion

The cases from the Mekong and the Rhine discussed and analyzed in this dissertation add empirical evidences to the literature addressing emerging patterns of institutional transformation at multiple layers of global environmental governance. To fully understand institutional transformation at multiple layers, we need to understand the institutional drivers that originate within the state-centric system and those institutional drivers originating from outside the system. This dissertation adds empirical evidence to the literature by examining the forces shaping institutional transformation from outside the state-centric international systems. The dominant theories of international relations have been addressing issues associated with state-centric international systems. As discussed in chapter 2, these dominant theories cannot sufficiently explain how and why institutional transformation (or adaptation)¹⁴⁴ occurs at the international layer and what forces are behind shaping this institutional order of the world.

To explain institutional transformation at multiple layers, I analyzed and explained four cases of the Rhine water pollution clean-up regime and one case of dams in the Mekong River Basin. In this chapter, I will synthesize what I learned from both the Mekong and Rhine cases. In so doing, I will discuss the lessons I learned in both theoretical and policy dimensions. Then I will offer my ideas about the future direction of research to explain institutional transformation.

¹⁴⁴ I have used “institutional transformation” interchangeably with “institutional adaptation.”

What We Knew about Institutional Transformation before This Dissertation

The literature that is addressing issues associated with international relations theories has made significant effort in explaining how institutions emerge and shape governance processes at the international layer. The literature particularly dealing with international environmental regimes have addressed underlying theoretical issues ranging from regime formation and effectiveness to regime design (Mitchell, 1994; Keohane and Ostrom, 1995; Young, 1999). As I discussed in chapters 1 and 2, we know from the literature that at least in the global environmental governance arena, states alone were not the only key actors. Non-state actors have made significantly positive advances in addressing global environmental issues and advancing regime formation and effectiveness in global environmental governance (Princen and Finger, 1994; Lipschutz and Mayer, 1996; Wapner, 1996; Auer, 2002). However, there is a lack of theories to explain how institutions transform or adapt to changes.

From the practitioners' front, World Bank, in its *1999-2000 World Development Report*, opened its introduction chapter with the title "New Directions in Development Thinking," highlighting the changes institutions that are designed to govern issues associated with development face in the era of global transformation. It then reports that there is a need for new institutions in the world to solve global problems, stating:

The events of the 1980s and 1990s have shown that existing institutions are far from sufficient to address the economic and environmental issues of the future.¹⁴⁵

¹⁴⁵ See p. 32 of the *World Development Report 1999/2000*.

This assertion mirrors the argument of the International Water Tribunal (IWT) complaining of insufficient capacity of then existing institutions to solve the problem of the Rhine water pollution (chapter 5). The 1999-2000 World Bank report was not only exclusively reporting that the world did not have enough institutions to address development problems but it also was implicitly reporting the need for the old institutions to adapt to changes. As I have discussed theoretical and policy puzzles of this dissertation in chapters 1 and 2, we know that institutions need to adapt to changes and thereby transform over time.

In a study on institutional adaptation in the cases of East Rapti River Basin in Nepal and Fuyang River Basin in China, Molden et al. (2001: 73) report that

an important feature of a well-functioning set of water management institutions is the ability to adapt to changes. We argue that to meet increases in demand over time, institutions must change their focus from development of infrastructure, to better utilizing and conserving water resources, then to improving allocation and regulation of water resources. Institutions must be dynamic entities that change with changing phases of development of the basin.

Their findings were reported as preliminary at the international workshop organized in South Africa in October 2000 on the topic “Integrated Water Management in Water-Stressed River Basins in Developing Countries: Strategies for Poverty Alleviation and Agricultural Growth.” The workshop was funded by the German Foundation for International Development and attended by 80 practitioners and scholars from 20 countries. At the same workshop, Shah et al. (2001: 89) presented a paper on institutional “leapfrogging” hurrying adaptation! Shah et al. (2001) first posed their puzzle:

Many developed countries such as the USA, France, and Australia have evolved highly advanced and resilient institutional regimes for Integrated River Basin

Management (IRBM); but this has taken decades or even centuries of gradual change to evolve. An issue which has held great appeal to policymakers, donors and social researchers is: might it be possible for the developing countries of today to do an “institutional leap-frog,” as it were, to quickly approach a stage at which developed-country basin institutions find themselves today. (p. 89)

Then Shah et al. (2001) answered their puzzle as follows:

Problems that evolved basin institutions in the developed world have successfully resolved ... are not the uppermost in the priorities of many developing country policymakers and people There is thus the problem of “contextual fit.” This does not mean that the experience of river basin management in the developed world is irrelevant; but it does mean that uncritical imposition of developed-country institutional models in developing-country river basin contexts may prove dysfunctional or even counter-productive. What it also means is that we need to take a broader view of institutional change (pp. 89, 110-111)

Finally, Shah et al. propose:

If institutional change is about how societies adapt to new demands, its study has to deal with more than what just the governments do; people, businesses, exchange institutions, civil society institutions, religions and movements—all these must be covered in the ambit of institutional analysis

While the practitioner, World Bank, was rather concerned with the need for new institutions, scholars were addressing the problems associated with the old institutions to adapt to changes. From a legal and policy perspective, Wescoat (1996) reviews a three-century journey of multilateral water treaties in an article titled “Main Currents in Early Multilateral Water Treaties: A Historical-Geographical Perspective, 1648-1948,” published in the *Colorado Journal of International Environmental Law and Policy*.

Wescoat (1996) concluded that:

The lessons of the first three centuries of multilateral water law and policy are: (1) to build specialized water institutions with meaningful powers and leadership; (2) to concentrate on incremental economic, environmental, and political steps toward integrated management; and (3) to be simultaneously open to and wary of the “breakthrough” opportunities that arise in the broader international context and to approach such opportunities in an historically informed, critical, yet constructive way. (p. 74)

In this dissertation, what we have observed in the case of the emergence of the Rhine Action Program after the Sandoz accident is in line with the third point Wescoat concluded above. This entails that institutional transformation can occur when relevant issues, interests, and actors engage in an appropriate time and context of social change. This is what happened in the Rhine when it transformed from having a legally binding nature to the program-oriented Rhine Action Program.

We know from the evidences and findings of scholars, such as the ones presented above, that institutions need to adapt to changes, and some do adapt to changes. However, what we do not know yet is *how* institutions adapt. In a major review of the study of commons, Ostrom et al. (2002) reports:

The case-based research makes it clear that effective resource management institutions adapt to variation and change in the resources they manage and to changes in the resources user group... How institutions adapt has not been received much systematic research attention. Institutional adaptation and flexibility are likely to become increasingly important for common-pool resource management because of increasing rates of change in the stocks of some resources and in the institutional environment, particularly at the international level. (p. 466)

This dissertation starts out with an informed assumption as discussed in chapters 1 and 2 from the literature that non-state actors from the outside, state-centric, international systems are influencing institutional transformation in the Rhine and Mekong river basins. As such, I explored and analyzed the sources of the power of these non-state actors in the cases of four water pollution clean-up regimes in the Rhine and one case of dams in the Mekong. I now will turn to the cases I have analyzed in preceding chapters and discuss what lessons we learned from the cases in the Rhine and Mekong to understand what forces are influencing institutional transformation.

Synthesis and Summary of Findings

This dissertation takes off from the ground that the institutional order of the world is in transformation. On this transforming landscape of international order of the world, the central question was asked to locate the origin of the power of non-state actors that influenced institutional transformation processes. In theoretical terms, this dissertation traces the causal links and institutional drivers that collectively cause institutional transformation by analyzing non-state actors in multiple layers of environmental governance. In my analysis, I applied the Issues, Interests, and Actors Networks (IAN) framework that I have developed to trace and deconstruct these governance processes.

In so doing, I posed three related research questions in chapter 1 to guide my analysis of institutional transformation in the cases of the Mekong and the Rhine. First, *what is the origin of the power of non-state actors who influence institutional transformations in the Mekong and the Rhine?* Second, *why and how do non-state actors influence the state-centric regime to transform, and what are the consequences for the authority, policy, and law of the state?* Finally, *what do we learn from empirical evidences of the Mekong and the Rhine regime transformations to construct a theoretical foundation for institutional adaptation by which states and non-state actors act together to achieve projected goals?*

Origins of the Power of Non-State Actors

From a widely analyzed and reported case of the Rhine River pollution cleanup regimes, I learned that both states and non-state actors are cooperating in implementation of various policy programs because states alone had failed to deliver production

processes of public good—a cleaner Rhine. The successes were made with institutions that facilitated the cooperation between states and non-state actors as we observed in the case of the Rhine Action Program. As in the case of the Rhine, especially the emergence and influence of IWT and the emergence and successes of the Rhine Action Program analyzed in chapter 5, the Mekong River Basin regime is also being challenged by emerging non-state forces, as we analyzed the emergence and influence of the Assembly of the Poor (AOP) and a range of non-state actors in chapters 6 and 7.

Holding the power of states constant, this dissertation asks the first question: What are the sources of power of non-state actors to influence institutional transformation or adaptation of state-centric institutions? To answer this question, I traced the processes of governance in the Rhine and Mekong river basins and deconstructed these processes into issues, interests, and actors. By examining a dynamic network of issues, interests, and actors, I am able to trace further how issues are evolved, how interests are framed, and how actors are value oriented in engaging in governance processes. There are at least three factors that serve as variables to explain the sources of the power of non-state actors in the cases of the Rhine and the case of Pak Mun Dam in the Mekong. They are *knowledge*, *assets*, and *degree of political freedom* of non-state actors. These factors interdependently shape in a way that I would preliminarily report as a mechanism of institutional transformation.

Mechanisms of Institutional Transformation

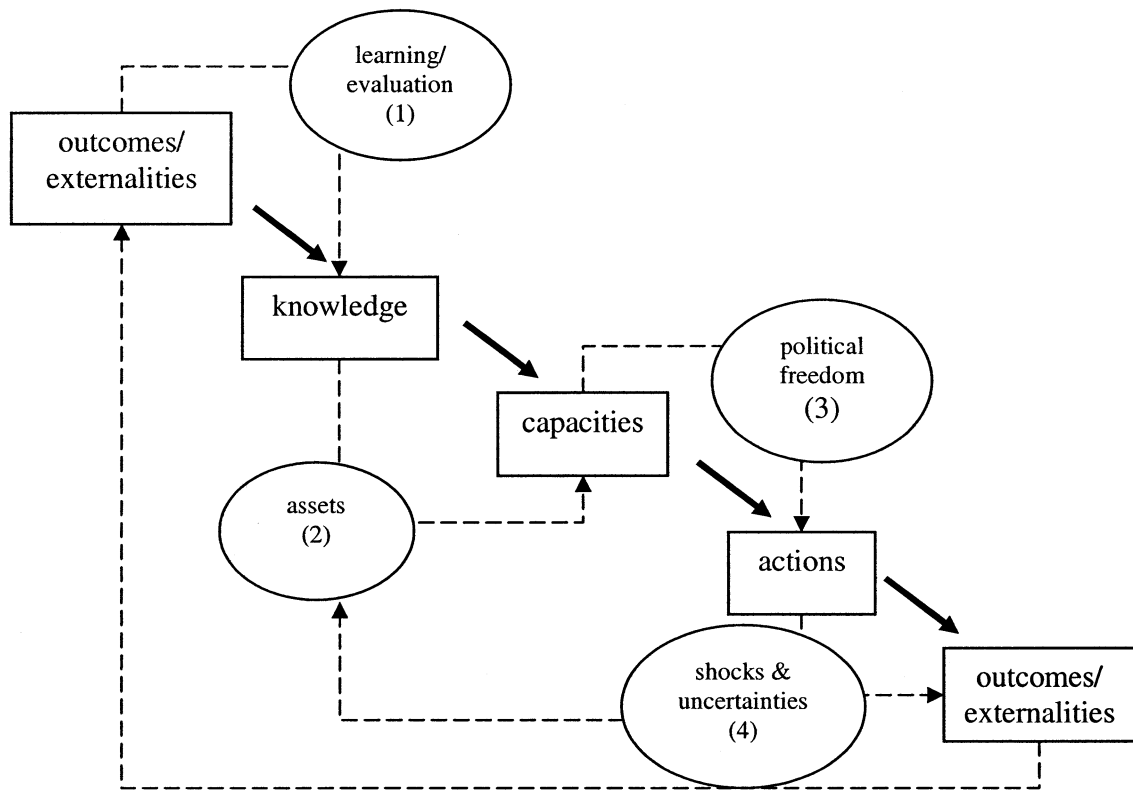
To understand the sources of the power of non-state actors, we have to trace the ways by which non-state actors influence governance processes in the cases of the Rhine

and Mekong. As we have observed and analyzed in the cases, we can summarize our finding that the origin of the power of non-state actors can be explained by analyzing actors' *knowledge*, their *assets*, and the *degree of political freedom* they have. Using Figure 8.1 as a conceptual map of the mechanism that shows the location of the power of non-state actors, I want to unpack the findings I stated above from my research.

Figure 8.1 is a conceptual map I drew based on my findings from the analyses of the cases in the Mekong and the Rhine. It shows how non-state actors produced knowledge, and how knowledge is transformed into capacity, and how capacity is turned into action to influence institutional transformation. This conceptual map, in a way, represents the bottom arrow referred to as “Learning: Knowledge Production and Utilization” in the IAN Framework (see Figure 1.1). This map is a conceptual interpretation of the findings from my research and can complement the IAN framework to analyze how learning or knowledge production and utilization occur in social processes. It, therefore, can become a part of the IAN framework.

Meanwhile, this mechanism helps me summarize how the stated three variables serve as sources of power for non-state actors. I call this mechanism a “conceptual map” rather than a “conceptual model,” because a model would require sufficient theory to support its assumption in drawing the map. I have not made any assumption about a particular set of theories in drawing this map and therefore it would be premature to call it a model. For this reason, I present this mechanism as a conceptual map that explains the location of the origin of the power of non-state actors.

Figure 8.1 A Mechanism of Institutional Transformation



Outcomes and Externalities of Action

Every human action produces both outcomes and externalities¹⁴⁶ as indicated in IAN framework Figure 1.1 in chapter 1. These outcomes and externalities force actors to evaluate and learn to their respective degree. There are at least two types of outcomes (expected and unexpected) and two types of externalities (positive and negative). An expected outcome is the outcome clearly defined as an objective of an action. An unexpected outcome is the outcome that does not meet the stated objective. Among the two types of outcomes, the unexpected outcome will more likely trigger actors to evaluate and learn—knowledge production. For instance, if I put up a light pole on the

¹⁴⁶ Meadows et al. (1972) refer to externalities as “side-effects” in their “Limits to Growth.”

sidewalk in front of my house (action), the expected outcome is that there will be light during the night so I can see when I walk at night. An unexpected outcome might be that the light bulb burns out often and is expensive and time-consuming to replace so frequently. This unexpected outcome will lead me to study or evaluate what to do with the light pole, whether to dismantle the light pole or search for and find a better type of light bulb that will work longer. Thereby, I am learning and taking action to accomplish what I plan to achieve. By achieving what I planned, it can be said that I applied all my power in this process.

Positive externalities are those gained from an action that is neither an expected nor unexpected outcome. For instance, a positive externality of my action to put up a light pole is that my neighbors also like to walk at night and they benefit from my action. Negative externalities are those externalities that cause negative impact from an action. In my light pole example, a negative externality might be that the light bulbs consume too much electricity and if there are many people like me putting up light poles, we, as a community, increase energy consumption and that may contribute to an unsustainable use of resources. It may lead to damming a small river in my county or province to generate electricity to meet the increased demand, which may end my other neighbor's leisure-time activity of both fishing and canoeing in that river. This phenomenon of human action inevitably producing both outcomes and a chain of externalities from the very first action we take (if we can ever identify it) as a society set a momentum of our beings on this planet as a political community, and the processes that have kept this momentum alive might be referred as what Lasswell and McDougal (1954) call "social processes" and what I would, in this dissertation, call governance processes.

Knowledge

In the case of the Rhine, there are two types of externalities in addition to the projected outcomes of human actions associated with the Rhine. For instance, the intensification of industrialization in Europe produced the projected goal of economic growth and development. At the same time, industrialization produced both positive and negative externalities. The positive externalities are such benefits as how industrialization helped Europe to eventually maintain political stability and peace. The negative externalities include the pollution generated from the industrialization and the death of the ecosystem from the pollution, which also caused the Rhine to be labeled the “sewer of Europe,” as we discussed in chapters 3, 4, and 5. The information about the impact of negative externalities was produced and used to influence the institutional transformation in the case of the Rhine by the state and non-state actors such as the Government of The Netherlands and IWT.

Similarly, in chapters 6 and 7, the action of constructing the Pak Mun Dam produced both electricity (outcomes) and externalities—the destruction of villagers’ livelihoods (negative externalities). The fact that the fish ladder did not work was the unexpected outcome. The negative externalities forced both the villagers and Thai government to conduct research and learn how they might mitigate those negative externalities. For villagers in the Pak Mun case, the impacts of negative externalities from the Pak Mun Dam is so severe that they were motivated to challenge the state to get back their normal livelihood that they had had before the dam. We observed that both the

villagers and government engaged in a final battle of knowledge in the case of Pak Mun Dam, forced by the impacts of negative externalities.

In Figure 8.1, the segment that shows knowledge production is segment (1), an oval box labeled “learning/evaluation” and connected by the arrow from “outcome/externalities” to “knowledge.” This knowledge production mechanism is the first segment in what non-state actors such as IWT in the Rhine and AOP in the Pak Mun Dam case used as a first step to influence decision making in governance processes. Therefore, knowledge is considered and used as an influential factor by actors. I call it *knowledge* production not *information* production because the intention of production of information about water pollutant chemicals in the case of the Rhine or the fisheries in the Pak Mun Dam is politically framed and, therefore, that package of information is knowledge not just information or facts or data.

Assets

Having knowledge does not make actors automatically influential. Actors have to have both human and financial resources to turn knowledge into a capacity. In the Rhine case in chapter 5, IWT had scientists who were both capable of knowledge production and at the same time capable of organizing IWT. Organizers of IWT were able to raise funds and motivate volunteers to join in the work of IWT. For instance, scientists who conducted Fliessende Welle research and international legal, social, and environmental experts who sat in the IWT jury were all resources that the International Water Tribunal Foundation (hereinafter Foundation) utilized very well in shaping their influence and challenging existing international and national laws of riparian states in the Rhine River

Basin. These human and financial resources are, what I would call, *assets* that enable non-state actors in the Rhine to turn their knowledge into capacities, which were then ready to turn into action.

In Chapters 6 and 7, the Southeast Asia Rivers Network (SEARIN), AOP, other local and national non-government organizations (NGOs), and their supporters were key human resources as well as volunteers who contributed their working hours. The villagers and AOP utilized these human and financial resources (assets) to turn their knowledge into capacity to be able to take action. This mechanism of using assets to influence governance processes by turning knowledge into capacity is represented by the oval box (2) labeled “assets,” which is connected from “knowledge” to “capacity” by the arrow. For instance, AOP and villagers used information about their livelihoods and the findings of the World Commission on Dams to distribute to media both inside Thailand and on the Internet and the international NGO community. All of these were resources for them, and they utilized these assets to both nationalize and internationalize their struggle as we observed in the second stage of the Pak Mun Dam struggle in chapter 7. The meaning of assets here is closer to the meaning of social capital rather than wealth, although wealth can be a part of assets. To summarize, both human and material resources, including money, are assets that the Pak Mun Dam villagers utilized in turning their knowledge into capacities.

Political Freedom

Actors, however, may not be able to turn their capacities into action if they have no political freedom or if the rules and norms forbid them to take action. In the case of

the Rhine, if the Rhine riparian countries had limited political freedom that forbade actions taken by the Foundation and other NGOs, the non-state actors might not have been able to organize action like IWT did. However, we observed that the Foundation and NGOs used their political freedom in accordance with the Dutch laws that permit them to organize and take action. At the same time, the media was able to exercise their freedom to report the problems associated with the Rhine pollution and their livelihoods. Citizens in Europe were able to read and express their opinion by joining in the action of IWT. Meanwhile, the International Commission for the Protection of the Rhine (ICPR) was politically able to transform itself from a legally binding regime to an action-oriented program taking the occasion and context of the Sandoz accident, which raised the urgency to address the Rhine pollution more effectively.

In the case of Pak Mun Dam, villagers and AOP used their political freedom to stage protests in Bangkok and at the dam site, to organize NGOs' activities, to produce press releases and information that supported their arguments. It is legitimately questionable if the Pak Mun Dam had been built in the 1970s or earlier, villagers probably would not have had the political freedom to address the problems of Pak Mun Dam as they were able to do in the 1990s. In fact, they were even able to participate in the constitutional reform processes, as we observed in chapter 7, and were able to influence the change in constitutional law by way of getting Section 56 added to the 1997 Thai Constitution.

In Figure 8.1, box (3) labeled as “political freedom” and connected from “capacities” to “actions” represents this mechanism. Box (3) is very often the case where actors' knowledge and capacities cannot turn into the action they desire to take. This

segment of the mechanism is perhaps more complex than the previous two segments because the nuances of political freedom are embedded in human institutions. We must understand that behind the political freedom lies institutions. Institutions control degree of political freedom by way of laws against certain groups of people or by way of norms such as cultural and gender discrimination or by way of practical constraints in decision making. Analysts must not only look at the degree of political freedom as defined and granted by law but also as the cultural, political, social, and economic structure and norms of political society.

In the case of Pak Mun Dam, Prime Minister Thaksin Shinawatra possibly wanted to help villagers and open the dam gates in accordance with the recommendation of the government-commissioned study conducted by the Ubon Ratchathani University. However, he was politically unable to make the decision on behalf of villagers. Although the Prime Minister has authority to make decisions, it is politically infeasible for him to apply his authority to make a decision in favor of the villagers. It can be inferred from the facts (that he went to the protest camp near the government house to offer lunch to protesters and that he met with villagers at the government house, which was unprecedented in Thai history) that the prime minister at least was sympathetic to villagers. In fact, as reported in Bangkok on January 16, 2003, he stated that he had made the final decision about Pak Mun Dam in favor of the majority of the Thais as opposed to the minority—the Pak Mun villagers.

In both open and closed societies, political freedom is perhaps the most expensive source of power that can either restrict turning knowledge and capacity into action or completely forbid them as in the case of authoritarian or dictatorial regimes. In open

societies, lobbying firms and citizens' advocacy organizations are good examples of how political freedom is treated as an expensive commodity. For instance, in the Mekong River Basin, the donors that are funding local NGOs such as SEARIN in Pak Mun Dam struggles are basically buying political freedom to influence decision-making processes so the donors can shape actions and thereby the outcomes. In an authoritarian or dictatorial system, political freedom is controlled by the central authority. It can cost a citizen up to a life-long jail sentence, or he or she can be forced into exile for exercising political freedom.

Shocks and Uncertainties

Even if actors have knowledge and capacity, and take action, actors' actions may face shocks and uncertainties that can alter outcomes and externalities. The shocks and uncertainties may alter the outcomes they project to achieve in either direction of expected or unexpected. For instance, in the case of the Rhine, the Sandoz accident disrupted the work of ICPR in implementing objectives set out by legal conventions for good reason. Because the legal conventions were not producing the expected outcome, a cleaner Rhine, I put it as "for good reason," because the Sandoz accident opened up the situation for alternative actions. I reported that the former ICPR Secretary Huisman called the Sandoz accident a "gift from the heaven," conveying that the disturbance to ICPR regime's actions was a good reason in that case as they were "shocked" into the Rhine Action Program that produced the expected outcome.

In addition, shocks and uncertainties can alter the values of assets and physical structures of assets. It may then open up political processes to resolve new issues that

emerge after shocks or that existed before the shocks but were too politically immature to be recognized in the agenda of decision making. As we have observed again in the case of the Rhine, the Sandoz accident damaged the physical structure of the Rhine and thereby decreased the value of the Rhine River. Therefore, shocks and uncertainties cannot be underestimated in governance processes.

It is important to note that all segments from (1) to (4) of this mechanism of institutional transformation occur in a simultaneous fashion rather than in stages. For conceptual construction and analytical purposes, I dissect them into segments of mechanism. As actors go through this mechanism and influence governance processes by taking actions, this mechanism also shapes to transform their preferences. Therefore, actors' learning processes transform their preferences in governance processes. Consequently, actors' preferences change over time as they are shaped by the knowledge, assets, and degree of political freedom. For instance, in the case of the Rhine, riparian countries preferred economic growth and development over the environmental issues during the early stage of industrialization. However, after they learned about the Rhine pollution, their preference on environmental quality, especially the quality of the Rhine, was considered as an issue in the agenda of the international political arena and pushed by the Dutch government, as discussed in chapter 5. Meanwhile, citizens' preferences were also shaped by the global environmental awareness facilitated by the media and non-government actors such as Greenpeace and IWT. The establishment of the Flood Plain Institute in Rastatt, Germany, for instance, was influenced by the knowledge of Dr. Wenger, a founding member, who learned the need for such an institute after attending the 1972 Stockholm Conference. The industries' preferences were also shaped by not

only the knowledge about the Rhine pollution but also their technological and financial assets that enabled them to shift resources to reduction of pollutant chemicals into the Rhine.

It is also equally important to understand that in each segment, this whole mechanism of institutional transformation occurs simultaneously. For instance, to act for learning or evaluation, segment (1), there had to have been knowledge that made actors realize the need to evaluate. They have to have assets to perform an evaluation to produce new knowledge. Meanwhile, this evaluation process has to be politically feasible to be allowed to occur.

Finally, it must also be understood that in order for the knowledge, assets, and political freedom to become a powerful force for non-state actors, they have to be compositely applied in dynamic governance processes in which all relevant IANs are connected across multiple layers. The essence of the Rhine Action Program is that it allows all relevant IANs to play in their respective roles. Similarly, Thailand, after the Cold War and especially after enactment of the 1997 Thai Constitution, opened up the participation of non-state actors and citizens in social processes. The 1997 Thai Constitution even requires the government to seek relevant IANs for development project formation and implementation. From the cases analyzed, I find that the institutional transformation of a state-centric international system can likely occur when relevant IANs are connected to each other and linked across multiple layers.

Theoretical Implications

As I stated in my theoretical puzzle in chapter 1 and in the theoretical review of this dissertation in chapter 2, I did not conduct this dissertation research to test a theory. Testing theories is useful when the existing theories are sufficient enough to explain the institutional transformation. Because there is a lack of theories to explain institutional transformation, this dissertation research was conducted with the intention to establish an empirical foundation for building theory—the theory of institutional transformation or institutional adaptation. Taking rule-based and power-based theories that rigorously explain the behavior of state-centric international systems and grounding the work in transformationalists' explanation of the impact of globalization on the institutional order of the world, I made an assumption that non-state actors from outside the state-centric international system are influencing institutional transformation at multiple layers of global environmental governance.

What I have illustrated by way of the conceptual map in the previous section is a mechanism by which non-state actors influenced institutional transformation in the Mekong and the Rhine. This map shows us the locations of the sources of the power of non-state actors who influenced institutional transformation as we observed in the cases from the Mekong and the Rhine. From my research findings, there are three theoretical implications: (1) factors that explain the source of the power of non-state actors have to be composite variables interdependently serving as the force and form of the power of non-state actors to influence institutional transformation; (2) treating actors (either state or non-state actors) as unitary actors in the analysis of multilayer environmental governance can fall short of explaining the full picture of global environmental

governance; (3) future research to understand and explain institutional transformation has to pay more attention to the actors' world of value production and utilization. I will elaborate further on these implications below.

Composite Factors with Multiple Theories

First, it is most unlikely that we will discover one factor or one theory that can explain the complete picture of the power of non-state actors. Consequently, to investigate and explain institutional transformation, we need analytical frameworks that draw upon multiple theories from multiple disciplines. In this dissertation, I have applied IAN framework that draws upon value-based, power-based, and rule-based theories. All of these theories come from the family of new-institutionalism, rational-choice, and behavior theories that serve as the foundation of both Policy Sciences approaches and the IAD framework. I then used methodologies to investigate parameters that define key elements of the IAN framework—issues, interests, and actors. These methodologies I applied are open-ended, semi-structured, and structured interviews that are widely used in disciplines of anthropology, law, political science, and sociology. In addition, I applied conventional participatory observation, archival document search, and literature reviews of the cases. From my research experience and process of developing the IAN framework, I learned an important lesson: analysts who conduct research to explain phenomena of the puzzle he or she poses to test or to build theories must first understand and distinguish what framework, method, theories, and models are in their intellectual endeavors.¹⁴⁷ This distinction among these sets of analytical terminology is important,

¹⁴⁷ For distinction among them, see Ostrom (1999: 38-41).

especially when scholars have to deal with multiple factors, theories and multiple levels of analysis.

Classifying Actors

Second, it is evident in literature and from this dissertation to conclude that one of the reasons why the dominant international relations theories fall short of explaining a full picture of the institutional order of the world is because these theories focus on explaining behaviors of states and treat states as unitary actors, especially in international environmental treaty making and implementation processes. This dissertation research adds empirical evidences to the literature that highlights the important role of non-state actors in international treaty making and implementation processes (Lipschutz and Mayer, 1996; Wapner, 1996; Verweij, 2000; Auer, 2002).

Furthermore, from tracing evolution of issues and interests associated with the Rhine water pollution and the consequences of Pak Mun Dam, another important theoretical implication from this dissertation is that we need to classify actors among non-state actors. There are generally for-profit and not-for-profit actors that we can categorize at the outset. However, actors can be further categorized based on issues or perspectives and based on interests. Depending on the analysts' puzzles, theoretical orientation, and aim of research, classification of actors may vary in different cases. For instance, in the case of the Pak Mun Dam struggle, World Bank was basically acting on behalf of the Thai state based on the issue of poverty reduction. Therefore, it is appropriate to treat World Bank on the same side as the state in a conceptual level to explain its perspective and its issue orientation. World Bank, however, in some other

cases may behave against the state. In the Rhine, for instance, we observed German and Belgium chemical industries acting along with the state's law and preferring states to be regulators based on their interests. Therefore, when I was analyzing the IWT case, industries were at one point treated as not much different from states in terms of defending laws and preferring to obey laws rather than obey responsibility. In some cases, industries may "hijack" the state based on their interests as we observed in the case of German chemical industries behind the German delegation pushing for European regionwide standards for setting effluent limits rather than a Rhine Basin standard. Therefore, the second important theoretical implication is that we need to classify actors based on our research aims and theoretical orientation. In summary, classification of actors has to be conducted not only based on their identities but also based on issues and interests they align with in the governance processes.

Grappling with Allocation of Values

Third, actors in governance processes or social processes are engaged in allocation of values within their individual choices and within a community in which they interact. They do so, in one way, by prioritizing issues and interests they desire to pursue in life. As discussed in chapters 4 and 5, chemical industries, drinking water industries, IWT, NGOs, and citizens all were engaged in allocation of values within the governance processes. Each of these actors set its own priorities of issues and interests. For instance, industries that discharge pollutant chemicals put their profit as first while paying attention to their public image. In the case of Pak Mun Dam, the state is preoccupied with economic development and therefore electricity and irrigation are high in its list of

priorities while almost neglecting the issue of villagers' livelihood, which was intricately tied to the fisheries of the Mun River.

Speaking from the perspective of practitioners who oversaw the process and made the decision to build a large dam in South Africa, former President Nelson Mandela shared his view of governance processes at the official release of the WCD study on November 16, 2000:

It is not easy to be inside of the process, making decisions that would affect the lives of millions and for decades to come The problem, though, is not the dam. It is the hunger. It is the thirst. It is the darkness of a township. It is townships and rural huts without running water, lights or sanitation. It is the time wasted gathering water by hand. There is a real pressing need for power in every sense of the word. Rather than single out dams for excessive blame, or credit, we must learn to answer: "It is all of us!" All of us must wrestle with the *difficult questions* we face. [italic added].

The difficult question, as I also encountered in the cases of Pak Mun Dam and the Rhine pollution, emerged from the issues associated with *allocation of values*. What do actors value, why and how do they achieve values, for what reason do they struggle to achieve these values, and what are the consequences of the allocation of values to the institutional orders of individuals, families, neighborhoods, communities, regions, nations, the world and civilization as a whole? These questions are hard questions that emerged from my research as I wrestled with understanding the sources of governance problems and the gravity that pulls actors into it. Therefore, as analysts, to understand and to explain the changing nature of the institutional order of the world by ways of theories of institutional transformation, we need to further investigate the actors' world of value production and utilization, and we have to be able to explain how it affects institutions.

Policy Implications

In addition to the theoretical implications addressed above, this dissertation also has policy implication in regard to governance of transnational environmental resources and river basins in particular. There are three policy implications: (1) the capacity building of actors must pay attention to whether the capacity being built will be applied due to lack of political freedom; (2) linkages between issues, interests, and actors at the local layer *and* the transnational layer are crucial linkages to achieve objectives of transnational regimes; and (3) successful institutional transformation/adaptation of transnational regimes is likely to occur when relevant issues, interests, and actors are linked across multiple layers.

Lesson on Capacity Building

Policy implication is linked to the theoretical implications I discussed above. Because the power of non-state actors originate in composite factors of knowledge, assets, and political freedom, it is crucial that capacity building consider these three factors as components of capacity that can eventually be applied in launching into action. If capacity-building programs focus only on providing knowledge and financial and material resources without much paying attention to whether actors, whose capacity is being built, will have the political freedom to act, the capacity building may only go halfway rather than achieving a complete cycle of capacity building. For instance, if we build capacity of villagers in centralized and authoritarian countries like Myanmar or Lao PDR, their capacities will less likely be applied at the fullest extent due to the lack of political freedom.

If we revisit the Pak Mun Dam case, villagers had knowledge of their livelihood and they were able to engage in fruitful discussion even before the dam was constructed. However, EGAT and the Thai government did not consider them important actors in project development and implementation processes. The villagers' capacities were not allowed to be utilized in decision-making processes during the Pak Mun Dam project development stage before construction. The villagers had a limited degree of political freedom, which was monopolized by the state having been entrusted by the majority of citizens to be a benevolent actor. In the Rhine case, the Chemical and Chloride conventions limited the political freedom only to states. Other actors, such as industries, citizens, and NGOs, were not considered legitimate and viable actors in international decision-making processes. Although industries, citizens, and NGOs had both knowledge and assets, they were not allowed to participate in the decision-making processes of these two conventions. On the other hand, the Rhine Action Program allowed these non-state actors to engage in program formation and implementation processes. In sum, if the international financing institutions and donor agencies with capacity-building programs pay attention to the complete cycle of capacity building (that is educate, enable, and make sure that the actors' capacity will be applied), they are more likely to be successful in achieving their objectives of capacity building. In other words, capacity building does not guarantee that the capacity will be applied if there is no political freedom for actors to apply their capacities. Therefore, the nuances of the degree of political freedom embedded in institutional dimensions must be considered in capacity-building policies.

Linkages between Local and Transnational Layers

Another policy implication from this dissertation research for international environmental policy and law making is that international environmental policy makers need to pay attention to linking the local layer to the international layer. It is often easy to neglect issues, interests, and actors from the local layer when decisions are made at the international layer because the states are treated as unitary actors with the assumption that states will have sovereign control to deal with local issues, interests, and actors. As such, most of state-centric international environmental policy and law-making processes do not treat local-layer issues, interests, and actors as important for the international layer. In fact, the international environmental treaties and laws today consider states to be the only entities that have legal personality in international environmental affairs. This has ramifications that affect the practice of policy and law when, in practice, states are not necessarily unitary actors and do not have control over policies they promulgate and regulations they issue. As illustrated in the case of the Rhine Action Program and the case of the nationalization and internationalization of Pak Mun Dam by AOP in Thailand, the linkage between local and international (transnational) layers is crucial for the success of transnational environmental regimes. Therefore, the strong linkage between local and international layers is equally important, if not more, as the linkage between national and international layers that is granted in international environmental policy and law making.

Furthermore, it is important not to confuse *linking* local layers with *consolidating* local layers to the international layer. Linking and consolidating the local layer to the international layer are two different sets of policies. Emerging literature on environmental policy and law (Palmer, 1992: 265; Bierman, 2001; Esty and Ivanova, 2001) that is

calling for consolidating all international environmental treaties and policy institutions under the so-called Global Environmental Organization is not the answer to the linkage problems I am addressing, especially in the environmental governance arena. The linkage problems in international environmental policy and law making have to do with not considering local issues, interests, and actors as legitimate and important in the international layer. Therefore, linking the local layer to the international layer has to do with thinning bureaucratic layers of state and international laws and allowing local issues, interests, and actors to play their respective roles in local-intensive and problem-focus policy programs that have transnational ramifications. The trend initiated by section 56 of the 1997 Thai Constitution and the 1999 Bern Convention of the Rhine regime requiring state agencies to consult and seek local participation and independent evaluation of programs is an important step in linking local layers to both national and transnational layers.

Recommendations to Thai State and World Bank

The case of Pak Mun Dam provides important policy lessons for the Thai state and World Bank. For the Thai state, Pak Mun Dam provides lessons to cope systematically with issues associated with crafting and implementing development projects in future. For the World Bank, Pak Mun Dam case highlights the importance of not only desires of states but also the desires of citizens and communities who are targeted recipients of the benefits of development projects funded by World Bank. I offer policy recommendations to Thai state and World Bank based on three dimensions: (1)

rights and responsibilities; (2) poverty and development and; (3) public participation in development projects.

Rights and Responsibilities

The first lesson for Thailand from the Pak Mun Dam case is that when state exercises its rights to develop the nation as a whole, it must also take responsibility seriously to respect the rights of local citizens and communities to participate in decision making processes of projects that have direct impact on their livelihoods. The state officials from responsible agencies such as EGAT should be trained to understand the rights and responsibilities of state and citizens that are defined and protected under the Thai constitution. At the same time, citizens should also be informed of their rights and responsibilities when development projects such as the Pak Mun Dam project is planned to implement. To be more precise, Section 56 and 79¹⁴⁸ of Thai constitution should be a part of guiding principles for government agencies that are mandated to carry out development projects. I would further recommend to select key definitions of 1997 Thai constitutions that deal with the rights and responsibilities of state and citizens to be incorporated into high school textbooks and teaching curriculum.

¹⁴⁸ Section 79 of Thai Constitution states:

[T]he State shall promote and encourage public participation in the preservation, maintenance and balanced exploitation of natural resources and biological diversity and in the promotion, maintenance and protection of the quality of the environment in accordance with the persistent development principle as well as the control and elimination of pollution affecting public health, sanitary conditions, welfare and quality of life.

Poverty and Development

The second lesson from the Pak Mun Dam case is that working definition of poverty and development must not only be crafted and implemented by the state officials' learned views but also by rural communities' needs, desires, and wisdom. As I have analyzed and explained, the meaning of development seems to be a source of the problematic issues in the case of Pak Mun Dam. I recommend reconsidering seriously the consequences of dominant views of development policy thinking in Thailand, especially those of the majority among state officials, elites and educated Thai, that what is good for western societies must be equally good for Thailand. Is it always so? This recommendation is to highlight the depth and breadth of challenges in incorporating traditional, cultural and social elements into development policy making in Thailand. For instance, villagers in the northeast Thailand maybe materially poor compared to urbanites but their wisdom and tacit knowledge about local issues must not be underestimated. Careful observation of Pak Mun Dam case suggests that both the Thai state and the World Bank overlooked the local knowledge and wisdom about fisheries and ecosystem of the Mun River and thereby missed opportunity to incorporate them into project development processes. One example is the project developers and engineers failed to design appropriate size and dimension of "fish ladder" which seems to be designed with textbook model not based on local knowledge about fisheries and migration patterns.

Public Participation

The third lesson is that public participation in development projects should be systematically sought to avoid misunderstanding between government and citizens. Public participation includes four important components (1) information gathering; (2) information dissemination; (3) consultation; and (4) public involvement in decision processes of development projects. The Pak Mun Dam project lacked two out of four components. It included information gathering and dissemination processes. Even though information gathering and information dissemination were conducted in the case of Pak Mun Dam, these two components were not conducted appropriately because crucial data about the linkages between the fisheries of the Mun River and livelihoods of villagers were not collected and disseminated fully. As we have observed in chapters 6 and 7, this lack of crucial baseline information about villagers' livelihoods was a source of the problem for calculating compensation packages and conducting comprehensive benefits and costs analyses of the project. Therefore, in future, Thai state should conduct full cycle of public participation with four key components before the projects are implemented.

For the World Bank, I recommend issuing both general and case-specific guiding principles to loan-recipient countries based on three dimensions I discussed above for its poverty reduction and development loan packages. More important, in analyzing consequences of its funding, the World Bank must consider that the end recipients of the benefits and costs of its loans or grants are not only the state but also local communities.

Agenda for Future Research

This dissertation research has led me to sharpen my future research agenda. At the theoretical level, my broader research agenda is threefold to understand: (1) the ways in which human values, their interests, and their daily issues cause institutional adaptation; (2) how institutional adaptation transforms organization (governance) of human orders at multiple layers and scales; and (3) how transformation of human orders characterizes nature-society interactions. I am interested in how human beings' *adaptive capacity* to manmade institutions and the rules of ecosystems and their *ability to transform* institutions and ecosystems affect daily governance of human order and how that order characterizes nature-society interactions.

At the policy level, my research interests are in (1) how we might transform old institutions or innovate new institutions to improve governance of human orders in bridging the economic, political, and knowledge gaps among various actors; (2) how we might address the “problem of fit,” or rather the coevolution of human institutions and environment at the policy level; and (3) how we might “govern” coevolution between human institutions and the environment. These two broad research agenda will serve as the landscape of my scholarly journey in my future profession, research and teaching.

Emerging Cases in the Mekong River Basin

At the immediate outset, emerging cases related to constructed and planned dam projects in the Mekong River Basin, especially hydroelectric dams in China for domestic consumption and Lao PDR which aims to become the “battery of Asia” to export electricity to neighboring countries, are exciting candidates for my future research

agenda. These cases are exciting because dam projects involve multifaceted consequences to human institutions and the ecosystems of river basins. They involve transforming physical and social structure of human communities as some of those communities will be relocated and changing the ecosystem dynamics of the river basin.

One of these emerging cases is the Nam Theun 2 (NT2) Dam project in Lao PDR. The NT2 dam is to be located about 250 km (150 miles) east of the capital, Vientiane, on the Nam Theun River, a tributary of the Mekong. In 1993, the government of Lao PDR awarded Transfield Holdings, an Australian engineering company, the exclusive rights to develop the NT2 project as a Build-Own-Operate-and-Transfer (hereinafter “BOOT”) system for 25 years. According to the BOOT system, after 25 years, the NT2 will be transferred to the Lao PDR government with 100% ownership.

After it signed the NT2 development contract, Transfield Holdings established a consortium, known as the Nam Theun 2 Electricity Consortium (NTEC) for preparation to build and operate NT2 for 25 years before turning it over to the Lao PDR government. During the BOOT years, the government of Lao PDR has 25% equity in NTEC and five international private companies own the remaining 75%. The shareholders’ contract was restructured along with the renaming of NTEC to Nam Theun 2 Power Company (NTPC) in 2002. Under the newly restructured NTPC, Lao PDR still owns 25% of the shares during the BOOT years. Among the remaining share, the Electricite de France International (EDFI) owns 35%, Electricity Generating Public Company (EGCO) of Thailand owns 25%, and Italian-Thai Development Public Company (ITD) owns 15%. The NT2 project’s total base cost is estimated to be US \$1.075 billion and planned to be

financed by a combination of equity by the shareholders (30%) and international loans (70%).

World Bank and Asian Development Bank are expected to provide “comfort” to the commercial lenders through “political risk guarantee” facilities or other financial instruments and participation in the project. Because Lao PDR is an underdeveloped country, the investors want World Bank to provide a political risk guarantee to cover more than \$100 million of the project’s cost in case anything goes wrong. Private companies often consider World Bank’s involvement vital to secure investor confidence in poor and politically unstable countries like Lao PDR.

NT2 is projected to produce output electricity of 1,070 MW. Under the Power Purchasing Agreement (PPA) between the Thai government and NTPC signed on November 8, 2003, 995 megawatts is to be exported to Thailand on the basis of 5,636 GWh per year. This PPA between Thailand and NTPC was signed under the framework of a bilateral agreement known as the Memorandum of Understanding (MoU) between Lao PDR and Thailand that was signed on June 19, 1996, for the export of more than 3,000 MW of electricity from various power development projects, including NT2, in Lao PDR to Thailand. From NTPC, the Electricite de Lao (EDL), the state-owned electricity utility of Lao PDR, will purchase the remaining 75 MW on the basis of 200 GWh per year for domestic use.

World Bank has delayed its decision to fund the NT2 project until May 5, 2005. It passed two deadlines, one in 1994 and another in 2003. The delay of World Bank’s decision to fund NT2 is not under the control of the Lao PDR state but rather under the control of non-state actors, mainly international environmental NGOs and a network of

global citizens who are concerned about the potential impacts of the NT2 dam on both local populations in the Nakai Plateau and Xe Bang Fai river basins and on the biodiversity significance of the Nakai Nam Theun National Protected Area in central Lao PDR.

World Bank has responded to the voices of critics by requiring both the government of Lao PDR and NTPC to meet its ten safeguard policies outlined together with its decision framework for NT2. World Bank has required both parties, the government of Lao PDR and NTPC, to conduct public consultation workshops with will-be-affected villagers and international environmental NGOs. It requires both parties to clearly state, outline, and guarantee in legal terms within a Concession Agreement (CA) signed between NTPC and the government of Lao PDR on October 3, 2002. The CA is, therefore, a non-state-centric type of international law contracted between the state of Lao PDR and a private multinational corporation, NTPC. The CA is a legally binding document and a constitutive policy document that will govern the NT2 project. For World Bank and Asian Development Bank, this CA is the legal frame of reference for enforcement on both the Lao PDR government and NTPC. Therefore, World Bank and Asian Development Bank's concerns, mostly brought to their attention by the international environmental NGOs, are to be defined and promised in legal terms by the Lao PDR government and NTPC on what they will do to mitigate consequences of negative externalities from the dam.

Therefore, the interests and stakes in NT2 for all parties concerned are high. According to the CA, the dam and reservoir will displace 5,684 people from 17 villages in Nakai District. Some villagers welcome the coming of the NT2 dam with the hope of

new opportunities that were promised by NTPC and the Lao PDR government. Some villagers, however, express concerns over the construction of the NT2 dam with the fear of social disintegration and the loss of their indigenous ways of living. In the midst of the dynamic institutional arrangements of the NT2 dam regime that is shaped by non-state actors and the Lao PDR government, World Bank has been involved since 1991 when it launched the first feasibility study of the project and social, economic, and environmental impact assessments of the NT2 dam. Although World Bank has not made a final decision yet as of writing this dissertation, it is just a matter of time that the bank will fund this project as it is scheduled to announce the decision on May 5, 2005.

As a followup to the finding of this dissertation, I plan to conduct further research on the NT2 case. In addition to the questions that are raised in this dissertation, I will investigate whether the public consultation workshops conducted by the government of Lao PDR and NTPC are truly addressing the underlying concerns that World Bank has raised under the pressure from the international environmental NGOs. This will be an important investigation in terms of examining the role of political freedom in forming the power of non-state actors in the NT2 case, because villagers and Lao PDR citizens do not have political freedom to express their disagreement with the state as did villagers in the Pak Mun Dam case. As such, the international environmental NGOs are supposedly promoting the interests of villagers. How do international environmental NGOs promote villagers' interests and protection of environment in the NT2 case? What are the consequences of the pressure of international non-state actors via World Bank on the Lao PDR state? Does World Bank's involvement promote liberalization of the Lao PDR state and thereby increase the degree of political freedom of Lao PDR citizens? What are the

consequences of World Bank's involvement in NT2 to the institutional structure of the Lao PDR state? If NT2 is built, will relocated villagers adapt to new challenges and what are the consequences to their values? Is the CA initiating a pattern of international environmental law that departs from the consolidation thesis of promoting a centralized international environmental law and thereby the CA serves as evidence of the emergence of a polycentric order in multilayer environmental governance? All of these questions will be worthy of pursuit to unpack the theoretical and policy agenda I set out in preceding paragraphs. I look forward to further validating my research findings of this dissertation and following up on the NT2 case with these questions in my postdoctoral research.

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ข้อกำหนดการศึกษา:โครงการศึกษาวิจัยด้านทรัพยากรประมงและฟื้นฟูระบบนิเวศของแม่น้ำมูล, ฉบับปรับปรุง 21 มิถุนายน 2544

Terms of Reference: Fishery Researching and Studying Project and the Restoration of Eco-system of Mun River, Revision Version 21 June 2001

รายงานความก้าวหน้า:การติดตามสภาพเศรษฐกิจสังคมสิ่งแวดล้อม
และจัดทำแผนพัฒนาคุณภาพชีวิตสำหรับราษฎรและชุมชนในเขตลุ่มแม่น้ำมูลตอนล่าง,
โดยสถาบันวิจัยวิทยาศาสตร์และเทคโนโลยีแห่งประเทศไทย,เสนอต่อ
การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย

Progress Report: Socio-economic and Environmental State Monitoring and the Making of Quality of Life Development Plan for Residents and Communities of Lower Lying Mun River, by Science and Technology Research Institute, presented to Electricity Generating Authority of Thailand

ข้อมูลและความเห็น:ต่อข้อเรียกร้องของสมัชชาคนจนกรณีเขื่อนปากมูล,โดย
การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย,เสนอต่อคณะกรรมการกลางเพื่อแก้ไขปัญหาของสมัช
ชาคนจน, 12 มิถุนายน 2543

Information and Opinions: Toward Assembly of the Poor's Demands on the Case of Pak Mun Dam, by Electricity Generating Authority of Thailand, presented to Central Committee in Resolution Findings for Assembly of the Poor, 12 June 2000

สรชัย หวันแก้ว, บรรณาธิการ, การวิจัยเพื่อฟื้นฟูชุมชน: มิติใหม่ ของสังคมไทย,
ศูนย์ศึกษาการพัฒนาสังคม คณะรัฐศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย, 2545
Surichai Wungao, ed., *Community Rehabilitation: New Dimension of Thai Society*,
Social Development Study Center, Faculty of Political Science, Chulalongkorn
University.

Appendix A

INDIANA UNIVERSITY - BLOOMINGTON STUDY INFORMATION SHEET

Study of the Environmental Governance of the Mekong River and Rhine River Basins:
Pak Mun Dam Participant Interview

Thank you for taking the time to participate in this structured interview. I just wanted to let you know that participation in this interview is voluntary and that all of your responses can remain anonymous, if you would like.

Would you like to remain anonymous?

☐ Yes

☐ No

Date: _____

1. Please provide your name, address, name of affiliated groups/organizations, and country.

Your Name	Address/Organization/Country
Ms. _____	
Mrs. _____	
Mr. _____	
Dr. _____	

2. Please tell us to whom you belong to or represent regarding the Pak Mun Dam issues by marking in "who" column. If you represent more than one group, please explain why and how.

You are:	Who
a. Villager/Local community member	
b. Local or National NGO	
c. International NGO	
d. Village/Township/Provincial Government	
e. National/Central Government	
f. Mekong River Commission	
g. Investor/Businesses/Industries	
h. Donor country	
i. International financing agency or bank	
j. Researchers/Experts	
k. Others (Please identify) _____	

3. What are the key issues that the Mekong River Basin as a whole face? Please rank them in order of 1 = the least urgent/important to 10 = the most urgent/important issue.

Issues	Rank (please circle)
a. Water pollution	1 2 3 4 5 6 7 8 9 10
b. Flood	1 2 3 4 5 6 7 8 9 10
c. Degradation of fisheries	1 2 3 4 5 6 7 8 9 10
d. Loss of forestry and agricultural land from dam construction	1 2 3 4 5 6 7 8 9 10
e. Poverty and underdevelopment	1 2 3 4 5 6 7 8 9 10
f. Environmental education within population	1 2 3 4 5 6 7 8 9 10
g. Clear rules about the use of the Mekong among riparian countries	1 2 3 4 5 6 7 8 9 10
h. Cooperation among riparian countries to manage the river resources	1 2 3 4 5 6 7 8 9 10
i. Participation of local communities in management of river resources	1 2 3 4 5 6 7 8 9 10
j. Others _____	1 2 3 4 5 6 7 8 9 10

Explain if you desire:

4. Who do you think should be included in decision-making processes of the Pak Mun Dam? Please rank them in order of 1 = the least important to 10 = the most important to include in decision-making processes.

Who	Rank (please circle)
a. Local villagers who are affected by settlement plan	1 2 3 4 5 6 7 8 9 10
b. International financing agencies such as the World Bank and the Asian Development Bank	1 2 3 4 5 6 7 8 9 10
c. Thai national government (national leaders)	1 2 3 4 5 6 7 8 9 10
d. Thai provincial or local government leaders	1 2 3 4 5 6 7 8 9 10
e. International donor agencies such as JICA, SIDA and etc	1 2 3 4 5 6 7 8 9 10
f. International environmental NGOs that are working in the Mekong region	1 2 3 4 5 6 7 8 9 10
g. Leaders of the national or local communities	1 2 3 4 5 6 7 8 9 10
h. Mekong River Commission	1 2 3 4 5 6 7 8 9 10
i. Local and national environmental NGOs who are concerned with the Pak Mun dam	1 2 3 4 5 6 7 8 9 10
j. Researchers and scientists	1 2 3 4 5 6 7 8 9 10
k. Others (please specify) _____	1 2 3 4 5 6 7 8 9 10

Explain if you desire:

5. What is the main source of your power to advance your objective goals in the process of Pak Mun Dam case? Please rank them in order of 1 = least able source of power to 10 = most able source of power for you.

Source	Rank (please circle)
a. Scientific knowledge to form sound reason for your position	1 2 3 4 5 6 7 8 9 10
b. Voting for politician who would take your issue and interest to the decision-making process	1 2 3 4 5 6 7 8 9 10
c. Media (newspaper, television, radio e.t.c)	1 2 3 4 5 6 7 8 9 10
d. A university researcher who would advocate your issues or interests	1 2 3 4 5 6 7 8 9 10
e. Network or coalition or community of interest in your issues or interests	1 2 3 4 5 6 7 8 9 10
f. Organizing and participating in demonstrations and strikes at public places	1 2 3 4 5 6 7 8 9 10
g. Financial capital	1 2 3 4 5 6 7 8 9 10
h. General public's understanding and support to your issues and interests	1 2 3 4 5 6 7 8 9 10
i. National law and legal institutions	1 2 3 4 5 6 7 8 9 10
j. International law and legal institutions such as the Mekong River Commission	1 2 3 4 5 6 7 8 9 10
k. Others (please specify) _____	1 2 3 4 5 6 7 8 9 10

Explain if you desire:

6. Based on your observation and expertise, what do you consider are the source of decision-influencing factors in the case of Pak Mun Dam project? Please rank the following factors in terms of 1 = least influential factor to 10 = most influential factor.

Source	Rank (please circle)
a. Sound scientific knowledge about the problem context of Pak Mun dam	1 2 3 4 5 6 7 8 9 10
b. Financial capital	1 2 3 4 5 6 7 8 9 10
c. Public awareness of the problem contexts of the Pak Mun dam	1 2 3 4 5 6 7 8 9 10
d. Experts' official opinion (or research findings) that are published in media, journal article, public forums, and etc	1 2 3 4 5 6 7 8 9 10
e. Citizens' vote to elected leaders	1 2 3 4 5 6 7 8 9 10
f. The intensity of the involvement of international businesses and non-government organizations in Pak Mun Dam	1 2 3 4 5 6 7 8 9 10
g. The intensity of the involvement of the international financial institutions such as the World Bank and the Asian Development Bank in Pak Mun Dam	1 2 3 4 5 6 7 8 9 10
h. Local people's political activism	1 2 3 4 5 6 7 8 9 10
i. National government's interest in the development of Pak Mun Dam project	1 2 3 4 5 6 7 8 9 10
j. Education of local stakeholders who are affected directly or indirectly by the construction of Pak Mun Dam	1 2 3 4 5 6 7 8 9 10
k. Others (please specify) _____	1 2 3 4 5 6 7 8 9 10

Explain if you desire:

7. What is the most problematic issue that you or your collective group encounters in the struggle for Pak Mun Dam project? Please rank the following issues from 1 = least problematic to 10 = most problematic issue.

Issues	Rank (please circle)
a. The loss of agricultural land and quality of soil due to Pak Mun Dam	1 2 3 4 5 6 7 8 9 10
b. The loss of forest due to Pak Mun Dam	1 2 3 4 5 6 7 8 9 10
c. Impact on riverbank vegetation	1 2 3 4 5 6 7 8 9 10
d. Impact on wildlife and fauna of river ecosystem	1 2 3 4 5 6 7 8 9 10
e. Impact on natural rapids in the river	1 2 3 4 5 6 7 8 9 10
f. Lack of environmental education among affected local people	1 2 3 4 5 6 7 8 9 10
g. Poverty and underdevelopment in the region	1 2 3 4 5 6 7 8 9 10
h. Impact on communities' cultural and traditional heritage that local communities consider as important to their livelihood	1 2 3 4 5 6 7 8 9 10
i. Local communities do not gain economic benefit of electricity production from Pak Mun Dam (exploitation from outsiders)	1 2 3 4 5 6 7 8 9 10
j. Others (please specify) _____	1 2 3 4 5 6 7 8 9 10

Explain if you desire:

8. In decision making for issues relating to the Pak Mun Dam, whose knowledge, data, and social and scientific information do you use? Please rank the following sources of knowledge, data, and social and scientific information in order of 1 = never use to 10 = always all the time use for any decision making relating to the Pak Mun Dam issues.

Sources	Rank (please circle)
a. Government's appointed academics' research findings	1 2 3 4 5 6 7 8 9 10
b. Independent academics' research findings	1 2 3 4 5 6 7 8 9 10
c. Local villagers' knowledge and their research findings	1 2 3 4 5 6 7 8 9 10
d. NGOs' research findings such as the World Commission on Dam or the International Rivers Network	1 2 3 4 5 6 7 8 9 10
e. Consulting firms' research findings, that are hired by the government or funding agencies such as the World Bank and the Asian Development Bank	1 2 3 4 5 6 7 8 9 10
f. Others (please specify) _____	1 2 3 4 5 6 7 8 9 10

Explain if you desire:

9. What source of social and scientific information regarding Pak Mun Dam project should you think be considered as reliable source of information to help decision making about Pak Mun Dam project? Please rank them in order of 1 = least reliable source to 10 = most reliable source.

Sources	Rank (please circle)
a. Government's appointed academics' research findings	1 2 3 4 5 6 7 8 9 10
b. Independent academics' research findings	1 2 3 4 5 6 7 8 9 10
c. Local villagers' knowledge and their research findings	1 2 3 4 5 6 7 8 9 10
d. NGOs' research findings such as the World Commission on Dam or the International Rivers Network	1 2 3 4 5 6 7 8 9 10
e. Consulting firms' research findings, that are hired by the government or funding agencies such as the World Bank and the Asian Development Bank	1 2 3 4 5 6 7 8 9 10
f. Others (please specify) _____	1 2 3 4 5 6 7 8 9 10

Explain if you desire:

10. As a participant, what value(s) do you desire to gain from the policy and governance processes of the Pak Mun Dam project? Among the following values, please rank them 1 = lest desired to 10 = most desired values for you.

Desired values	Rank (please circle)
a. Wealth in terms of gaining money and materials for yourself, your group, company, and/or your country	1 2 3 4 5 6 7 8 9 10
b. Power in terms of gaining political and leadership authority in governance processes of Pak Mun Dam project	1 2 3 4 5 6 7 8 9 10
c. Enlightenment in terms of gaining scientific understanding of the human affairs relating to Pak Mun Dam project	1 2 3 4 5 6 7 8 9 10
d. Skill in terms of obtaining know-how and practical knowledge about Nam Theun Dam project	1 2 3 4 5 6 7 8 9 10
e. Well-being in terms of promoting the welfare for yourself and your collective group, organizations, company and/or your country	1 2 3 4 5 6 7 8 9 10
f. Respect in terms of trying to gain respect from other participants in Pak Mun Dam project and general public	1 2 3 4 5 6 7 8 9 10
g. Rectitude in terms of promoting your desired righteousness and morality in human affairs associated with Pak Mun Dam project	1 2 3 4 5 6 7 8 9 10
h. Others (please specify) _____	1 2 3 4 5 6 7 8 9 10

Explain if you desire: rectitude

11. Which of the following statements about the Pak Mun Dam project do you agree most? Please rank these statements in order of, 1 = absolutely disagree to 10 = absolutely agree.

Statements	Rank (please circle)
a. History of the Pak Mun Dam project is largely a history of the struggle over fair compensation	1 2 3 4 5 6 7 8 9 10
b. The Pak Mun Dam project is struggle of villagers against state's authority that threaten livelihoods of villagers.	1 2 3 4 5 6 7 8 9 10
c. The Pak Mun Dam project represents struggles of the local villagers to achieve their own self-governance	1 2 3 4 5 6 7 8 9 10
d. The Pak Mun Dam struggle can only be fought by the power of credible knowledge	1 2 3 4 5 6 7 8 9 10
e. The meaning of "development" is the center dispute of the Pak Mun Dam project because villagers' meaning of development is different from state's meaning of "development"	1 2 3 4 5 6 7 8 9 10
f. The struggle of Pak Mun Dam project represents the struggle between the needs of urban population for electricity to live daily life and the struggle of villagers who need river and fishes	1 2 3 4 5 6 7 8 9 10
g. Protesters against the Pak Mun Dam are troublemakers in the society	1 2 3 4 5 6 7 8 9 10
h. Pak Mun Dam is necessary and very important for the development of Thailand	1 2 3 4 5 6 7 8 9 10
i. Others (please specify) _____	1 2 3 4 5 6 7 8 9 10

Explain if you desire:

12. In determining, who is affected and who is not affected by the Pak Mun Dam project for the resettlement process and compensation process, which of the following statements do you agree? Please score them in order of, 1 = absolutely disagree to 10 = absolutely agree.

Statements	Rank (please circle)
a. There were clear guidelines to determine who would be affected by the Pak Mun Dam project	1 2 3 4 5 6 7 8 9 10
b. The affected people were consulted from the beginning of the Pak Mun Dam project	1 2 3 4 5 6 7 8 9 10
c. The compensation packages were fair	1 2 3 4 5 6 7 8 9 10
d. The measurement of compensation packages contains only economic value of measurements such as income not the value of village community in livelihood, cultural, traditional, and social terms	1 2 3 4 5 6 7 8 9 10
e. The villagers' or affected people's non-monetary values such as livelihood, cultural, traditional, and social values cannot be compensated in Pak Mun Dam project	1 2 3 4 5 6 7 8 9 10
f. Allocation of values is fundamental problem in compensation process	1 2 3 4 5 6 7 8 9 10
g. Others (please specify) _____	1 2 3 4 5 6 7 8 9 10

Explain if you desire:

13. Among the layers (levels) of governance (or decision making) for projects like Pak Mun Dam that has either direct or indirect affect on international river basin like the Mekong River Basin, which of the following level of governments, communities, and institution should play most important role in managing the Mekong River?

Level	Rank (please circle)
a. The international level community or governmental institution such as the Mekong River Commission or ASEAN	1 2 3 4 5 6 7 8 9 10
b. The Global (worldwide) level institutions such as the United Nations Environmental Programs (UNEP)	1 2 3 4 5 6 7 8 9 10
c. The national governments of riparian countries	1 2 3 4 5 6 7 8 9 10
d. The regional and local governments of riparian countries	1 2 3 4 5 6 7 8 9 10
e. Local communities (individuals and association) who are direct users of the Mekong River Resources	1 2 3 4 5 6 7 8 9 10
f. All of the levels mentioned above	1 2 3 4 5 6 7 8 9 10
g. Others (please specify) _____	

Explain if you desire:

14. Would you like to receive summary report of this interview?

No ____ Yes ____

If YES, please provide mailing address if it is different from the address provided in Q1. If you prefer to receive the summary report in electronic form, please provide your email address. I apologize that I will not be able to send you by fax.

Appendix A (Thai Version)

มหาวิทยาลัยอินเดียยา บลุ่มมิงตัน

แบบสอบถามข้อมูล

การศึกษาเกี่ยวกับการจัดการสิ่งแวดล้อมในลุ่มน้ำโขงและลุ่มน้ำไ ร์

แบบสอบถามโครงการเขื่อนปากมูล

ผู้ศึกษาขอขอบคุณที่ท่านได้สละเวลาเพื่อตอบแบบสอบถามนี้ การตอบแบบสอบถามนี้เป็นไปด้วยความสมัครใจ และท่านสามารถเลือกไม่เปิดเผยชื่อและข้อมูลของท่าน

ท่านต้องการให้เก็บชื่อและข้อมูลของท่านเป็นความลับหรือไม่

___ ใช่
___ ไม่ใช่

วันที่: _____

1. กรุณาใส่ชื่อ ที่อยู่ องค์กรที่ท่านสังกัด และประเทศ

ชื่อ	ที่อยู่/องค์กร/ประเทศ
นางสาว _____	
นาง _____	
นาย. _____	
ดร. _____	

2. กรุณาระบุว่าท่านสังกัดกลุ่มใดหรือเป็นตัวแทนของกลุ่มใดในกรณีเขื่อนปากมูล

โดยใส่เครื่องหมายในช่อง “ใคร” หากท่านสังกัดมากกว่า 1 กลุ่มกรุณาอธิบายเหตุผล

ท่านคือ:	ใคร
a. ชาวบ้าน/สมาชิกชุมชนในท้องถิ่น	
b. องค์กรพัฒนาเอกชนระดับท้องถิ่นและระดับประเทศ	
c. องค์กรพัฒนาเอกชนระดับนานาชาติ	
d. หน่วยงานราชการในระดับหมู่บ้าน/อำเภอ/จังหวัด	
e. หน่วยงานราชการในส่วนกลาง/รัฐบาล	
f. คณะกรรมการแม่น้ำโขง	
g. ผู้ลงทุน/ภาคธุรกิจ/อุตสาหกรรม	
h. ประเทศผู้บริจาค	
i. องค์กรการเงินระหว่างประเทศ/ธนาคาร	
j. นักวิจัย/ผู้เชี่ยวชาญ	
k. อื่นๆ (ระบุ) _____	

3. หากมองลุ่มน้ำโขงโดยรวม อะไรคือประเด็นที่สำคัญและเร่งด่วนสำหรับลุ่มน้ำโขง เรียงตามลำดับ (1 = ประเด็นที่สำคัญ/เร่งด่วนน้อยที่สุด 10 = ประเด็นที่สำคัญ/เร่งด่วนมากที่สุด)

ประเด็น	ลำดับ (กรณาวง)
a. มลภาวะทางน้ำ	1 2 3 4 5 6 7 8 9 10
b. น้ำท่วม	1 2 3 4 5 6 7 8 9 10
c. การลดลงของการประมง	1 2 3 4 5 6 7 8 9 10
d. การสูญเสียพื้นที่ป่าและพื้นที่ทางการเกษตรเนื่องจากการสร้างเขื่อน	1 2 3 4 5 6 7 8 9 10
e. ความยากจนและความด้อยพัฒนา	1 2 3 4 5 6 7 8 9 10
f. ความรู้ด้านสิ่งแวดล้อมของประชาชน	1 2 3 4 5 6 7 8 9 10
g. ข้อกำหนดที่ชัดเจนเกี่ยวกับการใช้แม่น้ำโขงของประเทศต่างๆ ในลุ่มน้ำโขง	1 2 3 4 5 6 7 8 9 10
h. ความร่วมมือระหว่างประเทศในการจัดการทรัพยากรแม่น้ำโขง	1 2 3 4 5 6 7 8 9 10
i. การมีส่วนร่วมของประชาชนในท้องถิ่นในการจัดการทรัพยากรแม่น้ำ	1 2 3 4 5 6 7 8 9 10
j. อื่นๆ _____	1 2 3 4 5 6 7 8 9 10

กรุณาอธิบายหากต้องการ:

4. กระบวนการตัดสินใจในกรณีเขื่อนปากมูลควรเพิ่มการมีส่วนร่วมของใครบ้าง กรุณาเรียงตามลำดับความสำคัญ 1 = สำคัญน้อยที่สุด 10 = สำคัญมากที่สุดซึ่งควรมีส่วนร่วมในกระบวนการตัดสินใจ

ใคร	ลำดับ (กรณาวง)
a. ชาวบ้านที่ได้รับผลกระทบจากแผนอพยพ	1 2 3 4 5 6 7 8 9 10
b. สถาบันการเงินระหว่างประเทศ เช่น ธนาคารโลก และธนาคารเพื่อการพัฒนาเอเชีย (เอดีบี)	1 2 3 4 5 6 7 8 9 10
c. รัฐบาลไทย (ผู้นำประเทศ)	1 2 3 4 5 6 7 8 9 10
d. เจ้าหน้าที่รัฐในระดับจังหวัดหรือระดับท้องถิ่น	1 2 3 4 5 6 7 8 9 10
e. หน่วยงานความช่วยเหลือระดับนานาชาติ เช่น JICA, SIDA	1 2 3 4 5 6 7 8 9 10
f. องค์กรพัฒนาเอกชนด้านสิ่งแวดล้อมระดับนานาชาติซึ่งทำงานในภูมิภาคแม่โขง	1 2 3 4 5 6 7 8 9 10
g. เครือข่ายผู้นำชาวบ้าน นักพัฒนา ในระดับประเทศและระดับท้องถิ่น	1 2 3 4 5 6 7 8 9 10
h. คณะกรรมาธิการแม่น้ำโขง (Mekong River Commission)	1 2 3 4 5 6 7 8 9 10
i. องค์กรพัฒนาเอกชนด้านสิ่งแวดล้อมในระดับท้องถิ่นและประเทศซึ่งทำงานเกี่ยวกับเขื่อนปากมูล	1 2 3 4 5 6 7 8 9 10
j. นักวิจัยและนักวิทยาศาสตร์	1 2 3 4 5 6 7 8 9 10
k. อื่นๆ (กรณาระบุ) _____	1 2 3 4 5 6 7 8 9 10

กรุณาอธิบายหากต้องการ:

5. อะไรเป็นสิ่งที่มีความสำคัญในการผลักดันให้เป้าหมายของท่านก้าวหน้าไปได้ในกระบวนการของกรณีศึกษา
 กรุณาเรียงตามลำดับ 1 = มีความสำคัญน้อยที่สุด 10 = มีความสำคัญมากที่สุดสำหรับท่าน

แหล่ง	ลำดับ (กรณาวง)
a. ความรู้ที่มีเหตุผลและเชื่อถือได้สำหรับสถานะของท่าน	1 2 3 4 5 6 7 8 9 10
b. นักการเมืองที่มาจากการเลือกตั้งซึ่งจะนำประเด็นของท่านเข้าสู่กระบวนการตัดสินใจ	1 2 3 4 5 6 7 8 9 10
c. สื่อ (หนังสือพิมพ์, โทรทัศน์, วิทยุ และสื่ออื่นๆ)	1 2 3 4 5 6 7 8 9 10
d. นักวิชาการจากมหาวิทยาลัยซึ่งจะเคลื่อนไหวในประเด็นของท่าน	1 2 3 4 5 6 7 8 9 10
e. เครือข่ายหรือความร่วมมือของกลุ่มผู้ที่สนใจในประเด็นของท่าน	1 2 3 4 5 6 7 8 9 10
f. จัดตั้งหรือเข้าร่วมการเดินขบวนเคลื่อนไหวในที่สาธารณะ	1 2 3 4 5 6 7 8 9 10
g. ทุนทางการเงิน	1 2 3 4 5 6 7 8 9 10
h. ความเข้าใจและการสนับสนุนจากสาธารณชนในประเด็นของท่าน	1 2 3 4 5 6 7 8 9 10
i. กฎหมายของประเทศ และสถาบันทางกฎหมายในประเทศ	1 2 3 4 5 6 7 8 9 10
j. กฎหมายระหว่างประเทศและสถาบันทางกฎหมายในระดับนานาชาติ เช่น คณะกรรมการการค้าระหว่างประเทศ	1 2 3 4 5 6 7 8 9 10
k. อื่นๆ (กรณาราย) _____	1 2 3 4 5 6 7 8 9 10

กรุณาอธิบายหากต้องการ:

6. จากการสังเกตและความเชี่ยวชาญของคุณ คุณคิดว่าอะไรเป็นปัจจัยที่มีอิทธิพล
ในกระบวนการตัดสินใจในกรณีเชื่อนปากมูล กรุณาเรียงตามลำดับ 1 = ปัจจัยที่มีอิทธิพลน้อยที่สุด
10 = ปัจจัยที่มีอิทธิพลมากที่สุด

ปัจจัย	ลำดับ (กรณาวง)
a. องค์ความรู้ทางวิทยาศาสตร์ที่เกี่ยวกับบริบทของเชื่อนปากมูล	1 2 3 4 5 6 7 8 9 10
b. ทุนทางการเงิน	1 2 3 4 5 6 7 8 9 10
c. ความตื่นตัวของสาธารณะในปัญหาเชื่อนปากมูล	1 2 3 4 5 6 7 8 9 10
d. ความคิดเห็นของผู้เชี่ยวชาญของทางการ (หรือ ผลการศึกษาวิจัย) ซึ่งเผยแพร่ผ่านสื่อ, บทความในหนังสือพิมพ์, เว็บไซต์สาธารณะ และอื่นๆ	1 2 3 4 5 6 7 8 9 10
e. ผู้แทนราษฎรที่มาจากการเลือกตั้ง	1 2 3 4 5 6 7 8 9 10
f. การเข้ามาเกี่ยวข้องของธุรกิจนานาชาติและองค์กรพัฒนาเอกชน ในกรณีเชื่อนปากมูล	1 2 3 4 5 6 7 8 9 10
g. การเข้ามาเกี่ยวข้องในกรณีปากมูลของสถาบันการเงินระหว่างประเทศ เช่น ธนาคารโลก และธนาคารเพื่อการพัฒนาเอเชีย	1 2 3 4 5 6 7 8 9 10
h. ความตื่นตัวในการมีส่วนร่วมของชาวบ้าน และประชาชนชาวไทย	1 2 3 4 5 6 7 8 9 10
i. กฟผ.และรัฐบาลที่ต้องการพัฒนาโครงการเชื่อนปากมูล	1 2 3 4 5 6 7 8 9 10
j. ความรู้ความเข้าใจ และการตื่นตัวทางการเมืองของผู้มีส่วนได้ส่วนเสียในพื้นที่ซึ่งได้รับผลกระทบทั้งโดยตรงและโดยอ้อมจากการสร้างเชื่อนปากมูล	1 2 3 4 5 6 7 8 9 10
k. อื่นๆ (กรุณาระบุ) _____	1 2 3 4 5 6 7 8 9 10

กรุณาอธิบายหากต้องการ:

7. อะไรเป็นประเด็นที่ท่านเห็นว่าเป็นปัญหามากที่สุดจากการที่กลุ่มของท่านได้ต่อสู้ในกรณีเขื่อนปากมูล
 กรุณาเรียงตามลำดับ 1 = ประเด็นที่มีปัญหาน้อยที่สุด 10 = ประเด็นที่เป็นปัญหามากที่สุด

ประเด็น	ลำดับ (กรณาวง)
a. การสูญเสียพื้นที่ทำกินทางการเกษตรและคุณภาพของดินเนื่องจากเขื่อนปากมูล	1 2 3 4 5 6 7 8 9 10
b. การสูญเสียป่าไม้เนื่องจากเขื่อนปากมูล	1 2 3 4 5 6 7 8 9 10
c. ผลกระทบต่อเกษตรกรรม	1 2 3 4 5 6 7 8 9 10
d. ผลกระทบต่อสัตว์ธรรมชาติ และระบบนิเวศน์วิทยาแม่น้ำ	1 2 3 4 5 6 7 8 9 10
e. ผลกระทบต่อเกาะแก่งธรรมชาติในแม่น้ำ	1 2 3 4 5 6 7 8 9 10
f. การขาดความรู้เกี่ยวกับสิ่งแวดล้อมของชาวบ้านผู้ได้รับผลกระทบ	1 2 3 4 5 6 7 8 9 10
g. ความยากจนและการด้อยการพัฒนาในภูมิภาค	1 2 3 4 5 6 7 8 9 10
h. ผลกระทบต่อประเพณีและมรดกทางวัฒนธรรมท้องถิ่นที่สำคัญต่อวิถีชีวิตของชุมชนท้องถิ่น	1 2 3 4 5 6 7 8 9 10
i. ชุมชนท้องถิ่นไม่ได้รับผลประโยชน์ทางเศรษฐกิจจากการผลิตไฟฟ้าจากเขื่อนปากมูล (การเข้ามาทำลายจากคนภายนอก)	1 2 3 4 5 6 7 8 9 10
j. อื่นๆ (กรณารับ) _____	1 2 3 4 5 6 7 8 9 10

กรณาวธิบายหากต้องการ:

8. ในกระบวนการตัดสินใจกรณีเชื่อนปากมูลคุณได้ใช้ความรู้ข้อมูลทางด้านสังคมและวิทยาศาสตร์ของใครบ้างกรณารับแหล่งข้อมูล 1= ไม่เคยใช้ข้อมูลจากแหล่งนี้เลย 10 = ใช้ข้อมูลจากแหล่งนี้ตลอด
ในกระบวนการตัดสินใจในกรณีเชื่อนปากมูล

แหล่งข้อมูล	ลำดับ (กรณาวง)
a. ผลการศึกษาของนักวิชาการที่รัฐบาลมอบหมายให้ทำการศึกษา	1 2 3 4 5 6 7 8 9 10
b. ผลการศึกษาของนักวิชาการอิสระ	1 2 3 4 5 6 7 8 9 10
c. ความรู้ของชาวบ้านในท้องถิ่น และผลการศึกษาของงานวิจัยของชาวบ้าน	1 2 3 4 5 6 7 8 9 10
d. ผลการศึกษาขององค์กรพัฒนาเอกชน เช่น คณะกรรมการเขื่อนโลก (World Commission on Dam) และเครือข่ายแม่น้ำนานาชาติ (International Rivers Network)	1 2 3 4 5 6 7 8 9 10
e. ผลการศึกษาของบริษัทที่ปรึกษาซึ่งจ้างโดยรัฐบาลหรือองค์กรแหล่ง ทุน เช่น ธนาคารโลก และธนาคารเพื่อการพัฒนาเอเชีย	1 2 3 4 5 6 7 8 9 10
f. อื่นๆ (กรณารับ) _____	1 2 3 4 5 6 7 8 9 10

กรณาวธิบายหากต้องการ:

9. คุณคิดว่าแหล่งข้อมูลด้านสังคมและวิทยาศาสตร์แหล่งใดที่ให้ข้อมูลที่เชื่อถือได้และช่วยในกระบวนการตัดสินใจในโครงการเขื่อนปากมูล กรุณาระบุแหล่งข้อมูล 1= แหล่งข้อมูลที่เชื่อถือได้น้อยที่สุด 10= แหล่งข้อมูลที่เชื่อถือได้มากที่สุด

แหล่งข้อมูล	ลำดับ (กรณาวง)
a. ผลการศึกษาของนักวิชาการที่รัฐบาลมอบหมายให้ทำการศึกษา	1 2 3 4 5 6 7 8 9 10
b. ผลการศึกษาของนักวิชาการอิสระ	1 2 3 4 5 6 7 8 9 10
c. ความรู้ของชาวบ้านในท้องถิ่น และผลการศึกษาของงานวิจัยของชาวบ้าน	1 2 3 4 5 6 7 8 9 10
d. ผลการศึกษาขององค์กรพัฒนาเอกชน เช่น คณะกรรมการเขื่อนโลก (World Commission on Dam) และเครือข่ายแม่น้ำนานาชาติ (International Rivers Network)	1 2 3 4 5 6 7 8 9 10
e. ผลการศึกษาของบริษัทที่ปรึกษาซึ่งจ้างโดยรัฐบาลหรือองค์กรแหล่ง ทุน เช่น ธนาคารโลก และธนาคารเพื่อการพัฒนาเอเชีย	1 2 3 4 5 6 7 8 9 10
f. อื่นๆ (กรณาระบุ) _____	1 2 3 4 5 6 7 8 9 10

กรุณาอธิบายหากต้องการ:

10. ในฐานะผู้มีส่วนร่วมในเชื่อนปากมูล คุณค่าที่ท่านต้องการจะ ได้รับจากกระบวนการจัดการและนโยบายที่เกี่ยวข้องกับเชื่อนปากมูลมีอะไรบ้าง กรุณาเรียงตามลำดับ 1= คุณค่าที่ท่านต้องการได้น้อยที่สุด 10= คุณค่าที่ท่านต้องการได้มากที่สุด

คุณค่าที่ท่านต้องการ	ลำดับ (กรณาวงกลม)
a. ความร่ำรวยทางการเงินและทางด้านวัตถุให้กับตัวท่านเอง, กลุ่ม, บริษัท และ/หรือ ประเทศของท่าน	1 2 3 4 5 6 7 8 9 10
b.อำนาจทางด้านการเมืองและอำนาจผู้นำในกระบวนการจัดการเชื่อนปากมูล	1 2 3 4 5 6 7 8 9 10
c. ความกระฉ่างแจ้งและความเข้าใจทางวิทยาศาสตร์ในเรื่องของมนุษย์ที่เกี่ยวข้องกับเชื่อนปากมูล	1 2 3 4 5 6 7 8 9 10
d.ทักษะของการได้มาซึ่งความรู้ว่าจะทำอะไรและความรู้ในเชิงปฏิบัติเกี่ยวกับเชื่อนปากมูล	1 2 3 4 5 6 7 8 9 10
e. สภาพความเป็นอยู่ที่ดีในแง่ของการส่งเสริมสวัสดิการให้แก่ตัวท่าน กลุ่มของท่าน องค์กรของท่าน บริษัทของท่าน และ/หรือ ประเทศของท่าน	1 2 3 4 5 6 7 8 9 10
f.ความเคารพที่ท่านต้องการได้รับจากผู้มีส่วนร่วมในกรณีเชื่อนปากมูลกลุ่มอื่น ๆ หรือ จากสาธารณชนทั่วไป	1 2 3 4 5 6 7 8 9 10
g.ความยุติธรรม ในแง่ของการส่งเสริมความถูกต้องและความมีจริยธรรมของมนุษย์ ที่เกี่ยวข้องกับเชื่อนปากมูล	1 2 3 4 5 6 7 8 9 10
h. อื่นๆ (ระบุ) _____	1 2 3 4 5 6 7 8 9 10

กรุณาอธิบายหากต้องการ:

11. คำกล่าวเกี่ยวกับโครงการเชื่อมปากมูลข้อใดที่คุณเห็นด้วยมากที่สุด กรุณาเรียงตามลำดับ
1=เห็นด้วยน้อยที่สุด 10 = เห็นด้วยมากที่สุด

คำกล่าว	ลำดับ (กรณาวง)
a.ประวัติศาสตร์ของเชื่อมปากมูลคือประวัติศาสตร์แห่งการต่อสู้เพื่อค่าชดเชยที่เป็นธรรม	1 2 3 4 5 6 7 8 9 10
b.เชื่อมปากมูลเป็นการต่อสู้ของชาวบ้านกับอำนาจรัฐซึ่งทำลายวิถีชีวิตของชาวบ้าน	1 2 3 4 5 6 7 8 9 10
c.โครงการเชื่อมปากมูลสะท้อนการต่อสู้ของชาวบ้านเพื่อจัดการทรัพยากรโดยประชาชน	1 2 3 4 5 6 7 8 9 10
d.การต่อสู้ในกรณีเชื่อมปากมูลจะสำเร็จได้ด้วยการใช้ข้อมูลที่เชื่อถือได้เท่านั้น	1 2 3 4 5 6 7 8 9 10
e.คำว่า“การพัฒนา”คือประเด็นหลักของการถกเถียงในโครงการเชื่อมปากมูล เพราะคำว่า “การพัฒนา” ของชาวบ้านมีความหมายแตกต่างจากความหมายของคำว่า “การพัฒนา” ของรัฐ	1 2 3 4 5 6 7 8 9 10
f. การต่อสู้ในโครงการเชื่อมปากมูลแสดงให้เห็นถึงความขัดแย้งระหว่างความต้องการของประชาชนในเมืองในการใช้ไฟฟ้าสำหรับชีวิตประจำวัน กับความต้องการของชาวบ้านซึ่งมีวิถีชีวิตที่พึ่งพาแม่น้ำและปลา	1 2 3 4 5 6 7 8 9 10
g. ผู้ประท้วงในกรณีเชื่อมปากมูลเป็นพวกที่ก่อความวุ่นวายในสังคม	1 2 3 4 5 6 7 8 9 10
h. เชื่อมปากมูลเป็นสิ่งที่จำเป็นและสำคัญต่อการพัฒนาของประเทศไทย	1 2 3 4 5 6 7 8 9 10
i. อื่นๆ (กรณาระบุ) _____	1 2 3 4 5 6 7 8 9 10

กรุณาอธิบายหากต้องการ:

12. ในการพิจารณาว่าใครคือผู้ได้รับผลกระทบ และใครไม่ใช่ผู้ได้รับผลกระทบจากโครงการเชื่อมปากมูลสำหรับกระบวนการอพยพโยกย้ายและจ่ายค่าชดเชย
คุณเห็นด้วยกับคำกล่าวใดมากที่สุด กรุณาเรียงตามลำดับ 1 = ไม่เห็นด้วยอย่างยิ่ง 10 = เห็นด้วยอย่างยิ่ง

คำกล่าว	ลำดับ (กรณาวง)
a. มีแนวทางชัดเจนในการพิจารณาว่าใครคือผู้ได้รับผลกระทบจากโครงการเชื่อมปากมูล	1 2 3 4 5 6 7 8 9 10
b. ผู้ได้รับผลกระทบได้รับการปรึกษาหารือตั้งแต่ขั้นตอนเริ่มโครงการ	1 2 3 4 5 6 7 8 9 10
c. ค่าชดเชยมีความยุติธรรม	1 2 3 4 5 6 7 8 9 10
d. การประเมินค่าชดเชยแก่ชาวบ้านคำนวณคุณค่าเฉพาะด้านเศรษฐกิจเท่านั้น เช่น รายได้ แต่ไม่คิดถึงต้นทุนและคุณค่าทางด้านวิถีชีวิต วัฒนธรรม ประเพณี และสังคม	1 2 3 4 5 6 7 8 9 10
e. ต้นทุนและคุณค่าของชาวบ้านหรือผู้ได้รับผลกระทบที่ไม่ใช่ตัวเงิน เช่น วิถีชีวิต วัฒนธรรม ประเพณี และสังคม ไม่สามารถชดเชยได้สำหรับโครงการเชื่อมปากมูล	1 2 3 4 5 6 7 8 9 10
f. การจัดสรรคุณค่าเป็นปัญหาพื้นฐานในขั้นตอนการจ่ายค่าชดเชย	1 2 3 4 5 6 7 8 9 10
g. อื่นๆ (กรณาระบุ) _____	1 2 3 4 5 6 7 8 9 10

กรุณาอธิบายหากต้องการ:

13. ระดับต่างๆ ในการจัดการ(หรือตัดสินใจ)ในโครงการ เช่น
โครงการซึ่งมีผลกระทบทั้งทางตรงและอ้อมต่อลุ่มนํ้านานาชาติ เช่น แม่นํ้าโขง คุณคิดว่ารัฐบาล, ชุมชน
และสถาบันในระดับต่างๆ องค์กรใดควรมีบทบาทมากที่สุดในการจัดการแม่นํ้าโขง

ระดับ	ลำดับ (กรณาวง)
a. สถาบัน หรือองค์กรของรัฐในระดับนานาชาติ เช่น คณะกรรมการแม่นํ้าโขง (MRC) หรือ อาเซียน	1 2 3 4 5 6 7 8 9 10
b. สถาบันระดับโลกเช่น องค์กรสหประชาชาติ (UNEP)	1 2 3 4 5 6 7 8 9 10
c. รัฐบาลของประเทศต่างๆ ในลุ่มนํ้าโขง	1 2 3 4 5 6 7 8 9 10
d.หน่วยงานราชการในระดับท้องถิ่นที่ติดกับแม่นํ้าโขงในประเทศลุ่ม นํ้าโขง (เช่น จังหวัดเชียงราย)	1 2 3 4 5 6 7 8 9 10
e. เครือข่ายท้องถิ่น (บุคคลและองค์กร) ซึ่งใช้ประโยชน์โดยตรงจากทรัพยากรแม่นํ้าโขง	1 2 3 4 5 6 7 8 9 10
f. องค์กรในทุกระดับที่กล่าวมาข้างต้น	1 2 3 4 5 6 7 8 9 10
g. อื่นๆ (กรณาระบุ) _____	

กรุณาอธิบายหากต้องการ:

ท่านต้องการสรุปผลการศึกษาหรือไม่

ใช่ ____ ไม่ใช่ ____

หากท่านต้องการสรุปผลการศึกษา กรุณาเขียนที่อยู่ในการจัดส่ง หากแตกต่างจากที่อยู่ในคำถามข้อ1
หากต้องการในรูปแบบอิเล็กทรอนิกส์กรุณาเขียน e-mail address
และผู้จัดทำขอภัยที่ไม่สามารถจัดส่งให้ท่านทางโทรสาร

แปลเป็นภาษาไทยโดย เพียรพร ดีเทศน์ และ ศิริธร ไวยรัชพานิช

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EDUCATION:

- 2000-2005** **Ph.D.** in Law and Social Science, Indiana University, Bloomington, Indiana. Major fields of study are *Public Policy, International Environmental Law and Policy, and Institutional Analysis*.
- 1997-1999** **Master of Public Affairs**, School of Public and Environmental Affairs, Indiana University, Bloomington, Indiana. Concentration is Comparative and International Affairs.
- 1994-1997** **Bachelor of Arts, Political Science (honor) and East Asian Studies (Double Major)**, Indiana University, (05/97). Completed a departmental honor thesis in Political Science: "The Meaning of Student Movements in Burma in 1988 and China in 1989."

PUBLICATIONS:

"Advancing Environmental Governance in Burma" in *Advancing Environmental Governance: Perspective from the Regional Environmental Forum for Mainland Southeast Asia*, p. 13-30, The Cambodian Institute for Cooperation and Peace, The Thailand Environmental Institute, and the World Resources Institute, 2003.

"Democracy in Global Environmental Governance: Issues, Interests, Actors in Mekong and Rhine Basins," *Indiana Journal of Global Legal Studies*, <http://ijgls.indiana.edu> Vol. 10:1, p. 287-314, Winter, 2003.

"Harnessing Governance for Democracy and Sustainability: Empirical Evidences from the Rhine" in Filho, Walter Leal (ed), *International Experiences on Sustainability*, p. 133-158, Peter Lang Press, 2002.

"Empirical Foundation for Agent Based Modeling: How Do Institutions Affects Agents' Land Use Decision Processes in Indiana? L. Carlson, M. Janssen, T. Myint, E. Ostrom, and A. York, in *Proceedings of Agent2002 Conference on Social Agents: Ecology, Exchange and Evolution*, p133-148, University of Chicago, 2002.

"Managing Complexities in Global Environmental Governance: Issues-Interests-Actors Network Model for Transnational Environmental Governance in Mekong

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River Commission and the International Commission for the Protection of the Rhine,” in Biermann, Frank et al. (eds), *Proceedings of 2001 Berlin Conference on Human Dimension of Global Environmental Change: Global Environmental Change and Nation States*, 2002 Potsdam Institute for Climate Impact Research, Berlin, Germany.

“Burmese Legal System: History and Evolution” in Kritzer, Herbert (editor), *Legal Systems of the World: A Political, Social, and Historical Encyclopedia*, p. 222-227, ABC-CLIO Inc., 2002.

PROFESSIONAL APPOINTMENTS AND SERVICES:

Visiting Scholar, The Workshop in Political Theory and Policy Analysis, www.iub.edu/~workshop Indiana University (09/04-Present).

Senior Fellow, Center for Constitutional Democracy in Plural Societies, School of Law, Indiana University - Bloomington (09/04-Present).

IDGEC Research Fellow, Institutional Dimensions of Global Environmental Change Program, the University of California Santa Barbara (UCSB), <http://fiesta.bren.ucsb.edu/~idgrec/> (07/02-Present).

Research Assistant, Center for the Study of Institution, Population and Environmental Change, www.cipecc.org, Indiana University, Bloomington (08/99-12/04).

Steering Committee Member, Regional Environmental Forum for Mainland Southeast Asia, at <http://www.ref-msea.org/> (11/02-Present).

Research Fellow, Knowledge Systems for Sustainable Development Project, Harvard Center for International Development, Kennedy School of Government, Harvard University, at <http://www.ksg.harvard.edu/kssd> (09/03-05/04).

Research Associate, Regional Center for Social Sciences and Sustainable Development, Chiang Mai University, Thailand, (10/02-05/03).

Visiting Researcher, Center for International Studies at the Swiss Federal Institute of Technology (ETH), Zurich, Switzerland (06/01-08/01).

Founder and Moderator of MAYKHA-L Internet discussion list at MAYKHA-L@listserv.indiana.edu. This list is composed of Burmese scholars and students around the world. Currently it has over 200 subscribers, <http://listserv.indiana.edu/archives/maykha-l.html> (09/95-Present).

Member, Dean's Student Advisory Committee, School of Public and Environmental Affairs, Indiana University, (08/00-05/02).

Elected Executive Committee member, Association of SPEA Ph.D. Students,

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School of Public and Environmental Affairs (SPEA), Indiana University, Bloomington. (08/00-12/01).

Elected Executive Committee Member and Representative for International Students, Graduate Student Association at the School of Public and Environmental Affairs at Indiana University, Bloomington (08/98-05/99).

Member of Executive Planning Committee, Nationwide Burmese Students Educational Conference at Indiana University (28/07/95-30/07/95).

Assistant Coordinator, Department of Residential Programs and Services, Indiana University (01/98-05/99). Supervise a team of six Resident Assistants. Conduct weekly staff and one-on-one meetings, set agenda for each week, administrate the affairs of about 2000 students, and write reports.

SELECTED CONFERENCE PAPERS AND WORKSHOP PRESENTATIONS:

Development of Development Rights in Thailand, to be presented at the Development Working Group, the Workshop in Political Theory and Policy Analysis, Indiana University, April 29, 2005.

Analyzing Multilayer Governance of Social Ecological Systems, presented at the Beyond Regression Analysis Workshop, <http://fiesta.bren.ucsb.edu/~idgce/events/beyond.html>, Bonn, Germany, November 18-19, 2004.

Origins of the Challenges in the Making of New Burma, presented at the International Burma Studies Conference, <http://www.grad.niu.edu/burma/conference/>, October 22-24, 2004, Northern Illinois University, DeKalb.

Institutional Dimensions of Knowledge Systems: Conceptualizing Co-production as a Governance Process, presented at Knowledge Systems for Sustainable Development, <http://ksg.harvard.edu/kssd> KSSD Project Meeting in Chiang Mai, January 20-23, 2004.

'Problem of Fit' between Institutions and Environment: Empirical Evidences from the Rhine River Basin, presented at the International Young Scientists Global Change Conference, November 16-20, 2003 Trieste, Italy.

Understanding 'Problem of Fit' between Institutions and Environment: Lessons from the Governance of Rhine River Basin, presented at the LARS2 Conference - The Second International Symposium on the Management of Large Rivers for Fisheries: Sustaining livelihoods and biodiversity in the new millennium

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www.lars2.org on February 11, 2003, Mekong River Commission, Phnom Penh, Cambodia.

Democracy in Global Environmental Governance: Issues, Interests, and Actors in Mekong and Rhine Basins, 2002 Symposium on Globalization and Governance: The Prospects for Democracy, 10th Anniversary Symposium of *Indiana Journal of Global Legal Studies*, on April 5, 2002, Indiana University School of Law, Bloomington, Indiana.

Managing Complexities in Global Environmental Governance: Issues-Interests-Actors Network Model for Transnational Environmental Governance in Mekong River Commission and the International Commission for the Protection of the Rhine, on November 1, 2001, CIPEC Colloquium, Indiana University.

Evolution of Law and Legal Concept in Burma: Challenges at the Transition, at the Burma Studies Conference, on October 14, 2000, Northern Illinois University.

Invited talk entitled *Burmese Visions: Ancient Culture and Contemporary Issues*, sponsored by the Chautauqua Society for Peace and Social Justice, on August 11, 2000, The Chautauqua Institute, New York.

Global Challenges of Failing States: Coping with Refugees and Ethnic Division, at the conference about Small States and Globalization, on March 22, 2000, Tufts University.

Delivered invited speeches about the European Union's Policy toward Burma at the Social Democrat Party Convention in Uppsala City Hall in Sweden and "The Struggle for Democracy in Burma" at Uppsala University, on March 7-9, 1998, Uppsala, Sweden.

Comparison of Burmese Student Movement in 1988 and Chinese Student Movement in 1989, at the Colloquium on Burma Studies, on October 25-27, 1996, Northern Illinois University.

Workshop on "Human Rights Violations in Burma" at the Amnesty International Midwest Conference at Butler University, on April 20, 1998.

Participated in the Online Essay Presentation for the UNDP World Summit for Social Development (WSSD) Youth Initiatives, March, 1996, the essay is entitled "The Roots of World Poverty and Refugee Crisis,"
<http://www.unicef.org/voy/past/voyI/un-0805.html>

FELLOWSHIPS AND ACADEMIC HONORS:

USAID (The United States Agency for International Development) funded Supplementary Grant from the Open Society Institute, 1996-2002.

Pre-dissertation Research Grants from the Center for the Study of Global Change, the Office of International Program and Indiana University Graduate School

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(Summer 2000 for Thailand and 2001 for Switzerland).

Title VI Fellowship, Foreign Language Area Studies, the U.S. Department of Education (2000-2001).

David ver Hagen Memorial Scholarship, Indiana University, 1996-97.

USIA (United States Information Agency) Burmese Refugee Scholarship Award (1993 -1995).

LANGUAGES:

Burmese (native), English (excellent), Thai (fluent in speaking), Chinese (intermediate in speaking), and Spanish (basic speaking and reading).

COMPUTER SKILLS:

GIS, SPSS, MS-Office Professional Edition, UNIX, HTML and Web development.