THE MEKONG RIVER COMMISSION: A REEVALUATION OF

REGIME PROGRESS AND SUCCESS

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List of Acronyms

Basin Development Plan (BDP)
Basin Development Plan 2 (BDP2)
Canadian International Development Agency (CIDA)
Climate Change and Adaption Initiative (CCAI)
Cumulative Environmental Assessment (CEA)
Environmental Impact Assessment (EIA)
Environment Program (EP)
Gross Domestic Product (GDP)
Integrated Basin Flow Management (IBFM)
Integrated Water Resources Management (IWRM)
Interim Mekong Committee (IMC)
Joint Committee (JC)
Lower Mekong Basin (LMB)
Mekong Committee (MC)
Mekong River Basin (MRB)
Mekong River Commission (MRC)
Mekong River Secretariat (MRS)
National Mekong Committee (NMC)
Strategic Environmental Assessment (SEA)
Procedure for Maintenance of Flows on the Mainstream (PMFM)
Upper Mekong Basin (UMB)
Water Utilization Program (WUP)
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Abstract

Regimes are the rules of the game that determine the norm for social practices (Osherenko and Young 1993). International environmental regimes seek to create a sense of interdependence and community in order to solve transboundary issues of resource use and pollution. Regimes are a natural fit for transboundary water management and development. Water is a classic example of how states are forced to cooperate with each other. Shlomi Dinar argues that, “when rivers and other bodies of water traverse or divide countries, transboundary externalities often produce conflict” (Dinar 2008). Water bodies respect no political boundaries and international water law and policy has emerged over hundreds of years to address the issues of water governance and transboundary conflict (Hildering 2004). This conflict provides a medium for cooperation that almost always takes form in a treaty or regime (Dinar 2008).

The Mekong River Commission (MRC) is an international environmental regime that promotes and implements regional cooperation and sustainable development in the Mekong River Basin (MRB) of Southeast Asia. This paper asks what have been the effects of the organization over its 17-year history and analyzes the political and environmental impacts of those effects. My analysis uses the logic model, created by the Canadian International Development Agency (CIDA), to track the growth and development of the MRC over time. Using the framework of the logic model, this paper argues that though effects of the MRC appear marginal and information-based, they should not be discredited because they demonstrate that the regime is following a positive trajectory toward ultimate goal realization.
THE MEKONG RIVER COMMISSION: A REEVALUATION OF
REGIME GROWTH AND SUCCESS

I. INTRODUCTION

For most of history humans have viewed the environment as a resource of infinite possibility and supply. As a result, society has prospered tremendously by learning to harness and utilize our natural resources. This development has brought immense economic and material wealth to many nations. However, as natural resource use intensifies it has become apparent to the global community that resources and the ecosystems they support are finite and that if development and growth are to be sustained, governing actors must intervene to create a set of global norms and rules to ensure the continued existence and bounty of our Earth’s natural resources.

From this shift in global perception of the natural environment and its resources, a new international standard was born. The latter portion of the twentieth century was a time of immense change, as citizens demanded that states and other actors be held accountable for the preservation of our shared resources. Issues of pollution, over extraction, and environmental destruction forced leaders to adopt a set of rules and principles on how to better manage the environment while still promoting a system of economic growth and development. The Report of the World Commission on Environment and Development: Our Common Future, more commonly known as the Brundtland Commission, coined the term sustainable development and since then it has remained the gold standard of global development tactics.

Brundtland changed the way international parties thought about the environment. Meeting the needs without compromising future generation’s abilities to meet their own needs became the goal of all other development tactics thereafter. Areas looking to develop their
economies were guided by international leaders and states such as the United States, Europe, and the World Bank to forge plans and institutions that encouraged greater monitoring and more responsible use of natural resources while in pursuit of economic development.

On April 5th 1995 the Agreement of the Cooperation for the Sustainable Development of the Mekong River Basin was signed by the governments of Cambodia, Laos, Thailand, and Vietnam. The purpose of the document was to establish an environmental regime for the Mekong River Basin (MRB). The Mekong River is one of the largest river Southeast Asia, cutting through six riparian states. The agreement draws strong parallels to Brundtland. The Agreement established a governing regulatory body (The MRC) to carry out the mission and goal of the treaty: to maintain a healthy and sustainable ecosystem while promoting economic growth and development. The Mekong River Commission was established as the primary regulatory body to oversee and facilitate member conversation and regional development tactics. The MRC achieves its goal through a series of core and periphery programs on issues related to economic development and the environment.

The MRC reflects a structure found in many other treaties concerned with international environmental issues. Many scholars have considered the MRC as a fairly ineffective regime arguing that though it has collected, “considerable amounts of data, knowledge, guidelines, IWRM methodologies and approaches have been developed by the MRC, but it seems they have not led to a more proactive engagement in Mekong water governance” (Hirsch et al. 2006). This paper seeks to challenge the view of the MRC as a failure by changing the analytical lens though which we evaluate and attribute success or failure. Though the MRC, in many respects, has been ineffective in terms of meeting its ultimate goal of improved sustainable development and management of the Mekong River, the regime has made great strides over its lifespan.
Today the MRC is beginning to show signs that it is moving into a new paradigm of influence and impact in the decision making process. Analyses that focus solely on the effects of the MRC in terms of how well they meet the program’s ultimate goal set relatively young programs, like the MRC, up for failure.

This paper analyzes the effects and progress of the MRC by identifying the milestones the regime has achieved over its 17-year history and places those milestones into the greater scheme of regime success and goal realization to show that the MRC is on a path toward ultimate goal achievement. Regime strengthening is a gradual progress and immediate results rarely breed ultimate goal realization. By using the Logic Model provided by the Canadian International Development Agency this paper will argue that even though the results of the MRC have been largely technical and information based, they are part of a gradual institutional strengthening process where regime impacts grow as the regime crosses several thresholds of impact type.

II. INTERNATIONAL ENVIRONMENTAL AGREEMENTS: HOW THEY WORK AND WHY THE MEKONG RIVER COMMISSION?

This section addresses why international agreements, like the 1995 Mekong Agreement, are best suited to solve transboundary environmental issues. Additionally, this section argues that the MRB is an excellent candidate for an international environmental regime given its many conflicting uses, interests, and parties.

Why International Environmental Agreements?

Few environmental problems confine themselves to international boundaries. The transient properties of the global commons quickly make the environmental problems of one
nation the problem of its neighbor. Regional state cooperation then becomes the key to alleviating transboundary environmental risks. International agreements and treaties between states have become the common way of addressing these shared risks. International environmental agreements can be an excellent way for states to establish a set of rules and requirements for signatories to abide by. They provide members with a common agreed upon goal, tasks to complete and rules to follow to help that goal become a reality. One common element of an international agreement is the establishment of a regime to ensure that the goal of the agreement is carried out by all relative states.

Stephen Krasner defines a regime as an “implicit or explicit principles, norms, rules and decision making procedures around which actors expectations converge in a given area of international relations” (Krasner 1983). The global community has placed a great deal of importance on regimes by entrusting them with the responsibilities of overseeing, monitoring, and alleviating environmental problems. According to Harold K Jacobson and Edith Brown Weiss, the key to success of international environmental regimes established by environmental treaties is that they “contribute to modifying the behavior of states and, through states, that of enterprises and individuals” (Jacobson and Weiss 1998). Regimes act as the governing bodies responsible for ensuring that members act in accordance with treaty goals and requirements. In essence, regimes are mechanism through which change in state occurs.

There are several ways that regimes can act as a gateway to positive change in member behavior. The most significant role that regimes play is helping alleviate the problems and risks associated with collective environmental efforts, namely the alleviation of the financial and political risks that a state takes when it takes measures to solve a problem of itself and others. Many states are wary to engage in practices that benefit themselves and others because they do
not want to bear the sole economic burden of solving the problems of others if others are not going to input the same resources and effort. This is a common problem associated with collective state action. This effect, known as the free rider problem, is a great inhibitor to solving environmental problems. Regimes can help solve this problem by “mitigating the collective action problems that stand as barriers to the realization of joint gains otherwise available to parties engaged in interactive decision making” (Young 1999). International environmental agreements establish the rules by which states are to play by, but regimes are the primary institution that ensure that all players follow those rules collectively.

Regimes help alleviate the free rider program of collective bargaining in a variety of ways. Regimes can enhance cooperation by increasing transparency so that actors are more willing to cooperate because the element of free riding on the success of other is reduced (Young 1999). Active self-reporting by states submitted to the regime can help identify states that are struggling or failing to comply with meeting treaty goals. It also is a way for holding states accountable for actively tracking their progress. Regimes can also help shape and carve a path toward goal attainment for its members. By “shaping the identities, (and therefore interests) of actors, and in the process, influencing the way actors behave as occupants of the roles to which they are assigned” (Young 1999). Regimes can cause a shift in state behavior by establishing a new set of norms and roles for state participants. States regularly find themselves taking on new roles under regimes even if their identities and roles were well established prior to treaty signing and regime establishment (Young 1999). Finally, regimes act as an authoritative figure, which adds to the legitimacy of the environmental agreement. This legitimacy can influence states to change their behavior.
The Mekong River Basin: Its Uses and Its Riparian States

The Mekong River Basin is one of the most unique river basins in the world. The Mekong River stretches over nearly 4,900 Kilometers, (2,700 miles), from its headwaters in the Tibetan plateau to its delta in the South China Sea (UNEP 2005). It is the seventh largest river in the world in terms of discharge and tenth in length. The basin covers nearly 795,000 square kilometers and has a population of 70 million (Backer 2006). Six riparian states share use of the Mekong river. They are China, Myanmar (Burma), Thailand, Laos, Vietnam, and Cambodia. The basin may be divided up into Upper and Lower basins. China and Myanmar forming the Upper Mekong Basin and Thailand, Laos, Vietnam, and Cambodia forming the Lower Mekong Basin (LMB) (Pachova et al. 2008).

Why Regional Cooperation is Important in the MRB?

All of the riparian countries of the MRB have different needs when it comes to water use and water resource management (MRC 2003). Often differences in needs are directly related to differences in levels of socioeconomic development. “The difference in economic power then translates to differences in regional political power and the potential for dominance of water resources of the basin” (MRC 2010). Additionally, differences in land use translate into significant differences in water use requirements. For example, Thailand and Vietnam require more water for irrigation where there are higher concentrations of productive agricultural land than in Cambodia or Laos.

While demands for water resources are spread unevenly across the MRB, so are the water resources themselves (MRC 2010). Thailand and Vietnam are more energy hungry than their neighbors, but almost all of the hydropower potential in the LMB is located in Cambodia and
Regional cooperation is important in the MRB to ensure that all parties can best utilize the resources the Mekong River has to offer in a way that will ensure that each state will reap and economic benefit whilst maintaining the fragile ecology and uniqueness of the basin.

The MRC is an outlet for regional cooperation. The MRC ensures that “decisions related to one sector, for example hydropower development, also reflect the existing uses and future needs of others, such as agriculture, water supply, fisheries, aquatic ecosystem protection, flood management, and water quality” (MRC 2010). A structured transboundary approach to basin governance helps ensure that the sharing of the transboundary benefits for water use. Maintaining the unique properties of the MRB while balancing its key uses is the raison d'être of the Mekong River Commission. Basin wide monitoring and decision making cannot function in a national vacuum. They must be examined, discussed, and carried out on a regional level. The MRC realizes this need and seeks to fill it by helping its members facilitate effective development and environment programs that do not harm the long-term health of the Mekong River and its surrounding basin.

Regional cooperation in the MRB also ensures there is a mechanism for dealing with conflicts that arise in response to water use. The MRC seeks to identify the “transboundary issues for negotiation, mediation, and conflict prevention; and to develop mediation and conflict management capacity” (MRC 2010). Unequal distribution and accessibility of water resources in the MRB will inevitably lead to regional disagreement as countries harness the economic potential of the Mekong River. Regional cooperation and correct preventative planning mitigates some of the negative political consequences associated with unequal access to water resources.

All of the riparian countries have different needs when it comes to water resources management. Cambodia, Laos, and Vietnam all rely on the Mekong for its fisheries and water
resources for irrigation. For China and Laos, the Mekong River is an important navigational tool. The river’s tributaries are important sources of hydropower for all riparian states. To date, China is the only state in the MRB to construct a dam on the mainstream of the Mekong. These diverse outlooks on how to utilize Mekong River resources can give rise to different objectives in riparian countries. For example, maintaining the seasonality of the Mekong plays a critical role in the productivity of its flood plains and ecosystem of the Tonle Sap Lake (Pachova 2008). In contrast, Thailand draws water from the Mekong River and its tributaries to meet its agricultural demands (Pachova, 2008). Thailand is also strongly motivated to further develop its hydropower resources based on electricity-buying agreements with Laos and China (Pachova 2008). Figure 1 displays the main riparian uses by state and lists some of the feared impacts.

<table>
<thead>
<tr>
<th>Country</th>
<th>Main Use/Function</th>
<th>Major Feared Impacts caused by country</th>
<th>Major threats to the country</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Hydropower, transportation route</td>
<td>Leveling out of the floods, trapping of sediments and nutrients</td>
<td>Lack of energy and transportation routes</td>
</tr>
<tr>
<td>Thailand</td>
<td>Water diversion for irrigation and other uses</td>
<td>Environmental degradation, flow changes</td>
<td>Lack of water for irrigation</td>
</tr>
<tr>
<td>Laos</td>
<td>Hydropower, navigation, aquatic resources</td>
<td>Leveling out the floods, trapping sediments and nutrients</td>
<td>Impacts on agriculture and fishing, river bank erosion</td>
</tr>
<tr>
<td>Cambodia</td>
<td>Aquatic resources, irrigation, possibly hydropower</td>
<td>Potential negative impacts owing to unsustainable fisheries management</td>
<td>Changes in floodplains, particularly in the Tonle Sap flood pulse- impact on fishing and agriculture</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Irrigation (delta), hydropower (central highlands)</td>
<td>Increasing environmental degradation and water quality problems in the delta owning to intensive agriculture and dense population</td>
<td>Decreased dry season water flows; increasing salt water intrusion and negative impacts on irrigation</td>
</tr>
</tbody>
</table>

Table 1: Main Riparian Functions By State (Pachova 2008)
As indicated by Table 1, there are several different, and often conflicting, riparian uses of the Mekong River. The diversity of interests and riparian use of the Mekong River are a reflection of the incredibly diverse ecological environments and political motivations of the MRB and shed light onto some of the key concerns and motivations for collaborative efforts in sustainable development in the LMB.

The Mekong River and Its Uses – Evidence for Regional Cooperation

The variety and diversity of interests in the use and development of the Mekong River lend themselves as perfect examples of how the MRB could benefit from regional cooperation through the formation of an environmental regime. Fisheries, agriculture, and hydropower dominate the conversation of basin development as the transboundary impacts for each can have very large consequences.

Fisheries

The fisheries of the Mekong River are some of the most productive river fisheries in the world (Coates et al. 2003). Fisheries are a main occupation for the Mekong’s population and provide most people with their main source of protein. Approximately 2.6 million tons are harvested annually from fisheries in the LMB (US Senate 2010). This figure amounts to nearly 20 percent of the world’s freshwater fish yield (US Senate 2010). By the time Mekong fish products have been transported, processed, and marketed they are estimated to be worth between 5.6 and 9.4 billion US dollars (US Senate 2010). The revenues generated by the fishing industry
in the LMB make up a significant portion of the Gross Domestic Product (GDP) for many MRC members (US Senate 2010).

Mekong fisheries are also very important for food security in the LMB. In every Mekong country, fish are the main source of animal protein (US Senate 2010). The average person in the LMB eats 56.6 kilograms of freshwater fish products each year (US Senate 2010). It is well established that maintenance of healthy inland fisheries in the LMB is important to food security in the region. Recent data collected by the MRC and other organizations indicates that MRB fisheries may be in jeopardy. The 2010 State of the Basin report found that throughout the basin fisheries are reporting declining catches, falling average sizes and a declining proportion of large predatory species (MRC 2010). Declining fisheries in a region that is highly dependent on the resource is an excellent example of why coordination and basin-wide monitoring of fish biodiversity, count, and environmental conditions in the MRB is important.

*Agriculture/Irrigation*

Agriculture is the single most important economic activity in the LMB (MRC 2010). Rice is the primary crop grown in the region, however it is not the only crop grown in the region (See Figure 2). “Mekong Delta, farmers may produce three crops a year. Yields per crop range from 1.0 to more than 5.0 t/ha. In 2005, about 33.8 million tons of rice was produced in the LMB, more than half of it in Viet Nam” (MRC 2010). Over the next decade agricultural production is expected to increase to keep up with a growing population. The irrigation sector is the largest water user in the LMB, consuming an estimated 41.8 billion cubic meters of water each year (MRC 2010).
Figure 2: Map of Land Use in the LMB Source: MRC

The deposition of rich sediments from upstream on to the Mekong Delta during the wet season provides the LMB with the vital nutrients crops need to be successful. The Mekong Delta in Vietnam is one of the most productive regions in the LMB. It produces upwards of 16 million metric tons of rice annually, enough to feed 77 million Vietnamese for a year (US Senate 2010). Maintenance of sediment transportation along the Mekong is key to maintaining a healthy agricultural sector in the MRB. Blocking of sediment upstream could greatly alter the productivity
of rice paddies on the Mekong Delta. Regional cooperation is necessary to ensure that upstream practices do not significantly jeopardize the livelihoods of downstream farmers.

**Hydropower**

Over the past few decades the MRB has experienced economic growth (MRC 2010). This growth has lead to an increase in energy demand. “From 1993-2005 economic and energy demand both increased at an average annual rate of eight percent, which is one of the highest growth rates in the world over a sustained period” (MRC 2010). Currently, only ten percent of the estimated hydroelectric potential in the Lower Mekong Basin is developed (MRC 2010). The State of the basin report stated that, “how Mekong countries decide to pursue future hydropower development is perhaps one of the most challenging strategic decisions they have faced since the signing of the 1995 Mekong Agreement” (MRC, 2010).

There are currently no large dams on the mainstream of the Mekong River. However, in the past decade the parties of the MRC have reached a crossroads. Many MRC members have been actively pursuing intensive hydrodevelopment projects along the Mekong mainstream. Hydropower has the potential to provide great economic and energy gains, however, there are several environmental risks associated with development of the mainstream channel, as indicated by Figure 3.
Summary of Riparian Uses

From a big picture point of view, all MRB states have similar interests regarding development and economic growth. All states want to improve GDP and increase efficiencies production and use of natural resources for economic gain. Intensification of fishing, irrigation, and hydro development are clear outlets for achieving this goal. However, all three come at a cost. The cost of disrupting one of the last remaining, relatively untouched river basins in the

Figure 3: Map of Proposed Dams in the Mekong River Basin. Source: MRC
world has profound consequences. Furthermore all three practices, if left unchecked, could have negative downstream or transboundary effects on the livelihood of a neighboring state.

In light of recent trends in development agendas for some MRB states (China, Cambodia, Laos), cooperation must play a key role. The MRC is the perfect vehicle for regional cooperation. Its promotion of sustainable development tactics and increase dialogue between states are ways to increase regional transparency and ensure that national practices do not harm regional interests. The MRC has already made great strides in creating a unified set of institutional and technical standards which members must abide by as well as publishing several assessments on the overall health of the MRB. However, establishment of an international regime alone is only necessary, not sufficient, in the collective management of regional resources. The real results stem from the actions the regime takes to meet its goals through production of outputs. The real question to ask when gauging regime effectiveness then centers on the milestones achieved by the regime and its members that helped the regime in its progression toward realization of its ultimate goals. To analyze the outcomes and progress of the MRC a strong theoretical framework must be established for assessing the impact and level of regime milestones.

III. ANALYTICAL METHODOLOGY: THE LOGIC MODEL

*International Environmental Agreements: Mapping Outcomes - The Logic Model*

Though international agreements and their respective regimes can influence great changes in state behavior, not all regimes achieve the same degree of effectiveness. Some regimes pass the effectiveness test with flying colors, while others fail to even move beyond treaty ratification. As demonstrated in Section II, the MRB is a good candidate for an effective
environmental regime. It is quite evident, based on conflicting uses and interests in the LMB, that the MRC has great potential to leave a positive impact on the LMB. To map how successful the MRC has been achieving its goals, I will use a logic model produced by the Canadian International Development Agency (CIDA). The logic model is, “a depiction of the causal or logical relationships between inputs, activities, and outputs of a given policy or program of investment” (CIDA). The model is part of a Results Based Management assessment tool the CIDA uses to improve decision-making, transparency, and accountability on issues of development.

The CIDA breaks down its logic model into six levels: inputs, activities, outputs, immediate outcomes, intermediate outcomes, and ultimate outcomes. Figure two describes in further detail the characteristics of each element. Each level represents a unique and distinct step in the causal logic of a policy, program, or investment (CIDA). These levels may be grouped into three categories that explain the how, what and why of an organization or regime.

The bottom three levels, (inputs, activities and outputs), relate to how the policy, program, or investment got its start. Inputs consist of the, “financial, human, material, and information resources used to produce outputs though activities and accomplish outcomes” (CIDA). Activities are actions taken or work performed though which inputs are mobilized to produce outputs” (CIDA). Finally, outputs are defined as, “direct products or services stemming from the activities of an organization, policy, program or initiative” (CIDA).

The immediate and intermediate outcomes explain what the regime was able to produce or change. Immediate outcomes are defined as a, “change that is directly attributable to the outcomes of an organization, policy, program, or initiative. In terms of time frame and level these are short term outcomes and are usually at the level of an increase in awareness/skills of …
or access to … among beneficiaries” (CIDA). Intermediate outcomes refer to, “a change that is expected to logically occur once one or more immediate outcomes have been achieved” (CIDA). Intermediate outcomes are medium term outcomes are, “usually achieved by the end of a project/program and are usually the change of behavior/practice level among beneficiaries” (CIDA). Finally, ultimate outcomes are the, “highest level of change that can be reasonably attributed to an organization, policy, program or initiative in a causal manner, and is the consequence of one or more intermediate outcomes” (CIDA). The ultimate outcomes most often represents the raison d'être of the policy or program and takes the form of states changing their behavior to favor sustainable practices (CIDA).

The top three levels, (immediate, intermediate, and ultimate outcomes), constitute the actual changes that took place as a result of the first three. These changes may be referred as development results. Development results reflect the actual changes in the state of development that are attributable, at least in part, to investment (CIDA). Results are then defined as “a desirable or measurable change in state that is derived from a cause and effect relationship. Results are the same as outcomes and are further qualified as immediate, intermediate, or ultimate (CIDA).”

The Logic Model provides and excellent framework for analysis because it provides a way to measure the progress of a regime over time. A regime will not be able to produce ultimate outcomes immediately after treaty ratification. Regime strengthening is a gradual progress and the Logic Model illustrates that in a clear and concise manner.
The CIDA Logic Model provides the perfect framework for analysis because it breaks up outcomes into three categories to better understand what level of institutional accomplishments the regime has achieved. It is easy to confuse failure to achieve ultimate outcomes with overall failure. The logic model helps to highlight some of the smaller victories regimes may achieve in their earlier years by breaking them down into immediate, intermediate, and ultimate outcomes.

Historically, government departments and implementing organizations, (IOs), focused their attention on inputs, (what they spent), activities, (what they did), and outputs, (what they produced) (CIDA). Although the information gathered was accurate, it did not provide a clear picture of whether or not regimes were making real progress toward goal attainment (CIDA). “Modern management requires that we look beyond activities and outputs to focus on actual results: the changes created, and contributed to, by our programming” (CIDA).
The MRC is a perfect candidate for the Logic Model. It is a fairly young regime and has had few impacts that stretch beyond the immediate outcome level. In a traditional input, activities, and output model it would seem as if the MRC has not achieved any of its goals. However, with the Logic Model applied it becomes evident that the MRC has only made the first step in a series of outputs leading to realization of treaty goals.

**Weaknesses of the Logic Model**

The Consultative Group on International Agricultural Research identifies a potential problem in attributing causation to an analysis using the Logic Model. Multiple causation is a result often falsely accredited to a regime’s program. Multiple causation refers to the false attribution of a set of successes to a regime when those successes actually were a product of another organization or group. For example, both a regime and a NGO are working on a similar problem in a region and the success of the solution is solely attributed to the regime when the NGO contributed significantly to its victory. The Logic Model framework only “acknowledges that the degree to which results can be confidently attributed to program-specific inputs and actions decreases as one moves “along” the sequence from inputs toward ultimate impacts on the state of the world” (CIDA).

The MRC is one of many actors influencing state behavior in the MRB on issues of development and sustainable practices. The World Bank and Asian Development Bank also work closely with MRB countries to develop their economies. Therefore, changes in behavior, development, or the environment may be attributed to the success of another party, like the World Bank. These successes may occur independently or as a result of interaction and cooperation between actors. The problem of multiple causation applies when examining the
MRC. Other development agencies and interest groups all have a stake in the development of MRB resources. Any major success or changes in behavior could have easily stemmed independently or collectively from any one of these parties. However, the MRC is a fairly young regime and few outcomes have stretched beyond the immediate outcome level. Immediate outcomes are “directly attributable to the outputs of an organization, policy, program, or initiative” (CIDA). Therefore, the Logic Model is an appropriate method of analysis for where the MRC currently is. As the MRC moves into immediate and ultimate outcome achievement it will become more important to reassess the outcomes that can correctly be attributed to the MRC.

IV. THE MEKONG RIVER COMMISSION AND INTERIM MEKONG COMMISSION -

Several decades of inputs and activities went into the primary output of transboundary cooperation in the MRB. The MRC was not created out of thin air; it was a product of nearly 40 years of regional planning and development. Exploring the inputs and activities that lead to the output and creation of the MRC are important to understanding the MRC and its agenda today. The CIDA Logic Model defines inputs as, “the financial, human, material, and information resources used to produce outputs through activities to accomplish outcomes” (CIDA). Whereas activities are defined as, “actions taken or work preformed through which inputs are mobilized to produce outputs” (CIDA). Understanding the inputs and activities that lead up to the creation of the MRC are critical for understanding the goals and mission of the regime as well as understanding how an organization 40 years in the making could have such a slow start.
History of the Mekong River Commission

On April 5th 1995 four lower riparian nations of the Mekong River Basin signed the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin. Thailand, Laos, Cambodia and Vietnam took a monumental step toward cooperative management of the Lower Mekong Basin (LMB). The goal of the 1995 agreement is coordinate sustainable development in the MRB. To accomplish this goal the treaty established the Mekong River Commission to act as the governing body responsible for facilitating these developmental goals. Though the Mekong River Commission was not established until 1995 it had two predecessors, the Mekong Committee, (MC), and the Interim Mekong Committee, (IMC), that helped set the stage for the 1995 agreement. The MC and IMC collectively encompass most of inputs and activities required to form the MRC.

Mekong Commission and Interim Mekong Commission

The Mekong Committee was established in 1957 with the adoption of the ‘Statute for Coordination of the Investigations of the Lower Mekong Basin”. It members included Cambodia, Laos, South Vietnam, and Thailand. China was not included because it was not a member of the United Nations at the time and Myanmar did not join because it had no interest in participating (Jacobs 2002). The Committee was created as part of the United Nations’ Economic Commission for Asia and the Far East (ECAFE). The Mekong Committee marked the UN’s first venture into international river basin planning (Jacobs 2002). The Committee was also the first large-scale effort to study the economic, social, and organizational aspects of a river basin prior to development.
Though the MC was initially grounded in issues of flood control, the organization quickly took a turn toward basin development when ECAFE’s Bureau of Flood Control identified the Mekong River as the most promising candidate of its 18 basins under watch. Studies were conducted on the prospect of irrigation, hydropower, flood control, and navigation. The Committee sponsored the construction of seven tributary dams in the MRB.

By the late 1960’s it became evident that the MC was not progressing as quickly as members and donors would have hoped. Donors and members had been contributing a significant amount of capital, (inputs), into the MC and were seeing few measurable results. The MC had not realized its vision of large multipurpose dams. Furthermore the war in Indochina had dulled the interests of critical donors (Jacobs 2002). In the mid 1970’s, activity within the MC came to a halt.

Cambodia’s lack of involvement in the Committee forced the remaining members, Thailand, Laos, and Vietnam, to form the Interim Mekong Committee, (IMC) in 1978 (Jacobs 2002). The IMC carried out all previous functions of the Mekong Committee that did not require the participation of all riparians. Though the IMC made some advances in regional development, (it published the 1987 Indicative Basin Plan), in general, the committee had too many forces working against it to be successful. Lack of inputs from key donors and internal conflict in MC member states lead to few activities and MC outputs.

By the late 1980’s we began to see a divergence in national agendas of LMB nations. During the tenure of the IMC, Thailand began to diverge from the rest of the LMB nations. In the late 1980’s Thailand experienced rapid economic growth while the rest of the basin grew only slowly or at all (Jacobs 2002). Cambodia’s lack of participation and a divergence from economic symmetry in the LMB led the region to stray away from the ideas of regional
cooperation. By the late 1980’s LMB countries gave up on basin-wide initiations and elected to pursue their own nationally driven initiatives. The 1998 Strategic Plan stated that of the 29 main water plans outlined in the 1987 Indicative Basin Plan, 26 were pursued on a national level (MRC 1998). As IMC members began to slip back into the habit of national orientation collective basin cooperation began to die out and the IMC became a diplomatic background rather than a primary regional resource and governing body (Pachova et al. 2008).

**Creating The Mekong River Commission**

The early 1990’s marked a revitalization of Mekong cooperation. This resurgence of interest from the Lower Mekong Basin let to the creation and signing of the 1995 Agreement on the Cooperation for the Sustainable Development of the Mekong. As a result the Mekong River Commission was born. Shortly after Cambodia’s signing of its peace agreement in 1991, its government requested its reactivation of membership into the Mekong Committee (Pachova et al. 2008). All IMC members were in agreement over Cambodia’s admittance, however, there was much debate over a new constitutional structure of the Mekong Commission (Pachova et al. 2008).

During the absence of the Mekong Commission, the LMB had undergone many changes in its political dynamic. “The ending of the Cold War era altered the geopolitical situation in Southeast Asia as well, and forced the riparian countries to rethink their domestic and foreign policies” (Pachova et al. 2008). Additionally, major geopolitical changes began to occur in the MRB as China began to emerge as a strong regional power. In the late 1990’s China initiated a large hydropower project development project in the Upper Mekong Basin. The environmental and political implications that sprung from China’s activity only led to fragment the Mekong
Commission parties even further (Pachova et al. 2008). Furthermore, Thailand’s economic growth since the 1980’s also became an area of dispute. Thailand’s economic growth far exceeded the rather stagnant behavior of other LMB nations. This discrepancy in regional socioeconomic hegemony created many difficulties in the decision making process as it became obvious that Thailand was clearly more developed than the remaining 3 riparian nations (Pachova et al. 2008).

The debate over the future of the Mekong Commission came down to one decision, to keep the structure of the old Commission or to establish an new regime that incorporated rising powers, such as China, and issues surrounding more developed nations into the equation (Pachova et al. 2008). The result was the establishment of an entirely new regime, The Mekong River Commission. The MRC marked a new era of cooperation, “instead of the former emphasis on planning and construction, the Mekong Agreement focused on sustainable and comprehensive management of the Mekong River” (Pachova et al. 2008). The goal of the MRC shifted from a regional organization to facilitate growth and development to a governing body whose job it was to oversee that the development actions of one state did not significantly threaten the environmental and economic livelihoods of another.

Though the establishment of the MRC marks a milestone in regional cooperation, its establishment created many weak links that have plagued, and continue to plague, the organization’s success. Implementation of regime goals has been successful in some areas such as data collection and information sharing, however, questions emerge over whether member nations have the capacity and financial resources to implement more complex measures of cooperation (Hirsh et al. 2006). Furthermore, as nations begin to develop hydropower technologies and strong national development agendas to meet growing energy and resources
demands, many questions arise over what the role of the MRC will be and if members will take its advice or sideline the evidence in favor of national interests (Pachova et al. 2008).

V. THE MEKONG RIVER COMMISSION

The Logic Model defines inputs, activities and outputs as how the regime got its start. Inputs are defined as the “financial, human, material, and information resources used to produce outputs through activities and accomplish outcomes” (CIDA). Activities are defined as Actions taken or work performed through which inputs are mobilized to produce outputs” (CIDA) and outputs are defined as, “direct products or services stemming from the activities of an organization, policy, program or initiative” (CIDA). This analysis will focus primarily on the primary output of LMB cooperation, the MRC Agreement. An understanding of the role and structure of the regime not only sheds light onto the primary goals of the 1995 Mekong Agreement but also indicates some of the key elements of the MRC Core Programs addressed later in Section VII of this paper.

Role and Structure of the MRC

The 1995 Mekong Agreement opened a third chapter in regional water management in the Mekong River Basin. The Mekong River Agreement has three primary goals; cooperation, development, and environmental protection. The role of each goal may be found in Chapter III of the 1995 Mekong Agreement.

1.) Cooperation: “To cooperate in all fields of sustainable development, utilization, management and conservation of the water and related resources of the Mekong River Basin” (MRC 1995).
2.) Development: “To promote, support, cooperate and coordinate in the development of the full potential of sustainable benefits to all riparian States and the prevention of wasteful use of Mekong River Basin waters, with emphasis and preference on joint and/or basin-wide development projects and basin programs through the formulation of a basin development plan, that would be used to identify, categorize and prioritize the projects and programs to seek assistance for and to implement at the basin level” (MRC 1995).

3.) Environmental Protection: “To protect the environment, natural resources, aquatic life and conditions, and ecological balance of the Mekong River Basin from pollution or other harmful effects resulting from any development plans and uses of water and related resources in the Basin” (MRC, 1995).

The Mekong River Commission structure operates from three primary branches: the Council, Joint Committee (JC), and the MRC Secretariat. The Council and Joint committee both consist of one high-ranking governing official from each member nation (Jansky 2002). The Secretariat is lead by a Chief Executive Officer (CEO). Together these organizations work to create appropriate legislature, literature, reports, and data necessary to implementing a basin-wide strategy of development.

These branches may be viewed as the institutional mechanisms through which the MRC produces impacts and effects. Therefore, it is important to understand the role and function of the Council, JC, and MRC Secretariat because it is though these branches that real regional changes and impacts are made.
The Council

Articles 15 through 20 outline the duties and responsibilities of the Mekong Council. The 1995 agreement describes the composition of the Council as a group that, “shall be composed of one member from each participating riparian State at the Ministerial and Cabinet level who will be empowered to make policy decisions on behalf of his/her government” (MRC 1995). The Council is lead by a chairman to be elected on a rotational basis according to the alphabetical listing of participating countries for a one-year term. The Council holds at least one regular session each year. However, the Council may convene special sessions whenever necessary or
upon request of a member States. Relevant non-member parties upon invitation from the MRC may observe council meetings.

The Council has two functions listed in article 18 of the 1995 Agreement. The first is,

“...To make policies and decisions and provide other necessary guidance concerning the promotion, support, cooperation and coordination in joint activities and projects in a constructive and mutually beneficial manner for the sustainable development, utilization, conservation and management of the Mekong River Basin waters and related resources, and protection of the environment and aquatic conditions in the basin” (MRC 1995).

The first function of the Commission is to carry out the ideals of integrated basin-wide management and sustainable development expressed in the Agreement’s preamble. This provision establishes the Council as the legislative branch of the MRC, bestowing them with the authority to make the necessary policies to carry out successful implementation of the treaty. The second function of the Committee is,

“...To decide any other policy-making matters and make decisions necessary to successfully implement this Agreement, including but no limited to approval to the Rules of Procedures of the Joint Committee under article 25, Rules of Water Utilization and Inter-Basin Diversions proposed by the Joint Committee under Article 26, and the basin development plan and major component projects/programs; to establish guidelines for financial and technical assistance of development projects and programs; and if considered necessary, to invite the donors to coordinate their support through a Donor Consultative group; and to entertain, address and resolve issues, differences and disputes referred to it by any Council member, the Joint Committee, or any member State on matters arising under this Agreement” (MRC, 1995 6).

The second function of the committee is more concrete than the first. It cites examples of some of the duties and programs to be created and evaluated by the Commission.
The Joint Committee

The duties and functions of the Joint Committee (JC) are laid out in articles 21 through 27 of the 1995 Mekong Agreement. The JC, like the Commission, is comprised of one member from each participating riparian State at the Head of Department level. The Joint Committee meets at least twice a year. The role of the JC is to “implement the policies and decisions of the Council and such other tasks as may be assigned by the Council” (MRC 1995). One of the JC’s primary roles is to formulate a basin development plan for approval by the Council.

The JC also regularly obtains, updates, and exchanges important data necessary to implement the 1995 Agreement. Articles 5 and 6 of the Agreement discuss reasonable and equitable utilization of basin resources and waters. Article 5 states that the member states must “utilize the waters of the Mekong River system in a reasonable and equitable manner in their respective territories” (MRC 1995). There are several notification requirements set forth in the Agreement. During the wet season, members are required to notify the Joint Committee of intra-basin water use. During the dry season members are subject to prior consultation, which aims at arriving at an agreement by the JC. Furthermore, “any inter-basin diversion project shall be agreed upon by the JC through a specific agreement for each project prior to any proposed diversion” (MRC 1995). The JC was given the role of adopting the level and locations of flow monitoring as well as the right to take actions necessary for their maintenance. Monitoring conditions and rules were established in the Rules for Water Utilization, prepared by the JC with approval by the Commission.
The Secretariat

The Mekong Secretariat is the final branch of the Mekong River Commission. The functions and duties of the Secretariat are outlined in Articles 28 through 33 of the 1995 Mekong Agreement. The purpose of the Secretariat is to, “render technical and administrative services to the Council and Joint Committee” under supervision of the Joint Committee. The functions of the Secretariat are to carry out the decision process and tasks assigned by the Council and the Joint Committee under the direction of the Joint Committee, to formulate the annual work program and all other plans, projects, and program documents, studies and assessments to be carried out by the MRC, assist the Joint Committee in the implementation and management of projects and programs, maintain databases and information, and make preparations for sessions of the Council and Joint Committee (MRC 1995).

The Secretariat is under the direction of a Chief Executive Officer (CEO) who is approved by the Council from a list of qualified candidates selected by the Joint Committee. The CEO has one assistant that serves a one-year term. The Secretariat is composed of a riparian technical staff that was recruited on the basis of technical competence and serves terms of no more than two to three years.

State Implementation of 1995 Agreement

National Mekong Committees

Member nations have formed National Mekong Committees (NMCs) to help them implement the goals of the 1995 Agreement and the mandates of the Mekong River Commission. The NMCs serve the needs of the MRC by providing a link from the MRC to the national governments. NMCs help coordinate MRC activities, such as streamflow monitoring, at the
national level. The 1994 Annual Report states that the principle implementing agencies of MRC programs and projects are nationally-based satellite agencies or NMCs (MRC 1994). Though there is no legally defined relationship between the NMCs and the MRC, communication and coordination between the two is a critical element to the regime’s effectiveness and success.

VI. IMMEDIATE OUTCOMES: TRACKING PROGRESS

The chartering of the Mekong River Commission marked a significant shift in the direction of regional cooperation. Previous institutions, the Mekong Commission and Interim Mekong Commission, placed a heavy emphasis on development of natural and economic resources primarily through large hydropower projects carried out at the national level on a case-by-case basis. A 2004 MRC report, Progress In Water Management at the River Basin Level: Mekong River Basin, stated that during this period, consideration for social and economic impacts were minimal (MRC 2004). Cambodia’s willingness to rejoin the basin-wide development discussion was the catalyst for a series of changes that greatly shifted the focus and strength of member attention to a program approach solution that sought to maintain a balance between economic development and environmental and social well being.

The MRC was created to holistically manage policy, technical, and administrative matters on the Mekong River. Creation of the MRC marked the phasing out of purely economically driven development tactics and the phasing in of a program based model of inter-basin management. In its 2001 Strategic Plan, the MRC stated that it felt that general development tactics could be easily filled by other development agencies such as the Asian Development Bank (MRC 2001). The 1995 Agreement called for operations carried out by the MRC to be “strategic” in nature, meaning they need to have basin wide significance. This shift
from a project-based approach to a program-based approach forced states to take a more active role in the policy and decision making process.

The previous section discussed the primary output, the MRC, of the inputs and activities of states following the discontinuation of the Interim Mekong Committee as well as the overall structure and function of the MRC. This second level of analysis focuses on the immediate outcomes of the 1995 Agreement and what the MRC has accomplished by tracking changes in member behavior, environmental quality, and level of economic wealth over the 17 years of its existence.

Section VI focuses on the early years of the MRC. This period, 1995-2000, was a critical learning and experimental stage for the MRC. During these first five years the regime had to figure out how to create a program or series of programs to carry out all of the aspects of basin-wide management expressed in the 1995 Agreement. Section VII, Immediate Outcomes: The Modern MRC, (2001-Present), analyzes MRC outputs during this period. The CIDA defines immediate outcomes as, “A change that is directly related to attributable to the outcomes of an organization, policy, program, or initiative” (CIDA). This second chapter of the MRC marked the beginning of program implementation and real progress in tracking and producing changes in development and management patterns. Over the years the MRC has evolved into a regime that is showing increasing strength in its pursuit of preamble goal attainment.

**Outcomes: Tracking Progress**

The MRC, like many international institutions, struggled with achieving measurable outcomes in its early years. Political, social, environmental, and economic forces have all at some point acted as roadblocks to effective regional management of the MRB. However, the
organization has gained significant momentum toward treaty success with each successive year, especially since the turn of the last decade. Seventeen years after its creation, the regime shows signs of strength and growing regional influence. Figure 6 illustrates this gradual strengthening of the MRC.

Figure 6 documents the MRC’s effectiveness over time. Each year of the MRC’s existence has been given a numerical value, (1 through 10), based on the measurable outcomes the organization had been able to produce in that year. Values 0 through 4 correspond with immediate outcomes. These include production of Basin Reports, agreements necessary to facilitate core programs, and building of technical and administrative capacities. Values 5-through 9 correspond with intermediate outcomes A score of 10 means the organization has effectively met its goals as stated in the 1995 Agreement, by successfully implementing a variety of successful programs promoting sustainable development. Additionally those results must have made lasting improvements on the overall ecological health of the Lower Mekong Basin.

According to the 2004 report, Progress In Water Management at the River Basin Level: Mekong River Basin, after the signing of the 1995 Agreement, progress was painfully slow (MRC 2004). Despite several obstacles, the MRC was able to accomplish some important achievements in its first five years. Table 2 lists the published and recorded accomplishments of the MRC from 1995 to 2000. Though these accomplishments may be small in relation to the grand ideals promoted in the 1995 Agreement Preamble, they set the stage for future regime success by establishing a general vision for how to implement ideals of sustainable development in the LMB.

<table>
<thead>
<tr>
<th>Early MRC Outcomes: 1995-2000</th>
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<tbody>
<tr>
<td>▪ Headquarters moved to Phnom Penh, Cambodia (1997)</td>
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<tr>
<td>▪ Agreement between the Socialist Republic of Vietnam and Cambodia on waterway transportation</td>
</tr>
<tr>
<td>▪ Strategic Plan (1998)</td>
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<tr>
<td>▪ Major Restructuring of MRC Secretariat</td>
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<tr>
<td>▪ Began work on 2001 Strategic Plan</td>
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Figure 7: MRC Immediate Outcomes 1995-2000

The most significant achievement during this period was the publication of the 1999 Strategic Plan that set and outlined goals for sustainable development. The 1999 Strategic Plan shared many of the same characteristics of the Mekong Committee and the Interim Mekong Committee. The 2001 Strategic Plan took a project-based approach to problem solving in the MRB (MRC 2001). In a project-based model programs are carried out on a case-by-case basis rather than on a broad basin-wide scale. The 2011 Strategic plan stated that the 1999 Strategic plan was set to span from 1999 to 2003 (MRC 2011). Its duration, however, was cut short with
the adoption of the 2001 Strategic plan that drastically changed the mechanisms by which activity was conducted. The 1999 Strategic Plan echoed the MC and IMC in many ways, but its most notable parallel came in the form of the plan’s project-based approach. In this project approach, direction was organized around sector programs and projects on an individual level (MRC 2011). In other words, projects and programs were conducted on a case-by-case analysis rather than a full basin wide scale.

**Signs of Regime Strength: 1995-2000**

During the early years the MRC was able to accomplish some key achievements in light of serious internal and external barriers. The 2004 report to the WWF and INBO had some positive findings in that there had been several measurable achievements made in the early stages of MRC development. In the latter half of the first chapter of the MRC, progress began to accelerate and the beginnings of an established regime trajectory began to emerge.

One of the requirements of the 1995 Agreement was that it required member states to actively monitor and report streamflow levels. In 1998 a timeframe for the Water Utilization Program (WUP) was established. This time frame included several time-specific milestones regarding agreements on technical procedures and data collection. The timeline established in 1998 began in 2001 and was set for completion in 2005. The 2001 Annual Report stated the specific deadlines as follows: procedures for data and information exchange by 2001, preliminary procedures for notification, consultation and agreement by 2003, procedures for monitoring existing water uses by 2003, procedures for notification, consultation and agreement by 2003, rules for the maintenance of flows by 2004, and rules for water quality by 2005 (MRC 2001).
The 2001 Strategic Plan stated that active data collection and reporting lead to a major overhaul in the MRC’s institutional capacity. In order to handle increasing stresses of the WUP, the Secretariat made several significant structural changes in 2000 (MRC 2001). New staff was recruited, management and operational procedures were streamlined and improved, and a new staff training program was developed (MRC 2001). The 2001 Strategic plan states that major changes were also made to the Secretariats of the National Mekong Committees. NMCs also underwent a series of upgrades including: increased staff recruitment, improvement of management and operations, and technical training and assistance (MRC 2001). By recruiting qualified staff, streamlining and improving the institutional qualities of the organization, and creating a uniform set of educational policies, the MRC was able to enhance the institutional capacity of the regime so it could successfully implement the WUP and other core programs.

In December 1998 another successful case of Mekong River cooperation emerged. On December 17th the governments of Cambodia and Vietnam signed the Agreement between the Government of the Socialist Republic of Viet Nam and the Royal Government of Cambodia on Waterway Transportation. The agreement was drafted in response to Article 9 of the 1995 Agreement and is an example of successful member compliance. Article 9 of the 1995 Agreement states that “on the basis of equality of right, freedom of navigation shall be accorded throughout the mainstream of the Mekong River without regard to the territorial boundaries, for transportation and communication to promote regional cooperation” (MRC 1995). The agreement sets several navigation standards and establishes an agreed upon legal framework, set of terms and definitions to promote “effective implementation of freedom of navigation in the Mekong River system”, as defined in the 1998 Waterway Transport Agreement (MRC 1998). More important than the terms of the agreement is the fact that Cambodia and Vietnam
collectively agreed to implement a binding legal agreement in such a relatively short period of time. The two parties’ willingness to cooperate and follow through with a provision in the 1995 agreement is a large indicator of state willingness to engage in at least one area of successful treaty implementation.

The 2001 Strategic Plan stated that the publication of the 1999 Strategic Plan lead to increased donor confidence in long-term investment in the MRC (MRC 2001). The MRC is heavily dependent on external funding to carry out its operations. The 1999 Strategic Plan was a declaration to MRC donors that the regime was a promising investment. The Strategic Plan provided a clear picture of how funds were to be used (MRC 2001). As a result long term program funding increased substantially (MRC 2001). The MRC ultimately envisions itself as a “financially secure” regime. This means the MRC seeks to reduce reliance on donor funding of core projects to diversify, secure, and manage long-term funding for strategic programs and activities (MRC 2001). However, MRC members do not have sufficient funds at this time to achieve this vision and therefore, donor support is necessary to implement any environment or development scheme.

Although the MRC made many significant changes in the latter half of the regime’s first five years, the MRC still had many major structural and administrative kinks to work out. As policies and concrete goals began to emerge, questions over the MRC’s technical capacity to handle such tasks became great cause for concern. Despite these many challenges, member states were ready to make the changes to implement a better system of regional management, therefore signifying a dramatic shift toward realization of treaty goals.
Signs of Regime Weakness: 1995-2000

In its early years the MRC had difficulty implementing some of its goals. This slow start of the MRC can be attributed to several factors. In a 2004 report to the World Wildlife Fund (WWF) and the International Network of Basin Organizations (INBO) on the Progress in Water Management at the River Basin Level, the MRC identified four serious inhibiting factors that greatly affected the regime’s success.

The first and second roadblocks relate to the relocation of the MRC headquarters. In 1997 the MRC was relocated to Phnom Penh, Cambodia. The 2004 report, Progress In Water Management at the River Basin Level: Mekong River Basin, stated that during this move many qualified staff members opted out of the transition due to concerns over security (MRC 2004). At the time, Cambodia had just re-emerged as a player in the regional dialogue and many parties were skeptical and concerned for their security to make the move so quickly, (post war). The report argued that this led to several key vacancies in technical and administrative positions (MRC 2004, 3). The second impediment to regime success came in the form of internal management struggles. In the early years the management of the MRC was also not fully developed, which lead to difficulties in treaty implementation (MRC 2004, 3). Finally, as a result of lack of regime unity, donor confidence began to decline. In the early years it was questionable if the MRC was capable of developing and implementing a successful strategic objective and direction of the MRC (MRC 2004, 3). Most member states of the MRC are impoverished by global standards and cannot afford to independently fund a fully operational regime like the MRC. Despite these four weaknesses, the MRC did make significant progress toward treaty achievement.


**Analysis: 1995-2001**

The first five years of the MRC can be viewed overall as a success. Despite the many struggles the organization had in implementation of regional policy and rules; it did make significant positive strides in a relatively short period of time. Momentum created from several key accomplishments in 1998 marked the beginning of a period of regime strengthening. The 2001 Strategic Plan stated that inter-state agreements and the development of the 1999 Strategic Plan became the catalyst for renewed donor confidence in the success of the MRC (MRC 2001).

Establishment of the time fame for the WUP created a sense of urgency for the MRC and set into motion a series of actions to improve the efficiency of the organization. Changes made to the Secretariat to keep up with growing technical demands demonstrated that the MRC was ready to move to the next step in realizing basin-wide planning and development. Furthermore, with changes to funding that were in place by the late 1990’s it became apparent that the current structure of the MRC and its Strategic Plan could be enhanced to improve regime productivity further and create a larger impact on the MRB. The progress made from 1995 to 2000 launched the MRC into a new chapter that propelled to start making the necessary changes to realize its treaty goals.

**VIII. IMMEDIATE OUTCOMES: THE MODERN MRC (2001-2010)**

The second chapter of MRC outcomes marked another shift in regime direction. During this time frame, many major changes regarding approaches to problem solving were carried out and have since had a lasting impression on the products and efforts of the MRC. It was during this second chapter that the MRC began to develop strong immediate results. Tangible core
programs with measurable goals were established and confidence from members and donors increased dramatically.

In 2001 the MRC took a monumental step toward adopting a long-term regional management program. The 2001 Strategic Plan and Annual Report set into motion the next steps for the MRC in successfully implementing and promoting integrated basin management. Though the MRC acknowledged that in the two years between the 1999 Strategic plan and the 2001 Strategic Plan the organization had made significant improvements to the regime’s system of operations, it argued that there were still many changes that needed to be made (MRC 2001). In its 2001 Strategic Plan, the MRC identified several key improvements that needed to be addressed. These improvements included making adjustments to program management, communication, data systems, professional staff, and overall status of the MRC (MRC 2001). To implement these improvements several major procedural changes were made.

The missions of the Strategic Plan and Annual Reports seek to adopt all of the ideals and values set forth in the 1995 agreement and solidify them into a set program that will produce tangible and lasting results in the MRB. The most significant contribution of the Strategic Plan and Annual Report was a shift in the regional planning process. Instead of continuing the project-based approach the MRC chose to adopt a program-based approach that sought to solve issues on a basin-wide scale incorporating all parties and interests.

The 2001 Strategic Plan set four concrete target goals for the MRC to achieve from 2001 to 2005. The goals established were:

1. To establish and implement “rules” for water utilization and inter-basin diversion
2. To establish a dynamic basin development planning process as a framework for natural resource management and sustainable development; and to plan and execute corresponding priority sector programs and projects
3. to establish and promote MRC environmental and socio-economic management systems, recommendations, and policy guidelines
4. to establish an effective organization, capable to promote, in partnership with other institutions, basin-wide development and co-ordination (MRC 2001).

These four goals were to be carried out through the establishment of a series of programs intended to focus on key areas of MRB environmental health and ecosystem monitoring. Core, sector and support programs were created to handle a variety of environmental issues from water utilization to fisheries and flooding. To better understand MRC milestones it is best to examine them in the context of their core programs. The MRC core programs not only identify the target areas of development within the MRC, but they highlight the strengths and weaknesses of the MRC from three separate lenses of information and data sharing, environmental management, and development.

**MRC Core Programs**

One of the first steps the MRC had to take in making a substantial transition into a program-based approach was to identify the core fundamentals of the MRC. Ultimately the MRC selected three core programs to implement over its next basin wide strategic plan. These core programs focused on three very important goals that the MRC felt best reflected the overall mission statement of the organization, The goals were data collection and information sharing, environmental protection, and sustainable development. These three ideals translated into the Water Utilization Program (WUP), Environment Program (EP), and Basin Development Plan (BDP). The 2001 Annual Report stated that together the three core programs roughly encompass all of the goals of the 1995 Agreement by addressing its key articles (MRC 2001). MRC core
programs are intended to engage the regime and its supporting members for the long term and truly reflect the goals of regional cooperation and planning.

<table>
<thead>
<tr>
<th>Major MRC Core Program Outcomes</th>
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<tbody>
<tr>
<td>▪ Publication of Annual Report (2001-2010)</td>
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<tr>
<td>▪ Strategic Plan 2001-2005 (2001)</td>
</tr>
<tr>
<td>▪ MRC CCAI Created (2008)</td>
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<tr>
<td>▪ Basin Development Plan (2010)</td>
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**Figure 8: MRC Core Program Outcomes**

Given that the core programs best represent the main objectives of the MRC they will be used as the subject for regime outcomes. Although there are several smaller programs under the direction of the MRC this paper will focus only on the core programs since they best exemplify the Mekong “spirit” of cooperation on the basis of sustainable development. By examining the successes and failures of the core programs it is possible to determine where the regime is succeeding in meeting treaty goals and where it is showing signs of weakness.

**Water Utilization Program (WUP)**

The Water Utilization Program (WUP) was established in 2001. The 2001 Annual Report stated that its primary goal is to help establish permanent and functional mechanisms to support Mekong Basin water resources management in a manner that is consistent with the 1995
Agreement (MRC 2001). The program was set to run from 2000 until 2006. At its conclusion, the program established “reasonable and equitable water use among countries while maintaining the basin’s ecological integrity” (MRC 2001).

The WUP stems from member states’ acknowledgement of the 1995 Agreement’s declaration of the seriously damaging effect that could occur through uncontrolled economic development or environmental exploitation (MRC 2001). The 1995 Agreement established a streamflow monitoring process because of the basin’s sensitivity to external development and environmental stresses. The 2001 Strategic Plan warns that, “if uncontrolled land clearing, large hydropower development, or irrigation development are permitted, flooding could increase, low river flows could fall further, navigation could be disrupted, saltwater intrusion could occur and fish breeding patterns arrested” (MRC 2001).

The WUP has three components. First, basin modeling and knowledge base attempts to develop the necessary analytical tools and comprehensive basin stimulation package to support MRC basin management, decisions, determine, monitor, and implement the “Rules of Water Utilization”; and put functional information sharing mechanisms in place. The second component, rules for water utilization, include drafting the rules to establish the minimum flows of the Mekong and define water sharing, utilization, and water quality rules, preparing detailed review and notification procedures; and assisting in negotiation and consultation during the formation of the Rules. The third component of the WUP, Institutional strengthening, is designed to strengthen the institutional capacity to implement the rules, undertaking basin management functions, promoting participation of upper riparian states, coordination with donor agencies, supervision and monitoring of the implementation of the Project, and final procurement management.
The WUP’s primary target is to build a database of streamflow statistics on the mainstream of the Mekong River. The Secretariat is to use this data to create a baseline for flow in wet and dry seasons so as not to critically harm the river’s ecological health as stated in Article 6 of the 1995 Agreement. The WUP provides the MRC with the tools it needs to gain a deeper understanding of hydrolinkages between the environment, water use, and transboundary impacts on watery, society, and the environment (MRC 2001). With these tools available, the MRC will be able to carryout a necessary obligation of the 1995 Agreement.

Article 6 of the 1995 Mekong Agreement states that all members must cooperate in the maintenance of mainstream flows of the Mekong River (MRC 1995). It is the duty of the National Mekong Committees to collect data for main streamflow monitoring as required in article 6 and 26 of the Mekong Agreement (MRC 1995). Article 6 of the 1995 Mekong Agreement also states that member states must cooperate in the “maintenance of the flows on the mainstream diversions, storage releases, or other actions of permanent nature” (MRC 1995). Mainstream flows are to be maintained above the minimum natural flow during each month of the dry season. Additionally, average daily peak flows greater than what naturally occur during the flood season are to be prevented to the best of the abilities of member nations (MRC 1995).

The Joint Committee was entrusted with the responsibility of adopting the guidelines for the locations and levels of the flows as well as taking the necessary actions to ensure streamflow maintenance. The Water Utilization Program was developed to assist with the data collection requirements stated in the Mekong Agreement pass through. According to the 2001 Annual Report the objectives of the Basin Wide Agreement can only be realized once basin wide data is collected and processed (MRC 2001).
Indicators of Strength: Program Milestones

The WUP was a very successful MRC program. In general the program met all of its expected deadlines and was well received by members and their respective national programs. The timeline for program events established in 1999 provided an excellent framework for successful program completion. Though the program was extended for one year in 2007 at the twenty-fourth meeting of the MRC Joint Committee in August 2006, the initial draft of the Procedures for Flow Maintenance on the Mainstream of the Mekong River was nearly completed.

To indicate the success of the WUP it is critical to show that the program successfully established rules for mainstream flows as required by Article 6 and 26. There are five sets of rules established by the WUP. These rules may be broken down into two categories, procedural rules and physical rules.

Procedural Rules:

1. Protocols for information exchange and monitoring
2. Protocols for monitoring water use and diversion in the LMB
3. Protocols for notification, consultation, and agreement of water use

Physical Rules

1. Rules for maintenance of flows on the mainstream
2. Rules for water quality (MRC, 1995)

To establish these procedural and physical rules, a timeline for establishing the rules of the WUP was drafted in 1999. This timeline is, expressed in Figure 4 (page 40), provides a very tight time schedule for producing the foundation of the WUP. The WUP was one of the first programs created by the MRC and its strict timeline was very ambitious for an organization that
had been founded only a number of years earlier. If the MRC could successfully implement the WUP, many positive benefits would follow.

<table>
<thead>
<tr>
<th>Timeline for Water Utilization Program (1999)</th>
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<tr>
<td>▪ Procedures for data and information exchange by 2001</td>
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<tr>
<td>▪ Preliminary procedures for notification, consultation and agreement by 2003</td>
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<tr>
<td>▪ Procedures for monitoring existing water uses by 2003</td>
</tr>
<tr>
<td>▪ Procedures for notification, consultation and agreement by 2003</td>
</tr>
<tr>
<td>▪ Rules for the maintenance of flows by 2004</td>
</tr>
<tr>
<td>▪ Rules for water quality by 2005.</td>
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</table>

**Figure 9: WUP Timeline**

As previously stated, the tracking of streamflow on the Mekong River was designed to ensure that water levels did not fall above or below natural fluctuations and averages and therefore threaten the ecological health of the LMB. Proper implementation of a set of procedural and physical rules would add legitimacy and credibility to the MRC as well as indicate that it is mature enough to facilitate a major facet of the 1995 vision of basin wide planning and management. Though creating a set of rules and procedures may initially seem like an easy task, the MRC had to overcome major technical and administrative obstacles to ensure that the WUP stuck to its strict timeline of events. This meant that there needed to be careful planning and constant interaction and communication between the WUP, the MRC, NMCs, and donors to ensure that each rule was well understood and properly carried out uniformly be each respective party.

The remainder of this analysis focuses on the major milestones that the WUP accomplished in its 7-year lifespan. Though the WUP was perhaps the easiest of the MRC core programs to implement and complete, it was by far the most successful of all three core
programs at meeting its goals and sticking to its timeline. Milestones of the WUP include administrative and technical capacity building, establishment of procedural rules and establishment of physical rules.

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Description of Milestone</th>
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| **Administrative and Technical Capacity Building** | - Uniform education of members on: data collection and reporting  
- Permanent legal advisor on multilateral agreements hired  
- Computer based modeling system implemented  
- Decision support framework published  
- Overview of basin hydrology published |
| **Protocols for Data and Information Exchange (Procedural Rule 1)** | - Set uniform standard for data and information  
- States required to report annually on uniform categories  
- Program completed on schedule |
| **Preliminary Procedures for Notification, Consultation, and Agreement (Procedural Rule 2)** | - Met article 5 provision in 1995 Agreement  
- Establishes standard format for notification, consultation and agreement on projects involving inter and intra water diversion projects |
| **Procedures for Water Use Monitoring (Procedural Rule 3)** | - Established procedures for data tracking on intra basin water use and inter basin diversion  
- Gave responsibility to each branch of MRC  
- Secretariat was given the responsibility of preparing necessary reports and technical assistance to carry out the program  
- National Mekong Committees were given the task of cooperating with the MRC and providing the necessary data and assistance |
| **Procedure for Maintenance of Flows on the Mainstream (Physical Rule 1)** | - Met requirement of 1995 Agreement  
- Established acceptable minimum monthly flows of the Mekong, acceptable natural reverse flow of the Tonle Sap, and set a maximum peak flow that is not to be surpassed on mainstream water levels |
| **Rules for Water Quality (Physical Rule 2)** | - Program was nearly completed before being removed from WUP |

**Figure 10: Summary of WUP Milestones**
Milestone: Administrative and Technical Capacity Building

The building of administrative and technical capacities was necessary for effective management and completion of the Water Utilization Program. The WUP began taking substantial steps to improve by ensuring that all members began at an equal starting block. For reporting of water levels on the Mekong River to be accurate and indicative of trends in the LMB, they first had to be uniform. This meant that each member state had to be educated on the same material, monitor water levels using the same tools and instruments, and report data in a uniform format. The MRC was able to successfully meet all of these targets by making the necessary changes to its institutional capacity to support a quality program that produced accurate results.

The 2001 Annual Report stated that in its first year the MRC held training and consulting workshops on data and information exchange for relevant parties, obtained a permanent legal advisor and experts in international law, multilateral agreements and data sharing (MRC 2001). The 2002 annual report followed up on the progress by stating that the WUP continued to build its technical capacity for carrying out the WUP by continuing to develop a computer based modeling system to predict the outcomes of proposed development in the LMB (MRC 2002). The WUP also introduced a “flow management” approach to determine the mainstream flow of the Mekong by incorporating both physical and ecological considerations. The flow management approach is a critical component required to support the Mainstream Flow Procedures due in 2004 (MRC, 2002). Finally, great improvements in management and collaboration between the Secretariat and NMCs were made as the two bodies cooperated on implementation of procedures and technology.
In addition to signing both procedures, the 2003 Annual Report stated that the WUP had also produced a working copy of the Decision Support Framework, implemented Integrated Basin Flow Management (IBFM) under joint supervision with the Environment Program and completed a schedule of agreements and procedural rules, paving the way for technical agreements and rules for water quality and quantity (MRC 2003).

The WUP took several steps to expand the technical capacity of the program in 2004 to meet the large demands of the PMFM. The Decision Support Framework, a program to aid the decision making process by using collected data to analyze and quantify mainstream projects and their effects, was completed (MRC 2004). Additionally river modeling tools were developed to better understand the reverse flow of the Tonle Sap tributary. Article 26 of the 1995 Agreement requires that the MRC collect accurate data on the tributary to enable the acceptable natural reverse flow during the wet season (MRC 1995). Five rounds of staff training of both the MRC Secretariat and NMCs were held so that they could make accurate hydrological calculations when establishing a minimum and maximum flow of the Mekong mainstream.

In 2005 WUP published the Overview of the Hydrology of the Mekong River Basin. The overview provided members with a comprehensive view of the LMB based on the data and statistics that had been collected by the MRC. Essentially the report provides its members with an introduction to hydrology of the Mekong so that they may be better educated on issues pertinent to the entire MRB with the hope that their development decisions may take these factors and concerns into account. Additionally, the WUP completed its first basin wide flow assessment of the MRB based on evaluation of the social, environmental, and economic beneficial uses of water under flow regimes representing a wide range of possible future basin development activities. The creation of a basin wide flow assessment was a huge step toward
sustainable and equitable use of the Mekong River and is a valuable tool in evaluating the potential impact on the LMB and streamflow.

Milestone: Procedural Rules

The MRC was able to successfully carry out all procedural rules on schedule. Though the procedures did not essentially change any state behavior to improve the ecological and economic health of the MRB, they did provide the foundation essential to program success. By agreeing on uniform terminology, measurements, and procedures the MRC took its first step in creating a cohesive transboundary regime. Three major procedural rules were signed in between 2001 and 2003, the Procedures for Data and Information Exchange, Preliminary Procedures for Notification, Prior Consultation, and Agreement, and Procedures for Water Quality.

Rule 1: Procedures for Data and Information Exchange (2001)

In 2001 the MRC published the Procedures for Data and Information Exchange to ensure all states were reporting data in a uniform manner. The procedures established a common terminology / vocabulary, set of principles, types of data sharing, and timelines for reporting (MRC 2001). The procedure requires member states to report annually to the Secretariat on issues of water resources, topography, natural resources, agriculture, navigation, infrastructure, development, environment, and tourism (MRC 2001). 2001 was a significant first step toward establishment of water monitoring policy because it established a standard for how member states were to carry out and establish the necessary programs on the national level to meet the demands of the 1995 agreement.
Another significant accomplishment was that the procedure was completed on schedule. Successful singing and adaptation of the program marked a monumental step toward cohesiveness within the MRC. It also acts as an indicator of member states’ willingness to cooperate and work toward successful implementation of the WUP and the new program-based MRC. In 2002 the WUP began to draft the initial workings of the Procedures for Notification, Prior Consultation, and Agreement.


In 2003 WUP made great strides toward successful implementation of its second and third procedural goals, (establishing preliminary procedures for notification, prior consultation, and agreement and procedures for monitoring of existing water uses by 2003). The continual expansion of technical capacity and adoption of practices to be implemented in the future show that the WUP was taken seriously by all of the invested parties and that there was a strong will to complete the program on schedule.

By 2003 the WUP was set to have completed the preliminary procedures for notification, consultation and agreement and completed the Procedures for Water Quality Monitoring. However the WUP had surpassed that goal by signing the finalized procedures into policy in November 2003. The WUP did not only meet its goal of having both procedures underway by 2003, it surpassed it.

Article 5 of the 1995 Agreement states that during the wet season and dry season inter basin and intra-basin diversions shall be subject to notification, prior consultation, or agreement by the Joint Committee (MRC 1995). The Procedures for Notification, Prior Consultation and Agreement established standards that member states must abide by when diverting water
resources of the Mekong River and its tributaries. The Agreement provides a standard format that states are to abide by when submitting a notification, prior consultation, or agreement including content, format, necessary institutional mechanisms, roles of the Mekong Commission and Joint Committee, process, timing, and absence of required documents or procedures. The establishment of a uniform procedure for notification, prior consultation, and agreement ensured that all states would produce identical information for processing by the MRC therefore streamlining the process and making the regime more efficient.


The Procedures for Water Use Monitoring, completed November 2003, established procedures for data tracking on intra basin water use and inter basin diversion (MRC 2003). The agreement established a set of duties for each branch of the MRC. The Joint Committee was entrusted with ensuring the efficiency and effectiveness of water monitoring by continually renewing and updating the system (MRC 2003). The Secretariat was given the responsibility of preparing necessary reports and technical assistance to carry out the program. The National Mekong Committees were given the task of cooperating with the MRC and providing the necessary data and assistance.

Milestone: Physical Rules


By 2004 the WUP was set to have the first of two physical rules in place. The 1999 timeline originally set the Rules for Maintenance of Flows on the Mainstream to be completed in 2004. Since the WUP had established and agreed on how members were to submit data to the
MRC, it needed to establish the parameters that data had to stay within. Unfortunately the rules were not completed until 2006. However, significant progress was made toward goal completion in the two-year gap.

In 2004 the WUP made great strides in developing the technical basis for the drafting of the Procedure for Maintenance of Flows on the Mainstream (PMFM). The objective of the PMFM is to “provide a framework for technical guidelines, institutional arrangements, directions, and information to enable the MRC and its member states to maintain and manage the flows of the Mekong River mainstream as required by articles 6 and 26 of the Agreement” (MRC 2006). However, adopting physical rules for flow maintenance was much more difficult than adopting policies and procedures for data submission. Establishment of the PMFM required extensive technical knowledge and training regarding the acceptable low and high flow levels of the mainstream of the Mekong River as well as one of its most prominent tributary, the Tonle Sap.

In June of 2006 MRC members signed off on the PMFM. The flow procedures are a required element of the 1995 agreement. The PMFM clarifies the acceptable minimum monthly flows of the Mekong, acceptable natural reverse flow of the Tonle Sap, and sets a maximum peak flow that is not to be surpassed on mainstream water levels. The agreement also resolved many uncertainties regarding administrative duties by clearly defining roles, objectives, principles, and the scope of the agreement by clearly defining the roles of each branch of the MRC and NMCs (MRC 2006). The final set of procedures for water quality were finalized and signed by the Council in 2006.
Rule 2: Rules for Water Quality

By 2005 the WUP was supposed to have established the Rules for Water Quality. The 2005 Annual Report stated that though the program did not complete this goal it did accomplish several key tasks including: the final text of the PMFM and Rules for Water Quality were initiated and nearly completed (MRC 2005).

2007 marked the successful completion of the Water Utilization Program. The PMFM was signed and completed and several loose ends regarding technical monitoring and capacity were tied up. Though the Rules for Water Quality were never completed, they (along with several other components of the WUP) were integrated into the BDP (MRC 2006). The completion of the WUP marked the completion of the first MRC core program. The WUP was a critical aspect of the MRC because it was responsible for carrying out one of the most basic functions of the MRC, monitoring of water levels in the LMB. The project was completed only one year behind schedule and addressed all of the key goals the 1999 timeline.

Indicators of Program Weakness

The WUP had few weaknesses in its implementation. Toward the end of its lifespan, the WUP failed to meet two of its target goals, (steamflow monitoring & funding). Monitoring streamflow on the mainstream of the Mekong was one of the most basic requirements of the 1995 Agreement. The MRC got a late start establishing the WUP and by the time the program was fully developed, over ten years had passed since the creation of the MRC.

Additionally, the WUP was heavily funded and sponsored by third parties including the World Bank and several other European donors. One could argue that the only reason why MRC member states were so effective in implementing a successful program was that they were
heavily reliant on external motivation and pressure to complete tasks on time. No program or project sponsored by the MRC was carried out without extensive external funding and support. In spite of these weaknesses / shorfalls, the WUP’s overall program was clearly a success.

Analysis of Water Utilization Program

The fact that the MRC was able to make such significant progress in creating the WUP so soon after its drastic shift to a program based approach is noteworthy. Although rules for water quality were not finished under the WUP, the program did an excellent job of setting target goals and sticking with them. By creating a uniform standard for how information is to be collected and shared the MRC and WUP took the first major step toward collective monitoring and management of the Mekong River Basin. Though data sharing is far from the grand ideal of sustainable development on a regional scale it does increase transparency in the LMB and create a bridge toward greater methods of cooperation.

One of the most important effects of the WUP was the improvement made to the institutional and technical capacities of the MRC. The building of the procedures and rules for data sharing and water monitoring forced the MRC, National Mekong Committees, and line agencies to work closely together on developing a common framework for technical analysis. Increased dialogue between the MRC, NMCs, and line agencies significantly increased the efficiency and credibility of the regime. States had to work closely with each other and the MRC to ensure that all data and procedures were carried out in a uniform manner. Organizing such a project took great cooperation and it was clear that member states were willing to abide by the expectations of the 1995 Agreement by making the necessary domestic changes to carryout the
WUP. All of the NMCs created permanent national WUP units responsible for the coordination of national participation and WUP implementation at the state level (MRC 2006).

The WUP was a critical component of the MRC. Without it, the regime would have failed to meet a major component of the 1995 Agreement. That being said, the project was relatively narrow in focus and required states to make only adjustments to administrative functions and policy. More ambitious programs, the EP and BDP, still had more obstacles to overcome.

<table>
<thead>
<tr>
<th>Program Strengths</th>
<th>Program Weaknesses</th>
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<tr>
<td>▪ Most WUP policies were completed on schedule</td>
<td>▪ Late program start</td>
</tr>
<tr>
<td>▪ Program fulfilled requirements on reporting and monitoring of 1995 Agreement</td>
<td>▪ A donor based regime – members reliant on World Bank and other development agencies</td>
</tr>
<tr>
<td>▪ Uniform standard for information sharing and notification established</td>
<td>▪ Rules for Water Quality never published under WUP</td>
</tr>
<tr>
<td>▪ Increased dialogue and cooperation between MRC, members, and NMCs</td>
<td></td>
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<tr>
<td>▪ Increased technical capacity of MRC</td>
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**Figure 11: Strengths and Weaknesses of WUP**

**Immediate Outcomes: Basin Development Program (BDP)**

The Basin Development Plan Program takes into account the larger picture of MRB success. The BDP compliments national planning processes by ensuring that member behavior is in ordinance with sustainable development practices. The BDP serves as a framework for strategy, identification, and formulation of mutually beneficial development projects. BDP projects must comply with national polices and be relevant on a regional scale. The 2007 Annual Report stated that the objective of the program is that water resources of the Mekong River Basin are managed and developed in an integrated and sustainable manner for the equitable benefit of the riparians (MRC 2007).
The BDP began in 2001 as a three-three year program to establish a planning process at the national and regional levels that would enable Lower MRB nations to jointly plan the development of the basin and produce the first regionally coordinated development plan by 2004 (MRC 2002, 9). The goal of the BDP is to create a shared understanding of the opportunities and risks of each member nation’s plans for water resource development and create a set agreed upon number of strategic priorities to optimize the development opportunities of the region and minimize the uncertainty and risks associated with them (MRC 2010). The BDP seeks to extend the level of regional cooperation beyond that of basic information sharing by identifying the collective risks and benefits of development in the LMB and how to best cooperate so that national development schemes fit within the goal of sustainable development.

The BDP was later split into two phases. Phase One was to be completed in 2006, while Phase Two was to begin one year later in 2007. For analytical purposes I have broken my analysis of program strengths and weaknesses into two parts that correspond with their respective phases.

*Indicators of Strength: Program Milestones*

Though the BDP got off to a very slow start, the program experienced many technical and administrative capacity issues that severely hindered its ability to carry out an effective program. In recent years the BDP has shown signs of improving infrastructure that will create significant program development and strength. 2010 marked the publication of the first basin development plan, albeit over ten years past the program’s founding date.

The BDP is the most ambitious of the MRC core programs, so it makes sense that it took the program so long to develop a working plan for the development for the LMB. The program
involves intense cooperation between member states on issues that, until recently, have remained largely national in scope. Though the BDP has yet to influence any significant change in the LMB, it has made significant strides in breaking down barriers of communication regarding development practices and how members view themselves in the larger picture of the LMB. Despite its many criticisms, the BDP is showing signs of gradual progress. The BDP has not remained stagnant for the entirety of its existence. The progress it has made in the last four years are indicative of the strides the program, and MRC as a whole. The 2010 Basin Development Plan encompasses the mission statement and spirit of the original 1995 agreement. Its publication demonstrates that the MRC and its members are making valuable strides toward the overall improvement of environmental, economic, and social issues in the LMB by producing a concrete vision with benchmarks and instructions on how to achieve it.

**BDP Phase One (2001-2006)**

Phase one of the Basin Development Plan was largely a capacity building period where member states and donors established a common vision of the direction of sustainable development in the LMB. Despite its delayed start and minimal outputs, the program had some successes. Members and donors were able to cooperate on a variety of tasks to ensure that the program could successfully move into its second phase of development and therefore eventually produce a working development plan for the entire Mekong River Basin.

The Basin Development Program was not formally launched until February of 2002. Its headquarters were established in Bangkok Thailand and several adjustments were made to ensure that all necessary dialogue partners were included in the structure. National subcommittees, according to the 2002 Annual Report, were established to support the planning progress to act as
liaisons between the BDP and the MRC Secretariat (MRC 2002, 9). The focus of the first phase of the BDP is to establish the necessary technical and administrative foundations to successfully move into the second phase of actually formulating a long-term plan for the LMB based on data and statistics collected in phase one.

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Phase 1 Successes</th>
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| **Technical and Capacity Building**| ▪ Implementation of functional data systems  
▪ Building of capacity and provision of training within MRCS, NMCs and national organizations resulting in well qualified staff and relevant institutional capacities available at MRCS and the NMCs  
▪ The setting up of a Projects Database (long-list) and prioritization of water-related development projects  
▪ Tools and routines for project identification, initial documentation, and screening of impacts and significance, classification and ranking (DSF, Resource Allocation Models, Social Impact Assessment and Strategic Environment Assessment, Screening toolkits) |
| **Member Cooperation**             | ▪ A functional network of more than 200 agencies actively collaborating on basin wide water-related development  
▪ An agreed "Strategic Directions for IWRM in the Lower Mekong Basin" |
| **Knowledge and Information Sharing** | ▪ Formulation of sub-area and basin-wide scenarios and strategies  
▪ An underlying comprehensive knowledge base and documentation, readily available to users within and outside the BDP, MRCS and the NMCs (the Core Library and the BDP Planning Atlas) |
| **Basin Development Plan**         | ▪ Establishment of an ongoing basin planning process  
▪ An agreed shortlist of priority development initiatives, to be maintained by the JC as a continuous activity  
▪ An agreed program for BDP2, formulated with full country input. The project document for BDP phase 2 is also regarded as a main output of BDP Phase 1 |

**Figure 12: Summary BDP Phase 1 Milestones**

**Milestone: Technical Capacity Building**

In its first year the BDP made significant gains in data collection and research by focusing research on ten core “subject areas.” The 2002 Annual Report defined subject areas as selected districts where new developments have the potential for cross-border benefits (MRC
By studying subject areas the BDP could analyze which projects have the potential to bring the most benefits to the LMB.

According to the Annual Report, many technical achievements were made in 2004. These included a draft of an Integrated Water Resources Development Strategy for the Lower Mekong Basin Development Strategy, a BDP Planning Cycle guideline and a portfolio of potential projects which were incorporated in the BDP project database (MRC 2004). Additionally, assessments of basin-wide development scenarios were calculated using the Decision Support Framework, a powerful mathematical tool that analyzes various development scenarios (MRC 2004). In 2004 the MRC Secretariat tested a sequence of six scenarios that established the groundwork for the World Bank's own development of a Mekong Region Water Resources Assistance Strategy (MRC 2004).

The 2006 Annual Report stated that in its final year of phase one, the BDP finalized all capacity building technologies and successfully established a planning network in the Lower Mekong Basin built on a range of BDP planning tools and features (MRC 2006). The program also made strides to ensure that programs goals were echoed in the national agendas of each member state. National BDP units were established in each member state through National Mekong Committees with the hope that collaboration between the BDP team at the MRCS, the BDP units in NMCs and other MRC programs will be strengthened (MRC 2006).

**Milestone: Consulting and Regional Cooperation**

In 2003 a first round of stakeholder meetings in the ten sub-areas were carried out in three out of four countries. The purpose of these meetings was to share the information and identify issues and concerns regarding the type and pace of development in the area (MRC 2006). Information from the sub-area studies was collated for discussion with local stakeholders.
representatives from government agencies, line ministries and departments, universities, international organizations and civil society (MRC 2003). During its early stages the BDP placed a strong emphasis on consultation and public participation by stakeholders in the LMB.

Discussion and cooperation continued into 2004. Forums held in Cambodia and Laos PDR involved international organizations, local NGOs, local communities and those involved in fisheries, forestry and agriculture (MRC 2004). Participation from multiple stakeholders helped produce outcomes that were to be used in national planning. Stakeholders helped the BDP to identify key development issues for the future regarding needs, concerns, trends and risks relating to water issues (MRC 2004). Cooperation with varying interests indicates a very important strength of the BDP. Consultation with and input from public interests in the LMB indicate that the BDP was serious about targeting the best possible development tactics for the LMB by listening to the parties that would be most affected by a basin-wide development plan.

In 2005 the BDP extended its phase one operations until 2006 so that it could adequately finalize all outputs and assessment tools (MRC 2005). Much of the BDP’s work in the final year of its first phase involved finalizing outputs. Outputs of phase one include: establishing and maintaining an ongoing basin planning process, creating functional and implemented data systems, establishing capacity building and training programs within the MRC Secretariat, creating National Mekong Committees, and respective national organizations, formulation of sub-area and basin-wide scenarios and strategies, and establishment of a project database with projects categorized in order of priority level (MRC 2005). The BDP also took a major step in facilitating a basin wide development strategy where MRC Joint Committee approved projects could be submitted to all MRC members for consideration with the hope that they would be adopted by the NMCs though national directives (MRC 2005).
At the end of 2005 it was clear that the BDP had completed all necessary steps to successfully move into phase two. At the conclusion of Phase 1, in 2006, the BDP established a planning network in the LMB built on a solid range of strategic planning tools and features including the Strategic Directions for Integrated Water Resources Management (IWRM) in the LMB in conjunction with a portfolio of projects and programs to support it (the MRC-BDP Projects Database) (MRC 2005).

Despite a slow start, the Basin Development Plan Program was able to accomplish several very important results that established a strong foundation, which allowed the process to successfully move into phase two of the process.

**BDP Phase 2 (2007-2010)**

“The BDP Phase 2 program objective is to ensure that the water resources of the Mekong River Basin are managed and developed in an integrated, sustainable and equitable manner for the mutual benefit of all riparians” (MRC 2006). The goal of Phase two of the BDP was to develop and maintain a rolling IWRM based Basin Development Plan produced in support of sustainable development in the Mekong River Basin. It was expected to further develop and effectively utilize the knowledge base and assessment tools in the MRC and the NMCs and build capacity at MRC and NMC levels for IWRM planning and for facilitation/mediation in areas where trade-off management is required (MRC 2006).

Phase two of the BDP (BDP2) was much stronger out the starting gate than phase one. In its first year the program had established three immediate objectives for the program. They were:

1. To create a rolling IWRM-based Mekong Basin Development Plan in support of sustainable development in the MRB. In line with the 1995 Mekong Agreement, the BDP works to prepare the development scenarios, the Basin IRWM strategy, and the portfolio of structural and supporting non-structural projects that will continue to manage and
develop some of the basin’s water resources while minimizing harmful effects that might result from natural occurrences or human activities (MRC 2007).

2. To further develop and effectively utilize the knowledge base and assessment tools available to the MRC Secretariat, the NMCs, and the national line agencies. Work under this objective will upgrade and refine the existing knowledge base and selected modelling assessment tools. It will also build capacity for the maintenance and use of tools by the Secretariat, NMCs, and line agencies (MRC 2007).

3. To develop capacity for IWRM planning and facilitation in areas where trade-off management is required. The BDP will thus build capacity for IRWM in the basin with a view to mainstreaming IWRM into national and sub-basin policies, plans, and projects, and will also enhance the facilitation of mediation skills of the MRC (MRC 2007).

These objectives provide the perfect framework for analysis for the strengths and weaknesses of the BDP2. The major milestones of Phase II of the BDP (BDP2) may be summarized as followed.

<table>
<thead>
<tr>
<th>Milestone</th>
<th>BDP2 Successes</th>
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</table>
| **Technological/Administrative Capacity Building - An IRWM-Based Approach** | ▪ National BDP teams were also mobilized in 2007 to ensure that the new program, when published, was ready to be carried out uniformly on a regional scale.  
▪ Detailed outline of the IWRM-based Basin Development Strategy was prepared and widely discussed with members and donors  
▪ Increased level of cooperation between the MRC, its donors, and other international experts |
| **Cooperation with Stakeholders** | ▪ The first Stakeholder Consultation for BDP was held in early 2008  
▪ Draft of a Stakeholder Participation and Communication Plan (SPCP) for BDP to guide the engagement of and communication with stakeholders about the various activities of the BDP published |
| **Basin Development Plan – 2010** | ▪ BDP published after 10 years of data collection and analysis |

Figure 13: Summary of BDP2 Milestones

**Milestone: Building Technological/Administrative Capacity - An IRWM-Based Approach**

In its first year the BDP2 prepared a concept for the rolling IRWM-based basin development plan. Terms of reference and priority activities were also identified. Additionally, the program made strides in enhancing the institutional capacity of the organization by recruiting
an entirely new regional BDP team. National BDP teams were also mobilized in 2007 to ensure that the new program, when published, was ready to be carried out uniformly on a regional scale.

In 2008 the BDP2 set to further improve its capacity regarding IRWM development. In late September 2008, a preliminary hydrological assessment of selected basin-wide development scenarios was implemented to inform the Regional Multi-Stakeholder Consultation on Hydropower, and to support the scoping of the trans-boundary economic, social and environmental assessment (MRC 2008). A detailed outline of the IWRM-based Basin Development Strategy was prepared and widely discussed with members and donors. Additionally, measures to improve the ability of stakeholders to participate in the planning process began in 2008 with the participation of line agencies, national planning agencies and member countries in the BDP planning cycle (MRC 2008). In 2008 the BDP2 also reached out to other resources. Experts from four Member Countries’ line agencies, working together as a team with an international expert on hydropower and irrigation, participated in a round table working group that looked at various development related scenarios and an IWRM-based basin development strategy (MRC 2008). This increased level of cooperation between the MRC, its donors, and other international experts demonstrates the BDP and the MRC have reached a level of maturity and have started to move beyond its role as a data collection and analytical agency.

Milestone: Cooperation with Stakeholders

The first Stakeholder Consultation for BDP was held in early 2008. The first donor review was conducted in May 2008 with members from DANIDA, SIDA and AusAID on the panel. Though “understandable delays” were noted, the review concluded that the BDP was on a “solid footing” (MRC 2008). Strengthening the BDP meant increasing funding from financial
partners. To increase stakeholder participation in the IWRM process of the BDP at all levels, the MRC Regional Meeting for Stakeholder Engagement was held in Vientiane, Laos PDR, in November 2008 (MRC 2008). Additionally, a draft of a Stakeholder Participation and Communication Plan (SPCP) for BDP to guide the engagement of and communication with stakeholders about the various activities of the BDP was written following national consultations to further strengthen the relationship between the MRC and its donors (MRC 2008).

**Milestone: Basin Development Plan - 2010**

In 2009 the BDP2 worked toward completing a first draft of the Basin Development Plan which was scheduled for completion in 2010. The program continued assembling and processing a wide range of new geographical, environmental and socio-economic data to support the scenario assessment. The program also continued to improve its training program by working in collaboration with the Integrated Capacity Building Program to prepare an IWRM training manual with Mekong River Basin specific case studies and to develop a Train-the- Trainers program on IWRM (MRC 2009).

2010 marked the publication of the first Basin Development Plan. After nearly ten years, the BDP had finally published a document that represented the ideals and mission statement of the Mekong River Commission. One of the most notable aspects of the program was the level of cooperation and institutional strengthening that occurred during the development of the plan. The BDP represents the first notable accomplishment of the MRC that seeks to integrate the MRB on a level of policy and development. In the 2010 Annual Report the MRC stated:

“The arrival of the IWRM-based Basin Development Strategy represents the first time that MRC Member Countries have developed a shared understanding of the opportunities and risks of national plans for water resources development in the LMB. It also gives rise to an
agreement on strategic priorities to optimize development opportunities and minimize uncertainties and risks associated with them. The strategy provides initial directions for sustainable basin development and management that are subject to review and update every five years” (MRC 2010).

Though the Basin Development Plan had its difficulties, it was able to produce what it set out to achieve in 2001. The fact that the program was able to adapt to the many challenges it faced during its tenure and continually make progress toward the publication of a basin-wide development plan is significant. Furthermore, the achievements the BDP2 program were quite significant given the three year time frame. The program showed gradual strengthening with each successive year. Today it appears the BDP is stronger than ever and is continuing to develop and improve its technical, administrative, and financial capacities so that it may become more efficient at dictating sustainable development practices in the LMB.

**Indicators of Program Weakness**

The biggest indicator of weakness regarding the BDP was its late publication. Originally, the BDP was set for completion and publication in 2004, however, the final product was not completed until 2010. From the start the BDP encountered a series of obstacles that placed it significantly behind schedule.

Phase One began in 2001 and was originally intended to run through 2003 (MRC 2006). In 2003 it was decided, based on pressure from supporting financial institutions, to extend the first phase of the program until the end of 2005 (MRC 2006). This decision came as a result of planning insecurities and lack of confidence from the program’s financial support system (MRC 2003). The program was later extended a final year in 2005 and was finally completed in July 2006. The MRC has even admitted that the BDP experienced major difficulties in its early years. A 2008 Annual Report stated, “the first year of implementation, teething problems were
experienced in the form of difficulties and delays by almost all national BDP units. These resulted in delays in the mobilizing of research institutions/national expert teams to start updating sub-area reports. There were also staffing delays and the program initially had difficulties in finding suitable trainers” (MRC 2008).

The second phase of the BDP was then set to begin in 2007. To bridge the gap between phase one and phase two, a no-cost extension was supported by Denmark, Sweden, Japan, Switzerland, and Australia, the BDP’s primary financial support (MRC 2006). When the BDP entered its second phase the major problems encountered in the program’s early years had vanished. The 2008 annual report stated that the “problems have been overcome and the BDP has accelerated its progress. Regular coordination meetings have helped to ensure close monitoring of activities at both regional and national levels and facilitating discussion amongst BDP teams for solutions” (MRC 2008).

Analysis of Basin Development Program

Though it had a rough start, the BDP is showing signs of promise as it continues with Phase 2 of its implementation. Phase 2 marked the beginning of a program-building phase that has increased the efficiency and productivity of the program. The 2008 Annual Report stated that, “despite scaling down some of its Phase 1 programs due to limited funding, BDP has gained a substantial volume of knowledge, personal skills, and strengthened the MRC’s institutional capacity. BDP is poised to help integrate on-the-ground river basin development projects included in the launch of Phase 2 of its operations” (MRC 2008).

Publication of the Basin Development Plan in 2010 marked a significant step forward in cooperative basin development in the LMB and serves as living proof that LMB states are able to agree to a common set of regional development goals. As states begin to implement the goals of
the Basin Development Plan, national development agendas will begin to align to a common, transboundary vision of development. The gradual progress of the BDP demonstrates that the MRC is making measurable progress toward its second core goal, basin wide development. Though the products of the past 11 years have only been immediate technical and policy publications they have laid a solid foundation for a program that appears to move into a stage of immediate outcomes in the coming years as states begin to implement the 2010 BDP.

<table>
<thead>
<tr>
<th>Program Strengths</th>
<th>Program Weaknesses</th>
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<tbody>
<tr>
<td>Successfully published Basin Development Plan</td>
<td>▪ Lack of adequate funding and technical capacity</td>
</tr>
<tr>
<td>Surveying of comprehensive environmental, political, and economic health of LMB.</td>
<td>▪ Slow start with frequent delays kept program behind schedule</td>
</tr>
<tr>
<td>Developed IRWM management approach in LMB</td>
<td>▪ Staffing and technical issues</td>
</tr>
<tr>
<td>Publication of BDP fostered increased regional transparency and cooperation between members and relevant parties.</td>
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</table>

Figure 14: BDP Program Strengths and Weaknesses

**Immediate Outcomes: Environment Program (EP)**

The Environment Program’s goal is to ensure that basin management and development is guided by up to date environmental and social knowledge. The 1995 Agreement sets out provisions for protecting the environment from harmful effects resulting from development plans and uses of water and minimizing negative effects of water resources development and uses through Articles 3 and 7 (MRC 1995). The Environment Program works to support cooperation among members to strike a balance between economic development and ecological protection in the MRB as expressed in the 1995 Agreement.

Articles 3 and 7 of the 1995 Agreement both mandate maintenance of a healthy environment. Article 3 states that members states must do their best to “protect the environment, natural resources, aquatic life and conditions, and ecological balance of the Mekong River Basin...
from pollution or other harmful effects resulting from any development plans and uses of water and related resources in the Basin” (MRC 1995). Article 7 relates to environmentally harmful practices a state may engage in that threaten the ecological balance of the LMB. Article 7 states that states must,

“make every effort to avoid, minimize and mitigate harmful effects that might occur to the environment, especially the water quantity and quality, the aquatic (eco-system) conditions, and ecological balance of the river system, from the development and use of the Mekong River Basin water resources or discharge of wastes and return flows. Where one or more States is notified with proper and valid evidence that it is causing substantial damage to one or more riparians from the use of and/or discharge to water of the Mekong River, that State or States shall cease immediately the alleged cause of harm until such cause of harm is determined in accordance with Article 8” (MRC 1995).

The EP seeks to minimize the risks of a violation of Article 3 and 7 by providing member states with resources and technical monitoring to assess the ecological health of the MRB. The Program produces a variety of technical and educational papers on a variety of environmental topics including water quality, fisheries health, and sustainable water diversion.

According to the 2002 Annual Report, the EP has five core components: environmental monitoring and assessment, environmental decision and support, strategic networking and coordination, capacity and awareness building, and support studies and research facilitation (MRC 2002). Together these five programs allow the EP to create a strong base of information about the MRC ecosystem so that members may make informed and sustainable choices when selecting a path for development. Environmental monitoring in the LMB has become increasingly more advanced since 1999. The 2010 Annual Report states that components of the EP include biological monitoring and monitoring of peoples’ dependence on aquatic ecosystems, strengthened the national capacity for regional environmental management including transboundary environmental impact assessments, ecological risk assessments, environmental...
conflict management, and environmental flows assessments (MRC 2010). Furthermore a strong understanding of the LMB has improved through studies of toxic pollution, the Mekong River flood pulse, aquatic species and habitats, and ecosystems and biodiversity (MRC 2010).

**Indicators of Program Strength**

The EP has achieved some major successes in its 11-year history. Although there have been several delays in milestone achievements, the program is making steady progress toward goal achievement. Progress in the EP started off very slow as the MRC had to adjust to the large administrative and technical changes that needed to be made to successfully run a program the size. Today the EP is showing signs of steady growth (MRC Secretariat, 4). Though the EP has had its struggles it has achieved some major milestones in environmental tracking and monitoring of the MRB that would not have been achieved without the EP. In its first six years the EP focused primarily on capacity building. However, the program did achieve some major milestones in development of transboundary assessment tools and published the 2003 State of the Basin Report.
**Milestones: 2001-2006**

<table>
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<tr>
<th>2001-2006 Milestone</th>
<th>Description of Milestone</th>
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| **Administrative Strengthening** | - Uniform training materials and programs created  
- Created Environmental Assessment and Impact Assessment tools  
- 20-case study resource manual created  
- NMC training  
- Prepared program for evaluation |
| **Development of Transboundary Assessment tools** | - Commissioned consultants to work with NMCs to develop guidelines and suggest potential procedures and protocols  
- Basin report card on water quality in LMB published |
| **State of the Basin Report** | - A valuable educational tool for MRC members as it provides data, statistics, and trends on the entire LMB  
- Publication of a report focused solely on the overall state of the LMB had never been published by the MRC before. |
| **Wetland Monitoring and Environmental Management** | - Development of a common set of classifications systems was created, including one for wetlands  
- Species management plan for the Mekong Dolphin  
- Series of studies and river monitoring were completed in 2005  
- Map of wetlands by type published. |

*Figure 15: EP Milestones 2001-1006*

**Milestone: Administrative Strengthening**

Training manuals for MRC and NMC staff were written and prepared for publication. The 2001 Annual Report made clear that the primary focus was on developing environmental assessment systems so that the program could begin a uniform data collection and assessment system to gauge the ecological health of the LMB (MRC 2001). Such assessment programs included a Strategic Environmental Assessment (SEA), Cumulative Environmental Assessment (CEA), and an Environmental Impact Assessment (EIA).

Correct training and education in the early years of the EP were critical to the successful implementation of any inter basin assessment tools or studies. During 2001 the EP developed a
set of training manuals involving 20 different case studies. Data on the 20 separate case studies was provided by the NMCs and their respective line agencies. The EP used materials and data collected by the NMCs to compile a comprehensive training and educational report on the ecology and state of the LMB to be used when implementing EP assessment tools. The EP took its first step toward distributing such materials by beginning to translate all relevant documents into the four riparian languages of the LMB, which were set for distribution in 2002.

In 2002 the EP made the necessary adjustments to ensure that the program was ready for its evaluation scheduled in 2003. A review by major donors in late 2002 provided the EP with useful recommendations on ways the program could be revised to ensure it supports the core mission of the MRC. The 2003 revision to the EP was completed to allow the program to refocus itself and keep up to date with its five thematic areas: monitoring and assessment, humans and ecosystems, decision support systems, ecosystem knowledge, and flow management. The scheduled evaluation of the EP is very important for keeping the program on track with the changing goals of the MRC.

**Milestone: Development of Transboundary Assessment Tools**

In addition to preparing training manuals on transboundary environment assessment, the EP began to address the obstacles associated with creating an effective assessment mechanism of the entire LMB. Transboundary assessment tools are critical to the collective management and oversight of LMB environmental quality. All MRC members already had national systems for assessing environmental impacts on a state-wide scale, but no such system existed on a regional, trans-boundary level (MRC 2001). Establishment of a set of transboundary environmental assessment tools brought up several questions regarding how the MRC should approach such a
program. Before such precautionary assessments were in place the EP needed to answer several key questions including how to establish mechanisms that allow for such assessments to be carried out across national boarders. If a project were to intersect state lines how should the pre-project investigations be conducted and by which agencies? Figuring out the answers to these questions was one of the biggest challenges for the EP in its early years. The program had to develop a set of tools and procedures that could be carried out in one country and accepted in another country that could be potentially impacted by the proposed activity (MRC 2001). To address these issues the MRC began commissioning consultants to work with NMCs to develop guidelines and suggest potential procedures and protocols that may be adopted by the four member governments to incorporate into environmental impact procedures.

In its first year the EP made great progress in leveling out the expectations and materials for all MRC members. The first step in creating a successful transboundary project is to ensure that all members are on the same page when it comes to expectations of desired outcomes and policies. By creating a uniform set of educational materials and working with all four riparian states in creating a uniform set of analytical tools, the EP took its first step forward in establishing a transboundary standard for environmental monitoring.

In 2003 the EP took more steps in completing the assessment program responsible for mitigating future harmful developments that may jeopardize the future state of the LMB. In 2003 the EP had begun preparation of advice to governments at the senior level on the development of a transboundary system of EIAs. The EP also worked on developing conflict mediation methods by completing a comprehensive review of environmental conflicts (MRC 2003). In 2005 the EP continued to build upon its research and fields of study. The program produced a technical document for the basin report card, which draws on results of basin wide monitoring
and assessments conducted by the EP. The environmental report card was to be finalized in 2006 and was to produce an overview of the MRB’s health.


In 2003 the EP revised its implementation plan for the program. They published a monumental State of the Basin Report outlining the economic, social, and environmental health of the LMB. The State of the Basin is a valuable educational tool for MRC members as it provides data, statistics, and trends on the entire LMB (MRC 2003). Publication of a report focused solely on the overall state of the LMB had never been published by the MRC before. Creation of such a document demonstrates that the MRC could work together to create a program that effectively analyzes and identifies general trends and concerns for the LMB.

**Milestone: Wetland Monitoring and Environmental Management**

Development of a common set of classifications systems was created, including one for wetlands (MRC 2002). A basin wide map of assessment values and the functions of wetlands were prepared and water quality monitoring on a Mekong tributary was conducted to help reveal new information on sediment transport on the Mekong. The EP was able to produce a complete a species management plan for the Mekong Dolphin (MRC 2004). The management plan was incorporated into the Mekong Wetlands Biodiversity Program to help better protect the aquatic habitat of the Mekong Dolphin.

In 2005 a series of studies and river monitoring were completed. This included assessments of the upper portion of the LMB, Mekong tributaries, and sediment transport along the Mekong River (MRC 2005). The map of wetland types was completed as well as a data base
for handling wetland related data. The EP continued to work on a technical report on the biological assessment of the Mekong River system (conducted in 2004). The technical paper marked the first attempt ever by the MRC to characterize the condition of the river using biological indicators (MRC 2005).

**Milestones 2007-2010**

<table>
<thead>
<tr>
<th>2007-2010 Milestones</th>
<th>Description of Milestone</th>
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</table>
| **Administrative Strengthening** | • Identified areas that of program and region that could give rise to potential conflict to enhance regional cooperation  
• Increase in transfer of data between governments  
• Improved cooperation and efficiency in NMCs  
• Identified 6 critical trans boundary issues |
| **Water Quality Monitoring** | • New parameters added  
• Completion of twenty-year assessment on water quality (2007)  
• Publication of water quality report card (2008)  
• Report concluded that water quality in LMB was good with dramatic positive changes in some areas and dramatic negative changes in others |
| **Climate Change Initiative** | • Addresses issue that will seriously impact region  
• Drafted climate change initiative  
• Hosted forum on how to address and prepare for the effects of climate change  
• Issues of climate change to become forefront of MRC goals and work  
• Agreement to share information and data related to climate change |

Figure 16: EP Milestones 2007-2010

**Milestone: Administrative Strengthening**

In 2007 the EP also made efforts to identify critical areas of the EP that could give rise to future inter state controversies. By identifying critical areas of the program, the EP could further develop the tools and resources for prevention and mediation of disputes and differences so that the EP could effectively handle a dispute over an environmental hot topic. This capacity building
within EP and the greater structure of the MRC was an effective way to enhance effective regional cooperation. Capacity building within the program also allowed the EP to handle a number of trans boundary issues related to environmental management (MRC, 2007). For example, there was an increase in the transfer of data between riparian governments (MRC, 2007). This increased cooperation between riparian states is a great indicator that the EP and other MRC programs have helped build a stronger-more integrated network in the LMB driven by the forces of cooperation and collective benefit.

Another indicator of progress in the EP was the continued building of institutional capacity through further environmental monitoring. In 2008 further monitoring from the EP’s Ecological Health and Monitoring system was transferred to the NMCs for increase national capacities.

The EP also identified six critical trans-boundary issues to focus its energy on in the coming years. The 2008 Annual Report stated that MRC members agreed to prioritize decisions on issues of

1. The environmental and fishery impact of upstream and downstream development
2. Water quality, water fluctuations and fisheries in the Se San, Sre Pok and Se Kong sub-basin
3. Strung Treng (Cambodia) and Champassak (Lao PDR) environmental, tourism and wetland management issues
4. Water quality on the border between China and Lao PDR at Hua Khong
5. The impact of mainstream hydropower development on water quantity and quality including sedimentation in the Mekong Delta
6. Potential oil spills from water transport between China, Chiang Saen (Thailand) and Bokeo Province (Lao PDR) (MRC 2008).

By identifying critical areas for improvement the MRC was able to address issues most pertinent to the health of the LMB as well as address areas most prone to trans national dispute. Furthermore, most of the critical areas for improvement dealt with cooperation and negotiation
between two states, thus increasing dialogue and cooperation between members and even important dialogue partners like China.

Milestone: Water Quality Monitoring

According to the Annual Report, various milestones were accomplished in 2007. Two new parameters were added to the water quality monitoring network. This addition was part of an advance to build program capacity in all national laboratories by assisting them in adoption and integration of international quality analyses and control systems (MRC 2007). Another major milestone achieved in 2007 was the completion of a twenty-year assessment of water quality of the Mekong River. Additionally, a draft of the report card of the LMB was completed and intended for publication in 2008 after having been approved by all member states.

The publication of the first report card of the Mekong River Basin in 2008 demonstrated that the EP had finally gathered and analyzed enough information to take a decisive stance on the health of the LMB on a regional scale. The report card provided easy to read statistics on the LMB and tracked the condition of the LMB over time.

Nearly ten years after the EP was commissioned, the program was able to identify trends in water quality and ecological health of the LMB. The 2009 Annual Report concluded that, in general, the water quality for the LMB was good. The exceptions to this rule were areas of high population density, agriculture, and aquaculture. All of these areas showed signs of environmental degradation (MRC 2009). The report also found that there had been a significant change in water quality from 2004 to 2008. Some monitoring areas had improved water quality while others had deteriorated (MRC 2009). The data collected over the duration of the EP shows that environmental impacts such as human disturbances and degradation of habitats and water
quality are occurring in some parts of the Mekong River thereby proving the importance of continual improvement of environmental monitoring and tracking systems in the LMB.

*Milestone: Climate Change Initiative*

2007 also led to the creation of a new branch of the EP, (A new initiative on climate change), which was created and set to begin implementation in 2008. The Mekong River Delta is predicted to be an area of the LMB severely impacted by climate change. Adoption of a climate change initiative shows that the MRC is looking forward at critical regional issues. Though the climate change initiative falls primarily under the EP, its goals and strategies will cross cut many other MRC programs.

The new MRC Climate Change and Adaptation Initiative was launched to support the member countries in their future efforts to deal with the impact of climate change. Preparation was made for a major Regional MRC Climate Change Forum. The forum was scheduled for the beginning of 2009 in Bangkok, Thailand. The initiative and forum mark a significant degree of cooperation between MRC member countries on a basin wide issue that could affect the ecological health and well being of the LMB.

Another major accomplishment of the EP in 2009 was the progress it made toward addressing the issue of climate change in the LMB. The LMB is recognized as one of the most vulnerable areas to climate change in the world (MRC 2009). There is a growing concern about the economic, social, and environment impacts that a changing climate will have on the productivity and overall health of the LMB. In 2009 the quick development of a climate initiative demonstrated the sense of urgency to address the issue within the MRC and the LMB in
general. In 2009 the MRC launched the Climate Change and Adaptation Initiative (CCAI) to assess the impacts of climate change in the LMB and develop and implement planning.

To further increase regional cooperation on issues of climate change, the MRC held a regional two-day forum on the possible impacts of climate changes and how to prepare for them. At this forum the MRC presented impact and adaptation assessments and how global climate change could inhibit some of the developmental and economic growth in the region (MRC 2009). Participants agreed that governments, provincial authorities, communities and the private sector needed to work together better to improve the regional knowledge and data related to climate change and climate change impacts. The Forum asked the MRC to further facilitate regional sharing of climate change data and experiences, and this became the core of much of the MRC’s work through 2009. They also agreed that the region needed to develop adaptation efforts at all levels in the LMB (MRC 2009). In addition to regional cooperation, members have taken upon themselves to adopt local changes to policy and programs to better adapt to the change patters of climate.

*Indicators of Program Weakness*

*Slow Beginnings*

The most notable weakness of the MRC’s Environment Program was its relatively slow start. Originally, the program was set to complete assessment tools and report cards on the state of the basin within its first five or six years of existence. However, a completed Environmental Impact Assessment has yet to be finalized and the report card on water quality in the LMB was published several years after its target date.
An Information-Based Regime

Another striking element of the EP is the fact that it, for the most part, has only has succeeded in producing technical data and information on the LMB. Few accomplishments to improve or change the state of the environment in the LMB have been made. The EP has done an excellent job at building the necessary technical capacity to handle the large influxes of data from member states on a variety of environmental factors. Additionally, the program has done an exceptional job of analyzing and producing valuable data and statistics on the ecological health of the LMB over the twenty-first century. However, when looking back on Article 7’s goals, it is evident that the program has not fully developed its administrative and authoritative capacity to address or drive the changes in behavior that must be made to improve the ecological health of the LMB.

One of the biggest indicators of the EP’s lack of influence on the improvement of the LMB is the apparent lack of Environmental Impact Assessment guidelines and tools. Environmental Impact Assessments were a major component of the EP since its founding. Over the program’s 11-year history the EP has yet to finalize an agreed upon set of assessment procedures. This missing link in the program is evidence that the EP, and MRC as a whole, have yet to move into a new paradigm of improving the health of the Mekong River Basin through sustainable development tactics. However, that is not to say that the EP and MRC are failures. Despite its struggles, the EP did make steady progress each year and managed to build up the administrative and technical capacity to analyze and report on the state of the LMB, something that had not been accomplished by the MRC or its predecessors before.
Analysis of Environment Program

The Environment Program had its ups and downs, but it has made steady progress in establishing a strong foundation to eventually enact real changes in environmental quality in the LMB. State compliance with ecological monitoring and reporting demonstrates that MRC members are willing to cooperate for the betterment of the LMB. Likewise, the EP did the best it could to ensure that all members were uniformly educated on what was expected of them.

Education and training materials have no direct effect on the ecological health of the LMB, but they are a necessary first step if cooperation is to be successful on the regional level. By providing members with a uniform set of educational materials, the MRC was ensuring that all members were at an equal starting point when it came to knowledge of the LMB and the issues or practices most threatening to its health.

<table>
<thead>
<tr>
<th>Program Strengths</th>
<th>Program Weaknesses</th>
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<tbody>
<tr>
<td>▪ Made steady progress, especially in the past few years</td>
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</tr>
<tr>
<td>▪ Developed comprehensive analytical tools to assess MRB ecological health</td>
<td>▪ Slow start: had difficulty meeting deadlines early on</td>
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<tr>
<td></td>
<td>▪ A technical emphasis thus far</td>
</tr>
<tr>
<td></td>
<td>▪ Only interested in data collection</td>
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Figure 17: Strengths and Weaknesses of the Environment Program

IX. POTENTIAL OBSTACLES / EVIDENCE OF INTERMEDIATE OUTCOMES

There are several potential external and internal obstacles that threaten to hinder the progress of the MRC to make lasting positive impacts in the Lower Mekong Basin. The first is China’s current status as a dialogue partner rather than a full member of the MRC. China has ascended as both a regional and global hegemon. China’s lack of interest in its invitation to join the MRC could present many problems for the regime. Currently, China is pursuing a cascade of
megadams at the headwaters of the Mekong River. Additionally, hydro development plans in Laos threaten to alter the Mekong River’s complex ecosystem. In the case of internal obstacles the MRC has shown signs that it is capable of taking the necessary transboundary precautions to analyze the regional impacts on such projects. However, the Xayaburi dam in Laos is only one of 11 proposed mainstream dams in the LMB that threaten regional ecology and fish stocks.

**External Obstacles: Hydropower Development in China**

Currently China plans to construct a cascade of eight large to mega-sized dams, four of which will be completed at the headwaters of the Mekong River (US Senate 2010, 2). The largest of the four, the Xiaowan Dam, is taller than the Hoover Dam and has a reservoir capacity of 15 billion cubic meters, nearly the size of 20 billion cubic meter capacity of the Three Gorges Dam (US Senate 2010, 2). Future dams in the Yunan Cascade will have even larger reservoirs, enabling China to suit its energy demands (US Senate: 2010, 2). The eight dam cascade will certainly disrupt some of the Mekong River’s natural fluctuations as well as give China some degree of control over timing and amount of river flows (US Senate 2010, 9).

The cascade of Chinese large dams also has several projected severe ecological impacts. The World Commission on Dams reports that, “large dams have fragmented and transformed the world’s rivers, modifying 46% of primary watersheds” (World Commission on Dams, 2000). The Commission states that dams that the main physical threat to ecosystem destruction because they fragment and transform the aquatic and terrestrial ecosystems with a range of effects that vary in duration, scale, and degree of reversibility (World Commission on Dams, 2000). Some effects include transformation of land, fragmentation of fisheries, and the quality and allocation of freshwater, an increasingly scarce and coveted resource (World Commission on Dams, 2000).
Projected problems associated with the cascade of dams in the Yunan province meet many of the same criteria as those expressed by the World Commission on Dams. Ecological impacts include aggravation of floods, issues of sedimentation, deforestation, downstream erosion, negative impacts of fisheries, and negative impacts on agriculture (Roberts, 2001).

From a political and institutional standpoint, the biggest concern for water governance in the MRB is not China’s history of dam building but its lack of willingness to join a regime that may be able to effectively mitigate or counter some of the adverse effects of hydrodevelopment. China, which has nearly twenty percent of the MRB’s water resources, is not a member of the Mekong River Commission (US Senate 2010, 14). China is also one of the few countries in the world that does not recognize downstream water rights of riparian nations (US Senate 2010, 3). In 1997 China opposed legislation considered by the UN General Assembly which adopted the Convention on the Law of Non-Navigational Uses of International Water Courses. The Convention provides a framework of principles and rules that may be applied and adjusted to suit the characteristics of particular international watercourses. The Convention has many similarities to the MRC including that a State sharing an international watercourse with other States may utilize the watercourse in its territory in a manner that is equitable and reasonable vis-à-vis the other States sharing it. China was one of three countries that voted against the treaty (Liebman 2005). The Chinese Representative at the time, Gao Feng, argued that the treaty text did not, “reflect the principle of the territorial sovereignty of a watercourse state. Such a state had indisputable sovereignty over a watercourse which flowed through its territory” (Liebman 2005). China’s unwillingness to support the Convention demonstrates that for now, its primary interests are internal, and what it does with its water resources are a reflection of its natural rights as a sovereign state.
This current outlook toward regional cooperation on watercourses and their management presents a troublesome dynamic for the LMB and MRC. China is, in essence, the gatekeeper for water resources in the MRB as the Tibetan Plateau is the source of the Mekong River. Without China’s active participation and compliance in the in the regional dialogue of transboundary water management, the MRC may fail in its mission. This failure would not be caused by its lack of necessary qualities and capacities as a regime, but because a key player is absent from membership.

China actively participates as a dialogue partner, however, the title has little to no obligation to work toward the ecological health and wellbeing of the MRB. Since 2002, China has provided the MRC with data daily water levels and rainfall from two Mekong River hydrological stations at Yunjinghong and Man’an during the flood season from 15 June-15 October each year (MRC, 2008). Though sharing of information during the wet season is a good start, many officials argue that China should be cooperating on a much high level. Joseph Yun, Deputy Assistant Secretary for the Bureau of East Asian and Pacific Affairs at the United States State Department, stated that he would like to see China share dry season data as well as historical data prior to developmental disruption in the Upper Mekong Basin. Only though analysis and comparison of historical data will the MRC be able to create an accurate trend of streamflow between the upper and lower Mekong Basins (US Senate 2010, 14).

Finally, as development in the upper Mekong region intensifies and the ecological effects of those dams become more widespread, public resistance to the Chinese project and its lack of engagement and interest in the LMB has intensified. In December of 2003 the Chinese ambassador in Bangkok was petitioned by 80 NGOs protesting the dams (Dore and Yu 2004, 18). Additionally, political cartoons in Thailand have depicted the great wall holding back large
amounts of water while impoverished Thai citizens can only produce a trickle of water with their tears (Liebman 2005, 294). Public resistance to Chinese efforts to harness the hydrological potential of the Upper Mekong may be met with greater opposition if the LMB continues to experience intense droughts, as it has for the past few years.

China’s development in the Upper Mekong presents an interesting problem for the MRC because so much of the problem is out of the reach and influence of the regime. Currently, China shows little interest in deepening its cooperative relations with the MRC, although that is not to say it will never will. Elhance argues that although, “hydropolitical cooperation may take a very long time to develop….however once achieved, such cooperate tends to endure” (Elhance 1999, 235). Liebman points out that such has been the case in a 1960 treaty between India and Pakistan on shared use of the Indus River. The treaty has endured despite two wars and years of conflict (Liebman 2005, 291). If China somewhere down the road decides to join the MRC, its political implications could be long lasting. Not only would the effects of the MRC be enhanced by incorporating a key member in regional dialogue, but the MRC could benefit substantially from having a stronger financial power to contribute to the regime.

**Internal Obstacles: Hydrodevelopment in the Lower Mekong**

The second obstacle facing the MRC is a series of hydrodevelopment projects in the Lower stretches of the Mekong River. In fact, development of the Lower Mekong may be the greatest ecological threat facing the region (US Senate 2010, 9). There are current plans for a 12 dam cascade on the mainstream of the LMB, with most of the power being sent to Vietnam and Thailand (US Senate 2010, 27). The project would transform two thirds of the length of the river...
into a series of reservoirs that would require resettlement of at least 88,000 people (US Senate 2010, 27).

To assess the environmental effects of a project of this magnitude, the MRC commissioned a Strategic Environmental Assessment (SEA) to highlight the significant environmental, social, and economic impacts that the dams are expected to have. Completion of the SEA marked the first ever comprehensive, cumulative impact assessment of dam construction on the Mekong mainstream. The SEA warns that the decision to construct just one large dam on the mainstream would result in permanent and irreversible changes to the Mekong River ecosystem and that the project in its entirety would impact over 40 million people (US Senate 2010, 27).

Some of the major environmental impacts include damages to fisheries in the LMB. Building dams on the mainstream would result in blocking of fish migration and result in an estimated fishery loss of between 700,000 and 1.4 million tons of catch each year, an estimated loss of 500 million to 1 billion dollars (US Senate 2010, 27). Social effects of damages to LMB fisheries could greatly impact the livelihoods and food security for millions of the basin’s residents (US Senate 2010, 27). Furthermore, there is a consensus among fishery scientists that many of the impacts of the dams cannot be mitigated (US Senate 2010, 27).

Additionally the dams would drastically alter the immense biodiversity of the LMB. It is estimated that, with the construction of mainstream dams, important critically endangered species, like the Irrawaddy Dolphin and the giant catfish, will be driven to extinction (US Senate 2010, 28). “The dams would flood key biodiversity zones, national protected areas, and Ramsar wetland sites, impacting half terrestrial and aquatic habitat for flora and fauna” (US Senate 2010, 28). This could impact the livelihoods of residents who make a living of the region’s thriving
ecosystem resulting in a projected loss of 18 to 57 million in income generation (US Senate 2010, 28).

In 2010 the Government of Laos submitted an official notification to the MRC for the construction of the Xayaburi dam on the Mekong mainstream. The Xayaburi dam was to be the first dam built on the lower Mekong. The dam has an installed capacity of 1,260 MW and stands 810 meters long by 32 meters high (MRC Press Release, 2010). From September 20th 2010 to December 2011 the MRC held several meetings and drafted reports on the impact of the dam including technical reviews and individual consultations within each member nation. On December 8, 2011 the MRC convened to consider the proposed Xayaburi hydroelectric project. As a result the project was put on hold. The MRC ruled that, “some Member Countries require an additional national approval process and thus agreed to bring this matter back to their respective governments for their internal discussion and necessary actions” (MRC, 2011).

The tabling of the Xayaburi hydroelectric project marked a significant shift in the role of the MRC. For the first time the MRC made a major decision on a project that is sure to effect the entire LMB. By allotting countries to investigate further into some of the environmental, political, and social impacts of the dam, the MRC is displaying signs of strength and influence on the behavior of member states. This display of regime strength would not have been possible without a strong foundation of core programs to lay out the ground rules and procedures for a regionally minded development regime. The successes of the WUP, EP, and BDP are clearly evident from the use of the notification system by Laos to the environmental impact assessments prepared by the Secretariat.

Though the MRC has shown great progress, especially in light of the Xayaburi hydroelectric project, it still has many obstacles to overcome. For example, if there are mixed
opinions on how the Xayaburi project is to continue, if at all, the MRC must resolve any disputes between members on how to move forward. Additionally, there is always the possibility that Laos will fail to abide by any recommendations made by the MRC. The MRC would then be forced to address sections of the 1995 Agreement regarding resolution of unsustainable practices that the regime has not yet had to face.

It is clear that the problems facing the MRC today are great. However, as indicated by the 2011 hold on the Xayaburi dam project, the MRC does have the institutional capacity to address and possibly make significant changes that could ultimately better the ecological health of the Mekong River Basin.

XI. CONCLUSION

The Mekong River Commission, despite its slow start, is showing signs of real progress toward sustainable management and development of the MRB. The steps it has taken in the past two decades have laid the groundwork for a smooth transition into a new paradigm of intermediate outcomes. The tabling of the Xayaburi dam suggests that the MRC is ready to make this transition. Postponing the project most likely would not have occurred without the structure, function, and procedures established by the MRC and its immediate outcomes. However, the MRC would not have been able to make such a decision had the proper technical and procedural mechanisms been in place to address the potential adverse effects of the project.

Though they may appear as basic tasks, the strong foundation that the MRC has built up over its 17-year history is quite strong. This is evident through the steady progress the regime has made each year. Though progress may be slow, the MRC is constantly improving. Constant improvement, no matter how small, is not an output that should go unnoticed or unrecognized.
Although most MRC core programs have not been able to stick to their desired time schedules, they are slowly and surely achieving the goals they set for themselves. The Basin Development Plan is a perfect example. For five years the BDP allocated all of its resources to collecting materials and training staff. Those five years were necessary to the successful development of the program because they allowed MRC staff to correctly and accurately move into Phase 2 and finally draft a Basin Development Plan in 2010.

Many confuse a slow pace or failure to meet ultimate goals right away with overall failure of a regime. Such has been the case with the MRC. The MRC has not been affective at effecting long term developmental or environmental change because it has not moved into a stage where it has had the opportunity to do so. The Logic Model has proved that. Until recently, the MRC has focused solely on immediate outcomes that set a solid, uniform foundation for future projects and state actions. The procedures of the WUP, 2010 Basin Development Plan, and 2010 State of the Basin Report are all shining examples of successful immediate outcomes. Furthermore, completion of these programs indicate that the MRC is ready for states to adopt the procedures into national policy in favor for a more regionally minded outlook, an intermediate outcome. Slow progress, is still progress and the fact that the MRC has taken the time to ensure all necessary foundations have been laid before it moves into the next paradigm is an indication of its maturity and willingness to implement sustainable development tactics the right way.

The MRC still has may uphill battles to fight concerning the preservation of the delicate MRB ecosystem. Many of these issues are time sensitive and will require a definite strengthening of the MRC’s ability to address and mitigate environmental treats against a ticking clock. However, the relatively quick startup of the CCAI indicate that the MRC is able to pool resources and staff to address serious issues such as climate change on short notice.
The MRC has not been the most successful transboundary water governing agreement, but it certainly deserves recognition for the progress it has made since 1995. If anything, an exploration into the outcomes and progress of the MRC forces viewers to change their ideas of regime success and failure. Change does not happen immediately, nor does it happen all at once. It is a gradual progression, where the success of each step or level depends on how solid of a foundation it was built upon. The MRC has faced great political, social, and economic adversity and in the wake of many setbacks, has been able to accomplish a number of significant technical and procedural milestones that characterize a strong foundation for intermediate outputs. While the future of the MRC is impossible to predict, the future of the MRC looks promising. So long as financial backing and support from donors and members remain constant, the MRC will remain on a positive trajectory toward realization of its ultimate outcomes: cooperation, development, and environmental protection.
Works Cited


