

Hydro-Hegemony

and Great Power Competition on the Mekong River

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ABSTRACT

In the four countries of the Lower Mekong River Basin, 60 million people rely on the river for food and livelihoods. Reduced water flow on the river now threatens the people's wellbeing and the resilience of governments in Laos, Cambodia, Thailand, and Vietnam. Recent droughts, climate change, and hydroelectric dam construction have starved the river and fed regional discord over shared management of the Mekong. Amid this tension, great power competition has landed on the banks of the Mekong. Dwindling water flow and rising water stress have attracted the attention of Chinese and American policymakers seeking to gain influence in the region. The introduction of competing hegemony to a regional water issue presents challenges and opportunities for all countries along the Mekong—especially Vietnam. The Vietnamese face significant environmental and economic insecurity. Dams and drought reduce the quantity and quality of river flow reaching Vietnamese territory. Located at the terminus of the Mekong, Vietnam is the last in line to drink from the river. Vietnam faces critical strategic decisions in the years ahead about how to engage its neighbors in ASEAN as well as China and the United States. To ameliorate the situation, Vietnamese policy makers must incorporate hydrodiplomacy into the agenda for their bilateral relations with regional partners and multilateral institutions. The first step will be securing and sharing better data about the state of the Mekong's water quality and quantity. Next, Vietnam must push for a more effective multilateral approach to managing the Mekong River Basin.

INTRODUCTION

The name Mekong is derived from the combination of the Vietnamese words for water and mother. It is a fitting name for a river which nurtures Southeast Asia with a bounty of wealth, health, and biodiversity. In the Lower Mekong

River Basin, 60 million people rely on the river for food and their livelihoods.¹ Reduced water flow on the river now threatens the people's wellbeing and the resilience of governments in Laos, Myanmar, Cambodia, Thailand, and Vietnam. Recent droughts, climate change, and hydroelectric dam construction have starved the river and fed regional discord over shared management of the Mekong.

Amid this tension, great power competition has landed on the banks of the Mekong. Dwindling water flow and rising water stress have attracted the attention of Chinese and American policymakers seeking to gain influence in the region. China has built massive hydroelectric dams within its borders and is financing dam construction in other Mekong countries. America and China now sponsor competing multilateral forums that are intended to negotiate water use on the transboundary river. The introduction of competing hegemony to a regional water issue presents challenges and opportunities for all countries along the Mekong—especially Vietnam.

Located at the terminus of the Mekong, Vietnam is the last in line to drink from the river. The Vietnamese face significant environmental and economic insecurity on the Mekong as their upstream neighbors use more water than nature can replenish. Dams and drought reduce the quantity and quality of river flow reaching Vietnamese territory. In the years ahead, climate change will compound this water stress. In addition to the constraints of its geographic location at the end of the river, Vietnam faces outsized economic and military power differentials with the state that holds the most control over water levels on the river—China. Vietnam cannot secure sufficient water resources in the future through force or unilateral action. Protecting the ecology, economy, and human health of the Mekong requires Vietnamese policymakers to look beyond their own borders and blind spots.

“Gender is an invisible yet organizing structure in society” and therefore a gender lens must be incorporated into any comprehensive analysis of Mekong water competition and possible solutions.² It is well documented that climate change and natural disasters cause a higher mortality rate for women.³ This paper will demonstrate that this distribution of harm is replicated on the Mekong. Water stress disproportionately affects women in Vietnam and endangers the economic progress that they have made in recent years. The consequences of water stress on Vietnamese women should be treated as an early warning indicator for policymakers to accelerate recognition of growing problems resulting from water stress and spur greater action. Accounting for the structures and identities of gender will enable policymakers to understand the true severity of Mekong water stress and design durable solutions. From a realpolitik perspective, adopting a gender lens will also help Vietnam accrue more support from America to counter Chinese hegemony on the Mekong. A greater emphasis on gender issues will align Vietnamese policymakers with

American civil society and Washington's NGO community, where calls for a Feminist Foreign Policy are growing.⁴

Vietnam faces critical decisions on its Mekong diplomatic strategy in the years ahead and there is no panacea. The geographic and economic power of China puts Vietnam at a major disadvantage but growing great power competition between the U.S. and China could become a fulcrum that will shift the power dynamics on the river. To ameliorate the situation, Vietnamese policy makers must incorporate hydro-diplomacy into the agenda for their bilateral relations and within multilateral institutions like the Association of Southeast Asian Nations (ASEAN) and the Mekong River Commission (MRC). A crucial step will be securing and sharing better data about the state of the Mekong's water quality and quantity. Next, Vietnam should embrace a gender sensitive analysis of the Mekong water scarcity in order to fully understand the costs of the problem and align its normative framing to attract support from policymakers in Washington. Greater regional trade will strengthen relationships and make it easier for Lower Mekong countries to reach a compromise on Mekong water management. Finally, Vietnam must push for a multilateral strategy for water, food, and energy in the Mekong River Basin.

CONTEXTUALIZING ENVIRONMENTAL SECURITY

In 2007, the Center for Naval Analysis coined the term “threat multiplier” to describe the myriad of challenges presented by climate change.⁵ Environmental security gained prominence in the following years as a useful lens for analyzing transboundary environmental problems. Some people lament this securitization of environmental issues. They highlight the innate value of environmental preservation and they reject the powerful discourse, tools, and funding that come with framing environmental problems as threats. After just one month in office, the Biden administration had addressed environmental security and began weaving it across their economic, diplomatic, and defense agendas.⁶ This climate-centric approach will likely influence the administration's engagement in Southeast Asia—Vietnam should welcome this development.

Vietnam serves as a perfect microcosm for the elements of environmental security. The shameful legacy of Agent Orange—an American chemical defoliant that destroyed Vietnamese forests and caused major health problems for the Vietnamese who were exposed—offers warnings about weaponizing environmental degradation. The people of Vietnam still deal with the pollution and environmental destruction unleashed during conflict with France, the United States, and Cambodia during the second half of the 20th century. Unexploded ordinance has killed 40,000 people since 1975 and the death toll continues to rise as munitions litter the countryside.⁷ The country's natural wonders and incredible biodiversity certainly warrant preservation on both

moral and pragmatic grounds. As this paper will demonstrate, Vietnam’s water challenges on the Mekong present one of the most important case studies in environmental security. And the stakes are high, as lower water quantity and quality threaten millions of lives and livelihoods.

Reliable access to freshwater is often taken for granted in the developed world. Though it often goes unnoticed, the abundance of freshwater resources is a reflection of power and the result of competition. Competition for water predates Thucydides and the study of international relations. Even the world rivalry comes from the Latin *rivalis* — which means he who shares the same river as another.⁸ Elizabeth Chalecki, a key scholar on environmental security and Woodrow Wilson Fellow, noted that “water resources are critical not only for human life and health, but also for ecological diversity, economic development, energy, and national security.”⁹ Simply put: water is a foundational resource for both prosperity and security.

Three decades ago, then-United Nations (UN) Secretary General Boutros Boutros-Ghali warned about a dire future where water scarcity would lead to war.¹⁰ So far that prediction has not proven true—at least in terms of interstate conflict. However, the past is not necessarily prologue. And even if future conflict is avoided, the costs of water scarcity on the Mekong are significant: human health and nutrition, economic development, manageable levels of migration, social mobility for women and girls, and the biodiversity of the region to name a few.

Finally, the hydro-diplomacy of Vietnam and its neighbors also offers important challenges to some of the ossified thinking in international relations. Many of the grand theories and strategies in international relations presuppose that a healthy and stable environment are given variables. Vietnam’s challenges warn us that such assumptions are obsolete and dangerous.

HYDROLOGY OF THE MEKONG: UNDERSTANDING THE VALUE AND ECOSYSTEM SERVICES

Like every river basin from the Mississippi to the Nile, the Mekong provides important ecosystem services for humans in the region. Ecosystem services are the processes of the natural world that benefit human beings like the pollination of crops, the flood protection of coastal wetlands, and even recreation. The Mekong River Basin is the world’s most productive freshwater fishery, providing over 15% of the global freshwater catch each year.¹¹ 18 million people reside in Vietnam’s Mekong Delta, whose rich tributaries and wetlands foster thriving agriculture, aquaculture, and biodiversity. This natural treasure propelled Vietnamese farmers to provide 14% of global rice trade in 2018 and much of Vietnam’s food supply.¹² In addition to the economic benefits of the Mekong, the river also improves elements of human security like sanitation

and nutrition. In Cambodia, the country's 16 million people harvest 75% of the protein in their diets through fishing on the Tonle Sap lake which is fed by the Mekong.¹³ A researcher at Arizona's Future H2O center stated, "in the Mekong, water is food."¹⁴ Biodiversity is another strength for the Mekong River Basin. Second only to the Amazon rainforest, the Mekong teems with fish biodiversity.¹⁵

The seasonal floodwaters that normally pulse from May through October are the heartbeat of this system. Though flooding generally has a negative connotation, it is an important process for the ecosystem. The wet season's monsoons bring torrential downpours which flood the banks of the Mekong and rush sediment downstream. These nutritious deposits of sediment drive an explosion of life in the river basin by supporting plant growth and fish populations. One estimate by the Mekong River Commission found that seasonal flooding caused less than \$70 million dollars in damages while producing as much as \$10 billion in annual economic benefits.¹⁶ The commission also found that if all proposed dam construction on Mekong is completed, then 97% of the nutritious sediment would be blocked from reaching Vietnam's Mekong Delta region.¹⁷

The valuable hydrology of this ecosystem defies the political boundaries of modern states. Wet season flooding surges Cambodia's Tonle Sap—expanding the lake by as much as five times its dry season surface area and 60 times its dry season volume.¹⁸ This expansion of water in Tonle Sap supports fish spawning. The lake is known as the beating heart of the entire basin's ecology and "produces an annual 500,000-tonne fish catch in the lake and dispatches migratory fish throughout the entire Mekong Basin."¹⁹ Societies from the Khmer Empire 1000 years ago to modern nation-states have all thrived on the annual flooding and the bounty of food that it produces.²⁰ The Mekong also provides opportunities for domestic energy production—enabling Mekong countries to economically develop while also maintaining international commitments like the Paris Agreement. The region's reliance on the Mekong nexus of water, food, and energy is becoming increasingly tenuous.

THE CURRENT SITUATION: SHALLOW WATER ON THE WANING MEKONG

The cause of the dwindling Mekong in recent years is two-fold. First, China has spent decades constructing a series of hydroelectric dams on the upper Mekong—referred to as the Lancang River in China. To date, China has built 11 massive dams and has plans for 12 more. The Nuozhadu—the largest of these dams—has the capacity to fill its reservoir with a volume that is equivalent to half of the water in the Chesapeake Bay.²¹ These dams regulate and constrict the natural flow of water downstream. This unilateral control of the Mekong-

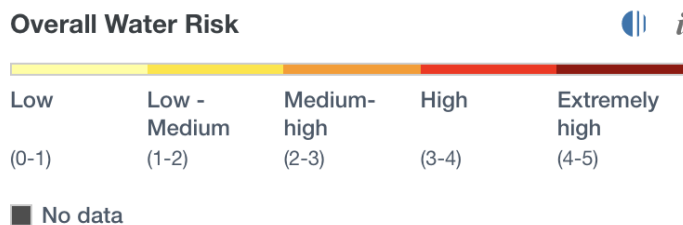
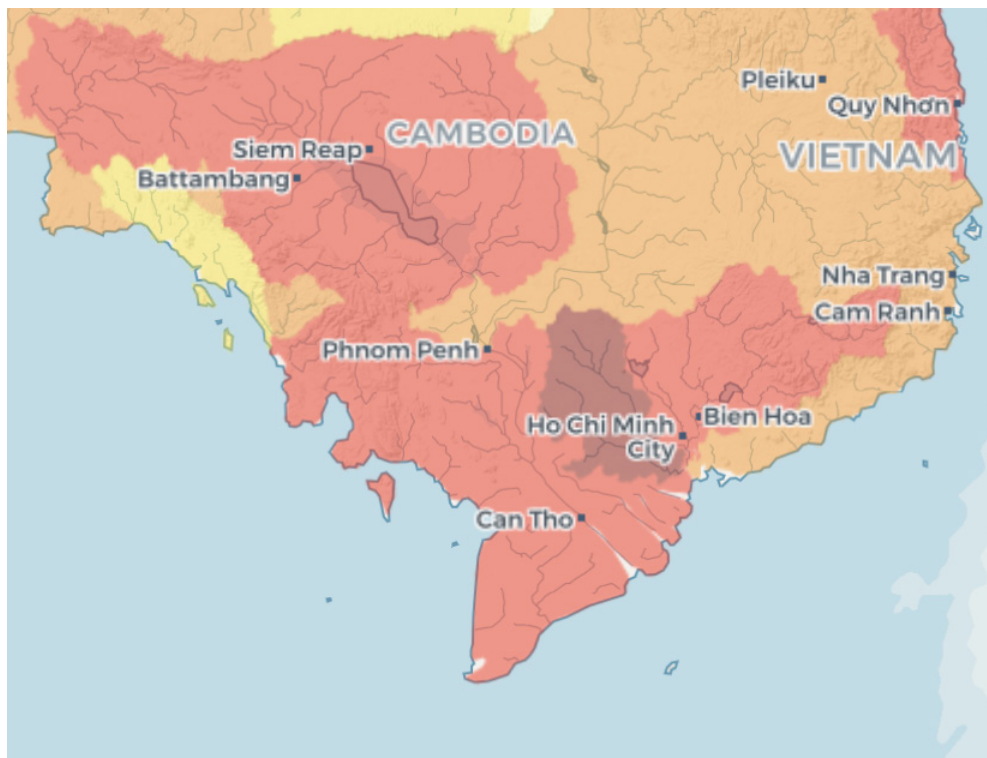
Lancang water levels amounts to a hydro-hegemony—in which China may use the water for its own economic development or as a potent tool of leverage in its diplomatic engagement with nations in the Lower Mekong Basin.

It must be noted that China is not the only nation damming the river—though Chinese dams dwarf the others. Lower Mekong nations see hydropower as an enticing way to easily power their growing economies. Laos hopes to become “the battery of Asia”—building 140 hydroelectric projects which are projected to become the largest contributor to Laotian coffers by 2025.²² These Laotian dams are often built by Chinese companies and are paid for with Chinese loans. Increasing access to other renewable energy sources and decreasing the cost of financing those projects will help Vietnamese policymakers slow the rate of hydropower construction throughout the Mekong.

The second reason for a depleted Mekong is climate-based factors. The Mekong river originates on China’s Tibetan plateau where glaciers store water as deposits of snow and ice. These deposits are withdrawn in spring and summer as ice melt fills the riverbanks. Warmer average global temperatures will reduce the glacial deposits that feed the Mekong over time. The river water levels are also supplemented with rainwater along its 4300 kilometer journey to Vietnam’s Mekong Delta and the South China Sea. A growing pattern of shorter and drier rainy seasons in the Lower Mekong have dramatically reduced the Mekong’s water levels. This pattern of paltry rainfall reached a nadir in 2019 when a historic drought starved the river of supplemental rain and brought the water level to its lowest levels in over 100 years.²³ After the consequences of 2019’s dramatic decrease in water levels, it is clear that the combination of dam construction and climate change threaten a vibrant region. David Michel, a senior researcher at the Stockholm Environment Institute, identified migration, famine, state fragility, and civil war as just some of the consequences of stressed water supplies on transboundary rivers.²⁴

A victim of bad geographic luck, Vietnam faces a compounded version of the Mekong’s water problem. As the last in line to drink from the Mekong, Vietnam will suffer the worst from decreased water quality and water volume on the river. This means less water for sanitation, agriculture, fishing, energy, and a healthy ecosystem. Figure 2 demonstrates that water stress is already an issue for Vietnam’s Mekong Delta region and its largest urban center Ho Chi Minh City. The low-lying area is also at a high risk of saltwater intrusion when river flow diminishes or when sea level rises. This intrusion of saltwater blights agricultural fields—threatening higher food prices and food shortages. In short, Vietnam faces what world renowned hydrologist Malin Falkenmark referred to as a water barrier on its economic development and public health.²⁵

FIGURE 2: OVERALL WATER RISK IN MEKONG DELTA
(WORLD RESOURCES INSTITUTE - AQUEDUCT WATER RISK ATLAS)



Elizabeth L. Chalecki, Environmental Security: A Guide to the Issues (Praeger, 2013), 28.

The costs of both the human and natural degradation of the Mekong are becoming clearer with each passing year. One symptom of the problem is diminished biodiversity. The Mekong Giant Catfish may soon become extinct and the survival rate of young birds is dropping rapidly, to less than 50% in 2016.²⁶ Rice farmers planted a fraction of their usual crop due to little irrigation in 2019.²⁷ This led to increased poverty in the region as well as higher food prices due to the constrained supply. Southern Vietnam is increasingly facing challenges with sanitation and potable tap water as Mekong water quality decreases.²⁸ As the Mekong's dwindling water supports fewer livelihoods for fishermen and farmers there will be serious consequences for Vietnam. Workers

will abandon pastoral livelihoods and migrate to urban centers in search of work. According to one study, environmental effects and climate change were a primary motivator for 14% of recent rural immigrants in Ho Chi Minh City.²⁹ Between 2008 and 2018 the Mekong Delta region in Vietnam faced a net migration of 1.7 million people from rural areas into cities.³⁰ More study is needed to expose the linkages between climate change, water stress, and rural-urban migration in Vietnam.

If one examines the plight of women in Vietnam's Mekong Delta, the danger of water stress for wider society becomes clear. When water stress induces migration, food insecurity, and economic dislocation, these costs disproportionately fall on women. Higher food prices and water shortages squeeze family finances and place a high burden on the homemakers who manage household food and chores related to water. That work of sustaining families still falls disproportionately on women due to social norms and reduced opportunities in the workforce. Only 66.4% of Vietnamese women have some amount of secondary education in comparison to 78.2% of men.³¹ 72.7% of Vietnamese women participate in the labor force in comparison to 82.4% of men.³² In 2019, Vietnam 65th out 162 countries on the 2019 Gender Inequality Index.³³ Existing inequalities may be exacerbated if current trends continue. Some girls may drop out of school to support their families and women will be taxed by the ballooning time and effort required to secure water and food. Those trends of gender inequality water stress threaten the long-term economic vitality and stability of Vietnam and its neighbors in the Lower Mekong. Vietnamese policymakers should view the effects on women as an early warning system for the consequences of water stress and act accordingly.

As the effects of climate change escalate, Vietnam and its neighbors on the Mekong must push for better multilateral consensus on solutions for the Mekong. Since climate is largely out of the control of Vietnamese policy makers, their diplomatic agenda should focus on the issue of hydroelectric dams. To ensure future prosperity and environmental security, Vietnamese policy must convince regional partners that shared management of the Mekong will promote regional stability and economic growth for all. This hydro-diplomacy will be a complicated and arduous endeavor.

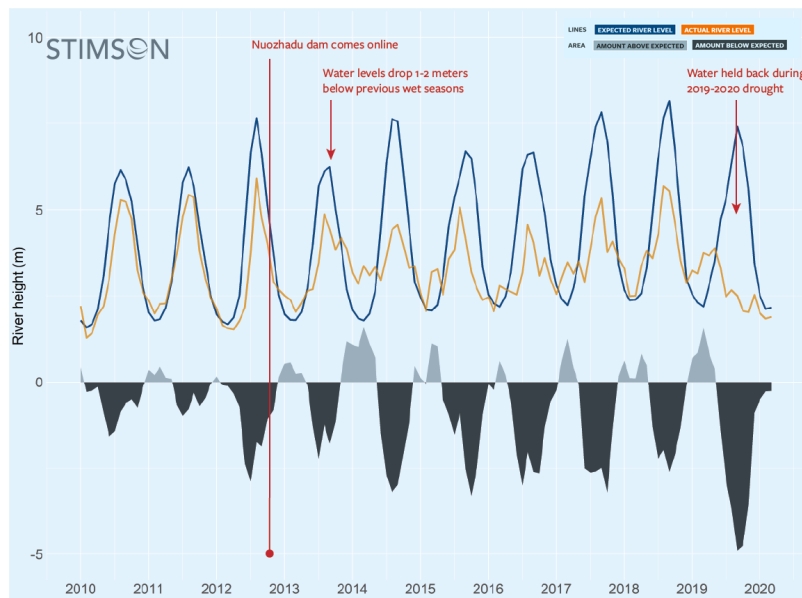
THE DEVIL IS IN THE RIVER DATA

The Mekong's flow is being weakened by hydropower dams. While all nations on the Mekong have built dams, the Chinese dams are significantly larger, more numerous, and more consequential. Collectively, these dams degrade the river basin by removing water, blocking sediment flow, and stopping fish migration. Assessing how much water is being held back by Chinese dams is an important foundation for building a comprehensive management plan

for the river. Unfortunately, China has historically been tight-lipped with data about dams, precipitation, and water flow on its portion of the Mekong. China considers water management data to be “a state secret” and has been reticent to share any data about the upper Mekong since it built its first dam thirty years ago.³⁴

Due to China’s reticence on river data, analysts are piecing together satellite images of Chinese territory and river gauge data from the Lower Mekong. A recent model from Eyes on Earth estimated how much water China is holding back (see Figure 1 below). The model predicts the natural, historical flow of water on the Mekong and then compares that to data from a river gauge at the Thai–Chinese border. The study found that over 126 meters of river height were missing in a 28-year period.³⁵ This report was striking because it suggested that during the catastrophic 2019 drought on the lower Mekong, China continued to restrict water from reaching downstream countries. One of the authors of the report bluntly depicted China as selfish, stating “glaciers are bank accounts of water but with climate change they’re melting fast... The Chinese are building safe deposit boxes on the upper Mekong because they know the bank account is going to be depleted eventually and they want to keep it in reserve.”³⁶ Since the Eyes on Earth study received US funding, China's Ministry of Foreign Affairs derided the report as a US driven conspiracy.³⁷ China argued that it also suffered from drought, but meteorological and satellite data suggest the opposite. The upper Mekong may have actually received above average rainfall.³⁸ As the existential threat on the Mekong is quantified with better data, it is important to examine whether the region will find room for cooperation and the likelihood of conflict.

FIGURE 1: MEKONG RIVER HEIGHT OVER TIME (EYLER, STIMSON CENTER, TURNING OF THE TAPS)



THE ROAD AHEAD: PROSPECT FOR CONFLICT AND COOPERATION

The chances for violent conflict are low and the need for cooperation is high. It is doubtful that there will be interstate conflict among the lower Mekong riparians because military conquest or coercion would do little to solve the large issue of Chinese water withdrawal. Similarly, it is unlikely that Vietnam or a coalition of lower riparian states would pursue war against China to coerce them to release more water or deter the construction of more dams. Demographics tell a different story about the chances of intrastate conflict. Research has shown that countries with a large percentage of their population under the age of 30—an ideal age for soldiers—are twice as likely to experience civil war.³⁹ Since several of the Lower Mekong riparians are lower income countries with youth bulges, subnational conflict seems plausible but not imminent.

The urgency for regional cooperation is growing as 12 more dams are under construction on the Mekong and several more are proposed.⁴⁰ Competing multilateral institutions are operating in parallel and attempting to mediate the growing problem of dwindling river flow. China is attempting to drive the conversation through the Lancang-Mekong Cooperation Mechanism (LMC). After creating the LMC in 2016, China financed a lavish building for the group in Cambodia which raised eyebrows for critics who view the LMC as a mouthpiece for China.⁴¹ Recently, China offered a softer position on Mekong data. Chinese Premier Li Keqiang pledged to share water management data for the entire 2020 year with its neighbors in the Lower Mekong.⁴² This one-time release of river data may have been induced by pressure from a competing river management institution with US backing.

Vietnam, Cambodia, Thailand, and Laos formed the Mekong River Commission (MRC) in 1995 to adjudicate how to best manage the river flow. Since China is not a member of the MRC, some observers have derided the organization as “effectively powerless.”⁴³ The US seeks to change that by bolstering the MRC and its members.

As the US pivots to avert Chinese hydro-hegemony on the Mekong, America has joined the regional dialogue through the Lower Mekong Initiative in 2009 and now the Mekong-US Partnership in September of 2020 — both of which seek to empower the MRC to supplant the LMC. Through funding these efforts, the US is pursuing the path championed by Peter Engelke and David Michel in *Towards Global Water Security*. With increased engagement on water issues and funding for Mekong initiatives, the US is seeking to demonstrate “responsiveness to tackling challenges that other nations view as vital to their own interests.”⁴⁴ The US is well positioned to provide technical and policy expertise through dialogues between American and Vietnamese civil society. A striking example of this partnership is the Mekong Dam Monitor.

Launched in December of 2020, this digital dashboard publishes river data every week.

Some observers are calling for ASEAN to take on a more holistic approach to their strategy in balancing China — a path which would elevate Mekong River issues on the ASEAN agenda. Critics of ASEAN argue that the forum is overly focused on the neutrality of the South China Sea. Meanwhile it treats the Mekong as a peripheral issue despite the fact that “China holds the throats of half of ASEAN in its hands” in the Mekong Basin.⁴⁵ Vietnam had an opportunity to elevate Mekong issues within the institution as the 2020 ASEAN chair. Unfortunately, the COVID-19 pandemic drained focus towards public health and economic opportunity.⁴⁶ Vietnam and its fellow Mekong riparians will continue to push for greater regional attention to the river basin but the chances of success are unclear. Since ASEAN is a consensus-based institution, it can be weakened when individual members move closer to China’s orbit.

A continual theme in the struggle for multilateral management is the influence of China in its bilateral relationship with each country. Cambodia’s largest trading partner is China and Beijing has supported the autocratic ruler Hun Sen — thus it should be no surprise that Cambodia treads lightly in its rhetoric towards China. Laos started the construction of dams on its portion of the Mekong with Chinese financing.⁴⁷ However, if the US continues to insert itself into the regional dialogue, then it is possible that Vietnam and its neighbors will assume a more confrontational approach towards Beijing.

ADDING A GENDER LENS TO ANALYSIS OF THE MEKONG’S WATER INSECURITY

The role of gender is often overlooked when analyzing water scarcity in the Mekong and its geopolitical dimensions. Women are often responsible for securing a family’s well-being through water related tasks like food production, water collection, cleaning and washing, and water-dependent livelihoods.⁴⁸ This dependence on water for livelihoods and familial responsibilities means that women face unique vulnerabilities to water stress and water induced migration. An incomplete understanding of these distinct gender roles around water leads to a lack of recognition of women’s needs and interests.⁴⁹ As a recent Oxfam report stated, women are “often disproportionately disadvantaged when water regimes change and their voices are the least heard in decision-making on water issues.”⁵⁰ When climate change or dam construction induce migration or economic hardship, it often reduces the individual agency of women in Mekong communities.

One study found that Vietnam’s own dam construction hampered women’s empowerment and health in numerous ways. An estimated 240,000

Vietnamese were displaced by two major hydroelectric dams in recent years.⁵¹ Women then faced fewer employment opportunities after migration as social norms often restrict certain jobs to men. When women see income from traditional livelihood activities decline, they become more dependent on male income—and this dependency weakens their power within their marriages and families.⁵² In addition to reduced agency over their finances, Vietnamese women displaced by a local dam reported increased domestic violence in interviews with researchers.⁵³ Future research on the externalities of dam construction should attempt to quantify the increased risk of gender-based violence in communities disrupted by water stress. These costs demand greater attention from the institutions and regimes that govern shared water resources.

At the regional level, gender and water issues do appear on the agenda, but they are rarely linked. ASEAN promotes gender equality but the organization has not connected those goals to water stress in the Mekong. The competing multilateral river committees discussed earlier have explicitly linked gender and water governance—but with varying degrees of articulation. The China-backed LMC and the US-backed MRC both ostensibly include references to gender equality in their development goals for the Mekong River Basin. The LMC's Five-Year Plan of Action on Lancang-Mekong Cooperation (2018-2022) only makes a solitary and vague reference to gender equality—though it is not enumerated until number 87 on the list of development goals.⁵⁴ In contrast, the US-backed MRC has a long history of recognizing how water stress on the Mekong exacerbates existing gender inequalities.

The MRC adopted its first Gender Strategy and Policy in 2000 and the MRC website spotlights references to gender inequality in reports and gender toolkits for commission members.⁵⁵ Perhaps most importantly, MRC encourages national and local partners to include sex and age disaggregated data for the monitoring and evaluation of projects in the Lower Mekong River Basin.⁵⁶ This data provides a much clearer picture of the current state of gender inequality and how climate change and dam construction might impact that disparity. Greater regional attention is a start, but these multilateral institutions must find more success at inserting a gender lens on the national and local levels.

This starts with political leadership. Women held 27% of the seats in parliament in 2019, a figure which matches the current 117th United State Congress.⁵⁷ The percentage of female leadership decreases at the provincial and local level. One study of five provinces in Vietnam demonstrated a stark disparity in female representation on district and community boards that influence water governance.⁵⁸ The same study found that the percentage of women working on executive boards peaked at 22% in An Giang province and was as low as 7% in Bac Lieu.⁵⁹ Legal frameworks should also be updated. While Vietnam's constitution explicitly bars gender discrimination, its laws on

water governance make no reference to the disproportionate harm that water stress poses for women.⁶⁰

This siloed approach to gender and water governance is replicated in government bureaucracies and universities. Men make up the majority of leadership and technical positions within water governance institutions and “the training of Water professionals often brackets out social and gender concerns.”⁶¹ To alleviate the gender blind spot in water governance, Vietnamese policymakers should implement several reforms. First would be to require experts trained in gender analysis to contribute to environmental impact assessments for future damming projects. Supporting and encouraging more women to pursue the technical training in water management would also help. Policymakers and civil society should also seek to encourage the use of an assessment tool like the CARE Gender Marker, which helps organizations assess whether their work is harmful, neutral, sensitive, responsive, or transformative in regards to gender roles, relationships, and structures.

CONCLUSION AND RECOMMENDATIONS:

While Vietnam’s dilemma on the Mekong river is serious, there are reasons to be optimistic. After the historic drought of 2019, all parties have realized that the issue cannot be ignored any longer. The fact that Beijing shared data from the upper Mekong is a significant milestone which should not be overlooked. But there is the possibility that the Chinese data is not accurate. Increasing the size of the dataset and comparing it with American furnished tools like the Mekong Dam Monitor will provide important insights. If the Chinese data and American models match up, then that verification will build trust between China and Lower Mekong nations. If the Chinese and American data diverge, then Vietnamese and American diplomats can coordinate regional partners to pressure China on the issue.

As data paints a clearer picture, Vietnam should continue to invest in efforts at systemic planning for the entire basin with regional partners. There is no panacea or quick fix. A thorny issue for Lower Mekong nations will be the construction of their own dams on the river. Vietnam and its partners must shift their mindset to prioritize investment in wind and solar over hydropower. Further economic integration will create new linkages and strengthen relationships which can accommodate and withstand compromise on water issues.

Most importantly, Vietnam should seize the geopolitical opportunity created by the renewal of great power competition. American policymakers in both major political parties have reached a consensus that America’s prosperity and security in the 21st century will, in large part, depend on America’s success or failure to compete for influence and power in the Indo-Pacific region. Both

parties are also aligned in their belief that a strong stance on China will be necessary for success in the region—and that anything less would amount to appeasement. The rising competition and tension over water resources in the Mekong offer an opportunity for American diplomats to earn goodwill with nations on the doorstep of mainland China. If Vietnamese policymakers walk a delicate line, then they can profit from both sides of this great power competition. Entreating American support for Lower Mekong nations will directly strengthen Vietnam's position. Increased American funding, technical support, and diplomatic efforts on the Mekong could also raise alarm in Beijing about growing American influence—and induce a more conciliatory approach to the Lower Mekong. The following recommendations represent a starting point for Vietnam as it charts a path to water security and prosperity.

RECOMMENDATIONS FOR VIETNAMESE POLICYMAKERS:

1. Push for Greater Attention from ASEAN

ASEAN has been successful in presenting a united front to deter Chinese expansion in the South China Sea. Now the organization should recognize that insecurity for members along the Mekong will weaken the organization as a whole. Brunei holds the ASEAN chairmanship for 2021 and Vietnam should push Brunei to include Mekong water issues on the agenda.

2. Increase Regional Trade and US Economic Investment

Increasing cross-border trade in the river basin will aid efforts to counter China's hydro-hegemony on the Mekong. Vietnam should encourage the United States and ASEAN partners to join the Comprehensive and Progressive Agreement for Trans-Pacific Partnership. Further economic integration of the region will strengthen relationships and make it easier to coordinate over water issues on the Mekong. This economic integration will also give American companies the opportunity to move segments of their value chain from China to other Mekong nations like Vietnam.

3. Develop a Regional Strategy Towards Water, Food, and Energy

According to the International Energy Agency, Southeast Asia has considerable potential for renewable energy and could power meet 70% of its electricity consumption with renewables by 2040.⁶² It will be important to minimize the proportion of hydropower in that renewable mix. Vietnam and its neighbors should source things like offshore wind and solar to reduce the region's reliance on hydroelectric power. US foreign direct investment and technical expertise

could accelerate this transition away from hydropower. Vietnam and its MRC partners should bolster the organization by seeking technical and policy expertise from the United States. This expertise will socialize the effects of excessive river damming by China, Laos, and other nations on the Mekong.

4. Embrace Gender Sensitive Analysis to Mekong Water Governance

Gender analysis in Vietnam is often siloed within gender-focused organizations that are tasked with broad initiatives like political participation and raising awareness on gender equality. And professionals in water management are typically not trained to include gender, ethnic, or other social analyses in water projects. An obvious step is increasing female leadership in all levels of government and water management intuitions like the MRC. Vietnamese policymakers should mandate greater dialogue between water and gender experts so that blind spots on gender can be identified and eliminated. Tools like the *CARE Gender Marker* offer an easy framework for policymakers to understand how to improve gender sensitivity Mekong water governance. Placing greater emphasis on the norm of gender equality will help consolidate support in Washington for greater involvement in the Mekong river dialogue.

5. Leverage US Funding and Data to Strengthen Negotiating Stance Towards China

Vietnam should welcome US support and engagement on Mekong issues. China dwarfs Vietnam in terms of economic and military power so the inclusion of a second great power to the dynamic. US support and greater engagement will make it easier for states like Laos and Cambodia to adopt stronger stances on Chinese water management. China in turn may also feel greater pressure to make concessions on water withdrawal in an attempt to counter US influence. China's pledge to release water data for 2020 is indicative that it will serve Vietnamese interests to pull a competing great power into its Mekong initiatives.

ENDNOTES

- 1 Shashank Bengali, "No Fish': How Dams and Climate Change Are Choking Asia's Great Lake," *Los Angeles Times*, January 20, 2020, <https://www.latimes.com/world-nation/story/2020-01-20/how-climate-change-and-dams-threaten-one-of-the-worlds-great-lakes>
- 2 Kathleen Kuehnast, "Opening Remarks," DC Student Consortium on Women Peace and Security, The DC Student Consortium on Women, Peace, and Security Launch Event, March 9, 2021.
- 3 Eric Neumayer, et al., "The Gendered Nature of Natural Disasters: The Impact of Catastrophic Events on the Gender Gap in Life Expectancy, 1981–2002," *Annals of the Association of American Geographers* 97, no. 3 (2008): 554.

- 4 International Center for Research on Woman, “Coalition for a Feminist Foreign Policy in the United States - ICRW: PASSION. PROOF. POWER,” February 11, 2021, www.icrw.org/publications/toward-a-feminist-foreign-policy-in-the-united-states/#:~:text=The%20Coalition%20for%20a%20Feminist,while%20prioritizing%20the%20articulation%20of
- 5 Caitlin Werrel and Francesco Femia, “Climate Change as a Threat Multiplier for Instability: Bloomberg.” *The Center for Climate & Security*, October 5, 2019, climateandsecurity.org/2019/09/climate-change-as-a-threat-multiplier-for-instability-bloomberg/
- 6 Juliet Eilperin, et al. “Tracking Biden's Environmental Actions,” *Washington Post*, February 22, 2021, www.washingtonpost.com/graphics/2021/climate-environment/biden-climate-environment-actions/
- 7 George Black, “The Vietnam War Is Still Killing People,” *New Yorker*, June 19, 2017, <https://www.newyorker.com/news/news-desk/the-vietnam-war-is-still-killing-people>
- 8 Marcus DuBois King, “Water Security,” in *An Introduction to Non-Traditional Security Studies: A Transnational Approach*, ed. Mely Anthony Caballero (London: Sage Publications, 2016), 154-173.
- 9 Elizabeth L. Chalecki, *Environmental Security: A Guide to the Issues* (Santa Barbara: Praeger, 2013), 15.
- 10 Patricia Kameri-Mbote, “Water, Conflict, and Cooperation: Lessons From the Nile River Basin,” *The Wilson Center*, No. 4, January 2007, www.wilsoncenter.org/publication/water-conflict-and-cooperation-lessons-the-nile-river-basin-no-4
- 11 Courtney Weatherby et al., “The Struggle for the Soul of the Mekong River,” *Bangkok Post*, July 31, 2020, <https://www.bangkokpost.com/opinion/opinion/1960339/the-struggle-for-the-soul-of-the-mekong-river>
- 12 Tomoya Onishi and Marimi Kishimoto, “Rice Prices Hit 6-Year High as Thailand and Vietnam Face Drought,” *Nikkei Asia* (Tokyo, Japan), March 30, 2020, <https://asia.nikkei.com/Business/Markets/Commodities/Rice-prices-hit-6-year-high-as-Thailand-and-Vietnam-face-drought>
- 13 Hannah Beech, “China Limited the Mekong's Flow. Other Countries Suffered a Drought,” *New York Times*, April 13, 2020, www.nytimes.com/2020/04/13/world/asia/china-mekong-drought.html
- 14 John Sabo, “Optimizing the Mekong for Fish, Floods & Energy,” *Medium*, November 6, 2019, <https://medium.com/arizona-state-universitys-future-h2o/optimizing-the-mekong-for-fish-floods-energy-e9eb5b440fc5>
- 15 Brian Eyler and Courtney Weatherby, “The Mekong Matters for America and America Matters for the Mekong,” East-West Center, April 28, 2020, 3, <https://www.eastwestcenter.org/publications/the-mekong-matters-americaamerica-matters-the-mekong>
- 16 Weatherby, “The Struggle for the Soul of the Mekong River.”
- 17 Hannah Beech, “‘Our River Was Like a God’: How Dams and China's Might Imperil the Mekong,” *New York Times*, October 12, 2019, www.nytimes.com/2019/10/12/world/asia/mekong-river-dams-china.html
- 18 Weatherby, et al. “The Struggle for the Soul of the Mekong River.”
- 19 Ibid.
- 20 Ibid.
- 21 Brian Eyler, “Science Shows Chinese Dams Are Devastating the Mekong,” *Foreign Policy*, April 22, 2020, <https://foreignpolicy.com/2020/04/22/science-shows-chinese-dams-devastating-mekong-river/>
- 22 Hannah Beech, “‘Our River Was Like a God’: How Dams and China's Might Imperil the Mekong,” *New York Times*, October 12, 2019, www.nytimes.com/2019/10/12/world/asia/mekong-river-dams-china.html
- 23 Chen Chen Lee, “Asean Needs to Act on Mekong River,” *Bangkok Post*, September 30, 2020, www.bangkokpost.com/opinion/opinion/1994067/asean-needs-to-act-on-mekong-river
- 24 David Michel, ed. *A River Runs through it: Climate Change, Security Challenges, and Shared Water Resources*. Troubled Waters. Page 86
- 25 Elizabeth L Chalecki, *Environmental Security: A Guide to the Issues* (Praeger, 2013), 28.
- 26 “China's Sudden Dam Water Releases Killing Wildlife in Lower Mekong River Basin,” *Mekong Eye*

- (*Bangkok, Thailand*), April 7, 2016, www.mekongeye.com/2016/04/07/chinas-sudden-dam-water-releases-killing-wildlife-in-lower-mekong-river-basin/
- 27 Shashank Bengali, “No Fish’: How Dams and Climate Change Are Choking Asia’s Great Lake,” *Los Angeles Times*, January 20, 2020, <https://www.latimes.com/world-nation/story/2020-01-20/how-climate-change-and-dams-threaten-one-of-the-worlds-great-lakes>
 - 28 Hoang Nam, “Mekong Delta Struggle to Find Freshwater as Drought, Salt Intrusion Continue,” *VNExpress International (Hanoi, Vietnam)*, March 22, 2020, <https://e.vnexpress.net/news/news/mekong-delta-struggles-to-find-freshwater-as-drought-salt-intrusion-continue-4071219.html>
 - 29 Thi Kim, et al., “Correlation between Climate Change Impacts and Migration Decisions in Vietnamese Mekong Delta” *International Journal of Innovative Science, Engineering & Technology* No. 8 (August, 2017): 111-116.
 - 30 Dang Tri, et al., “Climate Change Is Triggering a Migrant Crisis in Vietnam,” *The Conversation (Melbourne, Australia)*, November 19, 2019, <https://theconversation.com/climate-change-is-triggering-a-migrant-crisis-in-vietnam-88791>
 - 31 Those trends threaten the long-term economic vitality and stability of Vietnam and its neighbors in the Lower Mekong.
 - 32 Ibid.
 - 33 Ibid
 - 34 Brian Eyster, “Science Shows Chinese Dams Are Devastating the Mekong,” *Foreign Policy*, April 22, 2020 <https://foreignpolicy.com/2020/04/22/science-shows-chinese-dams-devastating-mekong-river/>
 - 35 A Basist. and C. Williams (2020), Monitoring the Quantity of Water Flowing Through the Mekong Basin Through Natural (Unimpeded) Conditions, Sustainable Infrastructure Partnership, Bangkok. Pages 4-5.
 - 36 Hannah Beech, “China Limited the Mekong’s Flow. Other Countries Suffered a Drought,” *New York Times*, April 13, 2020, www.nytimes.com/2020/04/13/world/asia/china-mekong-drought.html
 - 37 Brian Eyster, “Science Shows Chinese Dams Are Devastating the Mekong,” *Foreign Policy*, April 22, 2020, <https://foreignpolicy.com/2020/04/22/science-shows-chinese-dams-devastating-mekong-river/>
 - 38 Brian Eyster and Courtney Weatherby, “New Evidence: How China Turned off the Tap on the Mekong River”, Stimson Center, April 13, 2020, <https://www.stimson.org/2020/new-evidence-how-china-turned-off-the-mekong-tap/>
 - 39 Wilson Center, “The Future Faces of War: Population and National Security,” March 14, 2011, www.wilsoncenter.org/event/the-future-faces-war-population-and-national-security-book-launch
 - 40 Shashank Bengali, “No Fish’: How Dams and Climate Change Are Choking Asia’s Great Lake,” *Los Angeles Times*, January 20, 2020, <https://www.latimes.com/world-nation/story/2020-01-20/how-climate-change-and-dams-threaten-one-of-the-worlds-great-lakes>
 - 41 Hannah Beech, “China Limited the Mekong’s Flow. Other Countries Suffered a Drought” *New York Times*, April 13, 2020, www.nytimes.com/2020/04/13/world/asia/china-mekong-drought.html
 - 42 Chen Chen Lee, “Asean Needs to Act on Mekong River” *Bangkok Post*, September 30, 2020, www.bangkokpost.com/opinion/opinion/1994067/asean-needs-to-act-on-mekong-river
 - 43 Bilahari Kausikan, “Why Asean Should Treat the Mekong like the South China Sea,” *South China Morning Post (Hong Kong, China)*, July 17, 2020, www.scmp.com/week-asia/opinion/article/3093546/why-asean-should-treat-mekong-south-china-sea
 - 44 Peter Engelke & David Michel, “Toward Global Water Security,” Atlantic Council, August, 23, 2016, 8, <https://www.atlanticcouncil.org/in-depth-research-reports/report/toward-global-water-security/>
 - 45 Bilahari Kausikan, “Why Asean Should Treat the Mekong like the South China Sea,” *South China Morning Post (Hong Kong, China)*, July 17, 2020, www.scmp.com/week-asia/opinion/article/3093546/why-asean-should-treat-mekong-south-china-sea
 - 46 Chen Chen Lee, “Asean Needs to Act on Mekong River,” *Bangkok Post*, September 30, 2020, www.bangkokpost.com/opinion/opinion/1994067/asean-needs-to-act-on-mekong-river
 - 47 Shashank Bengali, “No Fish’: How Dams and Climate Change Are Choking Asia’s Great Lake,”

- Los Angeles Times*, January 20, 2020, <https://www.latimes.com/world-nation/story/2020-01-20/how-climate-change-and-dams-threaten-one-of-the-worlds-great-lakes>
- 48 Ha Nguyen, et al., “Exploring gender dimensions of water insecurity and governance in the Lower Mekong Region,” Stockholm Environment Institute, February 1, 2019, <https://www.sei.org/publications/exploring-gender-dimensions-of-water-insecurity-and-governance-in-the-lower-mekong-region/>
- 49 International Union for Conservation of Nature and Oxfam, “Gender and Water Governance in the Mekong Region,” June 2018, 26, https://www.iucn.org/sites/dev/files/content/documents/2018/final_gender_report_mekong_water_governance_17_july.pdf
- 50 Ibid.
- 51 Christina Hill, et al., “Lessons learnt from gender impact assessments of hydropower projects in Laos and Vietnam,” *Gender & Development*, Volume 25 [No.3] (2017): 463, <https://doi.org/10.1080/13552074.2017.1379777>
- 52 Ibid.
- 53 Ibid, 461.
- 54 Lancang-Mekong Cooperation, “Five-Year Plan of Action on Lancang-Mekong Cooperation (2018-2022),” , January 12, 2018, www.lmcchina.org/eng/n3/2020/0921/c416277-9762429.html
- 55 Mekong River Commission, “Gender Issues,” www.mrcmekong.org/our-work/topics/gender/
- 56 Ibid.
- 57 United Nations Development Program, “Human Development Reports - Vietnam,” 2020, <http://hdr.undp.org/en/countries/profiles/VNM#>
- Carrie Elizabeth Blazina & Drew DeSilver, “A Record Number of Women Are Serving in the 117th Congress,” *Pew Research Center*, January 22, 2021, www.pewresearch.org/fact-tank/2021/01/15/a-record-number-of-women-are-serving-in-the-117th-congress/
- 58 Nora Pistor, et al., “Baseline Study Report on Gender and Climate Change in 5 provinces of the Mekong Delta: Soc Trang, Bac Lieu, Ca Mau, Kien Giang and An Giang,” April 2012, 19, https://www.researchgate.net/publication/269092937_Baseline_Study_Report_on_Gender_and_Climate_Change_in_5_provinces_of_the_Mekong_Delta_Soc_Trang_Bac_Lieu_Ca_Mau_Kien_Giang_and_An_Giang
- 59 Ibid.
- 60 Ha Nguyen, et al., “Exploring gender dimensions of water insecurity and governance in the Lower Mekong Region,” Stockholm Environment Institute, February 1, 2019, <https://www.sei.org/publications/exploring-gender-dimensions-of-water-insecurity-and-governance-in-the-lower-mekong-region/>
- 61 Ibid.
- 62 International Energy Agency, “Southeast Asia Energy Outlook 2019,” October 2019, <https://www.iea.org/reports/southeast-asia-energy-outlook-2019> (February 2013), 11, <https://doi.org/10.1017/S0003055412000615>