

NOTES

The Sambor Dam: How China’s Breach of Customary International Law Will Affect the Future of the Mekong River Basin

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ABSTRACT

The construction of dams along the Mekong River poses a significant threat to the sustainability of the Mekong River Basin. The Mekong Agreement, which governs development on the Mekong River, sets forth the Mekong River Commission’s objectives and priorities; however, it has no binding enforcement mechanism and ultimately defers dispute resolution to the governments of the member states. The Mekong Agreement would be strengthened if the four member states to the Mekong River Commission also ratified the United Nations (“U.N.”) Watercourses Convention. The Mekong Agreement’s inability to enforce and resolve disputes is further weakened by the establishment of the Lancang-Mekong Cooperation (“LMC”). The LMC has provided China and Cambodia with the opportunity to bypass the obligations set forth in the Mekong Agreement and bilaterally construct the Sambor Dam in Cambodia. If completed, the Sambor Dam would devastate the Mekong River Basin and violate every principle of customary international water law. The Mekong River Commission’s member states could prevent the completion of the Sambor project and similar projects from being constructed in the future by pressuring China to incorporate principles of customary international water law into the LMC’s framework.

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INTRODUCTION

The Mekong River is the seventh longest river in Asia¹ with more than sixty million people depending directly upon the river for their livelihoods.² The Mekong River originates in Tibet and flows through six countries—China, Myanmar, Laos, Thailand, Cambodia, and Vietnam.³ The River is divided into two parts: the Upper Mekong Basin (“URB”), flowing through China and Myanmar, and the Lower Mekong Basin (“LRB”), flowing through Laos, Thailand, Cambodia, and Vietnam. While the Mekong River is the most productive river in the world and is second only to the Amazon River in biodiversity, it is also one of the world’s most threatened rivers.⁴

Two of the biggest threats to the Mekong River Basin are climate change and the construction of hydropower dams on the Mekong River.⁵ Climate change continues to exacerbate already existing environmental threats such as habitat loss, river pollution, and unsustainable resource extraction.⁶ Over the last century, the rate of sea level rise from climate change has significantly increased.⁷ The rate of global sea level rise nearly doubled from 1.7mm per year throughout most of the 20th century to 3.1mm per year since 1993.⁸ The Mekong River Basin is especially vulnerable to rising sea levels because of its extensive coastlines and major deltas which sit at sea level.⁹ Relative sea level has increased to 6mm per year in

1. LEWIS OWEN ET AL., MEKONG RIVER, ENCYCLOPÆDIA BRITANNICA, <https://perma.cc/PQ4L-SF8B> (last visited Sept. 21, 2019).

2. *Making the Most of the Mekong*, NEW AGRICULTURIST ON-LINE, <https://perma.cc/5J9P-PMMV> (last visited Sept. 21, 2018).

3. *Mekong River Basin*, NAT’L HERITAGE INST., <https://perma.cc/5Z4A-BBV2> (last visited Dec. 8, 2018).

4. *See id.*

5. Stefan Lovgren, *Southeast Asia May be Building Too Many Dams Too Fast*, NAT’L GEOGRAPHIC (Aug. 23, 2018), <https://perma.cc/X9UW-K7KW>.

6. Adam Oswell, *Climate change in the Greater Mekong*, WORLD WILDLIFE FUND, <https://perma.cc/T9Y9-LVKL> (last visited Dec. 12, 2018).

7. Rebecca Lindsey, *Climate Change: Global Sea Level*, NOAA CLIMATE.GOV (Aug. 1, 2018), <https://perma.cc/XB2S-6EVL>.

8. *Id.*

9. WORLD WILDLIFE FUND, *THE GREATER MEKONG AND CLIMATE CHANGE: BIODIVERSITY, ECOSYSTEM SERVICES AND DEVELOPMENT AT RISK 8* (2009), <https://perma.cc/G5WF-CE2Q>.

the Mekong Delta and 13 to 150mm per year in the Chao Phraya Delta.¹⁰ This rising sea level has resulted in saltwater intrusion and land loss on the coasts of Thailand and Vietnam.¹¹ In 2014, saltwater intrusion destroyed more than 6,000 hectares of rice fields in Vietnam.¹² In addition, land subsidence from groundwater abstraction and sediment loss from upstream dams are causing the Mekong's deltas to sink.¹³ The net rate of migration away from the Mekong Delta is double the national average of migration in Vietnam, suggesting that climate change is forcing people to leave the delta.¹⁴

Long coastlines and heavily populated low-lying areas make Southeast Asia one of the world's most vulnerable regions to extreme weather associated with global warming.¹⁵ Global warming has triggered more frequent and serious floods, droughts, and storms in the Mekong River Basin, resulting in ecological destruction across the region. The United States Environmental Protection Agency ("EPA") predicts that changes in annual rainfall and changes in regional temperatures would significantly affect rice production in the LMB.¹⁶ A drier climate combined with contemporary emission rates would reduce annual water yield by as much as 24 percent in 2030.¹⁷ Such a scenario would also reduce annual rainfall in the LMB by 250mm. Thailand—one of the world's greatest rice exporters—would experience a reduction in rice production of 8.2 percent.¹⁸ Additionally, by 2030, rice production in Laos and Cambodia would be insufficient to meet domestic consumption demands.¹⁹ The EPA also estimated that a drier climate in combination with contemporary emission rates would decrease rice production in the LMB by 4.2 percent.²⁰ Consequently, climate change will inevitably change the Mekong River Basin's ecology, affecting the livelihood of millions of peoples.

The second major threat to the Mekong River Basin is the construction of hydropower dams on both the URB and LRB. China has already built eight hydropower dams in the URB and is planning at least a dozen more.²¹ A UNESCO report asserts that additional Chinese dam construction could cause a

10. *Id.*

11. *Id.*

12. Navin Singh Khadka, *Climate Change: Mekong Delta Heads For Troubled Waters*, BBC NEWS (Oct. 20, 2015), <https://perma.cc/S4JY-CXPF>.

13. *See generally, id.*

14. Alex Chapman & Van Pham Dang Tri, *How Climate Change is Triggering a Migrant Crisis in Vietnam*, INDEPENDENT (Jan. 25, 2018), <https://perma.cc/6XF5-28YB>.

15. Amit Prakash, *Boiling Point*, 55 FIN. & DEV. 22, 22 (Sept. 2018), <https://perma.cc/7RMW-7T85>.

16. Yongyut Trisurat, et al., *Basin-wide Impacts of Climate Change on Ecosystem Services in the Lower Mekong Basin*, 33 ECOLOGICAL RES. 73, 73 (Oct. 2017).

17. *Id.* at 84.

18. *Id.* at 83.

19. *Id.* at 73.

20. *Id.* at 83.

21. *China, Asia Leaders Discuss Mekong Dam Projects*, VOICE OF AM. NEWS (Jan. 10, 2018), <https://perma.cc/T6BD-ZJ5F>.

94 percent reduction in sediment flow, which would have adverse effects on fishing and rice farming.²² The sediment and its attached organic matter are critical for the formation and stabilization of deltas and the ecosystems they support.²³ Many studies have predicted that a reduction in sediment and nutrient loads from sediment trapping behind dams will lead to river and coastal fisheries' depletion.²⁴ Reduced sediment loads would also result in loss of agricultural land, with impoverished communities being most affected.²⁵ Additionally, experts believe that Chinese dams in the URB have been at least partially responsible for Southeast Asia's severe droughts over the last decade.²⁶ In March of 2016, China agreed to Vietnam's request to open the Jinghong Dam's hydropower floodgates and alleviate downstream water shortages.²⁷ As a consequence of China's dam construction, the Mekong River's lower riparian states are left at the mercy of their upstream neighbor.

Additionally, Laos and Cambodia are already constructing or planning to construct eleven mainstream dams on the LRB. Interference with the natural fluctuation and seasonal flows of the river would have severe impacts on the delivery of nutrients downstream and disrupt fish migration patterns.²⁸ Thus, if built to completion, these dams would diminish essential flood pulses and decimate fisheries and agriculture that depend on variable flows and sediment.²⁹ A 2010 report conducted by the Mekong River Commission ("MRC") determined that the eleven proposed mainstream dams in the LRB would cause a loss of 26 percent to 42 percent of the fish in the river system and displace approximately 100,000 people.³⁰ The MRC also found that the eleven dams would turn more than half of the free-flowing LRB into stagnant reservoirs.³¹ It estimated losses of \$500 million per year due to the reduction of fish supplies, which would also threaten food security for over two million people.³² The dams' reservoirs would flood over half

22. *Drastic Reduction in Sediment Flows in Mekong River Much Faster and Larger Than Expected, New Study Shows*, UNESCO BANGKOK (Nov. 30, 2017), <https://perma.cc/847U-XZT7><https://perma.cc/847U-XZT7>.

23. Thanapon Piman & Manish Shrestha, *Case Study on Sediment in the Mekong River Basin: Current State and Future Trends*, STOCKHOLM ENV'T INST., 27, 27–30 (Nov. 2017).

24. Ilse Pukinskis, *SOK 2: Mekong Sediment Basics*, STATE OF KNOWLEDGE, 1, 3 (Feb. 2013).

25. *Id.*

26. Daniel Rechtschaffen, *China's Huge Dam Projects Will Threaten Southeast Asia As Water Scarcity Builds Downstream*, FORBES (May 3, 2017), <https://perma.cc/MF8H-2JLH>.

27. Shannon Tiezzi, *Facing Mekong Drought, China to Release Water From Yunnan Dam*, THE DIPLOMAT (March 16, 2016), <https://perma.cc/E6M5-8FSU>.

28. Joshua Zaffos, *Life on Mekong Faces Threats as Major Dams Begin to Rise*, YALE ENV'T 360 (Feb. 20, 2014), <https://perma.cc/S4ZB-TVRH>.

29. *Id.*

30. INT'L CTR. FOR ENVTL. MGMT., STRATEGY ENVIRONMENTAL ASSESSMENT OF HYDROPOWER ON THE MEKONG MAINSTREAM: SUMMARY OF THE FINAL REPORT 15–16 (Oct. 2010), <https://perma.cc/A8U9-AT27>.

31. *Id.* at 18.

32. *Id.* at 18–19.

of all riverbank gardens cultivated by subsistence farmers.³³ Finally, the MRC found that the mainstream projects would likely result in irreversible environmental damage by reducing biological diversity and compartmentalizing the Mekong ecosystem into smaller and less productive units.³⁴

The compounding impacts from climate change and hydropower dams on the Mekong River have caused socio-economic and ecological damage to the people and animals of the Mekong River Basin, and the impacts will only continue to grow as climate change worsens and more dams are built. In light of these adverse impacts, this Note will focus on the threat to the Mekong River Basin from the construction of hydropower dams. First, the Note will assess the Mekong River Agreement—the international document guiding development on the Mekong River; second, it will discuss China’s breach of customary international law by funding and developing the Sambor Dam; third, it will analyze the implications of China and Cambodia’s breach of customary international water law and provide potential solutions.

I. SUSTAINABLE DEVELOPMENT ON THE MEKONG RIVER IS GOVERNED BY THE MEKONG AGREEMENT, TO WHICH CHINA IS NOT A MEMBER

In 1995, the governments of Cambodia, Lao People’s Democratic Republic, Thailand, and Vietnam signed The Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin (“Agreement”).³⁵ The Agreement established the Mekong River Commission, which is the inter-governmental organization tasked with managing the use, development, and conservation of resources in the Mekong River Basin. The MRC recognizes that development decisions on the Basin may have transboundary consequences and thus strives for an “integrated water resources management” model.³⁶

The Agreement imposes four general duties upon the MRC: to cooperate in all fields of sustainable development, utilization, management and conservation of the Mekong River Basin; to promote sustainable development of the Mekong River through the formulation of a basin development plan; to protect the environment, natural resources, and ecological balance of the Mekong River from pollution and other harmful effects; and to utilize the waters of the Mekong River system in a reasonable and equitable manner.³⁷

33. *Id.* at 11.

34. *Id.* at 12.

35. Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, Apr. 5, 1995 [hereinafter Mekong Agreement].

36. MEKONG RIVER COMM’N, INTEGRATED WATER RESOURCES MANAGEMENT-BASED BASIN DEVELOPMENT STRATEGY FOR THE LOWER MEKONG BASIN 90 (2016) (IWRM promotes the coordinated development and management of water, land, and related resources in a way that maximizes economic and social welfare without compromising the sustainability of vital ecosystems).

37. *Id.* at 1.

A. AN ASSESSMENT OF THE MEKONG AGREEMENT

The Agreement is a legally binding treaty consistent with international law.³⁸ Much of the agreement uses the term “shall” rather than “should” to indicate the binding nature of the Agreement. By signing and ratifying the Agreement, each of the four member states committed themselves to the obligations outlined in Articles 1–10 of Chapter III: Objectives and Principles of Cooperation.³⁹ However, the treaty lacks any enforcement mechanism. While the treaty created the MRC to promote cooperation, the MRC does not have any police powers to require compliance or issue penalties for breach of the Agreement.⁴⁰ Article 35 asserts that in instances where the MRC is unable to resolve disputes, the member countries must resort to diplomatic channels or, if mutually agreed upon, mediation by a third party.⁴¹ Thus, the language of the Agreement itself recognizes that the MRC has no authority to enforce the obligations set forth by the Agreement.

Despite the lack of an enforcement mechanism, the governments of the four member states have strong incentives to comply with the Agreement. The treaty was created to prevent economic losses, environmental damage, and unequal distribution of benefits stemming from the use and development of the Mekong River.⁴² The most recent Strategy Plan published by the MRC in 2016 recognized and highlighted the need for greater regional cooperation by seeking to “increas[e] regional cooperation and integration through development of joint and basin-wide development opportunities which increase regional benefits” and “harmonize regional planning while decentralizing national policies.”⁴³ Additionally, former President of Vietnam, Truong Tan Sang, discussed the risk of unilateral development on the Mekong when he stated, “Tensions over water resources are threatening economic growth and present a source of conflict. Dam construction and stream adjustment by some countries in upstream rivers represents a concern for many countries and an implicit factor affecting relations between relevant countries.”⁴⁴ The MRC has adopted a core understanding that nearly all development on the Mekong River will have transboundary effects, which is why it has based its development strategy on a system of integrated and cooperative water

38. KIRK HERBERTSON, XAYABURI DAM: HOW LAOS VIOLATED THE 1995 MEKONG AGREEMENT 7 (2013), available at <https://perma.cc/7WY2-BY58>.

39. Mekong Agreement, *supra* note 35, at 3.

40. PHILIP HIRSCH & KURT MØRCK JENSEN, NATIONAL INTERESTS AND TRANSBOUNDARY WATER GOVERNANCE IN THE MEKONG, xvi (2006) (describing how the Agreement “lacks the legal ‘teeth’ to enforce any of its provisions”), <https://perma.cc/C9UU-RX8E>.

41. Mekong Agreement, *supra* note 35, at 10.

42. *Vision and Mission*, MEKONG RIVER COMM’N, <https://perma.cc/D5W5-QEQZ> (last visited Mar. 8, 2019).

43. *Strategic Plan 2016-2020*, MEKONG RIVER COMM’N, <https://perma.cc/BT6E-LTTA> (last visited Oct. 31, 2019).

44. *Vietnam Warns of Water Conflicts*, AGENCE FRANCE-PRESSE, Sept. 7, 2012.

resource management. The Mekong Agreement and the MRC's endurance for over twenty years are a testament to the importance of cooperative transboundary management of the Mekong River and indicate the countries' willingness to comply with the Agreement.

The U.N. Watercourses Convention ("UNWC"), adopted by the United Nations in 1997, has since been viewed as the premier international authority on conservation and management of water resources. The UNWC is significant because it codifies numerous principles of customary international law related to the non-navigational use of international watercourses. Although it is a binding treaty, the UNWC has only been ratified by thirty-six states. Of these thirty-six states, Vietnam is the only state in the Mekong River Basin to have ratified the UNWC.

Unsurprisingly, the Agreement has adopted several principles of substantive and procedural customary international water law outlined in the UNWC. The first substantive principle which the Agreement adopts is that of "reasonable and equitable use."⁴⁵ Article 5 of the Agreement, similar to the UNWC, requires the member countries to utilize the waters of the Mekong River in a "reasonable and equitable manner."⁴⁶ Article 6 of the UNWC outlines seven factors to help determine reasonable and equitable use.⁴⁷ However, unlike the UNWC, the Agreement does not describe any factors or standards to measure reasonable and equitable use. Instead, the Agreement asserts that reasonable and equitable use will be determined by the Joint Committee of the MRC.⁴⁸

Additionally, the Agreement incorporates customary international water law by imposing the obligation to avoid causing significant harm. This basic duty not to cause significant harm under customary international water law is found in Article 7 of the UNWC.⁴⁹ Article 7 of the Agreement similarly asserts that the member countries shall "make every effort to avoid, minimize and mitigate harmful effects that might occur."⁵⁰ The Agreement further parallels Article 7 of the UNWC by requiring States notified with proper and valid evidence that it is causing substantial damage to other riparian States to immediately cease the alleged cause of harm.⁵¹

The Agreement adopts a third principle of substantive customary international water law in Article 3,⁵² which requires member states to protect the environment

45. Convention on the Law of Non-Navigational Uses of Int'l Watercourses art. 6, May 21, 1997 [hereinafter U.N. Watercourses Convention].

46. Mekong Agreement, *supra* note 35, at 3-4.

47. *Id.* at art. 6.

48. *Id.*

49. U.N. Watercourses Convention, *supra* note 47, at art. 7.

50. Mekong Agreement, *supra* note 35, at 4.

51. *Id.*

52. *Id.* at 3.

and ecosystems of the Mekong River Basin. This parallels Article 20 of the UNWC⁵³, which requires that watercourse states shall individually and jointly protect and preserve the ecosystems of international watercourses. Article 7 to the Agreement, which expresses the “no significant harm” principle also specifically requires member states to “make every effort to avoid . . . harmful effects . . . to the aquatic eco-system.”⁵⁴

The international community has additionally recognized four procedural norms of international water law: cooperation, information, notification, and consultation.⁵⁵ The Agreement does not expressly assert all of these principles of customary international law as stand-alone obligations in its articles. Rather, the MRC codified a series of procedures to complement the general provisions in the Agreement. Between 2000 and 2008, the MRC published a set of procedures in the MRC Guidelines for Implementation, which include Procedures for Data and Information Exchange and Sharing; Procedures for Water Use Monitoring; Procedures for Notification; Prior Consultation and Agreement; Procedures for Maintenance of Flows on the Mainstream; and Procedures for Water Quality.⁵⁶ While the development of these procedures was influenced by the Agreement under Articles 5, 6, and 26, they are external to the treaty, and thus are non-binding procedures.⁵⁷

The Agreement does not have a parallel article to the UNWC’s Article 8: “General Obligation to Cooperate”; however, the principle of cooperation is implied throughout the text of the Agreement. The obligation for cooperation can first and foremost be found in the Agreement’s title. Additionally, Article 1 of the Agreement is titled “Areas of Cooperation” and requires member states to cooperate in all fields of sustainable development and use related to the Mekong River Basin.⁵⁸

Also absent from the Agreement is the obligation of member states to inform one another of plans for development on the Mekong River. The Agreement’s only mention of information exchange is found in Article 24, which sets out the functions of the Joint Committee. Article 24 asserts that a function of the Joint

53. UN Watercourses Convention, *supra* note 47, at art. 20.

54. Mekong Agreement, *supra* note 35, at 4.

55. Gabriel Eckstein, *Transboundary Legal Perspective: International Water Law*, 35–36, in *Hydrodiplomacy, Legal and Institutional Aspects of Water Resources Governance* (2016).

56. IUCN, *A WINDOW OF OPPORTUNITY FOR THE MEKONG BASIN: THE UN WATERCOURSES CONVENTION AS A BASIS FOR COOPERATION* 11 (2016).

57. RÉMY KINNA & ALISTAIR RIEU-CLARKE, *THE GOVERNANCE REGIME OF THE MEKONG RIVER BASIN: CAN THE GLOBAL WATER CONVENTIONS STRENGTHEN THE 1995 MEKONG AGREEMENT?* 61 (2017); *see also* Mekong Agreement, *supra* note 35, at art. 5 (“Inter-basin diversion shall be subject to prior consultation which aims at arriving at an agreement by the Joint Committee.”); *id.*, at art. 6 (“The Joint Committee shall adopt guidelines for the locations and levels of the flows, and monitor and take action necessary for their maintenance”); *id.*, at art. 26 (“The Joint Committee shall adopt guidelines for the locations and levels of the flows, and monitor and take action necessary for their maintenance”).

58. Mekong Agreement, *supra* note 35, at 3.

Committee is to “regularly obtain, update and exchange information and data necessary to implement [the] Agreement.”⁵⁹ However, the UNWC’s Article 11 requirement of watercourse states to exchange information of planned measures is mirrored in the MRC’s Procedures for Data and Information Exchange and Sharing. Nevertheless, these procedures are external to the Agreement and are therefore non-binding.

The obligations to notify and consult can both be found in Article 5 of the Agreement.⁶⁰ While Article 5 primarily mandates reasonable and equitable use of the River Basin, it additionally holds that both intra-basin use and inter-basin diversion of the Mekong River shall be subject to notification and prior consultation with the Joint Committee of the MRC.⁶¹ Thus, Article 5 contains three principles of customary international law—one substantive and two procedural.

Although the MRC has made progress in many of its objectives, it has nevertheless been criticized by the international community for its inadequacy in constraining states’ development.⁶² The Agreement is effectively utilized as a tool to bring the four member states to the table. However, it is less effective as a tool for dispute resolution because it ultimately leaves the individual state governments with the final authority to solve conflicts. While the MRC’s regime incorporates all three substantive norms of customary international law (“CIL”) within the Agreement, its adoption of procedural norms is weak. Only two principles of procedural CIL are explicitly found in the Agreement (the duty to consult and notify), whereas the other two principles (the duty to inform and cooperate) are discussed in the external Guidelines for Implementation. On the other hand, the UNWC dedicates a specific article to each of the four recognized principles of CIL. The weaknesses of the MRC—its soft stance on the procedural principles of CIL and its deference to the governments of the four member states for dispute resolution—is likely the primary reason Vietnam ratified the UNWC in 2014.⁶³ The UNWC has been recognized by the international community as the document which most precisely represents the principles of customary international water law. Unlike the Agreement, the UNWC includes a binding dispute resolution mechanism found in Article 33, which ultimately refers unresolved conflicts to the International Court of Justice.⁶⁴

To date, Vietnam is the only country in the Mekong River Basin to have ratified the UNWC.⁶⁵ The MRC’s regime would be strengthened if the remaining

59. *Id.* at 7.

60. *Id.* at 3–4.

61. *Id.*

62. See KINNA & RIEU-CLARKE, *supra* note 57, at 2 (arguing how the ability of the agreement to make developments is in question).

63. See *Why the Region Needs the UN Watercourses Convention*, INT’L UNION FOR CONSERVATION OF NATURE (June 24, 2015), <https://perma.cc/55GN-ZCYX>.

64. UN Watercourses Convention, *supra* note 47, at art. 33.

65. *Vietnam Leading the Way for Improved Transboundary Water Governance*, INTERNATIONAL RIVERS (June 18, 2014), <https://perma.cc/K2NX-NU2d>.

three countries adopted the UNWC. Doing so would reinforce the Agreement's non-binding Guidelines for Implementation. Adopting the UNWC would not only reaffirm the four member states' commitment to cooperative and sustainable development of the Mekong River Basin, but also subject them to more precisely defined principles of customary international water law.⁶⁶

B. THE NEED FOR CHINA TO JOIN THE MEKONG AGREEMENT

The Agreement's most fundamental weakness is its geographic scope of jurisdiction. China and Myanmar, whose territories fall within the URB, are not parties to the Agreement. Rather, China and Myanmar became "dialogue partners" to the MRC in 1996.⁶⁷ As dialogue partners, they are not subject to the requirements of the MRC but nevertheless participate in meetings and discussions on the development of the Mekong River. Most importantly, the MRC cannot access data from non-member states and is unable to influence any development on the UMB even though such development will inevitably have significant impacts on the LMB.

Further weakening the MRC's governance of the Mekong River Basin, the Lancang-Mekong Cooperation ("LMC") was created in 2016 between China and the other five riparian states along the Mekong River.⁶⁸ The LMC serves as a sub-regional mechanism that promotes cooperation between China and the five lower Mekong countries for the development of the Mekong River Basin. However, unlike the MRC, it has no binding obligations and is greatly influenced by China. It was well received by Cambodia, which was the first country to sign a cooperative agreement with China in 2017.⁶⁹ This agreement resulted in China granting more than \$7 million to Cambodia to fund various preservation projects on the Mekong River. The LMC rivals the MRC and aims to bolster economic development on the Mekong River Basin without being bound by the protective principles set out in the 1995 Mekong Agreement. In the three years since the LMC's creation, China has set aside billions of dollars to support forty-five projects, including increasing industrial capacity, border trade, and poverty alleviation.⁷⁰

One of the most impactful consequences of the LMC is its strengthening of ties between China and Cambodia. Cambodia has some of the world's highest electricity costs and has thus prioritized developing hydropower dams.⁷¹ The

66. IUCN, A WINDOW OF OPPORTUNITY FOR THE MEKONG BASIN: THE UN WATERCOURSES CONVENTION AS A BASIS FOR COOPERATION 21 (2016).

67. *Mekong River Commission: Upstream Partners*, MEKONG RIVER COMM'N (last visited Dec. 2, 2018), <https://perma.cc/P4J2-K9FE>.

68. *A Brief Introduction of Lancang-Mekong Cooperation*, IMCCHINA.ORG (Dec. 13, 2017), <https://perma.cc/NE9Z-GWPQ>.

69. Laura Zhou, *Five Things to Know About the Lancang-Mekong Cooperation Summit*, SOUTH CHINA MORNING POST (Jan. 9, 2018, 8:03 AM), <https://perma.cc/XU26-2HLU>.

70. *Id.*

71. Hannah Elten, *Cambodia's Chinese Dam Conundrum*, EAST ASIA FORUM (Aug. 15, 2018), <https://perma.cc/P7F3-ZKDQ>.

Cambodian government is pursuing this goal with the help of Chinese companies. Cambodia finds Chinese dam-construction companies attractive because of their relatively low cost and their willingness to carry out dam projects on the Mekong River. Likewise, China shares Cambodia's interest in developing hydropower because it may one day import Cambodian generated energy.⁷² In 2009, Chinese foreign minister Yang Jiechi pledged \$1 billion in investments to Cambodia's energy sector.⁷³ In 2016, six hydropower dams, all financed and built by Chinese companies, produced 47 percent of Cambodia's domestic energy production.⁷⁴ The planning and construction of these dams were not submitted to the MRC's consultation process and thus violated the obligations of the Agreement.⁷⁵ Most controversial of these Chinese-funded dams is the Lower Sesan 2 dam, which is expected to be fully operational by the end of 2019. Construction of the dam is expected to evict nearly 5,000 people, most of whom are ethnic minorities. In addition, the dam is expected to cause a 9.3 percent drop in fish stocks across the entire basin.⁷⁶ The governments of Australia, Finland, Japan, and the United States called upon Cambodia to submit the Lower Sesan 2 Dam to the MRC's prior consultation process in 2013 and 2014, but Cambodia never complied.⁷⁷

In order to achieve the MRC regime's objective for true cooperative and sustainable development on the Mekong River, Myanmar and China, in particular, must become members to the MRC and subject themselves to the principles outlined in the 1995 Agreement. The CEO of the MRC Secretariat, Pham Tuan Phan, asserted in an interview that the biggest barrier to cooperation under the MRC regime is Myanmar and China's refusal to join the MRC.⁷⁸ With the creation of the LMC, Cambodia has found an alternative route to construct dams on the Mekong River. By building diplomatic relations with China outside the MRC's regime, Cambodia established a back-door opportunity to finance and construct dams while disregarding the 1995 Mekong Agreement's protective measures. This bilateral effort to construct dams on the Mekong River has led to the planning of the most socially, economically, and ecologically destructive dam in the Mekong River Basin history—the Sambor Dam.

II. CHINA'S DEVELOPMENT AND CONSTRUCTION OF THE SAMBOR DAM WOULD VIOLATE CUSTOMARY INTERNATIONAL LAW

The Sambor Dam was originally proposed by the China Southern Power Grid Company for construction in the town of Sambor, Cambodia, which sits along

72. *Id.*

73. *Id.*

74. *Id.*

75. *Id.*

76. *Lower Sesan 2 Dam*, INT'L RIVERS, <https://perma.cc/VZH4-ZVMQ> (last visited Dec. 12, 2018).

77. *Id.*

78. Wang Yan, *Mekong River Commission Reaches Out to China to Avert Dam Damage*, CHINA DIALOGUE (May 4, 2018), <https://perma.cc/PY3T-Z8D2>.

the main stream of the Mekong River.⁷⁹ As originally conceived, the Sambor Dam would be the largest hydropower dam in the Mekong River Basin, doubling the size of the next largest Mekong dam. It would create an 82km-long reservoir, displacing thousands of people.⁸⁰ A significant volume of migratory fish pass through the proposed site of construction each year, and a feasibility study conducted by the National Heritage Institute (“NHI”) found that the Sambor Dam would pose an absolute barrier for migratory fish.⁸¹ The NHI also found that the Sambor would result in a loss of 95 percent of sediment flow and a loss of 40 percent of nutrient flow to the Mekong Delta—rendering the Mekong Delta unsustainable.

In 2011, the China Southern Power Grid Company withdrew from the project, reasoning that it was “a responsible company.”⁸² Instead of abandoning the project, the Cambodian government instead signed an agreement with China Guodian Corporation, one of the largest state-owned power generation groups in China, to conduct a feasibility study for the Sambor Dam.⁸³ Additionally, the NHI was contracted by Cambodia’s Ministry of Mines and Energy in 2014 to study the impacts of the Sambor Dam.⁸⁴

Despite voting against the U.N. Watercourse Convention in 1997 and refusing to join the MRC, China is still subject to principles of customary international law. However, if China Guodian Corporation moves forward with the construction of the Sambor Dam without significant modifications, China will effectively violate every substantive and procedural principle of customary international water law.

A. SUBSTANTIVE CUSTOMARY INTERNATIONAL LAW VIOLATIONS

China’s construction of the Sambor Dam will violate all three principles of customary international water law: (1) the obligation of reasonable and equitable use; (2) the obligation to prevent harm to other countries; and (3) the obligation to protect ecosystems. First, China’s construction of the Sambor Dam will violate the obligation of reasonable and equitable use. While Cambodia’s need for power production is great, the Sambor Dam is not a reasonable plan for increasing domestic power supplies because it would devastate fish supplies, jeopardize the existence of the Mekong Delta, and displace up to 19,000 people.⁸⁵

79. NAT’L HERITAGE INST., SAMBOR HYDROPOWER DAM ALTERNATIVES ASSESSMENT FINAL REPORT 1 (December 2017).

80. *Id.* at 1, 18.

81. *Id.* at 5.

82. Rod Harbinson, *Cambodia’s Sambor Dam Plans Cause Controversy as Public Left in the Dark*, MONGABAY (Mar. 16, 2017), <https://perma.cc/D65M-B4EW>.

83. *China Guodian Corporation*, INT’L RIVERS, <https://perma.cc/SNN6-TWFJ> (last visited Dec. 11, 2018).

84. NAT’L HERITAGE INST., *supra* note 79, at 1.

85. NAT’L HERITAGE INST., *supra* note 79, at 5, 9.

In its feasibility study, NHI proposed an alternative to the Sambor Dam—Sambor Alternative 7. Although Alternative 7 was a less environmentally harmful alternative, it was nevertheless rejected as outside the range of reasonable and equitable use. Alternative 7 proposes to dam the main channel, leaving the side channel (anabranch) unobstructed for the flow of fish, sediments, and nutrients.⁸⁶ This re-designed dam is expected to permit 95 percent of sediment to flow downstream and result in 95 percent survival of fish and larvae migrating up and downstream. It would potentially allow the endangered Irrawaddy Dolphins to migrate up and down the stream as well.⁸⁷ Sambor Alternative 7's design plan intended to minimize the relocation of people and enable the dam to be operated to maintain water velocities suitable for larval drift.⁸⁸ However, the NHI concluded that Alternative 7 still presents extremely high risks to migrating fish due to high uncertainty in scientific data.⁸⁹ NHI found that the fish screens required in Alternative 7 may be impractical, the velocity of the reservoir may be inadequate for the drift of larvae, and the upstream fish-passes may not pass sufficient fish to maintain downstream fisheries.⁹⁰ The NHI's report asserts that while Alternative 7 provides a degree of mitigation, it cannot bring the risk of fishery and sediment damage to an acceptable level.⁹¹

The report ultimately recommends that Cambodia adopt a “no-dam” alternative. NHI assessed the possibility of domestic energy production by installing a floating photovoltaic project (“PV”) at the already existing Lower Sesan 2 Dam.⁹² The PV project would be integrated with an existing hydropower project in order to channel its energy production into an existing power grid.⁹³ Additionally, attaching the PV project to the Lower Sesan 2 Dam would avoid the displacement of residents of the River Basin which would otherwise occur if a land-attached PV were built.⁹⁴ The report concluded that expected economic returns for the floating PV option will be significantly higher compared to the original Sambor Dam and Alternative 7⁹⁵ because the floating solar PV project has no material negative environmental externalities.⁹⁶ However, the floating PV option may be unappealing to Cambodia because it only has the capacity to create 400 MW of power. Nevertheless, when compared at a 400 MW scale, the floating PV has the highest economic rate of return at 7.8 percent and causes virtually no ecological damage.⁹⁷

86. *Id.* at 7.

87. *Id.*

88. *Id.*

89. *Id.* at 12.

90. *Id.*

91. *Id.* at 20.

92. *Id.* at 16.

93. *Id.* at 15.

94. *Id.* at 17.

95. *Id.* at 20.

96. *Id.* at 21.

97. *Id.* at 20.

Because the NHI has proposed both Alternative 7 and the floating solar PV option as viable alternatives to the original Sambor Dam, China and Cambodia would violate the reasonable and equitable principle of international law if they decided to move forward with the original construction of the dam.⁹⁸

Customary international law requires basin states to take all appropriate measures to prevent causing significant harm to other countries. However, China's construction of the Sambor Dam, as originally conceived, will cause significant harm to Vietnam as it is the most downstream country of the Mekong River. The NHI report asserts that 15 percent of the resulting fishery damage would be borne by Vietnam and 85 percent of the damage would be borne by Cambodia.⁹⁹ The 95 percent reduction in sediment flow downstream, as a result of the construction of the Sambor Dam, would inevitably destroy Vietnam's Mekong Delta.¹⁰⁰ The International Panel on Climate Change has identified the Mekong Delta as one of the three major delta systems in the world most vulnerable to sea level rise,¹⁰¹ which would only be exacerbated by the construction of the Sambor Dam. The resilience of the Mekong Delta to the effects of climate change depends directly on the annual replenishment of sediment brought downstream on the Mekong River.¹⁰² Within ten years of the Sambor Dam being built, the hydrology of the river will change drastically. The lack of fresh water in the delta will increase salinity levels and the frequency of drought, crippling Vietnam's agricultural sector.¹⁰³ Thus, the construction of the Sambor will disrupt the livelihoods of almost 18 million people in the Mekong Delta¹⁰⁴ while indirectly harming millions more due to a region-wide reduction in fisheries and agricultural production.

Finally, the Sambor Dam will devastate the Basin's ecosystems. The NHI report notes that the Sambor Dam site is in the reach of the Mekong River that experiences the largest migration of fish in the world. The report further states that the proposed site of construction is the least suitable place to build a major dam and such a structure could "literally kill the river."¹⁰⁵ The dam and the resulting reservoir would devastate migratory fish stocks that move from the Tonle Sap

98. UN Watercourses Convention, *supra* note 47, at art. 6 (factors relevant to equitable and reasonable utilization depend on the availability of alternatives).

99. NAT'L HERITAGE INST., *supra* note 79, at 22.

100. *Id.* at 21.

101. Ngan Collins, et al., *The Contribution of Human Capital to a Holistic Response to Climate Change: Learning from and for the Mekong Delta, Vietnam*, 23(2) ASIA PAC. BUS. REV. 230, 230 (2017).

102. *Id.*

103. Peter Hung, *New Chinese Dam on the Mekong to Have Devastating Environmental Consequences*, ASIA NEWS (May 22, 2018), <https://perma.cc/X9FC-VXQ3>.

104. David Boyle, *Huge Land Loss Predicted for Vietnam's Mekong Delta*, VOA NEWS (Feb. 16, 2019), <https://perma.cc/XUJ5-GHGH>.

105. NAT'L HERITAGE INST., *supra* note 79, at 4; Tom Fawthrop, *Leaked Report Warns Cambodia's Biggest Dam Could 'Literally Kill' Mekong River*, THE GUARDIAN (May 16, 2018), <https://perma.cc/Y332-8RXJ>.

Great Lake to the spawning grounds in the upstream tributaries.¹⁰⁶ At least eighty-six of the affected species are long-range migratory fish which inhabit the Cambodian region of the Mekong River.¹⁰⁷ All would become endangered by the construction of the Sambor Dam.¹⁰⁸ Additionally, the reservoir would place the world's remaining eighty Irrawaddy Dolphins at risk by fragmenting the already critically endangered species.¹⁰⁹ Currently, the dolphins only live in a 190km stretch of the Mekong River.¹¹⁰ Noise pollution from the construction and operation of the dam will likely disrupt the dolphins' ability to hunt and navigate with their sonar capability. The reservoir created from the dam would ultimately submerge 620 square kilometers of land, thereby severely altering the landscape and ecosystems of the Mekong River.¹¹¹

B. PROCEDURAL CUSTOMARY INTERNATIONAL LAW VIOLATIONS

China's development and construction of the Sambor Dam will additionally violate all four principles of procedural customary international water law including (1) the duty to notify, (2) the duty to consult, (3) the duty to cooperate, and (4) the duty to inform. Neither Cambodia nor China have formally notified any of the Mekong River Basin states of their intent to construct the Sambor Dam. Because there has been no formal notification, no opportunity for consultation has arisen. This bilateral construction project further violates the principle of cooperation because Vietnam, Thailand, Laos, and Myanmar have been kept in the dark as to the plan and progress of the project. Additionally, Cambodia and China have failed to inform the remaining riparian states of the impacts of the Sambor Dam. Instead, the NHI report commissioned by the Cambodian government was kept secret for nearly a year until it was leaked to the media.¹¹² The lack of transparency between the Sino-Cambodian countries and the other riparian states therefore constitutes a violation of the four procedural norms of international water law.

III. SOLUTIONS FOR CAMBODIA AND CHINA'S VIOLATION OF CUSTOMARY INTERNATIONAL LAW

If China and Cambodia decide to move forward with the construction of the Sambor Dam, the MRC's regime would be severely undermined. The construction project would set a dangerous precedent, implying that dam construction funded by China through the LMC and built in an MRC member state's

106. *Id.* at 4-5.

107. *Id.* at 2.

108. *Id.*

109. *Id.* at 14.

110. *Id.* at 13.

111. *Id.* at 4.

112. Fawthrop, *supra* note 105.

jurisdiction is not subject to the consultation process set forth by the MRC and the 1995 Agreement. In order to prevent the Agreement from losing its authority and legitimacy, Thailand, Laos, and Vietnam especially, must carry out the Agreement's dispute resolution mechanism. Article 34 states that when a dispute arises, the "Commission shall first make every effort to resolve the issue."¹¹³ Article 18(C) asserts that the Council of the MRC shall address and resolve disputes received by any Council member, Joint Committee, or any State.¹¹⁴ Article 24(F) also imposes on the Joint Council a duty to make every effort to resolve disputes and to refer the matter to the Council when necessary.¹¹⁵ Therefore, Thailand, Laos, and Vietnam should raise their concerns regarding the construction of the Sambor Dam to the MRC's Joint Committee or Council. These three MRC states should make clear that Cambodia's breach of the Agreement will not be overlooked, and it should do so via the dispute resolution procedures set forth in the Agreement.

If the Commission is unable to resolve the dispute within a timely manner, Article 35 states that the issue shall be resolved by the disputing governments through diplomatic channels.¹¹⁶ Thus, if the MRC is unable to negotiate around the construction of the Sambor Dam, Vietnam, Thailand, and Laos can negotiate directly with Cambodia through diplomatic means. If the countries are unable to resolve the dispute even through diplomatic means, Article 35 asserts that they can mutually request the assistance of mediation through an entity or party mutually agreed upon.¹¹⁷ However, it seems unlikely that Cambodia would voluntarily subject itself to mediation from a third party such as the International Court of Justice ("ICJ") or the Permanent Court of Arbitration. Doing so would require Cambodia to give up its national sovereignty on the matter and comply with an international court's binding decisions.

While Cambodia's breach of the Agreement is governed by Articles 34 and 35 of the Agreement, China's breach of customary international law can be addressed through the U.N.'s International Court of Justice. When deciding cases, the ICJ applies international law as summarized in Article 38 of the ICJ Statute.¹¹⁸ Of particular importance is the ICJ's recognition of international custom and the "general principles of law recognized by civilized nations." Therefore, the ICJ would apply principles of customary international law in resolving a dispute between China and any of the MRC states. However, the difficulty in persuading Cambodia to subject itself to the jurisdiction of the ICJ is likewise found in the case with China. The ICJ's jurisdiction in contentious cases is

113. Mekong Agreement, *supra* note 35, at 10.

114. *Id.* at 6-7.

115. *Id.* at 7-8.

116. *Id.* at 10.

117. *Id.*

118. Statute of the Int'l Court of Justice art. 38, Apr. 25, 1945, 59 Stat. 1031, 3 Bevans 1179.

determined on the basis of consent.¹¹⁹ It is unlikely that China will consent to have the ICJ adjudicate a claim for its breach of customary international water law.

In the likely scenario that China does not submit to the ICJ's jurisdiction, Vietnam, Laos, and Thailand should nevertheless pressure China to comply with principles of customary international law. This can be done by either influencing China to join the MRC and abide by the obligations set forth in the 1995 Agreement or by persuading it to incorporate principles of international water law into the LMC's framework. Realistically, China will not agree to become a member to the 1995 Agreement. Since becoming a dialogue partner to the Agreement in 1996, it has shown no interest in becoming a full-fledged member. However, the MRC member states may be able to influence China to incorporate principles of customary international law in the LMC which align with the LMC's vision for sustainable development on the River Basin.

At the very least, the MRC member states can persuade China to be more responsible in its damming of the Mekong River. In 2009, China reaffirmed its commitment to work with the MRC states by sharing hydrological information about the URB.¹²⁰ China indicated its willingness to provide experts to take part in the MRC's Strategic Environmental Assessment and has offered to share more information about the day-to-day operations of China's URB dams.¹²¹ Thus, even if the MRC is unable to bring a claim against China in the ICJ and is unable to persuade China to join the MRC or incorporate principles of customary international law into the LMC, the member states have a chance at building stronger diplomatic ties with China to dissuade it from constructing dams on the Mekong in a way which violates the Agreement.

CONCLUSION

The Mekong River Basin currently faces significant threats against its long-term sustainability. One of these threats is the damming of the Mekong River. While the 1995 Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin has established general priorities and objectives, the Agreement has no legal enforcement mechanism. This weakness is further amplified by the establishment of the Lancang-Mekong Cooperation, which has given China and Cambodia the opportunity to bilaterally construct the Sambor Dam while bypassing the Mekong River Commission's consultation process. If built to completion, the Sambor Dam will cause unprecedented social, economic, and environmental damage to the Mekong River Basin. Additionally, the construction

119. Contentious Cases, INT'L CT. OF JUST., <https://perma.cc/SC49-9V9U> (last visited Dec. 12, 2018).

120. Lao Vientiane, *China Re-affirms Commitment to Mekong/Lancang Cooperation and Sharing Information*, MEKONG RIVER COMM'N (Jul. 29, 2009), <https://perma.cc/2XN3-CG36>.

121. *Id.*

of the Sambor Dam will effectively violate every recognized principle of customary international water law. In order to preserve the MRC's regime and the 1995 Agreement's legitimacy, the remaining member states (Thailand, Vietnam, Laos) must carry out the procedures set forth in the Agreement. Resolving the Sambor Dam dispute through the use of the Agreement itself will further reinforce its efficacy and authority. Addressing the dispute with China presents a more difficult matter because China is not a member to the MRC and is unlikely to subject itself to the jurisdiction of the ICJ. Thus, the MRC member states should persuade China to incorporate principles of customary international water law into the Lancang-Mekong Cooperation's Framework. If the MRC member states achieve this goal, they can prevent the construction of the Sambor Dam as well as future dam construction without prior consultation with the MRC.