



PANEL DISCUSSION SUMMARY

Opportunities for More Efficient Water Use in the Mekong Basin and Implications for Vietnam

I. Introduction

Some of the first hydropower dams are being built on the mainstream of Mekong River. In addition, a number of Mekong water pumps and diversion projects for agriculture has reemerged in Cambodia and Thailand. These projects have proceeded despite concerns from neighboring countries within the basin. With existing knowledge on potential impacts, if the current trend of unilateral pursuit of each country's self-interests continues, basin countries would miss the opportunity to synergize planning that could optimize benefits of water usage at a basin-wide scale for ensuring energy security, water security, food security and ecological security for the commonwealth.

As the utmost downstream country, Vietnam will be most at risk from development activities of the upstream countries, regardless of whatever the goal is: hydropower or agricultural irrigation. At the moment, when Laos has just started its mainstream hydroelectric projects, Thailand and Cambodia are still in the startup phase of large water diversion initiatives, it is not too late for rethinking a new approach and policy reform measures to develop a strategic basin plan for minimizing impacts on communities and ecosystems while ensuring the development needs of all countries in the region.

Participants: About 50 participants from key decision-making institutions, policy research agencies, NGOs, and other interested parties based in Hanoi.

Time: from 08:30 – 11:30. Friday, 04 November 2016

Venue: Trade Union Hotel, 14 Tran Binh Trong Str., Hanoi

II. Program

- Welcome and Introduction – *Mr. Trinh Le Nguyen, PanNature*
- Strategic Basin-wide Energy Planning in Laos and Recommendations for Policy Responses for Vietnam – *Mr. Brian Eyler and Ms. Courtney Weatherby, Henry L. Stimson Center*
- The Re-immersion of Water Diversion Projects in the Lower Mekong – *Mr. Nguyen Nhan Quang, PanNature's Consultant*
- Comments on cooperation mechanisms and perspectives on water in the region – *Mr. Jake Brunner, IUCN*

- Open Discussion–*All participants*

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Strategic Basin-Wide Energy Planning in Laos and Recommendations for Policy Responses for Vietnam – Brian Eyler and Courtney Weatherby (Henry L. Stimson Center)

The most recent report by Stimson Center, entitled “Letters from the Mekong: A Call for Strategic, Basin-Wide Energy Planning in Laos,” is a country-focused program, though has important regional elements as well. Based on field research, the Stimson Center has come to three realizations:

1/The focus on individual dam projects has been effective, though it is also essential to look at overall plans in the region.

- Construction on Pak Beng dam near Luang Prabang has not yet started, though roads have been built and construction crews are ready, thus demonstrating that an announcement by the Laos Government to the Mekong River Commission is eminent. (In fact, on November 4, 2016, the Laos National Mekong Committee Secretariat submitted the project description to the Mekong River Commission Secretariat).
- Pressure and attention on individual projects is crucial and meaningful. In fact, dam developers and governments have been forced to change because of pressure by domestic and international organizations (i.e., fish mitigation efforts at Don Sahong dam have led to seven natural channels being prepared).
- However, by focusing only on individual projects, it takes away from looking at the overall plan in the region, such as smaller hydropower projects on tributaries of the Mekong River.

2/Laos is not going to stop its approach to become the “battery of Southeast Asia,” in particular through hydropower development, even though there are doubts on how much hydropower energy would contribute to economic growth.

3/There is still time to engage with Laos on alternatives to hydropower development. It’s important to “think creatively” when it comes to proposing alternatives and recommendations to the Laos Government. This includes “thinking creatively” about where the dams will be constructed, what kinds of energy Laos will invest in and develop, and the types of dams that can let water flow (“smart and sustainable” hydropower). Despite two decades of planning dams in the Mekong basin, there is still time to influence which dams will be built and where. Furthermore, only 29 out of 140 proposed dams have been completed. The Laos Government also does not have targets and master plans on how many dams will realistically be built, who is going to finance and develop them, etc.

Furthermore, there are four factors that are crucial to keep in mind when discussing hydropower development in Laos:

1/Repercussions from the 2015-2016 drought caused by El Niño (foretelling of future effects by climate change, such as increased flooding and more severe droughts).

2/Rise of Myanmar as an investment location (in particular due to its unexploited resources and underdeveloped areas).

- In fact, Myanmar has about four times as much potential for hydropower energy than Laos.
- The opening of Myanmar raises competition for energy investment and capacity building in the long-term.

3/Economic slowdown in China.

- Since China has been providing the majority of investment for tributary and mainstream dam projects in Laos, the economic slowdown in China is causing investors and developers to question the profitability of hydropower projects. In fact, based on anecdotal evidence from the Stimson Center, some Chinese investors have started pulling back funding for projects that are risky and not commercially viable.

4/Longer term trends in regional energy demand.

- While Thailand is the primary purchaser of energy from Laos, issues exist within Thailand's electricity regulator, EGAT, which has historic tendencies to overestimate energy demand for Thailand. Since Cambodia, China, nor Myanmar seem to have strong desires or needs to purchase energy from Laos, that leaves Vietnam as a possible purchaser, especially given the country's rising energy demand. Over the past decade, Vietnam's energy demand has increased by 10 to 12 percent annually.
- Historically, most countries do not end up building all of the proposed hydropower dams. In reality, the dams that are constructed typically represent 40 to 70 percent of what was originally proposed. Therefore, it is reasonable to say that Laos is likely to only build five of the nine proposed dams.

The Stimson Center proposes two strategies for energy development in the region:

1/Vietnam purchases power from Laos:In Vietnam, energy demand continues to be on the increase. It is in the best interest of Vietnam to purchase energy from Laos, especially because Laos' goal of becoming the "battery of Southeast Asia" and rising energy demand in Vietnam will eventually converge. By entering a power purchasing agreement with Laos, the Government of Vietnam can take a more active approach to energy planning in the country and can mitigate environmental impacts of hydropower development in the Mekong Delta. Pricing also makes purchasing hydropower energy from Laos extremely viable, since it is cheaper than imported coal in some cases.

2/Laos needs an effective and efficient national power grid that is plugged into the region. The construction of a national power grid could continue to transform Laos into the "battery of Southeast Asia" while making it easier and more convenient to transmit power to various countries in the region. Furthermore, development partners such as the Asian Development

Bank, World Bank, and Asian Infrastructure Investment Bank could partner to finance the project. However, as of now, the Laos Government has not demonstrated interest in this.

The Re-Immersion of Water Diversion Projects in the Lower Mekong – Nguyen Nhan Quang, River basin management specialist (PanNature's Consultant)

General information about water usage for irrigation in Lower Mekong countries:

Thailand: According to Thailand's 10th and 11th National Socio-economic Development Plan for 2005-2010 and 2011-2016, with a vision to 2017: The Northeast region is oriented to become the national center for food and biofuels production (and tourist development). Accordingly, Thailand will build and improve its irrigation and water diversion system at a large scale. In the region, Thailand currently ranks first in total irrigation construction (6,388) and second in total irrigated area, after Vietnam. Most of irrigation projects are located along rivers and floodplains in the Northeast, around large reservoirs and small run-off-river dams. Thailand has difficulties cultivating in dry season, including salt intrusion, high ground-water level, and limited fresh water from tributaries. 990 projects have been planned in Northeast Thailand, most of which are water diversion projects from the Mekong River.

According to the Royal Irrigation Department(RID), during the dry season in the period 2015-2016, the storage capacity of 4 large dams (Bhumibol, Sirikit, Pa Sak Jolasid, Khwae Noi Bamrung Daen) was 3.726 million m³, which is enough for electricity production. 59% of districts (548 of 978 districts) experienced water shortage. Solutions from the RID included releasing water from large dams until May 2016 and digging wells in some districts. 15 projects have been planned by the Thailand National Water Resources Committee, among them there are some diversion projects within and outside the basin (Yuam to Bhumibol dam).

There are two types of Thailand's water diversion projects related to the Mekong River: 1/Diverting water from the Mekong basin to other basins (Chao Phraya), including: Kong-Ing-Yom project, Kok-Ing-Nan project, Kong-Kok-Ngat project; Kong-Pasak project, etc. 2/Diverting water within the Mekong basin, including: from the left bank (Laos) to the right bank (Thailand), from the right bank into far Thailand's mainland with different routes.

Cambodia: Cambodia is a rice exporting country where rice cultivation accounts for 75% of total cultivation area of 3.7 million ha. Total rice exports in 2013 numbered 1.2 million tons. However, Cambodia still depends on natural water resources for irrigation. Cambodia is investing as well as collaborating with some other countries to build up canal system to divert water within the Mekong basin. Most of overseas investments are from China. Total current irrigation capacity is 504,245 ha, which is going to increase by 772,499 ha while a new system will be built for another 6,000 ha by 2030.

Laos: Most of the country's irrigation areas are narrowly located along tributaries and floodplains next to the Mekong River. Total current irrigation capacity is 166,476 ha, which

is going to increase by 213,062 ha while a new project will be implemented to serve another 238,617 ha.

Vietnam: Vietnam's annual irrigation area is almost 1.92 million ha, which accounts for 48% of total irrigation area in the Lower Mekong basin. According to the development plan by 2030, 339 small-scaled irrigation projects will be implemented in Sesan and Srepok basin, making the total irrigation area increase by 125,165 ha. There is low potential to expand the irrigation area in Mekong Delta because of limited land area and other factors such as salt intrusion, acid sulfate soil, etc.

Some comments and recommendations

- While evaluations on dam constructions and water diversion projects out of the basin conducted to be conducted, these water diversion projects within Mekong Delta are a threat to the Mekong Delta. If these projects only divert water in rainy season, together with dams' regulating activities, there will be no "flooding season" for the Mekong Delta. Even during the dry season, "monkey cheeks" will take water from Mekong river to reservoirs.
- Currently, it is not clear that when water will be diverted? During the rainy season? During the dry season? in between? Will water be used within or outside the basin? There are a lot of obstacles to collecting and accessing information. In reality, even with the Mekong Agreement, there is no prior notification and a lack of in-time information. The MRC Secretariat is passive in accessing information.
- Vietnam's organizations and institutions should: 1/Keep collecting information from different sources in order to analyze impacts, then give in-time recommendations for related agencies. 2/Recommend for related agencies to call on other Mekong countries to comply with Mekong Agreement, especially PNPCA. 3/Enhance related research possibilities of changing crops, rearranging cropping calendar or establishing new cooperation mechanism to enhance responsibilities in using water as well as ensuring benefits for multi-stakeholders. 4/Improve the roles of NGO and the media.

Comments on Cooperation Mechanisms and Perspectives on Water in the Region – Jake Bruner (IUCN):

- IUCN's position is that international cooperation over water offers enormous benefits; it isn't and shouldn't be treated as a zero sum game.
- Regarding hydropower development in the Mekong sub-region, it isn't a question of dams vs. no dams, but which dams and where.
- The time has come for Vietnam to think creatively, take leadership, and implore a "whole of government approach" that includes diplomacy, science, and investment.
- A combination of the strategies mentioned by Stimson Center – national power grid and power purchasing agreement between Vietnam and Lao PDR – would provide mutual water benefits. These offer Lao PDR several benefits. First, it would strengthen the government's bargaining position. Currently, the government is in a

weak position since it is completely dependent on foreign investment to construct, develop, and operate dams; in effect it has to accept whatever deal it's offered. By allowing power to be moved across country in response to changes in the demand, a national power grid would help put Lao in the driving seat when it comes to hydropower development. Second, it would reduce the need to build dams, which translates into social and environmental risk. Third, it would reduce Lao PDR's dependence on the Thai power market. The benefits for Vietnam include importing affordable cost power from its neighbor and giving Vietnam the ability to veto dams that threaten the Mekong Delta.

Discussion from Participants

Dr. Michael DiGregorio (Country Representative, The Asia Foundation): What is the possibility of utilizing ASEAN or agreements in the Mekong sub-region to create a regional electricity network?

Brian Eyler (Stimson Center): Through meetings of the energy ministers in ASEAN as well as ADB's Regional Power Cooperation, the region has demonstrated that it is thinking about how to build a regional grid. Unfortunately, these efforts continue to lack coordination. In order for regional integration to be meaningful, it is necessary for Laos to create a national power grid from the north to the south (which would cost roughly US\$400 million). This is a low cost, high value solution that would allow Laos to truly become the "battery of Southeast Asia."

Nguyễn Việt (Institute for Hydro Power and Renewable Energy - IHR, Ministry of Agriculture and Rural Development): Currently, there are three main pressures in the Mekong River basin: 1/ China does not participate in the MRC and restricts information regarding upstream hydropower projects. 2/ Hydropower inside Laos in recent years has developed strongly, and investors are mainly from China or originating from China. 3/ National interests are always the top priorities of every country. Laos definitely will continue its plan on hydropower. Meanwhile, Vietnam may not have the ability to build the electricity grid in Laos as the experts recommend, because Laos always has economic backing from China. Therefore, Vietnam should be active in accessing the information, measuring loss and having response plans. With the impacts of the Mekong dams in the coming years, the Mekong Delta should accordingly change in agricultural planning. According to the latest electricity master plan, the import of electricity to Vietnam is increasing, both from China and Laos. However, the proportion of imported electricity is negligible with many binding conditions. In the context of increasing number of hydropower development in the central area nowadays, the purchase of electricity from Laos does not affect the energy security of the country. Especially, even if Vietnam's invest in the power grid in Laos, Laos will definitely continue to develop hydropower as it is their national interest. Hence, Vietnam has to cope with the situation.

Brian Eyler (Stimson Center): Since some of the Memorandums of Understanding for dams in Laos are expiring, thus forcing Laos to find other investors and developers. In fact, many of these investors do not see the commercial viability of the projects. Therefore, while there

are plans to develop hydropower, it is not a “done deal” or “complete transaction.” It is necessary to provide the Laos Government with alternatives to minimize downstream impacts in Cambodia and Vietnam. For example, the EDL (Laos’ electricity regulator) is now acting as the purchaser and seller of power. Given the institution’s position, EDL is a principle stakeholder to engage with in order to better coordinate, provide incentives to invest in renewable energy, and negotiate with. After talking to the Vice-President on HydroLancang, which was the principle developer of the Lower Sesan 2 dam, he pointed to multiple obstacles the company faced (such as political issues, civil society pressure, and environmental mitigation costs) and ultimately reasons for not investing in the region again.

Courtney Weatherby (Stimson Center): Many Chinese investors, given the economic slowdown in China, are only looking at projects that are commercially viable. Even though Chinese companies are not the best when it comes to social and environmental safeguard policies, they are also starting to see that the risks and costs of these hydropower projects are extremely high. In order for a national power grid to be a reality, it is necessary for international partners to invest jointly as well as engage in diplomatic channels.

Do Hong Phan (independent expert): There are no rivers that people do not think about exploitation in the world. So the problem is not whether to build the dam but how to build the dams. China has almost complete all planned mainstream dams. Thailand and Vietnam also finished with hydropower in the Mekong. Therefore, Laos is the only country which still has potential to develop hydropower. Vietnam needs to fully understand the situation and actively response to the situation. Vietnam must respond based on electricity demand, but also national development planning.

Dr. Michael DiGregorio (Country Representative, The Asia Foundation): In 1996, Dr. DiGregorio joined in on talks about Sơn La dam with the representative of the World Bank and representatives of EVN. While the World Bank suggested the construction of two dams, EVN opposed and argued that the construction of one large dam would replace the need to create 26 other dams. Whereas there are cases in which Laos would be better off building multiple small dams, how can we expect Laos to be any different from the thinking of EVN? The project-to-project approach puts money in people’s pockets, whereas a coordinated national grid does not.

Brian Eyler (Stimson Center): Since money is the end goal in both Vietnam and Laos, it is necessary to demonstrate to the Laos Government that the money generated by these projects would be lower than expected, especially because many of these projects are not profitable. Moreover, because of Vietnam’s future energy demand, Vietnam needs to take more leadership within the region and think more creatively.

Nguyễn Thị Hồng Vân (Vietnam River Networks): Instead of importing power from Laos and China, Vietnam should “own” its energy production and develop renewable energy along the country’s 3,000 kilometer coastline. Vietnam needs to reconsider the use of water for agriculture as well as considerate thermal energy development in the Mekong Delta region.

Phùng Thị Châm (ISPONRE): While we have been focusing on water usage and hydropower development, it is also necessary to discuss environmental implications, public participation, access to information, as well as transparency of hydropower projects. Furthermore, quality of life and food security in the Mekong are extremely important. How can Vietnam better its water usage, such as collecting rainfall, utilizing treated wastewater, and creating reservoirs to store water?

Jake Brunner (IUCN): Historically, the upper provinces of the Mekong Delta operated as a giant sponge that absorbed water during the wet season and released water during the dry season. The Plain of Reeds, which stretched from HCMC to Cambodia, had the capacity to absorb 10 percent of the Mekong River's annual discharge. However, this absorptive capacity has been largely lost to produce more and more rice that no one wants. The "rice at all costs" that has dominated land and water management in the delta river over the past 15 years is the heart of the problem. The notion of energy security is equally out-of-date, especially considering ASEAN's regional integration.

Courtney Weatherby (Stimson Center): It is not realistic or safe for Vietnam to pursue "energy security," arguably because an integrated ASEAN grid would be more secure and interconnected. Plus, the import of coal from China and Australia is not energy secure. A major challenge within the region has been collecting reliable data and statistics to make informed decisions. While the Mekong River Commission continues to have institutional and structural problems, perhaps the recently-created Lancang-Mekong Cooperation by China could provide more access to information.

III. Media coverage after the event

<http://baophapluat.vn/kinh-te/su-dung-chung-hieu-qua-nguon-nuoc-song-me-kong-vietnam-can-co-ung-pho-kip-thoi-303529.html>

<http://baotainguyenmoitruong.vn/tai-nguyen-va-cuoc-song/201611/phoi-hop-quan-ly-hieu-qua-nguon-nuoc-song-me-cong-2751887/>

<http://daidoanket.vn/kinh-te/su-dung-nguon-nuoc-hieu-qua-trong-luu-vuc-me-kong/132467>

<http://vovworld.vn/vi-vn/Tin-tuc/Thuc-day-hop-tac-de-su-dung-hieu-qua-nguon-nuoc-luu-vuc-song-Me-Kong/484598.vov>

<http://goo.gl/Mis1k6> (MONRE)

<http://www.baohaiquan.vn/Pages/Xay-dung-thuy-dien-tren-song-Me-Kong-se-gay-nhieu-he-luy-cho-ha-luu.aspx>

<http://vietnamnews.vn/environment/345703/protect-the-mekong-together.html>

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