Letters from the MEKONG

OBSTACLES TO EQUITABLE HYDROPOWER DEVELOPMENT PLANNING IN THE LOWER MEKONG BASIN

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INTRODUCTION

This issue brief, the first in a new series of "Letters from the Mekong," discusses the current status of hydropower planning, development, cooperation and decision-making in the Mekong Basin. Hydropower dams, especially large dams on major tributaries and mainstreams, have long been highly controversial because of their negative impact on other components of the water-food-energy-livelihoods "nexus." In the lower, Southeast Asian half of the 5,080-kilometer Mekong River, with an ecology that has evolved over millions of years to annual extremes of flood and drought, the primary problem of large dams is that they interfere with the river's life-giving hydrology, block the spawning migration of highly important catch fisheries. Dams also trap nutrient rich sediment needed to replenish farm fields and sustain the Mekong Delta, already one of the world's most threatened coastal zones due to climate change and sea level rise.

Growing pressures by governments and commercial developers to build up to 11 dams on the mainstream of the Lower Mekong have roiled the Mekong River Commission (MRC), an intergovernmental body created by Cambodia, Laos, Thailand and Vietnam in a 1995 treaty to promote cooperation on the sustainable and equitable use of the Mekong River's mainstream. The already shaky standing of the MRC received a major blow in late 2012 from the breakdown of the first test of its protocol for approving proposed dams on the mainstream—known as the Procedures for Notification, Prior Consultation and Agreement (PNPCA)—for a multibillion-dollar, 32.6-meter-high (107-foot-high) dam in Laos' northern Xayaburi Province.

After failing to gain acceptance of the project from Vietnam and Cambodia because of unresolved questions about the dam's transboundary impact on important catch fisheries and sediment flow, Laos decided, with the backing of Thailand, that 95 percent of the 1,285 megawatts of electricity would be exported. Now Laos is moving forward with the Don Sahong dam, located at a vitally important fish migration channel at Laos' southern border with Cambodia, while again ignoring its obligation to engage in meaningful prior consultation with its downstream neighbors based on credible environmental and socioeconomic transboundary impact studies.

Without a more clear and binding process to address development disputes, the MRC faces complete marginalization of the organization and the Mekong basin will become an uncoordinated rush by commercial developers to build as many as seven more mainstream dams on the Lao and Lao-Thai stretches of the river and two more under consideration by Cambodia. The cumulative impact of even some dams will put at risk the food security and livelihoods of tens of millions of people, especially in Cambodia's lowlands and Tonle Sap Great Lake, the world's most productive inland fishery, and the Mekong Delta, Vietnam's "rice bowl" and home to nearly 19 million people. The conflicting national interest perceptions of the four governments of the MRC countries have already raised tensions in a region that has only recently emerged from decades of bitter conflict.

To address these urgent issues the Stimson Center partnered with the Institute for the Study of Natural Resources and Environmental Management (NREM) of Mae Fah Luang University in Chiang Rai, Thailand, to organize a high-level international workshop, "Finding Solutions to Equitable Hydropower Development Planning in the Lower

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Mekong Basin," on August 28-30, 2014. The more than 40 workshop participants included internationally recognized scientific, technical and legal experts; senior and midlevel officials from Mekong governments and MRC development partner governments, including Australia and the United States; and the CEO of the MRC.

The workshop was structured to promote extensive cross-sector and multidisciplinary discussions about the challenges and trade-offs of water resources development and to widen the dialogue around the future of the river. Despite the growing marginalization of the MRC and the prospect of irrevocable damage to the river and the people who depend on it, the workshop was structured to be forward-looking. All economic development involves unavoidable trade-offs but those involving fresh water, increasingly the world's most critical endangered resource, are among the most costly.

The content and main findings of this brief have largely been distilled from the workshop proceedings.

SHARED RIVER, SHARED FUTURE

While Laos created the most overt challenge to the relevance of the MRC and the future of cooperative management of the river's water and environmental resources, all four participating MRC countries have contributed to the crisis facing the world's most biologically productive river. For instance, Thailand is the principle source of financing for the Lao projects, and the Electrical Generating Authority of Thailand is the main purchaser of Lao hydropower. Numerous dams on major tributaries of the river in Vietnam's Central Highlands have resulted in destructive impacts in Cambodia as well as in Vietnam's own Mekong Delta. Cambodia has engaged China's Hydrolancang International Energy Company Ltd., to build the massive Lower Sesan II dam near the confluence of the Sesan and Srepok rivers—two of the Mekong's largest tributaries—and is considering two dams, each 10 to 12 kilometers long, on the mainstream that together could decimate the fisheries that supply as much as 80 percent of the protein and minerals in the diets of millions of people in Cambodia and the Mekong Delta.

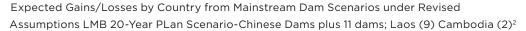
The workshop was structured to promote extensive cross-sector discussions about the challenges and trade-offs of water resources development and to widen the dialogue around the future of the river. Panels addressed five interrelated issues: the current situation facing the MRC and the wider fate of cooperative river water management; the state of knowledge about fisheries and other threatened environmental resources on the mainstream and major tributaries; legal issues surrounding mainstream dams, the lack of prior public consultation, and the inability of stakeholders to access information and influence decision making; alternative models that prioritize water and food over energy in promoting economic development in the Lower Mekong Basin; and the roles that bilateral foreign assistance donors, country and multilateral development partners of the MRC and other stakeholders, including civil society and private sector groups, could play in influencing sustainable practices.

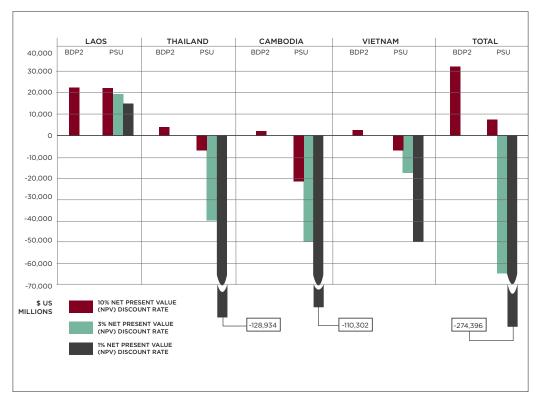
Key Takeaways for Policymakers, Funders, and Project-Planners

- The MRC is essential but insufficient. No other organization—including the Asian Development Bank's Greater Mekong Subregion (GMS) cooperative development initiative (which includes the four MRC countries plus China and Myanmar), ASEAN working groups on water resources management and energy, and the US State Department's Lower Mekong Initiative—adequately addresses water governance and coordination in the region. The MRC's inability to coordinate development or address serious concerns over the environmental and social impacts of dam projects—as evidenced through its inability to enforce the PNPCA procedures—has forced civil society groups and other stakeholders to protest, seek legal redress against groups involved in the projects, and find alternative methods of postponing dam construction.
- Equity is important. The upstream countries, China and Laos, have the most mainstream hydropower potential, and are positioned to reap most of the benefits of damming the river. Socioeconomic costs—which under some assumptions could exceed the net benefits at the basin level—will be disproportionately borne by downstream countries, especially Cambodia and Vietnam. At the individual level, most of the negative impacts of dams on the mainstream of the river and major tributaries will

be borne by those who subsist on small-scale fishing and farming. The MRC's Basin Development Plan (BDP2) estimates a cumulative net economic benefit of \$33.4 billion for a cascade of 11 dams on the Lower Mekong over a 20-year period. But a "sensitivity" analysis of the data used in the BDP2, carried out by the Institute for Sustainable Solutions at Portland State University and the Institute for the Study of Natural Resources and Environmental Management at Mae Fah Luang University, took the same data and carried out a sensitivity analysis of key variables that changed the total economic benefits for 11 dams from a positive \$33 billion to a staggering negative \$274.4 billion¹. The change varied with the discount rates and replacement cost of the lost resources, which produced differences of tens of billions of dollars between Laos, the sole "winner," and Cambodia, Vietnam and Thailand, the "losers".

• Especially in view of Laos' notification to the MRC of five new mainstream projects, environmental and socioeconomic impact assessments are critically needed in the near future. The failure of every current and previous project to incorporate transboundary environmental and socioeconomic impact assessments into project planning makes it impossible to either understand the impacts of individual dams or predict the likely impacts from a full cascade. The lack of data on fish life cycles, agriculture, and other hydrological data is widely recognized as an obstacle to understanding the impacts of individual projects. It is vital that a transboundary impact





PSU Report assumes alternative values from MRC's Basin Development Plan (PBD2) for NPV discount rates: 0.10% (Plan), 0.03%, and 0.01%, reassessment of the value of lost capture fisheries, future aquaculture production in the LMB, and the value of lost ecosystem services from wetlands, and adjustments for climate change.

assessment is initiated for at least one project in the basin in order to begin gathering the data needed to understand the likely impacts on food security and regional stability that these projects will bring.

- Different and mostly rudimentary environmental and social impact standards in Mekong countries inhibit coordination. Even at a national scale the MRC countries lack a single set of data that can be used to objectively compare projects and their impacts throughout the region. Methodology, the type and extent of required information, and levels of implementation vary from country to country. In many cases assessments do not meet international standards. As a result, governments lack the means to evaluate the full costs and benefits of proposed projects, and no basis exists to make scientifically sound trade-offs on a national basis, let alone for the Lower Mekong Basin as a whole.
- China's lack of transparency about the impacts and operations of its Yunnan cascade is a major obstacle to downstream management. China regards its half of the river as a national river and its decisions to be unchallengeable by downstream countries; furthermore, some of China's most basic information about the river is regarded as a state secret. China's continued lack of transparency and adequate information about its dam plans and water release schedule is a problem for both advocates and protestors. Calculations of the financial and economic viability of most of the planned mainstream dams are premised on the assumption that China will use its massive reservoir capacity to significantly augment the flow during the dry season, when the river is too low to generate electricity. While this is China's stated intention, the Chinese government and the hydropower companies will not provide any guarantees to downstream governments. Thus the Chinese government's continued treatment of information on hydrologic data, river basin and project plans, and the use and development of water resources as state secrets poses a major challenge to downstream communities seeking to understand the impacts of China's dams and to understand water flow changes in order to operate their own hydroelectric projects.

Mixed Trends Spur Action and Hope

Laos failed to win acceptance of the Xayaburi dam project by Cambodia, Thailand and Vietnam at the April 2011 meeting of the MRC Joint Committee. Laos' subsequent agreement to suspend construction pending further study of its risks and uncertainties appeared initially to justify cautious optimism that the first test of the PNPCA protocol might signal a turning point in the debate over mainstream dams and the effectiveness of the MRC. However, in early November 2012 Laos shattered any such illusions by announcing that the concerns raised by a team of MRC experts had been met via a partial redesign of the sluice gates and planned fish ladder, even though the new designs were not shared with downstream countries.³

The credibility of the MRC was further damaged in September 2013 when Laos formally gave the required notification that it was moving forward with the Don Sahong dam but said that construction would begin in November. Laos argued that the prior consultation and agreement phases of the PNPCA protocol were not applicable because the Don Sahong would only block one of many channels and was therefore not a mainstream dam.⁴

Under the terms of the 1995 treaty, the MRC lacks the authority to force Laos to subject the project to a full PNPCA review, but member countries can and do make their views felt on issues that affect them. Laos's position faced strong public and private objections by Vietnam and Cambodia, vocal criticism from civil society, and unfavorable media commentary. As a result, Laos agreed at a MRC meeting in Bangkok in late June 2014 that "the Don Sahong hydropower project, which had been submitted under a procedure known as Notification, will now instead undergo a process known as Prior Consultation, giving member nations the opportunity to address any harmful effects on the environment." However, the MRC has not yet announced the formal start of any consultation, and the developer, Mega First Corporation Berhad, has publicly indicated it has received no instruction to alter plans and is proceeding with the project as usual.

Laos has also informally notified the MRC that it intends to build five more dams, all of which will fully span the mainstream and consequently must undergo a full PNPCA review if the MRC is to maintain any credibility. How both Laos and the MRC will deal with these projects remains to be seen, but notification of projects makes the development and application of transboundary EIAs all the more urgent.

Workshop Discussion

The differing positions in long-standing arguments over the sovereign right of countries to exploit the river for export revenues and economic development, regardless of transboundary impacts, were well-aired in workshop discussions. Little if any forward movement was apparent, and whether any minds were changed remains to be seen.

The panel presentations did significantly advance the state of knowledge on fisheries and mechanisms for making sound trade-offs. Hans Guttmann, CEO of the MRC, told participants that three years after the Mekong governments agreed on the need to conduct follow-up studies to the Strategic Environmental Assessment, the so-called Council Study (first approved by the Mekong Council, the highest decision-making body) may be close to going forward. He also said that Laos had agreed to cooperate with a study being initiated by Vietnam to examine the impact of upstream dams on the Mekong Delta. He reiterated the argument that the MRC's effectiveness as a mediator is dependent on the willingness of member countries to accept its recommendations and leadership. The only way that the MRC can impact national policy is if each country individually incorporates its recommendations into its domestic planning, which has not yet occurred.

One of the most important observations about fisheries was that they are far from being too depleted to remain a major source of food security, livelihoods and national income, but rather still possess large scope for increasing stocks and catches through the protection of habitat and water quality, and proper management.

Legal issues have started to emerge as a possible game-changer. At least for OECD country companies, the Mekong countries may have weak or poorly enforced laws, but OECD principles follow them wherever they go. For instance, after making no headway on the dam projects via demonstrations, "Save the Mekong" letter-writing and media campaigns and other traditional means of protest, NGOs began focusing efforts on use of the legal systems. In June 2012, 15 regional and international NGOs filed a complaint against Poyry, a Finnish consultant for the Xayaburi project, for failing to meet OECD guidelines for corporate social responsibility. Similarly, in April 2014 the Northeast Community Network of seven provinces of the Mekong River Basin in Thailand, along

with six NGOs active in Cambodia and Vietnam, followed up on the Poyry case and filed a complaint against Andritz, an Austrian engineering company that will supply crucial parts for the project.⁸

Thai companies may also be vulnerable when they disregard Thai environmental laws. Most recently, on June 25, 2014, Thailand's Supreme Administrative Court accepted a case against the Electricity Generating Authority of Thailand for having signed the Xayaburi power-purchase agreement without first fulfilling constitutionally mandated social and environmental impact assessments.⁹

These cases have met with some success. For example, Laos announced the day after Thailand's Supreme Administrative Court accepted the Xayaburi suit that it would submit the Don Sahong project for prior consultation, which was a change from the earlier stance that it was a national project without major impacts downstream, and therefore would not need to go through the PNPCA process.

In response to strong and widespread criticism, Mega First Corporation Berhad, the Malaysian company that is developing the Don Sahong project, may be showing some additional sensitivity about its corporate image. The company has published its reportson environmental and social issues surrounding the project and the steps it is taking to address them, including a plan to deepen and widen alternative passages for fish migrating northward through the Khone Falls and committing to a 10-year plan to monitor the results of these measures and undertake additional ones as required. Unfortunately, by its own admission the company does not have enough data about mass, life cycles and exact numbers of species that traditionally migrate through the falls area, especially during the critical end of the dry season and arrival of the monsoon floods.

One of the more interesting aspects of these legal cases and the new awareness of developers, banks and other pro-dam stakeholders is a shift in the momentum for change away from the MRC and into the realm of law, political risk and corporate responsibility.

Some other basic assumptions were also challenged in the panel presentations and floor discussions. For instance, it has long been argued by supporters of mainstream dams that these were necessary to meet the region's fast-growing energy needs. Dam opponents, on the other hand, note that the biggest economies in the Lower Mekong Basin, Thailand and Vietnam, lag far behind international standards for energy efficiency. Thailand traditionally overstates its future electricity needs. The final report of the Strategic Environmental Assessment carried out for the MRC estimated that if all of the 11 proposed mainstream dams were built, by 2030 they would only have contributed about 6 to 8 percent of total electricity demand in the basin. By implication, destroying the river for the sake of a comparatively small amount of electricity is a dubious trade-off.

It became clear in the workshop presentations and discussions that the most difficult challenge to a more balanced approach to cooperative, sustainable and equitable development of the mainstream and ecologically sensitive tributaries is the Lao government's determination that fully exploiting its hydroelectric potential is its only way to achieve the goal of middle-income status by 2020. Some general ideas were put forth for alternatives to Laos' rush to build mainstream dams, but they need further study and development.



"The Definite Future": China's Projects on the River

Another major challenge for the MRC's credibility and the larger issue of cooperative water management in the Lower Mekong is the lack of participation from China, which controls the largest percentage of the Mekong's length and has already built dams that can regulate the mainstream. China's unilateralism in developing its half of the river is state policy: in 1997, China was one of three countries that voted against the Watercourses Convention, which limits the ability of sovereign states to develop water resources if doing so will harm downstream countries.¹³

China's reasons for voting against the Watercourses Convention are strategic: despite having nearly 20 percent of the world's population, China only has access to approximately 6 percent of the world's freshwater resources. Given the possibility that climate change and development will change China's needs and water supply in the future, it is no surprise that China is wary of any commitment that could inhibit its ability to exploit these water resources. China's own environmental impact assessment (EIA) law does not require transboundary impact assessments, which means that some projects were likely planned without first examining downstream impacts before construction.

Some limited information-sharing has come out of negotiations with the MRC: from 2003-2013, China shared water data during the four months of the flood season. Although China agreed in 2013 to extend this information-sharing for 30 days and to increase reports of water flow from once a day to twice a day, the increase in data still fails to address the need for real-time reporting of water releases to help downstream residents and officials plan for fluctuations. ¹⁴

China has generally defended these policies by emphasizing that the impacts of its dams are minimal and that it only contributes an estimated 16 percent of the river flow. However, that estimate comes from examining China's contribution from the delta—as a member of International Rivers who attended the conference pointed out that, in areas in northern Thailand such as Chiang Saen, China is responsible for contributing 95 percent of the water. Given that China's storage capacity upstream is the reason that downstream dams are feasible, it is vital for planners to obtain more detailed information that they can take into account when designing their own cascade operations.

Equally important is the lack of information about the impacts, from both the Chinese dams and the dams planned downstream, on fisheries, water quality, and agriculture. One NGO representative indicated that some unexpected consequences of the Chinese dams included water fluctuations at unusual times, a decrease in the sediment in the Golden Triangle of nearly 50 percent, and the flooding that occurred in December 2013, which wiped out riverside gardens and destroyed boats. Given the distance of the Chinese dams from major fisheries in the Tonle Sap region and the Mekong Delta, the impacts from Laos' dams are expected to be more significant.¹⁵

If development in the basin is to proceed in a way that would take into account equitable needs and dependence on the river, it is vital that EIAs are standardized throughout the region. Currently, different countries have different standards for EIAs even at the national level, and none have yet instituted a full transboundary EIA for any major project in the region. The MRC's efforts to negotiate a transboundary EIA standard have been impeded by disagreements over whether locality or the likely extent of impact should trigger a transboundary EIA.



WHERE TO GO FROM HERE?

The workshop focused on the sharing of information and dialogue across countries, disciplines, and stakeholders. It did not produce any formal list of findings or recommendations. Nonetheless, wide agreement was evident on several objectives, including:

- The urgent need for national EIA laws and regulations, along with the necessary institutions and capacity-building to enforce them. Work being done by NREM and the Vishnu Law Group for Cambodia's Ministry of Environment to facilitate the development of a new consultation-based and comprehensive environmental investment law is an encouraging example of action on the ground that could also be transferable to Laos in the future.
- The equally urgent and parallel carrying out of transboundary EIAs for individual projects, as well as a follow-up to the Strategic Environmental Assessment, whether in the form of the MRC Council Study or Vietnam's Delta Study. Such studies would be greatly aided by new national EIA laws, but need to be carried out regardless and be based on well-established criteria. Vietnam in particular has insisted that it is not unalterably opposed to any and every mainstream dam, but cannot agree to any project without adequate information on the cumulative impact of all proposed projects.
- Coordinated negotiation of a broader Mekong Standard for transboundary EIAs and eventual acceptance of standards for maximum acceptable trans-boundary impact. Cambodia's movement forward on a consultation-based EIA could become a model for other countries—such as Myanmar or Vietnam—which are reexamining national standards for impact assessments. At the moment an agreed-upon standard for the entire Lower Mekong Basin remains visionary, but a bottom-up approach based on national EIAs that meet common standards is the most feasible path to arrive at a regional baseline.
- Finding alternatives in the event that MRC negotiations fail to produce a standard trans-boundary EIA policy. The MRC's dependence on consensus among the member governments makes it likely that the negotiations on transboundary EIAs are unlikely to lead to a concrete agreement in the near future. Given the recognition among downstream countries that trans-boundary EIAs are vital for understanding impacts throughout the basin, it may be feasible for an independent effort to help move negotiations forward. Thailand's strong civil society movement and Cambodia's revised EIA law could, with the support of private funding, create an opportunity to design a complete transboundary impact assessment for one of the proposed mainstream projects. Doing so could galvanize movement on the MRC's negotiations, pressure Laos to follow suit with its own dams, and provide a baseline for understanding the regional impacts of a mainstream dam.
- Donor countries and participants need to push the MRC to quickly move forward on the Council Study and the Delta Study. The Council Study in particular has been delayed as a result of disagreements raised by some countries about the scope of what should be examined. If the MRC takes a stronger leadership role in pushing both studies forward through insisting that dissenting countries follow both the let-

ter and spirit of the agreement by allowing a thorough investigation, it will address the vital need for information in the basin as well as help re-center the MRC as an arena of progress.

The Asian Development Bank, the World Bank and bilateral development aid donors should engage with Laos on the value of a national energy grid to support southern Laos and export energy to Cambodia. Currently, all of Laos' energy exports are bilateral agreements that involve exports of electricity to Thailand and the purchase of electricity from Thailand—at higher prices—in Southern Laos. The Stimson Center has proposed either the development of a subregional power grid in the Lower Mekong Basin, which would facilitate the optimization of nexus tradeoffs with priority to environmental sustainability, or the construction of a national power grid for Laos. Either approach would require the involvement of the Asian Development Bank under the GMS framework, and probably the World Bank and bilateral ODA donor countries. If at least some mainstream dams are to be inevitable, either of these approaches would facilitate the construction of a few dams in northern Laos, where the impact on fisheries in particular would be much lower than in southern Laos and Cambodia, while allowing Cambodia to meet its legitimate need for more and cheaper electricity by purchasing it from Laos directly or from the subregional grid.

FNDNOTES

- Table 3.5: Sensitivity of the total NPV to changing assumptions in each scenario from the 2000 baseline by sector and country, in "Planning Approaches for Water Resources Development in the Lower Mekong Basin." Portland State University and Mae Fah Luang University. July 2011. http://web.pdx.edu/~kub/publicfiles/Mekong/LMB Report FullReport.pdf.
- 2. Ibid.
- 3. Fortin, Jacey. "A Dam Conundrum: Xayaburi Project Could Help Laos And Thailand, Hurt Cambodia And Vietnam." International Business Times. November 5, 2012. http://www.ibtimes.com/dam-conundrum-xayaburi-project-could-help-laos-thailand-hurt-cambodia-vietnam-859904.
- 4. Mekong River Commission. "Lao PDR submits notification on Don Sahong Hydropower Project." October 3, 2013. http://www.mrcmekong.org/news-and-events/news/lao-pdr-submits-notification-on-don-sahong-hydropower-project.
- 5. Mekong River Commission. "MRC Council reaches conclusions on pressing issues." June 26, 2014. http://www.mrcmekong.org/news-and-events/news/mrc-council-reaches-conclusions-on-pressing-issues.
- 6. Lipes, Joshua. "Lao Official, Developer Contradict on Don Sahong Construction." Radio Free Asia. August 20, 2014. http://www.rfa.org/english/news/laos/dam-08202014162840.html.
- 7. OECD Watch. "Siemenpuu et al vs Pöyry Group." Updated June 2013. http://oecdwatch.org/cases/Case_259.
- 8. OECD Watch. "CSRD et al vs Andritz AG." Updated July 2014. from http://oecdwatch.org/cases/Case-326.
- 9. Wangkiat, Paritta. "Court takes Xayaburi dam case." Bangkok Post. June 25, 2014. http://www.bangkokpost.com/news/local/417207/court-takes-xayaburi-dam-case.
- 10. Mekong River Commission. "MRC Council reaches conclusions on pressing issues." June 26, 2014. http://www.mrcmekong.org/news-and-events/news/mrc-council-reaches-conclusions-on-pressing-issues.
- 11. Don Sahong Power Company. "Reports." http://dshpp.com/reports.
- 12. International Centre for Environmental Management. Strategic Environmental Assessment of Hydropower on the Mekong Mainstream: Summary of the Final Report. Prepared for the Mekong River Commission. October 2010. Page 9. http://www.mrcmekong.org/assets/Publications/Consultations/SEA-Hydropower/SEA-FR-summary-13oct.pdf.
- 13. UN Watercourses Convention. "UNWC's Global Relevance." http://www.unwater-coursesconvention.org/global-relevance/south-and-east-asia.
- 14. Mekong River Commission. "Mekong River Commission and China boost water data exchange." August 30, 2013. http://www.mrcmekong.org/news-and-events/news/mekong-river-commission-and-china-boost-water-data-exchange.
- 15. Clark, Pilita. "Troubled waters: The Mekong River crisis." FT Magazine . June 18, 2014. http://www.ft.com/cms/s/2/1add7210-0d3d-11e4-bcb2-00144feabdc0.html#slide0.

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Dr. Richard P. Cronin is the director of the Southeast Asia program. At the Stimson Center, he focuses on transboundary and nontraditional security issues in Southeast Asia and the South China Sea, from a political economy perspective. He heads the Mekong Policy Project and has authored numerous pieces examining the environmental, food security, and regional stability impacts of mainstream dams being constructed on the Upper Mekong in China and planned for the Lower Mekong in Cambodia, Laos, and Thailand. **Ms. Courtney Weatherby** is the research associate for the Southeast Asia program at Stimson, where she focuses on hydropower development in Southeast Asia and China's role in regional politics.

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LETTERS FROM THE MEKONG This is the first in the Letters from the Mekong series of issue briefs from the Mekong Policy Project, a long-term initiative at the Stimson Center that focuses on alternative solutions to transboundary environmental and food security and regional stability impacts arising from proposed hydropower dams on the mainstream and major tributaries of the Lower Mekong River. The Mekong Policy Project seeks to promote further awareness about these impacts and the need for a more coordinated development strategy among regional actors, policy-makers in riparian countries, donor governments to the MRC, and civil society actors. Letters from the Mekong will be published following each research trip that the Southeast Asia team makes to the region and will examine changing trends for hydropower development and perceptions among regional actors.



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