

Regional Integration, Issue Fragmentation, and Cooperative Environmental Governance in the Lancang-Mekong River Basin

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Abstract

Existing research suggests that regional economic integration creates opportunities for environmental cooperation by increasing interdependence, issue-linkages and the possibility of trade-offs. From 1993-2004, total trade between China and ASEAN countries increased at an average annual rate of 22%, growing from 2.1% to 8.3% of total ASEAN external trade. However, economic integration between China and the Southeast Asian countries of the Mekong River Basin has not resulted in more cooperative governance structures for the Mekong River. As the level of regional economic integration in the Mekong River Basin has increased, so has the institutional density in terms of the number of non-hierarchical, overlapping, international institutions dealing with development and environmental issues. Of particular importance is the interaction between the Mekong River Commission and the Greater Mekong Sub-region Program, each of which has similar goals but take different approaches to achieve them. In this paper, I review recent scholarship on institutional interaction and argue that China has used the presence of overlapping institutions in the Mekong River Basin to its advantage by fragmenting negotiations of economic and environmental issues. I introduce the term “issue fragmentation” to describe this process, defined as the active division of interrelated issues between overlapping, non-hierarchical institutions in order to achieve state interests. While this process is not unique to Mekong River Basin, this case offers an excellent opportunity to examine the relationship between economic integration, increased density of regional institutions and cooperative environmental governance. Contrary to the predictions of existing research, high institutional density can serve as an impediment to cooperative environmental governance by creating opportunities for powerful states to pursue issue fragmentation.

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Introduction

In 1992, the Greater Mekong Sub-region (GMS) Program was initiated by the Asian Development Bank (ADB) in order to “facilitate sustainable growth and reduce poverty in the subregion by strengthening economic relations among the six member countries.”¹ GMS projects have focused on increasing trade, improving navigation, energy, and the environment. In 1995, representatives of the governments of Laos, Thailand, Vietnam and Cambodia agreed to create the Mekong River Commission (MRC), an intergovernmental organization tasked to “cooperate in all fields of sustainable development, utilization, management and conservation of the water and related resources of the Mekong River Basin.” Creation of the MRC was lauded as the type of integrated approach needed to balance environment and development in a major international river basin. As the upstream riparian country in the Mekong Basin, China was also invited to join the MRC, an invitation that Chinese officials reported to consider seriously.² In 1996, the Association of Southeast Asian Nations (ASEAN) launched the Mekong Basin Development Cooperation to “facilitate sustainable development” through cooperative development projects.

Why did multiple international institutions with overlapping objectives develop in the Lancang-Mekong Basin? How does the presence of these overlapping, non-hierarchical institutions impact environmental governance in the basin? Existing research on regional environmental cooperation has tended to view international institutions as coordinating bodies that facilitate cooperative exchanges between different issue-areas to achieve mutual benefits. This approach cannot account for the institutional dynamics that are observed in the Lancang-Mekong River Basin. To explain the presence of competing institutions, the interests of the states that comprise the Lancang-Mekong Basin must be explored. As the strongest regional power, China

¹ GMS Brochure, available at <http://www.adb.org/GMS/about.asp> (Accessed April 2007).

² Xinhua News Agency, Bangkok, 26 July 1996.

has been able to dominate institutional development by selective membership and participation. Because China plans to construct 14 large dams on the main stem of the Lancang (upper-Mekong) River during the next two decades, its interests are best served by promoting regional cooperation within institutions that have a traditional development orientation and avoiding significant participation in institutions that would involve substantial environmental constraints. I review recent scholarship on institutional interaction and argue that China has used the institutional density brought about by regionalism to its advantage by promoting cooperation that fragments economic and environmental issues. I use the term “issue fragmentation” to describe this process, defined as the division of interrelated issues between overlapping, non-hierarchical institutions in order to achieve state interests.

The process of issue fragmentation has important implications for environmental governance of the Lancang-Mekong Basin that run contrary to expectations derived from existing theory. Indeed, the literature on international river cooperation indicates that as countries become more integrated, the potential for cooperative environmental governance increases (LeMarquand 1977; Bernauer 2002; Wolf et al. 2003; Fitzmaurice & Elias 2004; Conca 2006). In particular, integration and regionalism increase the interdependence between countries and open new possibilities for trade-offs between different issue-areas.

Over the past decade, the level of economic cooperation and integration between China and Southeast Asia has increased dramatically. In 1993, ASEAN exports to China amounted to US\$4.529 billion and imports from China equaled US\$4.336 billion. By 2004, exports had reached \$38.647 billion and imports US\$43.211 billion.³ During this time period, total trade between China and ASEAN countries increased an average of 22% annually and ASEAN trade with China as a proportion of total external trade increased from 2.1% to 8.3%. This trend of increased economic cooperation is likely to accelerate in the coming years. Given the associated opportunities for broad cooperation based on issue-linkage, we would expect that cooperative environmental governance in the Lancang-Mekong Basin would be facilitated by regional economic integration.

³ ASEAN Statistical Yearbook, 2005. Available at <http://www.aseansec.org/18175.htm> (Accessed December 2006). Dataset does not include Lao PDR and Vietnam.

Despite growing economic interdependence within the region, China continues to plan and construct the 14-dam Lancang Cascade without significant consultation with the lower-basin countries. Because 21% of the Mekong River basin lies within China, accounting for 16% of the average annual flow and up to 40% of the dry-season flow, the Lancang dam cascade has raised significant environmental concerns for the communities in downstream countries (Ringler 2001; Gajaseeni et al. 2006). The Lancang dam cascade will cause significant changes in seasonal flow volumes and sedimentation patterns, with important implications for agricultural productivity and fisheries in the lower-Mekong Basin. China has also been a proponent of a plan to blast and dredge river shoals and reefs outside of its territory in order to improve river navigation along the Mekong River. Despite potential trade-offs between hydropower development, environmental management, and navigation improvement, these issues have been divided between separate institutions. Integrated management of rivers is well recognized as a requirement for effective environmental protection (Downs et al. 1991; Burton 1995), and thus issue fragmentation is likely to have negative repercussions on the river environment.

Increasing international institutional density is not a process that is specific to the Lancang-Mekong Basin. There is a need to both explain this now widespread phenomenon and assess its implications for environmental governance. The presence of overlapping, non-hierarchical institutions in the Lancang-Mekong Basin offers an excellent opportunity to explore these issues. This case shows that high institutional density can serve as an impediment to cooperative environmental governance by creating opportunities for issue fragmentation.

Interdependence and cooperative environmental governance

The study of international institutions has focused on the role institutions play in promoting cooperation between states. In many areas of international politics, including trade, finance, security, and the environment, states must cooperate with one another in order to achieve mutual benefits. Koehane states that cooperation occurs when “each party changes his or her behavior contingent on changes in the other’s behavior” (1998, p. 380). This definition highlights the importance of exchange within

cooperative processes and the contingent nature that states face when trying to achieve their interests. To the extent that one state does not have the power to force another state to change its behavior (see Krasner 1991), international institutions can lower the transaction costs of exchange so that states can achieve mutually beneficial outcomes. However, international institutions will not produce equal benefits for all states as “the rules of any institution will reflect the relative bargaining power positions of its actual and potential members, which constrain the feasible bargaining space and affect transaction costs” (Koehane 1998, p. 387). Nonetheless, it is difficult to imagine that any state would voluntarily subject itself to the rules of an international institution if it could better achieve its interests outside of that institution.

Abbott and Snidal (1998) describe several ways that international organizations promote cooperation, including facilitation, offering a stable communication forum, administrative and consultative support, and legitimizing policy outcomes. Each of these mechanisms lowers the transaction costs of trade-offs and increases the likelihood of cooperation. As countries become more integrated economically and the opportunities for cooperation increase in different issue-areas, the number of international institutions created to facilitate cooperation is also likely to increase. Several scholars have found that the number of international environmental agreements has increased rapidly over the last two decades (Young 2002; Gehring and Oberthur 2006). To the extent that there are benefits to be derived from cooperation and that linkages between issues do not unduly burden cooperative exchange by increasing complexity (see Susskind 1994), states would be expected to maintain only the necessary number of international institutions, in order to minimize transaction costs of cooperation. If international institutions are used by states to facilitate cooperation, then overlapping institutions in the same region should be complementary rather than competing, especially when the membership is similar.

Most scholars predict that as states become more integrated economically, the potential for environmental cooperation, defined as trade-offs between issue-areas that are intended to improve or maintain environmental quality, will also increase. One of the most notable processes leading to greater integration between states is regionalism, which has steadily increased around the world during the past two decades. Within East and South East Asia, important international institutions such as the Association of

Southeast Asian Nations (ASEAN), the Asia-Pacific Economic Cooperation (APEC), and the Asian Development Bank (ADB) have helped to promote growth in regional trade. In a review of a burgeoning literature on regionalism, Mansfield and Milner describe how regionalism has been thought of both as a “concentration of economic flows” and “a political process characterized by economic *policy* cooperation and coordination among countries” (1999, p. 591). Recent scholarship has emphasized the interests of domestic actors and international power structures that underpin the political processes of policy coordination (Fishlow and Haggard 1992; Mansfield and Milner 1999). For this discussion, regionalism is defined as a process of active policy coordination and cooperation based on the interests of states and their domestic constituencies.

Environmental scholars have questioned whether economic policy coordination will also lead to improved environmental management. In terms of the environmental impacts of liberalized *regional* trade, there are few conclusively damning accounts.⁴ Environmental organizations that oppose regional trade agreements often do so on the grounds that competition for international investment can cause a “race to the bottom” towards lax environmental regulations (Hufbauer et al. 2000, p. 1-2). However, empirical research has generated only limited support for this hypothesis. Beghin and Potier (1997) do not find evidence that less-developed countries have chosen to specialize in “dirty” industries through lax environmental regulations. Esty and Gerandis (1997) suggest that both EU and NAFTA trade agreements have provided opportunities for the harmonization and coordination of environmental regulations across national boundaries. In the case of NAFTA, the North America Commission of Cooperative Environmental Management was created as a parallel organization to promote regional cooperation in areas affected by the trade agreement. It has been argued that this organization has increased opportunities for interaction between state officials, which has resulted in the harmonization and strengthening of environmental regulations, especially in Mexico (Hufbauer et al. 2000, p. 49-54). While the environmental impact of NAFTA is an open debate, the important point here is that

⁴ Most of the literature dealing with the negative impacts of liberalized trade focuses on global, rather than regional patterns. See Daly (1993) for a popular argument against liberalized trade.

economic cooperation opened space for new international environmental cooperation that was based on coordinating trade and environmental issues.

Neumayer argues that economic interdependence can create new incentives for states to promote multilateral environmental cooperation. In particular, multilateral environmental cooperation may serve as an important “signaling device” demonstrating that “the country wants to be seen as serious about multilateral cooperation in general and therefore fit for multilateral cooperation concerning trade agreements in particular” (2002, p. 816). Because reputation is of great importance for repeated economic interactions, especially for export dependent countries, non-economic cooperation may be within state interests in terms of its ability to open foreign markets and ensure favorable trade arrangements. In order to test the hypothesis that trade facilitates multilateral environmental cooperation, Neumayer statistically tests the relationship between trade openness (WTO membership) and participation in multilateral environmental treaties. In several cases, there was a statistically significant relationship between WTO membership and environmental treaty participation, particularly for countries with high export dependence where “trade-relevant provisions are at stake” (p. 831). The results of this study reinforce the expectation that interdependence increases opportunities for cooperative exchange involving environmental quality issues.

This reasoning has carried over to theories of cooperation in international river basins, where “upstream-downstream” problems are difficult to solve due to asymmetries of power, influence, and interest among riparian countries. Sprinz and Vaahstoranta (1999) present a conceptual model that explains environmental cooperation in terms of a country’s vulnerability to environmental damage and the cost of mitigating damage. If a state has low vulnerability to environmental damage and high costs of mitigating damage, it will be a “dragger” in negotiations. Along the course of an international river, an upstream state often has low vulnerability due to its export of environmental problems downstream and presumably a high cost to mitigate damages that originate from activities such as dam building. Downstream riparian countries are highly vulnerable to the management practices of upstream countries and do not bare the immediate responsibility of mitigating damages, and are thus likely to be “pushers” in environmental negotiations. Under these general conditions, trade-offs

between different issue-areas are central for securing cooperation in international river basins.

Early scholarship on multilateral agreements for the governance of international river basins follows this type of reasoning and emphasizes the importance of issue-linkage for securing cooperation:

“The net benefit from an agreement may be increased or decreased through an associated agreement or actions with co-riparians. One country may offer another co-riparian favourable advantage in other areas of their relations, such as trade agreements, as an incentive for the first state to adopt a particular policy” (LeMarquand 1977, p. 21).

In the absence of immediate economic incentives for cooperation, incentives can be produced either through direct trade-offs in other issue-areas or may originate from the desire to create “a reservoir of good will” that can carry over more generally (*ibid.*, p. 13). In more integrated settings, opportunities for these trade-offs or use of “good will” are more abundant as a product of more complex inter-state relationships.

In his review of international river cooperation, Bernauer argues that upstream-downstream problems are easier to solve when “riparian countries are more integrated, i.e., when the density of political, economic, and societal ties among countries is greater” (2002, p. 7). This is explained in four ways: First, cooperation is often challenging due to the collective action problem of creating credible agreements. In more integrated settings, the initial groundwork of establishing credibility is already present. Second, in more integrated settings, opportunities for issue linkages are greater, allowing trade-offs between different asymmetries of interest and power that characterize upstream-downstream relations. Third, regional integration can be accompanied by a convergence in norms and concepts of justice, which may weigh on the reputation and thus actions of upstream states. Forth, regional integration is likely to promote a symmetrical distribution of information that can overcome other types of asymmetries and promote transnational institutions that challenge the role of states.

This paper will further explore the relationship between economic integration and issue-linkage, which can overcome asymmetries in interest by providing reciprocal benefits in negotiations (LeMarquand 1977; Susskind 1994). If cooperation over one issue would be beneficial to one country and costly to another, then it may be useful to

include other issues in negotiations where the benefits and costs are reversed so that a resulting agreement would have overall reciprocal benefits. Thus, issue-linkage has the potential to provide parties a reason to agree when this was not possible for single issues. Weinthal (2001) provides an example of the functioning of this sort of mechanism with her discussion of Central Asian cooperation over river management and energy production. Initially, interventions to manage rivers flowing into the Aral Sea were approached solely as water issues. The responsibilities of newly created interstate water management organizations overlapped with competing domestic and international organizations. After recognition that progress was slower than expected with this approach, water was linked to energy in negotiations, which allowed for realization of upstream energy production in Kyrgyzstan and downstream irrigation needs in Uzbekistan. This case demonstrates that interdependence is often historically based and not easily unraveled. Indeed, some of the richest examples of transboundary water resource management are based upon a long history of regional policy coordination that has maintained momentum despite significant obstacles (Wolf et al. 2003; Fitzmaurice & Elias 2004). Inasmuch as regionalism creates interdependence between states, it should contribute to similar outcomes.

Similarly, Conca (2006, Ch. 4) found that the single most important predictor of international river treaties is the existence of prior treaties within the same basin. In his account, the largest obstacle to cooperation in international river basins is the initiation of cooperative processes. Once cooperative processes are in place, it is relatively easy to achieve continued policy coordination. At a broader scale, regional integration and the cooperation that it entails are generally quite robust. Regional integration implies growing interdependence among states on a number of issues. Thus, cooperation over any single issue becomes easier because it is in the interest of states to maintain broadly cooperative relations under conditions of interdependence. The force of this process will, of course, be influenced by asymmetries of power, however we can assume that equally interdependent states will produce a relatively even distribution of benefits through negotiations involving several issue-areas.

Issue-linkages may also open additional negotiating forums that are important for implementation of cooperative actions. Susskind states, “adding an issue makes it possible to shift the institutional locus of negotiations to a new venue in which

implementation may be easier” (1994, p. 87). Issues that are important for environmental management are often the product of damages that have been created in other sectors. Thus, in many cases, approaches to environmental problems that do not address the underlying causes of those problems will ultimately be ineffective. This suggests that cooperative environmental management needs to be linked to economic policy in order to achieve its objectives.

The basic premise of regional integration and environmental cooperation seems straightforward. As countries are more integrated, they become more interdependent, which increases opportunities for issue-linkages. Much of the research done to this point supports this hypothesis generally, albeit on limited empirical grounds. The effect of increased institutional density at the international level has received less attention. Young (2002) introduces the possibility of “institutional interplay,” and argues that research can no longer study international institutions as isolated entities. International institutional interaction has only recently been the subject of thorough analysis, though the focus has been the interaction between global regimes and national institutions (Oberthur & Gehring 2006). In the proceeding sections, I will examine regionalism and international river cooperation in the Lancang-Mekong Basin to highlight how institutional interaction, and particularly the process of issue fragmentation, has led to outcomes that diverge from conventional expectations about environmental cooperation.

Regional Cooperation in the Lancang-Mekong Basin

The density of cooperative institutions and programs involving the six riparian countries of the Lancang-Mekong Basin has grown significantly over the past 15 years. China’s growing economic, diplomatic and military influence is reshaping international relations in the region (Shambaugh 2004). China has become increasingly active in institutions that were created to promote regional economic growth, and many Southeast Asian countries seek to create close ties with the Chinese economy, which they consider to be the engine of regional growth (Abeysinghe & Lu 2003). Although there is no clear consensus on how to engage China, ASEAN states realize that there is no country that can balance China’s power in the region and “under these

circumstances, attempting to engage and socialize China is the most appealing and viable option” (Narine 2002, p. 197). In this section, I will review cooperation in the region to highlight the increasing institutional density within the Lancang-Mekong Basin. This discussion will form the foundation for an analysis of institutional interaction in the next section.

As China’s economy opened in the later part of the 20th century, its trade both within and outside the region grew dramatically. According to IMF and Chinese trade statistics, China’s total external merchandise trade was US\$117 billion in 1990, growing to US\$1.422 trillion in 2005. This rapid growth in external trade has driven GDP growth averaging 9.7% since economic reforms were initiated in 1979.⁵ By the early-1990s, Southeast Asian countries were beginning to look to China as an engine of regional economic growth, stemming from the view that “ASEAN was too small to have any notable influence or voice” in world trade increasingly characterized by regionalism (Ba 2003, p. 629). Between 1993 and 2004, total trade between ASEAN countries and China grew an average of 22% annually, resulting in an increased concentration of trade at the regional level. During this same period, China actively engaged with ASEAN and other regional institutions on economic matters.

Within the context of broader regional cooperation through organizations such as ASEAN and APEC, creation of institutions specific to the Lancang-Mekong Basin has also progressed rapidly. In 1992, the ADB created the Greater Mekong Sub-region Program (GMS) in order to facilitate economic cooperation between the six riparian countries of the Lancang-Mekong Basin. The orientation of the GMS closely follows the functions prescribed in the ADB Charter, which states that the ADB will “utilize the resources at its disposal for financing development of the developing member countries in the region, giving priority to those regional, sub-regional as well as national projects and programmes which will contribute most effectively to the harmonious economic growth of the region.”⁶ Since 1992, the ADB has approved assisted loans worth \$1.8

⁵ These data are compiled from various official sources and presented in Morrison (2006). “China’s economic conditions.” Congressional Research Service Issue Brief for Congress. Available at <http://www.fas.org/sgp/crs/row/IB98014.pdf> (Accessed December 2006).

⁶ The ADB charter is available at <http://www.adb.org/Documents/Reports/Charter/chap01.asp> (Accessed December

billion within the GMS framework and leveraged \$2.6 billion of external financing for development projects.⁷ The GMS program facilitates cooperation in numerous sectors, including agriculture, energy, environment, human resources, investment, telecommunications, trade, and transportation.⁸ Initially, many of the programs focused on establishing basic infrastructure connections between the six riparian countries and fostering increased dialogue on economic development. The first loan of \$150 million approved in 1994 financed China's Yunnan Expressway Project, prompting continued, active participation from China. Other early financing included a \$60 million loan to Laos in order to develop a 210 MW hydropower station at Theun Hinboun with transmission lines to Thailand. Many GMS loan projects continue to focus on transportation and energy development.

In addition to loan projects, the GMS program has a substantial history of technical assistance, amounting to \$67 million of ADB funding between 1992 and 2005.⁹ This financing has been used to hold international meetings in the core project areas, conduct feasibility and project preparation studies, and fund training and capacity building programs. Technical assistance projects have enabled a consistent international dialogue on a range of issues. Projects related to environmental monitoring and management comprised \$8.9 million or 13% of ADB technical assistance project financing. Because of the significant financing available through the GMS program and China's enthusiastic participation, the GMS has become a locus of regional cooperation for many issues.

Loosely related to the GMS program, negotiation began in 2000 to establish a framework for improving commercial shipping along the Lancang-Mekong River. These negotiations produced the Quadpartite Commercial Navigation Agreement between China, Myanmar, Laos, and Thailand. Within this framework, improvements to the

2006).

⁷ For a summary of GMS loan and financing data see <http://www.adb.org/Documents/Others/GMS/gms-loan-projects.pdf> (Accessed December 2006).

⁸ Background on project activities is available at <http://www.adb.org/GMS/> (Accessed November 2006).

⁹ For a summary of GMS technical assistance projects financing data see <http://www.adb.org/Documents/Others/GMS/gms-technical-assistance.pdf> (Accessed December 2006).

river channel between Jinghong, China and Laung Prabang, Laos were discussed and ADB assistance has been sought to finance these improvements. Shortly following finalization of the Quadpartide Agreement, officials from China, Myanmar, Laos and Thailand agreed to form a committee in order to harmonize navigation regulations along the Lancang-Mekong River.¹⁰ In March 2001, officials from the four countries set out on a joint river survey from Jinghong, China to Chiang Rai, Thailand. One group of officials surveyed the river in order to assess where reefs and shoals needed to be removed in order to make navigation safe for larger ships, while another group of officials conducted a rapid Environmental Impact Assessment of the proposed channel improvements.¹¹ In June 2001, the Mekong River was opened for unrestricted commercial shipping from Simao, China to Luang Prabang, Laos, and the tonnage of commodities shipped on the river is expected to increase dramatically.¹² Subsequent discussions related to the Quadpartide Agreement have taken place within the GMS program, ASEAN, and the MRC. Initial reports indicate that cooperation over navigation may be continuing as China begins to ship crude oil up the Mekong River.¹³

ASEAN has also taken an active role in promoting economic cooperation with the Lancang-Mekong Basin. In 1996, the core member states of ASEAN met and agreed upon the “Basic Framework of ASEAN-Mekong Basin Development Cooperation.”¹⁴ The framework created a voluntary organization of states and other relevant organizations interested in facilitating sustainable development in the Mekong Basin and served as a forum for identification of collaborative development projects. The framework encourages engagement with the private sector for “full and sustainable utilization” of natural resources. Several areas for cooperative activities are identified, including transportation, infrastructure development, promotion of foreign investment,

¹⁰ <http://www.adb.org/Documents/Events/Mekong/Proceedings/stf6-app3.asp>

¹¹ “Mekong River: Four-Nation Bid to Improve Navigation,” Bangkok Post, 23 March 2001.

¹² Xinhua News Agency, 26 June 2001.

¹³ As of April 2007, information on this development is relatively limited. See J. Manthorpe, “China Gets Trade Route Instead of Dams on the Mekong River,” Vancouver Sun, 29 January 2007. Correspondence with the author yielded no information that hydropower and navigation negotiations are occurring through formal institutions.

¹⁴ For the text of the framework, see <http://www.aseansec.org/6353.htm>

development of the agriculture and forestry sectors, promotion of tourism, and technological cooperation. While this framework has never constituted more than a loose gathering of state officials, it has nonetheless provided a backdrop to Mekong Basin cooperation that China strongly supports. For example, when China and ASEAN states signed an agreement to work towards realization of a China-ASEAN free trade area in November 2002, development of the Mekong River Basin was highlighted as a future priority.¹⁵ As China has become more broadly engaged with ASEAN (see Shambaugh 2004), issues regarding trade and development in the Mekong Basin have been increasingly addressed within the ASEAN process.

Arguably the most important organization directly addressing environmental management of the Mekong Basin is the Mekong River Commission, established in 1995 between the riparian countries of the lower-Mekong Basin. As originally conceived, the MRC attempts to connect economic, environmental and social issues under one framework in order to overcome the difficulties of fragmenting economic development and environmental management. The original agreement identifies the following scope for the organization:

“To cooperate in all fields of sustainable development, utilization, management and conservation of the water and related resources of the Mekong River Basin including, but not limited to 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 and to minimize the harmful effects that might result from natural occurrences and man-made activities.”

In 1996, the first dialogue meeting between MRC and Chinese delegates was held in order to exchange views on a broad range of topics including navigation, hydropower development, tourism, and environmental protection. During this meeting, the Chinese delegate indicated that formal Chinese participation in the MRC was under consideration and that initial cooperation should focus on building “mutual understanding” with “easy projects.”¹⁶ It was already becoming clear at this time that

¹⁵ “ASEAN and China sign economic pact.” [ASEAN News Release](#), ASEAN Secretariat, Jakarta, Indonesia, 4 November 2002.

¹⁶ Xinhua News Agency, Bangkok, 26 July 1996.

Chinese officials were moving away from formal membership due to concerns about constraints on use of the Lancang River within the MRC.¹⁷

The most cooperative program established within the MRC process with China is the sharing of hydrological data during the flood season. The lower-Mekong Basin experiences significant flood damages each year due to monsoon rains. Because a significant portion of the Mekong Basin lies within Chinese territory, flood forecasting based on lower-basin data alone had limited value. In order to address this problem, the MRC encouraged China to share hydrological data from two stations within Yunnan Province. In April 2002, a formal agreement for this data exchange was signed between the Chinese Ministry of Water Resources and the MRC. The MRC agreed to provide technical assistance and equipment upgrades and the Chinese Ministry of Water Resources agreed to e-mail readings from two stations to the MRC every 24 hours. In the following months, the MRC Secretariat visited the Chinese hydrological stations and more formal consultations were held on implementation of the data sharing agreement. The first data was transmitted in June of the same year, and by 2004 the transmission of data was automatic due to improvements in computing equipment. Although this program continues, requests made by the MRC for year-round data sharing have not been fruitful, the important implications of which will be discussed below.

It should be clear at this point that international cooperation in the Lancang-Mekong Basin is carried out within a number of international institutions that have both overlapping and competing objectives. While the orientation of each of these institutions is very different, it is striking to observe the similarity in their intended scope of infrastructure development, navigation, and environmental management. In many cases, no explicit attempt has been made to link the activities of these institutions within a single issue-area, let alone to consider issue-linkages in a more comprehensive sense. In the proceeding section, I will examine the implications of overlapping and competing objectives, focusing on how the process of issue fragmentation impacts the opportunities for cooperative environmental governance at the basin level.

¹⁷ See *The Nation*, Bangkok, 9 November 1995.

Issue Fragmentation in the Lancang-Mekong Basin

Institutional Interaction

Cooperation between China and the lower-Mekong riparian countries has grown in recent years and now includes a number of overlapping institutions and processes with distinct approaches towards development and environmental management of the Lancang-Mekong River. Following the scholarship on international rivers, it would seem that the opportunity for cooperative environmental management in the Lancang-Mekong Basin is greater now because of growing regional interdependence and the potential for issue-linkage. The number of issues that require cooperative approaches are numerous. Integration of infrastructure planning creates opportunities for joint investment, observed in the implementation of regional railway and road projects. ASEAN, APEC, and the GMS Program have all attempted to serve as forums where this kind of cooperation can be discussed. Navigation along the Lancang-Mekong River depends on the harmonization of navigation regulations, and in many areas, deepening of the river channel to accommodate larger ships. In developing cooperative approaches to navigation, the GMS Program, Quadpartide Agreement and the MRC have all been involved at certain times. Because of the physical nature of a river, integrated environmental management requires the cooperation of all six riparian countries, and those upstream in particular. Upstream dams have the potential to affect downstream fisheries and agricultural productivity (Ringler 2001; Gajaseni et al. 2006). The MRC has taken the most prominent role in this regard, but without Chinese membership, its ability to effectively plan for environmental quality and water supply remains limited.

Although opportunities for cooperation exist for numerous issues, the international institutions that were created to promote cooperation remain fragmented despite significant overlap of institutional goals. Importantly, this has allowed China to divide interrelated issues into the institutions that are most amenable to its interests. Each of the interstate institutions introduced above have a different orientation towards governance of the Lancang-Mekong River and their distinct processes impact the outcomes of the others.

The question of institutional interaction has only recently garnered attention, partly because the saturation of international environmental regimes is a relatively new phenomenon. Recent scholarship on institutional interactions has dealt with how institutions cause changes in output, outcome, and impact of other institutions (see Underdal 2004). Young introduced the idea of “institutional interplay,” noting that “as the number of institutions in a given social space rises, opportunities for interactions between and among individual arrangements increase exponentially” (2002, p. 111). The recognition that non-hierarchical linkages between institutions are increasingly prevalent has opened a new line of inquiry that moves away from examination of single institutions in isolation. Oberthur & Gehring (2006) argue that institutional interplay can be studied by disaggregating the multiple linkages that allow one institution to affect another. In their approach, each causal link is examined separately, allowing the researcher to distinguish and analyze the numerous mechanisms that might cause one institution to affect another. While this line of inquiry may illuminate how institutional interaction affects the outputs, outcomes, and impacts of environmental regimes, it does not explain how multiple institutions in the same issue-area concurrently change as the result of their interactions. It also does not explain why a particular institution is chosen as the forum to address issues germane to several institutions.

Raustiala and Victor (2004) made important advances in this line of research by examining how property rights regimes for plant genetic resources have evolved over the past century. They describe at least five discrete international regimes that have been developed to address plant genetic resources, in addition to numerous national institutions. Raustiala and Victor introduce the term “regime complex” – “an array of partially overlapping and nonhierarchical institutions governing a particular issue-area” – and address how this idea can be used to explore the interactions between regimes (p. 279). The presence of a regime complex will lead to inconsistencies in rules, causing actors to seek the forum within a regime complex most favorable to their interests. Rosendal describes the possible outcome when overlapping regimes are characterized by diverging orientations, rules, and processes:

“Conflict is a more likely result when the overall policy objectives as well as the obligations emanating from overlapping international agreements fail to complement or enhance each other – or worse, when they are mutually

exclusive. This situation may hamper efforts to reach effective institutional responses to environmental problems, let alone to implement one or both regimes. Such situations may require procedures or mechanisms through which to deal with the more serious implications for effectiveness of international cooperative environmental management and implementation” (2001, p. 97).

In many cases, special mechanisms are required to harmonize the conflicting policy objectives of separate regimes on a single issue-area. But, does this same logic hold when attempting to coordinate policy objectives between several different issue-areas? When speaking of integrated management of environment and development in international river basins, the task becomes coordination of several interrelated issues, such as navigation, infrastructure development, hydropower generation, tourism, water withdrawal practices, and environmental quality. The potential for multi-issue coordination within a process of increasing institutional density has not been sufficiently explored.

Returning to regionalism, we can see how increased international integration would prompt an increased density of cooperative institutions. As more issues are added to the international agenda, states may find that existing institutions do not readily promote cooperation in ways that are pertinent to their interests. Jupille and Snidal (2006) argue that powerful states face several choices when evaluating international organizations. First, if a particular organization is not sufficient to promote the interests of a state, an alternative organization can be selected if it exists. If a good alternative does not exist, then a state can work to change existing organizations. It is assumed that changing an existing organization entails higher transaction costs than selecting among existing organizations. Finally, if changing existing organizations proves unworkable, a new institution can be created, which entails the highest transaction costs. This process of “forum shopping” can be an impediment to the policy coordination within deepening regionalism, especially between economic and non-economic issues.

For plant genetic resources, developed countries largely sought to establish intellectual property rights through WTO trade negotiations, while developing countries worked to protect the common heritage status of these resources through the FAO

(Raustiala and Victor 2004). In each case, countries sought to focus negotiations in the forum most amenable to their interests. Following this logic, we can begin to understand how China has used its position as a regional leader to focus policy coordination in institutions favorable to its interests, while fragmenting overlapping institutions through selective participation. This has resulted in the failure to manage development and the environment of the Lancang-Mekong Basin in an integrated fashion as intended when the MRC was created.

Divergent Development Paradigms in the Lancang-Mekong Basin

The GSM program, funded primarily by the ADB, was established in order to promote economic growth within the sub-region. While environmental concerns have recently been placed on the ADB agenda (Hansen & Hansen 1999),¹⁸ the bulk of ADB programs focus on conventional development projects. According to the 2006 ADB budget,¹⁹ \$4.5 billion of loans will be dispersed in FY2006, divided between Ordinary Capital Resources (OCR) Loans and Asian Development Fund (ADF) Loans. Of OCR loans, 90% of funding explicitly supports the goal of economic growth and only 20% includes an environmental sustainability component. Only 10% of ADF loans include projects with an environmental component.

Thus, the overall focus of the GSM program is to fund conventional development projects.²⁰ Because of steady ADB funding and its emphasis of joint infrastructure development, the GSM has emerged with an orientation favorable to Chinese interests. When initial discussions were held with China about membership in the MRC, Chinese delegates emphasized the importance that they placed on development and investment

¹⁸ For example, see the policy paper approved by the ADB board of directors in November 2002 outlining the ADB's policies and strategies for addressing environmental problems. Available at <http://www.adb.org/documents/policies/environment/default.asp?p=policies#contents> (Accessed October 2006).

¹⁹ Available at <http://www.adb.org/Documents/Reports/Budget/2006/2006-budget.pdf> (Accessed October 2006). Especially note p.11, item 34. This budget refers to the total ADB budget, not only projects with the GSM.

²⁰ The notable exception is the GSM Corridors Project, which provides funding to protect high biodiversity areas in order to offset environmental damage of GSM infrastructure project in the region.

cooperation. In the end, the GSM program proved most amenable to that focus. With considerable funding for programs of mutual interest to all six riparian countries, it has promoted significant economic cooperation and has become the forum of choice for joint investment, infrastructure development and trade relations.

The MRC was established to achieve many of these same ends, but explicitly links issues of economic development to environmental management. In its earlier forms as the Mekong Committee and the Mekong Interim Committee, this lower-basin organization also focused on economic development and especially the construction of large water projects. However, by the early-1990s, there was substantial regional and donor interest in reviving an integrated management institution for the Mekong River due to the emerging sustainability discourse among donor organizations, the development of systematic watershed management theory, and lower-basin recognition of the need for cooperative management to ensure the optimal use of water and related resources (Browder 1998). Thus, the 1995 Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin that formed the MRC attempts to balance lower-basin development and use of river resources with environmental protection, while respecting the sovereign positions of the member countries.

The scope and objectives of the MRC are broad, and cooperation is based upon the principles of equitable use of water resources and protection of the environment. These objectives are formed around the recognition that the natural resources of the Mekong River are essential for the economic and social well being of people living in the basin (MRC 1995). Much like the GSM program, the MRC has programs relating to irrigation, navigation, hydropower, fisheries, flood management, and tourism, among others. However, all of these programs fit within a framework of integrated river management that seeks to balance economic development with protection of natural resources. This approach obviously places constraints on traditional development projects, such as the construction of large dams.

A clear contrast can be drawn by comparing the institutional orientation of the GSM Program and the MRC Basin Development Plan (BDP).²¹ As discussed above, the GSM program focuses mainly on traditional development projects. The BDP has similar

²¹ Information about the MRC Basin Development Plan is available at <http://www.mrcmekong.org/programmes/bdp.htm> (Accessed November 2006).

goals approach using principles of integrated river basin management (see Downs et al. 1991; Burton 1995; Calder 1999). Economic development is to be balanced with environmental concerns and include open public and other kinds of stakeholder involvement. In particular, the BDP accepts proposal for projects that: (1) encourage sustainable development; (2) aim to assist the poor; (3) ensure development is in “harmony with the environment.” Projects are screened against these criteria and those that are not suitable are not selected for further planning. It is worth mentioning that this program is supported by several bilateral aid organizations, each with interest in sustainable development projects.

A similar orientation can be observed with the MRC Water Resource and Hydrology Program, recently renamed the Hydropower Program.²² This program is essentially a strategy-making body that advises lower-basin countries on the balance between development needs and the environmental and social concerns that have been raised within the global community about large dams (see WCD 2001). Core policy principles of the Hydropower Program include multi-sector integrated management, stakeholder participation, and protection of the environment. Experts that work for this program advise country officials and business people on the broader issues surrounding hydropower development when demanded. Thus far, it does not appear that engagement beyond international development agencies has been achieved.

China has always taken the position that control over domestic resources and their use for economic development are not subject to international negotiation (Kane 2001). Energy demand in China is increasing at a rate faster than anywhere in the world. Currently, 25% of electricity in China comes from hydropower; this rate reaches 62% for Yunnan province, which is undergoing rapid economic development (Hori 2000). Because of concern about the pollution generated by coal-fired plants, hydropower is being aggressively pursued as an alternative energy source (Nguyen 1999). The importance of securing new energy sources for continued economic growth in China cannot be overstated (Crompton & Wu 2005; Zweig & Bi 2005). The purpose of the MRC Water Resource and Hydrology Program, as discussed above, promotes

²² Information about the MRC Water Resource and Hydrology Program is available at <http://www.mrcmekong.org/programmes/hydropower.htm> (Accessed November 2006).

development alternatives that are less environmentally and socially disruptive than conventional projects. Given the large and extensive nature of hydropower projects in China, this institutional orientation is not amenable to Chinese interests.

It is curious that two organizations with relatively similar development goals have emerged within the same basin. Jupille and Snidal's (2006) hierarchy of international institutional choice offers an explanation based on state transaction costs. If a country is searching for an international institution to address a particular problem, the transaction cost of choosing between existing institutions is lower than the cost of modifying an existing institution or creating a new institution to address the problem. During the mid-1990s, both the GSM program and MRC were taking form. The former, funded largely by a multi-lateral development bank, focused on traditional development projects, while the later explicitly emphasized projects that balanced environmental protection with development. If the national interest of a particular country were traditional development projects, it is easy to see that the GSM is the forum that would be chosen to coordinate these projects.

In October 1995, shortly after the MRC had been created, the six Mekong riparian countries met to discuss infrastructure development and investment opportunities. The Chinese delegate Zhang Yesui, had already reported that acceptance of the MRC's water use principles would not be possible for China. In December 1995, the 2nd GSM conference on energy cooperation was held between the six riparian countries, and opportunities for joint investment in hydropower, including upcoming projects in Laos were discussed. In July 1996, the foreign ministers of China and Laos met to discuss economic development in the Mekong Basin and agreed to create a joint committee to coordinate economic and trade relations. What can be observed from these interactions is the deliberate movement of economic cooperation outside the MRC process, which approached development within the integrated river management framework. Given the importance that all six riparian countries placed on economic development, the choice to move negotiations outside the MRC can be understood in terms of state interests, especially on the part of China.

Navigation

The negotiations about navigation development in the Lancang-Mekong River also demonstrate how the presence of several institutions has shaped regional cooperation. One of the core issues that the MRC was designed to address was navigation and transport along the Mekong River. During the first MRC-China Dialogue meeting in July 1996, navigation and transport was one of the areas of discussion. For this particular issue, China is dependent on the lower-basin countries for access to Southeast Asia and the South China Sea. Indeed, part of China's development plans for the western provinces, in this case Yunnan, involves increasing access to new markets for Chinese exports. As a result, China engaged lower-basin countries with the goal of dredging and blasting some of the shoals and reefs in Myanmar, Laos, and Thailand that prevented larger ships carrying 100 to 150 ton cargo loads from navigating the entire river between Simao, China and the South China Sea. In the long-term, China pushed for navigation development that would allow ships carrying 500 tons of cargo to navigate the river.

Because the dredging and blasting required to meet these goals were likely to be environmentally harmful to fisheries that many lower-basin communities depended upon for subsistence livelihoods (Poulsen et al. 2002; Ratner 2003; Osborne 2004), the MRC process was not amenable to realization of China's interests. Although navigation was one of the focal areas of the MRC, it would doubtless require extensive review of the project activities and promote community participation. As a result, cooperation was pursued outside the MRC process, resulting in the Quadpartide Navigation Agreement signed in 2000, which became part of the GMS program project pipeline. At most, the MRC has been consulted about this process and has been used as a forum to pursue only non-controversial activities, like harmonization of navigation buoys and beacons between China, Myanmar, Laos, and Thailand. A Rapid Environmental Impact Assessment was conducted in March 2001, concurrent to planning for blasting and dredging activities, without broad stakeholder involvement.

Issue fragmentation is especially notable in this case, because navigation during the dry season will depend on the water release schedules of dams located in China (Osborne 2004). As much as 40% of the lower-basin dry season flow originates in

China, and it is predicted that Chinese dams will have the capacity to increase dry season flow from China by 50% (Ringler 2001; Gajaseeni et al. 2006). Despite the critical importance of release schedules for future navigation and transport potential, China has been unwilling to share any dry-season hydrological data to compliment the data exchange that is in place to aid flood forecasting. In addition, there has been very little dialogue concerning the timing of future release schedules with lower-basin officials. Joint navigation development offers conditions of reciprocal interdependence and thus an excellent opportunity for issue-linkage and promotion of integrated river management.

In June 2003, China abandoned plans for channel improvements beyond Phase 1 of the Quadpartide project, which included blasting to make the Lancang-Mekong River navigable by 150-ton ships. Joern Kristensen, CEO of the MRC, announced that Cambodia and Vietnam, not members to the Quadpartide Agreement, had voiced concerns about the impacts of the project on the people living along the river following and independent impact assessment.²³ It is interesting to note that in June 2005, China's Ministry of Foreign Affairs invited a prominent MRC delegation to visit China in order to discuss possibilities of future cooperation, including specific activities within the MRC Navigation Programme.²⁴ As of early-2007, limited reports indicate that China is pursuing informal negotiations that would allow crude oil to be shipped up the Mekong River.²⁵

The overlapping participation of the GMS and MRC in this case opened space for cooperation outside the MRC framework, resulting in negotiations that did not significantly link the issues of navigation, fisheries, and hydropower development. If China had been a full member of the MRC, the negotiation process may have played out differently, because China would have been constrained by past institutional commitments. Likewise, the other member countries to the Quadpartide Agreement have found it advantageous to increase trade with China due to its rapid economic growth. According to Chinese news sources, in 1990, 45 tons of freight was transported

²³ "Mekong River: China Vows to Limit Blasting of River," *The Nation*, Thailand, 13 June 2003.

²⁴ MRC Annual Report 2005, p. 30.

²⁵ See footnote 13.

between China and the lower-basin countries on the Mekong River. By 2001, following the Quadpartide Agreement, freight transport had increased to 200,000 tons.²⁶ Following Jupille and Snidal's (2006) analysis of international forum shopping, the choice between existing institutions entails the lowest transaction costs to realize a particular interest. Thus, when institutional density is high, transaction costs to a state of realizing a particular interest is lower than with low institutional density. The presence of multiple institutions also allows for the most fitting institution to be chosen for any particular interest. This results in issue fragmentation between multiple institutions when it would be most beneficial to deal with multiple issues in an integrated fashion. In the case of navigation, China cooperated with the MRC on the harmonization of navigation buoys and markers, but not on navigation issues that would have encountered institutional resistance, like blasting shoals and reefs for navigation development.

Selective participation, asymmetries, and issue fragmentation

China drives issue fragmentation in the Lancang-Mekong Basin through selective participation and its asymmetrical balance of power. China has limited its participation in the MRC, while actively participating in regional cooperation stemming from GMS program activities. China has been the recipient of \$1.232 billion of assisted loans through the GMS program between 1994 and 2005, representing 68% of total GMS program loans.²⁷ This funding doubtless provides China with strong incentives to promote continued development and operation of this program. Thus, it actively participates in the numerous meetings of sub-programs and in July 2005 even held a ministerial level meeting in Kunming to discuss regional energy, transportation, and agricultural development.

By contrast, China limits its participation in the MRC. As a "dialogue partner," China attends an annual meeting with MRC member country officials and maintains

²⁶ Xinhua News Agency, 26 June 2001.

²⁷ Data compiled from ADB loan information, available at <http://www.adb.org/Documents/Others/GMS/gms-loan-projects.pdf> (Accessed December 2006).

observer status for other important meetings. The annual dialogue meetings generally entail the exchange of ideas and updates about project activities, rather than formulating substantive plans for cooperative programs. As mentioned previously, the most substantial cooperation within the MRC process has been the exchange of hydrological data during the monsoon season for flood forecasting.

The process of issue fragmentation has particular implications for environmental management. Because environmental conditions, in this case of the Mekong River, are determined by the activities in other sectors, effective environment management is necessarily issue linking. It is of limited use to create a regional development program within one institution, when the decisions about regional development are made in another. It is also of limited use to attempt management of navigation development in one organization, when international cooperation concerning navigation is governed by a separate agreement. Thus, issue fragmentation brought about by increased institutional density, is the primary challenge facing the MRC as it attempts to promote sustainable development in the Mekong Basin. As a recent World Bank draft report has emphasized, MRC strategic plans for 2006-2010 do not address the most fundamental development initiatives in the basin.²⁸ The member countries of the MRC recognize the limitations of their organization without Chinese participation, and when discussing strategic planning in the November 2005 MRC Council meeting, explicitly emphasized the importance of including China in future strategic planning for the organization. Given China's asymmetrical balance of power as a regional economic leader and upstream riparian, it can limit its participation in the MRC to technical cooperation, such as monsoon season data sharing, without significant consequence. Its interests, along with the lower-basin countries, can be met by dividing issues between distinct institutional processes.

Conclusion

The view of regionalism and cooperative environmental governance contained in the literature on international rivers may underestimate the role of increasing

²⁸ http://siteresources.worldbank.org/INTEASTASIAPACIFIC/Resources/226262-1151703454492/Mekong_MWRAS_draft.pdf

institutional density and issue fragmentation on outcomes. The preceding analysis of the Lancang-Mekong River shows that the presence of institutions does not necessarily equate to cooperative environmental management. This qualification needs to be incorporated into broader analysis on cooperation in international river basins. For example, Wolf et al. (2003) have significantly advanced our knowledge about international river cooperation through their analysis of international river treaties and river basin events. However, we must recognize the limitations of this analysis by being careful not to conflate the presence of a treaty or institution with cooperative environmental governance. In making this logical jump, we are likely to conclude that there has been an exponential growth of environmental cooperation over the last several decades due to increased institutional density. This conclusion would obviously be overstated.

Continued analysis of institutional overlap in the Mekong Basin will likely prove fruitful, especially in anticipation of a China-ASEAN free trade area. When China became an active player in ASEAN, it promoted the ASEAN-Mekong Basin Development Cooperation, initiated in June 1996. Like other organizations already discussed, this program is meant to support coordinated projects that promote sustainable development and complement institutions already in place by mobilizing private sector participation in investment. This organization languished during the Asian financial crisis in the late-1990s, however China has continued to be a proponent of this process. When China and ASEAN signed a pact to begin negotiations towards a free trade agreement in November 2002, Mekong Basin development was highlighted as a key issue. Until this point, ASEAN has played a relatively small role as a forum for Mekong Basin policy coordination. This may change significantly as regional free trade discussions move forward. In addition, other institutions are poised to play a large role in the environment and development of the Mekong River Basin, including the newly created Asia-Pacific Water Forum.

Our understanding of institutional interactions is lacking. In this paper, I have begun to examine the detrimental effects on environmental governance of high institutional density that result from issue fragmentation. It is also possible that high institutional density might create synergies between organizations that result in increased realization of cooperative benefits. In addition, it will be important to explore

how the activities of overlapping institutions can be harmonized, especially with regard to environmental management. In the Mekong Basin, the MRC has expanded its list of observer organizations to include the ADB, ASEAN, United Nations Development Program and several conservation groups. In addition, the GMS program and MRC actively collaborate on flood forecasting and mitigation. The conditions that could promote expansion of this collaboration to more substantive development issues remain unexplored.

Given the rapid increase in institutional density over the past decades, institutional interplay is a pervasive phenomenon and an important area for future research (Young 2002, Ch. 5). As Young states, “the development of effective procedures to resolve, or at least manage, conflicts arising from institutional overlaps is a critical concern in every social setting” (p. 130). The first step towards that goal is a critical analysis of the types and consequences of institutional overlap. The potential for this type of analysis is significant, and has begun to attract the attention of some scholars (e.g., Uberthur & Gehring 2006). Here, I have made a modest attempt to tackle a part of this challenge. Whereas previous studies often contain the hidden assumption that the presence of institutions is equivalent to their intended output, examination of the Lancang-Mekong River Basin suggests otherwise. Regionalism surely increases the potential for environmental cooperation if measured by the number of institutions, but not if measured by the output of those same institutions in relation to each other.

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