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CHINESE MEKONG DOMINANCE: HYDROPOWER IN SOUTHEAST ASIA

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CHINESE MEKONG DOMINANCE

HYDROPOWER IN SOUTHEAST ASIA

SPECIAL REPORT

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Authors

Jonathan Fong is a Risk Specialist at Global Risk Intelligence. He is fluent in English and Cantonese, proficient in Mandarin, and has an intermediate command of French. He is currently a MSc Foreign Service candidate at Georgetown University in Washington, DC, where he focuses on Global Business and Finance. Jonathan is currently based in the USA.

Summary

This Risk Report highlights the Mekong River as an influential factor with regards to security and economic implications for riparian Southeast Asian countries. This report is framed by the construction of Chinese hydroelectric dams near the source of the river that allows them unparalleled control over the river's flow. To understand the issues, the Mekong and its importance to the economies of the downstream countries is first explored, namely: Myanmar, Laos, Thailand, Cambodia, and Vietnam. Subsequently, a discussion of the multilateral forums in place which provide a form of regional governance for the relevant countries. This is followed an examination of Chinese ambitions along the Mekong and a survey of several of the larger dams that exist along the river. Lastly, an assessment of the implications of Mekong dams through security, economic, and environmental lenses is provided.

List of Abbreviations:

ADB	**Asian Development Bank**
AIIB	**Asian Infrastructure Investment Bank**
AMBDC	**ASEAN Mekong Basin Development Cooperation**
ASEAN	**Association of Southeast Asian Nations**
ENSO	**El Niño-Southern Oscillation**
LMC	**Lancang-Mekong Cooperation**
MRC	**Mekong River Commission**
MW	**Megawatt**
PLA	**People's Liberation Army**
SCS	**South China Sea**
SKRL	**Singapore-Kunming Rail Link**

BOLTS: STRATEGIC, OPERATIONAL, FINANCIAL, COMPLIANCE.

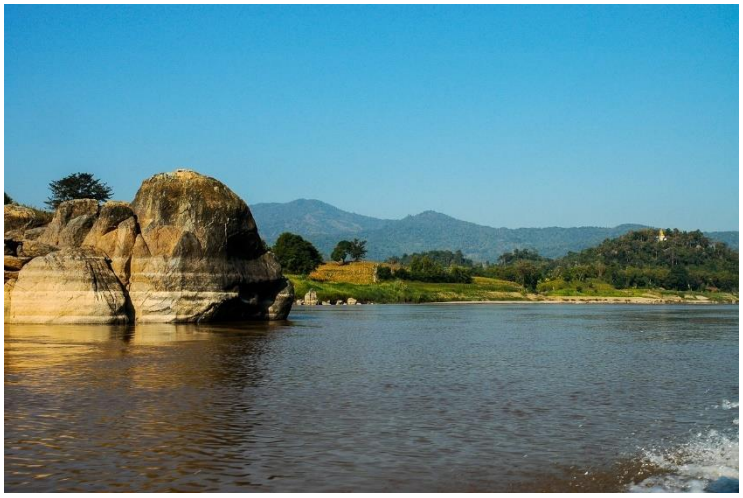
TAGS: ASIA, SOUTHEAST ASIA, ASEAN, MEKONG, LANCANG, CHINA, MYANMAR, LAOS, THAILAND, CAMBODIA, VIETNAM, RIVER, WATER, FISHING, AGRICULTURE, HYDROELECTRICITY, DAMS, MEGADAMS, FLOOD, DROUGHT, SUSTAINABILITY, CLIMATE CHANGE.

Introduction

The Mekong translates to the 'mother of water' in many Southeast Asian languages, indicating the importance of the river to the region. China has valued the hydroelectric potential of the river and has built dams along its portion since the 1980s, with many more hydroelectric stations planned along the whole course of the river. Although a good source of renewable energy, there is growing concern that the number of megadams being built is unsustainable and will negatively affect farming, fishing, and other economic activity in the region. As the source of the Mekong, China has unprecedented control over the flow of the river and could, in theory, use this as a geostrategic advantage over downstream countries.

The Mekong

High in the Tibetan Plateau in the Qinghai province of China is an area known as Sanjiangyuan, literally meaning the "Source of Three Rivers," and home to the headwaters of three of Asia's longest waterways: the Huang He, the Yangtze, and the Mekong. The Mekong, known as the Lancang[1] in China, courses through the Tibetan Autonomous Region and into Yunnan Province. It then crosses the border in Myanmar and runs through Laos,



[1] **(Traditional:** 瀾滄**; Simplified:** 澜沧**)**

Thailand, Cambodia, and Vietnam before draining into the South China Sea (SCS) in a 2,700-mile journey[2] (Figure 1). Conventionally, the river is divided into the Upper Basin and the Lower Basin. The former, representing roughly 24% of the river, courses through China as the Lancang, and the remaining 76% meanders its way through Southeast Asia[3]. The Mekong is the longest river in Southeast Asia and the lifeline for the countries in the region.

Mekong Lifeline

Many of the 60 million inhabitants of the Lower Mekong Basin depend on the river for their livelihoods[4]. In fact, the Mekong hosts the world's largest inland fishery industry, representing an immense 25% of the global freshwater catch[5]. The Mekong is also home to Asia's "rice bowl", which is a significant source of food production. The seasonal flood pulse, driven by monsoon rains, brings important nutrients in the sediment downstream to create fertile floodplains suitable for rice

[2] Sullivan, Michael. "China Reshapes The Vital Mekong River To Power Its Expansion." *NPR*, 6 Oct. 2018, www.npr.org/2018/10/06/639280566/china-reshapes-the-vital-mekong-river-to-power-its-expansion (Last Retrieved: August 4, 2019).
[3] AQUASTAT. "Mekong Basin." Food and Agriculture Organization of the United Nations (FAO), 2011.
[4] Sullivan, Michael. "China Reshapes The Vital Mekong River To Power Its Expansion." *NPR*, 6 Oct. 2018, www.npr.org/2018/10/06/639280566/china-reshapes-the-vital-mekong-river-to-power-its-expansion. (Last Retrieved: August 4, 2019).
[5] Lovgren, Stefan. "Southeast Asia May Be Building Too Many Dams Too Fast." *National Geographic*, 23 Aug. 2018, www.nationalgeographic.com/environment/2018/08/news-southeast-asia-building-dams-floods-climate-change/ (Last Retrieved: August 4, 2019).

propagation. The Southeast Asian countries along the Mekong collectively produced 110 million tons of rice in 2014, accounting for 15% of the world's total production[6]. Increasingly, countries see the potential of the Mekong as a source of energy. With growing populations and a concurrent increase in energy demand, hydroelectricity seems to be an economically viable way for countries to develop while simultaneously addressing issues relating to climate change. While the benefits of hydroelectricity are hard to ignore, negative environmental and economic implications must be taken into account, as well as the geopolitical threat posed by China, which controls the headwaters of the Mekong.

Multilateral Forums

The original multilateral agreement intended to oversee the Mekong was founded under the name, the Mekong Committee. It was established in 1957 to discuss geopolitical developments in light of the decolonization of Indochina. Through the years, the purpose of the committee has changed and in 1995, it was transformed into its current iteration: the Mekong River Commission (MRC). The MRC is an intergovernmental organization comprised of the Member Countries of Cambodia, Laos, Thailand, and Vietnam and is designed "to jointly manage the shared water resources and the sustainable development of the Mekong River[7]," despite varying national interests. The organization manages issues related to fisheries, agriculture, freedom of navigation, hydropower, flood and drought management, and preservation and conservation. China and

[6] **"Requiem for a River."** ***The Economist,*** **26 Jan. 2016, www.economist.com/news/essays/21689225-can-one-world-s-great-waterways-survive-its-development (Last Retrieved: August 4, 2019).**
[7] **"About MRC."** ***Mekong River Commission,*** **www.mrcmekong.org/about-mrc/ (Last Retrieved: August 4, 2019).**

Myanmar are granted the role of Dialogue Partners, who share data and information and are involved on a consultation basis. China was hesitant to join the MRC because the consultation process required by the organization would have impeded their plans to build hydroelectric dams[8]. Myanmar also had very little incentive to join the MRC because the part of the Mekong running through the country represents just 3% of the total length of the river[9].

The Association of Southeast Asian Nations (ASEAN) also established the ASEAN Mekong Basin Development Cooperation (AMBDC) in 1996 in order to promote economic integration and a policy dialogue between the ASEAN Member States and the Mekong riparian countries[10]. AMBDC works closely with the MRC and relies on funding from development agencies and the private sector to promote and sustain development in the region. The flagship project, the Singapore-Kunming Rail Link (SKRL), will provide a land connection between Singapore and China by way of Southeast Asia[11].

[8] **Mony, Say. "On Mekong Commission, a Stark Absence of Two Countries."** ***VOA Cambodia*****, 4 Jan. 2012, www.voacambodia.com/a/on-mekong-commission-a-stark-absence-of-two-countries--136675808/1360370.html (Last Retrieved: August 4, 2019).**

[9] **AQUASTAT. "Mekong Basin." Food and Agriculture Organization of the United Nations (FAO), 2011.**

[10] **"ASEAN Mekong Basin Development Cooperation."** ***ASEAN,*** **www.asean.org/asean-economic-community/asean-mekong-basin-development-cooperation-ambdc/overview/ (Last Retrieved: August 4, 2019).**

[11] **"ASEAN Mekong Basin Development Cooperation."** ***ASEAN,*** **www.asean.org/asean-economic-community/asean-mekong-basin-development-cooperation-ambdc/overview/ (Last Retrieved: August 4, 2019).**

In 2016, China established the Lancang-Mekong Cooperation (LMC), designed to foster cooperation between itself and the riparian countries of Myanmar, Laos, Thailand, Cambodia, and Vietnam[12]. The framework is meant to bolster social development in the countries and promote already important economic ties. In fact, bilateral trade between China and the five downstream countries reached a total of $260bn in 2018, and in each of those countries, China remains the largest trading partner[13]. As a part of joining the LMC, Chinese Premier Li Keqiang promised $1.08bn in loans and pledged an additional $5bn credit line to complement an existing $10bn credit line for infrastructure development[14]. While the economic benefits may be attractive to the five riparian countries, there is worry that China is using the LMC to undermine the existing multilateral frameworks in the Mekong. These concerns are fortified by increasing Chinese influence in the Southeast Asia region.

Waterway into Southeast Asia

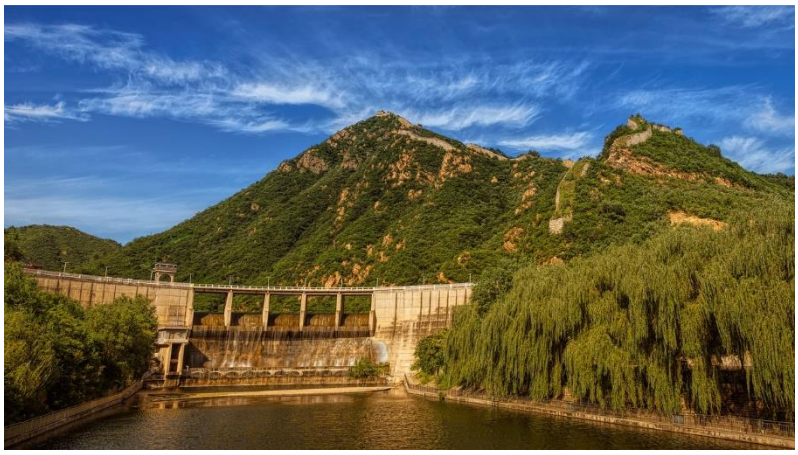
The Chinese government has plans to make the Mekong an important commercial transport vein into Southeast Asia. As a part of the "Mekong River Navigation Channel Improvement Project," China wants to make the stretch of river between the China-Myanmar border to Luang Prabang, Laos, accessible by large vessels weighing 500 tons and measuring up to 100 meter in

[12] **"Lancang-Mekong Cooperation (LMC) China Secretariat Launched."** ***Lancang-Mekong Cooperation*****, 27 Nov. 2017, www.lmcchina.org/eng/lmhzzgmsc_1/mscjj/t1514166.htm (Last Retrieved: August 4, 2019).**

[13] **Thomas, Jason. "Lancang-Mekong Cooperation: Blessing or Curse?"** ***The ASEAN Post*****, 3 Apr. 2019, www.theaseanpost.com/article/lancang-mekong-cooperation-blessing-or-curse (Last Retrieved: August 4, 2019).**

[14] **Ono, Yukako. "Mekong River Nations Face the Hidden Costs of China's Dams."** ***Nikkei Asian Review*****, 9 May 2018, www.asia.nikkei.com/Spotlight/Cover-Story/Mekong-River-nations-face-the-hidden-costs-of-China-s-dams (Last Retrieved: August 4, 2019).**

length[15]. To do so, plans called for the blasting and clearing of rocks, islets, reefs, and rapids along the 390-mile stretch. The mile-long Kon Phi Luong tract on the Thai-Laotian border remains the only incomplete portion of the project due to the Thai government's objection. In addition to protests by Thai citizens, the government is also concerned that the clearing of the channel in this area would alter the current border between Laos and Thailand against their favor[16].



Recently, China has also been projecting power into Southeast Asia via riverine patrols along the Mekong. The People's Liberation Army (PLA) Navy regularly sends gunboats from Guanlei, Yunnan, some 160 miles upstream, through Myanmar and Laos[17]. The gunboats stop short of the Thai border, where they would be confronted by Thailand's own brown-water fleet. These Chinese patrols, and several joint patrols with Laotian ships, are intended to stabilize the region known as the Golden Triangle, where the borders of Thailand, Laos, and Myanmar meet. This region is the

[15] **Bernstein, Richard. "China's Mekong Plans Threaten Disaster for Countries Downstream."** ***Foreign Policy,*** **4 Oct. 2017, www.foreignpolicy.com/2017/09/27/chinas-mekong-plans-threaten-disaster-for-countries-downstream/ (Last Retrieved: August 4, 2019).**

[16] **Ibid.**

[17] **Simon, Scott, et al. "China Reshapes The Vital Mekong River To Power Its Expansion." 6 Oct. 2018.**

world's second largest producer of opium, responsible for 20% of the global supply, and an integral part of the international illicit drug trade[18].

Damming of the Mekong

Hydroelectricity is China's main source of renewable energy and the second largest source overall after coal. The massive hydropower sector in China represents over a quarter of the world's installed capacity[19]. China began constructing large hydroelectric dams along the Lancang in the 1980s[20]. At present, China has built six megadams with an installed capacity of over 1,000 megawatts (MW) along the Lancang[21]. The two biggest are the Nuozhadu, with a 5,850MW capacity, and the Xiaowan, measuring in at 4,200MW – to give a sense of scale, the Hoover Dam has an installed capacity of 2,080MW[22]. At present, these six dams can hold back 23 billion cubic meters of water representing 27% of the annual flow between China and Thailand[23]. China has plans

[18] **"Mekong Officials Gather to Address the Golden Triangle Opium Economy."** ***United Nations Office on Drugs and Crime,*** **www.unodc.org/southeastasiaandpacific/en/2016/11/golden-triangle-opium-economy/story.html (Last Retrieved: August 4, 2019).**

[19] **"2019 Hydropower Status Report."** ***International Hydropower Association,*** **www.hydropower.org/statusreport.**

[20] **Wu, Shang-su. "The Trouble With the Lancang Mekong Cooperation Forum."** ***The Diplomat,*** **20 Dec. 2018, www.thediplomat.com/2018/12/the-trouble-with-the-lancang-mekong-cooperation-forum/ (Last Retrieved: August 4, 2019).**

[21] **Brennan, Elliot. "China Eyes Its next Prize – the Mekong."** ***Lowy Institute,*** **12 June 2018, www.lowyinstitute.org/the-interpreter/china-eyes-its-next-prize-mekong (Last Retrieved: August 4, 2019).**

[22] **Ibid.**

[23] **Ibid.**

to build an additional 22 largescale dams along its stretch of the upper Mekong in Yunnan province alone[24].

The five downstream countries are also looking towards hydroelectricity. For example, Cambodia is hoping to connect 70% of its households to the grid by 2030, up from the current 50%[25]. Laos, the poorest country in the region, is also hoping that hydroelectricity will be the answer to its economic woes and has plans to become the "battery of Southeast Asia[26]." The Lao government has pushed through with a $3.5bn, 1,300MW dam in Xayaburi against a backdrop of protests by the Cambodian and Vietnamese governments[27]. The project eventually proceeded, bolstered by lobbying efforts from Chinese construction companies as well as Xayaburi's main customer, the state-owned Electric Generating Authority of Thailand, which will buy 95% of the generated hydropower[28].

[24] **Pottinger, Lori, editor. "Focus on the Mekong." *World Rivers Review*, vol. 29, no. 4, Dec. 2014, www.internationalrivers.org/node/8456 (Last Retrieved: August 4, 2019).**
[25] **Aczel, Debra. "Cambodia's Renewable Energy Prospects." *Leaders In Energy*, www.leadersinenergy.org/cambodias-renewable-energy-prospects/ (Last Retrieved: August 4, 2019).**
[26] **Roberts, David, and Jalel Sager. "Recharging Asia's Battery." *Foreign Affairs*, 3 Sept. 2016, www.foreignaffairs.com/articles/laos/2016-09-01/recharging-asia-s-battery (Last Retrieved: August 4, 2019).**
[27] **"Xayaburi Dam." *International Rivers*, www.internationalrivers.org/campaigns/xayaburi-dam (Last Retrieved: August 4, 2019).**
[28] **Ibid.**

China also plays a direct role in the development of dams in the lower Mekong basin - of the 11 megadams[29] planned, six are Chinese-backed[30]. In addition, China actually owns several dams along the lower Mekong, including the Lower Sesan 2, the largest dam in Cambodia. Chinese state-owned HydroLancang International Energy owns 51% of the $800mn joint venture, and ownership will only be transferred to the Cambodian government in 40 years[31]. Even as the Asian Development Bank (ADB) has stopped funding the development of hydroelectric projects over concern of "potentially negative effects[32]," the Beijing-headquartered Asian Infrastructure Investment Bank (AIIB) continues to invest in hydropower.

Implications

There are serious security concerns regarding the construction of dams along the Mekong. This is especially true of the hydroelectric dams that are built close to the headwaters in Yunnan, China. These megadams along the Lancang give China the power to control the flow of water, in turn granting them significant influence over the economic prosperity of the downstream countries that rely on the river for fresh water, agriculture, fishing and electricity generation.

[29] **Refer to Figure 2 for map**

[30] **Ono, Yukako. "Mekong River Nations Face the Hidden Costs of China's Dams." *Nikkei Asian Review*, 9 May 2018, https://asia.nikkei.com/Spotlight/Cover-Story/Mekong-River-nations-face-the-hidden-costs-of-China-s-dams (Last Retrieved: August 4, 2019).**

[31] **Thomas, Jason. "Lancang-Mekong Cooperation: Blessing or Curse?" *The ASEAN Post*, 3 Apr. 2019, www.theaseanpost.com/article/lancang-mekong-cooperation-blessing-or-curse (Last Retrieved: August 4, 2019).**

[32] **Ono, Yukako. "Mekong River Nations Face the Hidden Costs of China's Dams." *Nikkei Asian Review*, 9 May 2018, https://asia.nikkei.com/Spotlight/Cover-Story/Mekong-River-nations-face-the-hidden-costs-of-China-s-dams (Last Retrieved: August 4, 2019).**

In 2016, the Mekong Basin suffered a major drought due to that year's El Niño-Southern Oscillation (ENSO) event. ENSO intensified the regular monsoonal patterns bringing about a more intense dry season, an event exacerbated by the megadams along the river. The year marked the worst drought recorded in Vietnam, and the drop in water levels also led to saltwater from the South China Sea rushing into the Mekong Delta[33]. Although a yearly occurrence during the dry season, the drought aggravated the effects of the saltwater intrusion. The event started two months early and tainted groundwater reserves and destroyed farmland and rice paddies some 55 miles inland[34]. The incursion of saltwater destroyed 159,000 acres of rice paddies, an area larger than the size of Los Angeles[35]. This phenomenon will only be exacerbated by climate change as sea level rise intensifies the effect of salt water intrusion.

In response, China's Ministry of Water Resources approved an emergency water release from the Jinhong Reservoir in Yunan to mitigate impacts of the drought[36]. The supplemental water

[33] **Larson, Christina. "Mekong Megadrought Erodes Food Security."** ***Science Magazine*****, 9 Dec. 2017, www.sciencemag.org/news/2016/04/mekong-megadrought-erodes-food-security (Last Retrieved: August 4, 2019).**

[34] **Ibid.**

[35] **Ibid.**

[36] **"China's Emergency Water Supply Increased Mekong's Water Level, Says an MRC-China Joint Study."** ***Mekong River Commission*****, 14 Nov. 2016, www.mrcmekong.org/news-and-events/news/chinas-emergency-water-supply-increased-mekongs-water-level-says-an-mrc-china-joint-study/ (Last Retrieved: August 4, 2019).**

measure was successful to a degree, however it was largely reactive and there are no emergency guarantees in place to ensure that China's benevolent actions continue in the future. There are also concerns that China can use its ability to control the river's flow as a means of asserting pressure over the downstream riparian countries.

The decreased waterflow due to the damming of the Mekong affects the seasonal flood pulse which brings about severe economic implications for the region. If all the proposed

megadams along the Lower Mekong Basin are approved, it could reduce sediment flow by 94%, leading to riverbank erosion[37]. More significantly, the sediment flow brings nutrients downstream which are vital to the rice paddies and other forms of agricultural production along the floodplains of the river. The fishing industry is also under threat by hydroelectric dams. A study by the Mekong River Commission found that fish stocks could fall by 40% as a result of the dams' impact, a grave outlook for those that rely on the fishing industry for their income[38]. Furthermore, there are estimates that

[37] **"Drastic Reduction in Sediment Flows in Mekong River Much Faster and Larger than Expected, New Study Shows."** ***UNESCO Bangkok,*** **30 Nov. 2017, https://bangkok.unesco.org/content/drastic-reduction-sediment-flows-mekong-river-much-faster-and-larger-expected-new-study (Last Retrieved: August 4, 2019).**

[38] **Lovgren, Stefan. "Southeast Asia May Be Building Too Many Dams Too Fast."** ***National Geographic,*** **23 Aug. 2018, www.nationalgeographic.com/environment/2018/08/news-southeast-asia-building-dams-floods-climate-change/ (Last Retrieved: August 4, 2019).**

at least 43 species of fish will go extinct due to the damming of the Mekong, including the Mekong giant catfish, the largest catfish species in the world[39]. Effects would be especially severe in countries such as Cambodia, where fish makes up 80% of animal protein intake in local diets[40]. Similarly, due to relatively low prices, fish is the primary source of animal protein in Thailand, meaning a decrease in fish stocks could have acute implications on personal finances as well[41].

China's control of the Lancang also means that it could effectively control the ability of the lower riparian countries to generate their own hydroelectricity. The construction of the dams itself is also causing some domestic issues within the countries where they are located. For example, during the construction of the Son La dam, Vietnam displaced 91,000 ethnic minority people in the country's largest resettlement plan[42]. Most of the villagers were forced to move between 30 and 60 miles away, which inhibited their access to the Da River that they once relied on for their livelihoods. Additionally, the dams pose risks to villagers while they are under construction. In 2018, the Saddle Dam D in Champasak Province, Laos, collapsed. The deluge caused widespread destruction downstream, leading to 39 deaths and causing 6,000 people to be displaced[43].

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[39] **Sullivan, Michael. "Damming The Mekong River: Economic Boon Or Environmental Mistake?" *NPR*, 4 July 2014, www.npr.org/sections/parallels/2014/07/04/327673946/damming-the-mekong-river-economic-boon-or-environmental-mistake (Last Retrieved: August 4, 2019).**

[40] **"CARD, MAFF, FAO and WorldFish Cambodia Exploring How Social Protection Can Improve Sustainable Use of Fisheries Resources." *Food and Agriculture Organization of the United Nations*, 4 July 2018, www.fao.org/cambodia/news/detail-events/en/c/1143992/ (Last Retrieved: August 4, 2019).**

[41] **"Fisheries & Aquaculture Country Profile: The Kingdom of Thailand." *Food and Agriculture Organization of the United Nations*, www.fao.org/fishery/facp/THA/en (Last Retrieved: August 4, 2019).**

[42] **Manorom, Kanokwan. "Hydropower Resettlement in the Mekong Region." *Water Knowledge*, Aug. 2018.**

[43] **Lovgren, Stefan. "Southeast Asia May Be Building Too Many Dams Too Fast." *National Geographic*, 23 Aug. 2018, www.nationalgeographic.com/environment/2018/08/news-southeast-asia-building-dams-floods-climate-change/ (Last Retrieved: August 4, 2019).**

Overall, there are concerns that the construction of many of these megadams are moving forward without proper assessment of the potential economic impact on agriculture and fisheries. Furthermore, there is the security implication of upstream countries' ability to regulate the flow of water and therefore control the economic drivers of the downstream countries. Lastly, the environmental implications may be difficult to quantify, but the long-term health of the Mekong depends on the responsible use of this vital resource. These risk factors are largely being ignored as many countries seek the more immediate economic gain of hydroelectric generation.

Strategic Summary

Strengths

- The interest in hydroelectricity signals a desire for many Southeast Asian countries to move towards renewable energy sources. Geothermal, solar, and wind are viable alternatives for this region, where countries are expecting an increase in energy consumption while concurrently trying to diversify away from coal.
- Hydroelectricity is able to generate an income for many Southeast Asian countries. China's economic influence in the region is also bringing prosperity to many downstream countries.

Weaknesses

- By constructing a series of megadams in the Upper Mekong, China is able to exercise control over the flow of the river. This puts Southeast Asian countries at a heavy disadvantage over the governance of the Mekong.
- China is the largest trading partner for all countries along the Lower Mekong. This gives China significant economic leverage over downstream countries as well.

Tactical Breakdown

Strategic

- In theory, China is able to release or suppress water flowing into Southeast Asia to a high degree, such as when it released water during the 2016 drought. This essentially gives China unprecedented control over industries that rely on the river such as agriculture, fisheries, and hydroelectric generation.
- China's financial power makes it enticing for many Southeast Asian countries to agree to projects on terms that are favorable to China. For example, China owns a dam in Cambodia, and ownership will not be transferred over to the Cambodian government for 40 years.

Operational

- China's desire to make the Mekong traversable by large boats will create an economic channel and a direct water link to Southeast Asia.
- Greater integration through the ASEAN Mekong Basin Development Cooperation will make the riparian countries in Southeast Asia an important link between China and the Malay Archipelago.

Financial

- As a motivation for Southeast Asian countries to join the Lancang-Mekong Cooperation, financial incentives were promised to them to further develop their infrastructure.
- The financial impact of ecological damage is hard to measure. Loss of biodiversity has economic implications as far-reaching as tourism or potential medical discoveries.

Compliance

- Large hydroelectric projects should be approved by the Mekong River Commission, however, Laos violated the agreement. Laos proceeded with the construction of the Xayaburi dam without the sign-off of the Vietnamese and Cambodian governments.
- The development of the Lancang-Mekong Cooperation may further erode the power of the Mekong River Commission as a multilateral forum and lead to further noncompliance.

Conclusion

There is growing concern that the construction of these megadams along the Mekong River pose a series of significant threats to the riparian countries of Southeast Asia. China alone has plans to complete a total of 22 largescale hydroelectric dams in the Upper Mekong, which is domestically known as the Lancang. This gives China the unique ability to control the Mekong, which serves as an economic lifeline for much of Southeast Asia. Decreased waterflow will impact farming by reducing the delivery of nutrient-rich sediment and increase the severity of saltwater intrusion in the delta. Hydroelectric dams are also impeding the migratory and reproductive ability of fish, resulting in a substantial drop in fish stock. In theory, upstream countries can also diminish the ability of downstream countries to produce hydroelectric power. It is imperative that all countries along the Mekong understand these risk factors and begin thinking about to how to mitigate these negative impacts.

Figures

Figure 1: **Lancang/Mekong River Basin**

https://commons.wikimedia.org/wiki/File:Mekong_river_basin.png

(Last Retrieved: August 5, 2019).

Figure 2: **Planned Hydroelectric Projects Along the Lower Mekong https://www.eco-business.com/news/emergency-meeting-mekong-river-commission-urgently-needed-wwf/ (Last Retrieved: August 5, 2019).**

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