

The Mekong Matters for America/ America Matters for the Mekong

The East-West Center promotes better relations and understanding among the people and nations of the United States, Asia, and the Pacific through cooperative study, research, and dialogue. Established by the US Congress in 1960, the Center serves as a resource for information and analysis on critical issues of common concern, bringing people together to exchange views, build expertise, and develop policy options.

The Stimson Center is a nonpartisan policy research center working to protect people, preserve the planet, and promote security & prosperity. Stimson's award-winning research serves as a roadmap to address borderless threats through concerted action. Our formula is simple: We gather the brightest people to think beyond soundbites, create solutions, and make those solutions a reality. We follow the credo of one of history's leading statesmen, Henry L. Stimson, in taking "pragmatic steps toward ideal objectives." We are practical in our approach and independent in our analysis. Our innovative ideas change the world. The **Southeast Asia Program** at the Stimson Center has been active since 2005 and is a thought leader and policy advisor on Mekong security issues and other security and development issues across ASEAN.

This report explores the trade, investment, business, diplomacy, security, education, and people-to-people connections between the United States and the five countries of mainland Southeast Asia referred to as the Mekong region. Myanmar, Thailand, Laos, Cambodia, and Vietnam are bound together and geographically defined by the Mekong River, which has historically provided a rich, natural bounty of fish, agricultural productivity, physical connectivity, and key environmental services to more than 60 million people living in the river basin. The Mekong's importance has only grown as the region's social, economic, and diplomatic ties export the river's bounty to the rest of the world. As the region develops, urbanization, infrastructure development, and climate change—among other changes—are all impacting the river, its resources, and the millions who depend on the mighty Mekong.

Part of the East-West Center's *Asia Matters for America* initiative, this publication and the AsiaMattersforAmerica.org website are resources for understanding the robust and dynamic US relationship with the Mekong region.

AsiaMattersforAmerica.org
stimson.org/program/southeast-asia/

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Highlights

THE MEKONG IN PROFILE

With 240 million people, the Mekong countries of Cambodia, Laos, Myanmar, Thailand, and Vietnam form a rapidly developing, resource-rich region still healing from the wounds of conflict. China's influence as a northern neighbor looms large, once again transforming the Mekong into a zone of great power competition in the Indo-Pacific. United States engagement in the Mekong is on the rise.

MEKONG ECONOMY

Vietnam, Cambodia, and Laos continue to grow at rates greater than 7%. With 40% of the Mekong's population younger than 25, the rapidly urbanizing region will emerge as a hub of innovation. Expansion in light manufacturing industries, with most significant growth in Vietnam and Cambodia due to relatively low wages, is pulling the Mekong closer to the center of the global manufacturing supply chain.

MEKONG TRADE

US total trade with the Mekong countries is \$116.6 billion. America exports \$26.72 billion in goods and services to the Mekong region and imports \$89.94 billion. Thailand and Vietnam are two of America's top 20 trading partners. However, the United States has significant trade deficits with each Mekong country which create economic and political tensions.

THE MEKONG IN AMERICA

As of 2017, approximately 3.5 million Americans are immigrants or descendants of immigrants from the Mekong countries, and most (2.1 million) are Vietnamese. Many retain close connections with family in the Mekong countries: Remittances from the United States make up half of all remittances to Vietnam, and approximately one-fifth of all remittances to Thailand, Cambodia, and Laos.

LEGACIES OF WAR

The United States has allocated over \$500 million in foreign assistance to programs in Vietnam, Laos, and Cambodia to remove mines and unexploded ordnance left over from the war and to remediate land contaminated by dioxin, commonly known as Agent Orange. In April 2019, nine US Senators and high-level Vietnamese officials launched a \$181 million cleanup campaign to clear the Bien Hoa airbase of Agent Orange contamination.

MEKONG INVESTMENT

More than 1,000 US companies are active in the five Mekong countries. US FDI to Vietnam and Cambodia has increased at a rate higher than 10% per year in recent years. The United States has pledged its support to Thailand's ACMECS initiative for investment in regional infrastructure.

Highlights

MEKONG POWER SECTOR NEEDS

The International Energy Agency estimates Southeast Asia needs at least \$2.7 trillion invested in electricity transmission, power generation, and energy efficiency measures through 2040. China is involved in the development of 18% of all existing, planned, and under construction energy projects in the Mekong region, with Thailand a close second at 15% and Japan at 8%. The investment gap is large with significant opportunity for high-quality US projects.

MEKONG RESOURCES

The Mekong Basin is the world's largest inland fishery with a haul of 2.6 million tons of fish per year. The Mekong ranks second globally for fish biodiversity just behind the Amazon. Plans for more than 400 dams in the Mekong Basin threaten fisheries and agricultural practices of tens of millions of people.

US-MEKONG PARTNERSHIP

Mekong countries are key diplomatic, economic, and security partners for the United States. The US has allocated more than \$2 billion in development assistance to bilateral and regional initiatives in the Mekong over the last decade. In 2009, the Lower Mekong Initiative (LMI) was established by the US Department of State to promote regionalism and sustainable development in the Mekong region. To date, the US government has provided more than \$120 million for LMI programming. These and other ongoing programs in the Mekong countries are listed in the table below.

Japan – US Mekong Power Partnership (\$29.5 million)	Smart Infrastructure for the Mekong (\$30 million)
Digital Connectivity and Cybersecurity Partnership (\$25 million)	Asia Enhancing Development and Growth through Energy (Asia EDGE) (\$250 million)
Indo-Pacific Transparency Initiative (\$600 million)	US – ASEAN Smart Cities Partnership (\$10 million)
Asia Counter Trafficking in Persons (CTIP) (\$35 million)	USAID Clean Power Asia (\$16.3 million)
USAID Green Invest Asia (\$19 million)	Young Southeast Asia Leadership Initiative (YSEALI) (\$68.8 million)

This report explores the highlights above and profiles the actions of several US government agency programs and the efforts of US-based individuals and non-government organizations active in the water, energy, and conservation sectors in the Mekong.

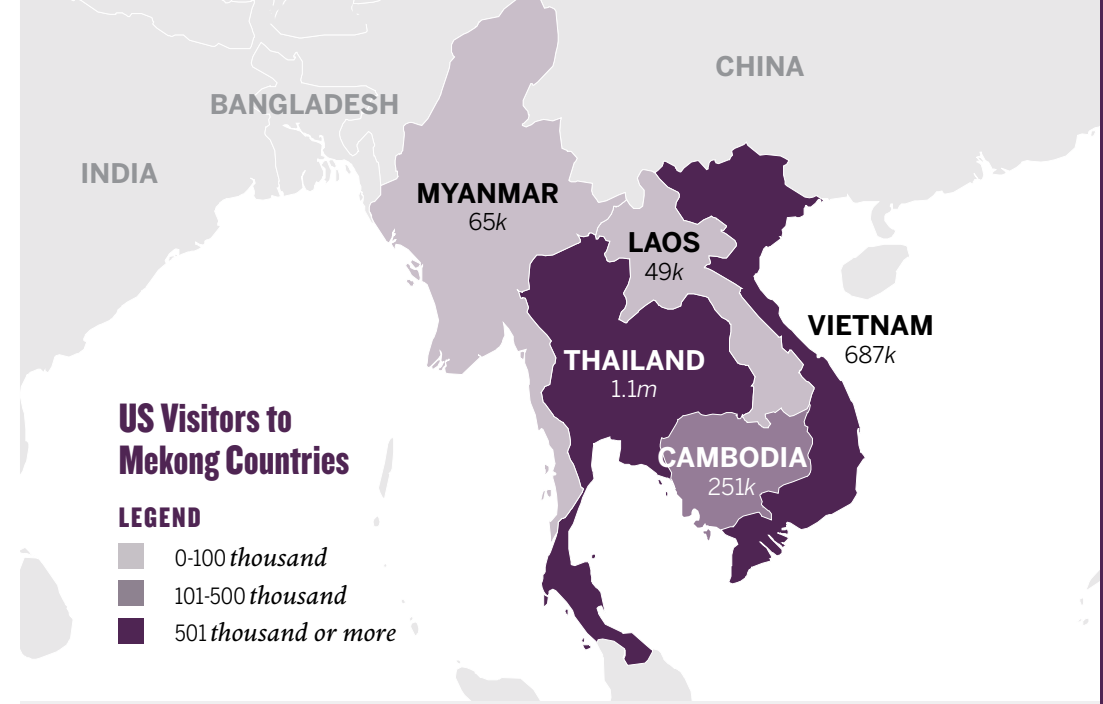
The Mekong Region in Profile

Cambodia, Laos, Myanmar, Thailand, and Vietnam—the five countries of mainland Southeast Asia—are commonly referred to as the countries of the Mekong because portions of each country are located in the Mekong River Basin. Collectively the Mekong countries have a population of 240 million. The region has only achieved relative stability since the mid-1990s, and Myanmar still is home to the world’s longest lasting civil conflict.

The legacy of conflict and difficult terrain means roads, railways, and other infrastructure are only in recent decades beginning to connect major urban and industrializing markets in Hanoi, Ho Chi Minh City, Phnom Penh, Bangkok, and Yangon. China’s influence looms large: 79% of experts surveyed indicated that China was the most influential economic power in a 2020 survey from Singapore’s Institute of Southeast Asian Studies. However, 72% expressed wariness about China’s growing economic clout.

Abundant with natural resources and home to booming economies, the Mekong is now a zone of strategic competition among great powers. The United States, China, Australia, Japan, South Korea, India, and the Asian Development Bank (ADB) each support economic development and stability in the Mekong through their own regional cooperation frameworks.

<p>CAMBODIA Capital: Phnom Penh Population: 16.6 million The United States is the largest purchaser of Cambodia’s exports, including over \$2 billion in apparel.</p> 	<p>LAOS Capital: Vientiane Population: 7.2 million In 2016, then President Barack Obama became the first sitting US President to visit Laos.</p> 
<p>MYANMAR Capital: Nay Pyi Taw Population: 54.5 million The United States restored full diplomatic relations with Myanmar in 2012 and removed all sanctions in 2016.</p> 	<p>THAILAND Capital: Bangkok Population: 69.6 million Thailand is the oldest US treaty partner in the Indo-Pacific, dating from 1833.</p> 
<p>VIETNAM Capital: Hanoi Population: 96.2 million Since 1995, US trade with Vietnam has grown 230-fold to \$58 billion. US-Vietnam security cooperation has enhanced steadily including high-level defense visits, military sales, and exchanges.</p> 	



In the Mekong, some of the world’s most biodiverse rivers and forests—along with robust agricultural zones—feed local populations and contribute to global food security. Almost 40% of the Mekong’s booming population is under the age of 25, which means these five countries are rich with innovative energies ready to solve numerous development challenges into the coming decades. The region’s biodiversity is under threat from unbridled investment practices as well as climate change. The GermanWatch Global Climate Risk Index 2020 ranks Vietnam, Thailand, and Myanmar within the top 10 countries in the world most vulnerable to climate change.

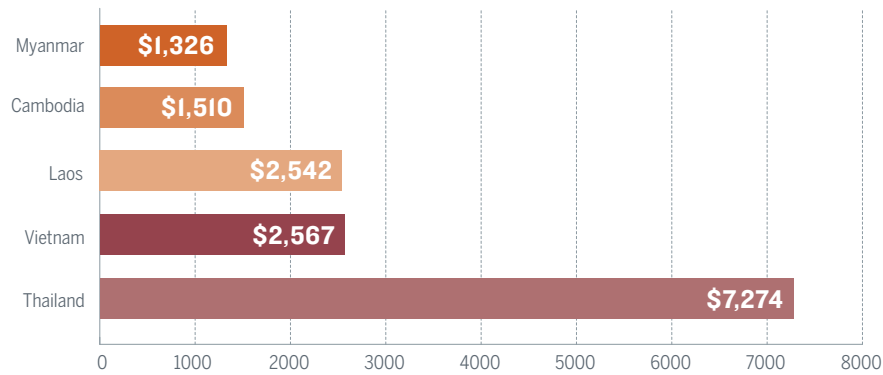
The region’s rich cultural sites from Angkor Wat in Cambodia to Luang Prabang in Laos to the Bagan pagodas in Myanmar draw tourists from around the world but also require the application of mindful cultural heritage protection. The same can be said for the protection of nearly 200 ethnic groups who live mostly in the upland parts of the Mekong.

Map sources: Cambodia Ministry of Tourism, Laos Tourism Development Department, Myanmar Ministry of Hotels and Tourism, Thai Ministry of Tourism and Sports, Vietnam Ministry of Culture, Sports and Tourism; 2018 data

The rapidly growing Mekong region has a combined GDP of \$865b and is emerging as a critical hub for trade in the Indo-Pacific

The Mekong region's rapid economic growth (6% in 2018 weighted by population) is driven by expansion in manufacturing industries with most significant growth in Vietnam and Cambodia due to relatively low wages. Tourism contributes to more than 20% of GDP in Thailand, Laos, and Cambodia. In 2019, 2.1 million Americans visited the Mekong countries mostly for tourism purposes.

2018 Per Capita GDP

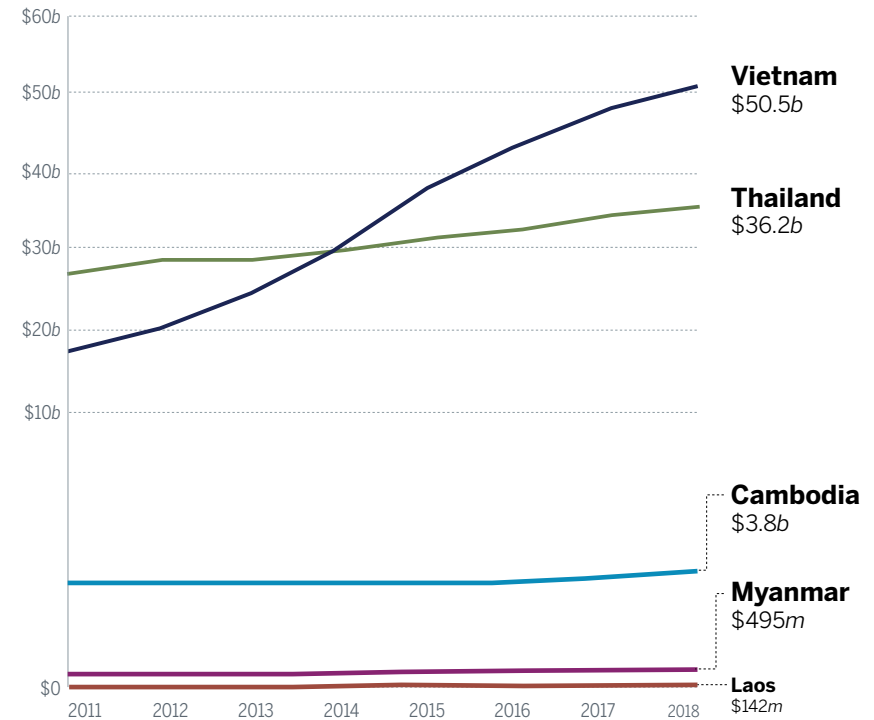


GDP Source: World Development Indicators, updated 12/20/2019.

Good and Services Source: US International Trade Administration and US Bureau of Economic Analysis, 2018 data

NOTE: Services data not available for Cambodia, Laos, and Myanmar. There were no exports to the US from Myanmar in 2011 due to sanctions.

Goods and Services Exports from Mekong Countries to the US



The five Mekong countries are part of the ASEAN Economic Community (AEC) which was formed in 2015 and seeks to reduce or remove trade barriers to facilitate the free movement of goods, services, capital, and skilled labor within the region. A single customs window, known as the ASEAN Single Window, is near completion with support from the United States, while regional agreements to facilitate the movement of ASEAN member states' nationals are also being developed.

Since 2000, the United States has established a Trade and Investment Framework Agreement (TIFA) with each of the five Mekong countries, the most recent being with Myanmar in 2013, signed in response to democratic reforms there. Despite close economic ties to China, Cambodia's largest trading partner is the United States. Total trade with each of the Mekong countries continues to rise; however, the United States has significant trade deficits with each country.

COUNTRY USTR RANK	US EXPORTS TO COUNTRY	COUNTRY IMPORTS TO US	TOP US EXPORTS TO COUNTRY	TOP COUNTRY IMPORTS TO US
Vietnam (17)	\$12.1 billion	\$50.5 billion	electrical machinery (\$1.6 b) agricultural products(\$4 b) cotton (\$1.3 b) miscellaneous grain, seeds, fruit (\$591 m) food waste, animal feed (\$576 m)	electrical machinery (\$11 b) knit apparel (\$7.2 b) footwear (\$6.2 b) furniture and bedding (\$5.1 b) woven apparel (\$5 b)
Thailand (20)	\$13.9 billion	\$35 billion	electrical machinery (\$2.6 b) mineral fuels (\$1.2 b) machinery (\$1.1 b) miscellaneous grain, seeds, fruit (\$657 m) optical and medical instruments (\$645 m)	machinery (\$7.9 b) electrical machinery (\$7.9 b) rubber (\$3.3 b) agricultural products (\$2.7 b) services (travel, financial) (\$3.8 b)
Cambodia (66)	\$447 million	\$3.8 billion	vehicles (\$290 m) agricultural products (\$62 m) food waste, animal feed (\$27 m) machinery (\$24 m) paper, paperboard (\$12 m)	knit apparel (\$1.8 b) woven apparel (\$628 m) leather products (\$390 m) footwear (\$329 m) plastics (\$189 m)
Myanmar (105)	\$261 million	\$495 million	food waste, animal feed (\$65 m) plastics (\$47 m) miscellaneous grain, seeds, fruit (\$33 m) machinery (\$21 m) optical and medical instruments (\$15 m)	woven apparel (\$106 m) leather products (\$94 m) knit apparel (\$78 m) precious metal and stone (\$75 m) fish and seafood (crabs) (\$36 m)
Laos (155)	\$16 million	\$142 million	vehicles (\$4 m) precious metal and stone (diamonds) (\$2 m) machinery (\$2 m) agricultural products (\$2 m) plastics (\$1 m)	electrical machinery (\$80 m) precious metal and stone (diamonds) (\$13 m) iron and steel products (\$10 m) inorganic chemicals (\$6 m) knit apparel (\$5 m)
Total Trade: \$116.6 billion	\$26.72 billion	\$89.94 billion		

Sources: Office of the United States Trade Representative individual country profile websites.

Challenges to Trade

In addition to rising trade deficits, the countries of the Mekong all face scrutiny over human rights and environmental concerns related to key export industries. In late 2019, the office of the United States Trade Representative announced the suspension of \$1 billion in trade preferences toward Thailand's fishing industry citing serious and rampant human rights violations, particularly over the exploitation of migrant workers. Vietnam's fishing fleet is also known to engage in a range of Illegal, Unregulated, and Unreported (IUU) fishing practices. Both Vietnam and Thailand have pledged to improve practices in their fishing sectors.

In 2019, the US Congress raised the possibility of reviewing or removing preferential trade status with Cambodia, particularly with its clothing export industry (the country's largest), in response to the Cambodian government's outlawing of its opposition party and gutting of the free press and civil society there in 2018. Myanmar and Laos continue to be conduits for the illegal trafficking of wildlife, and US agencies are expanding development assistance to these countries to curb the flow of this and other illicit goods in these countries.

Investment

MORE THAN 1,000 US COMPANIES ARE ACTIVE IN THE FIVE MEKONG COUNTRIES.

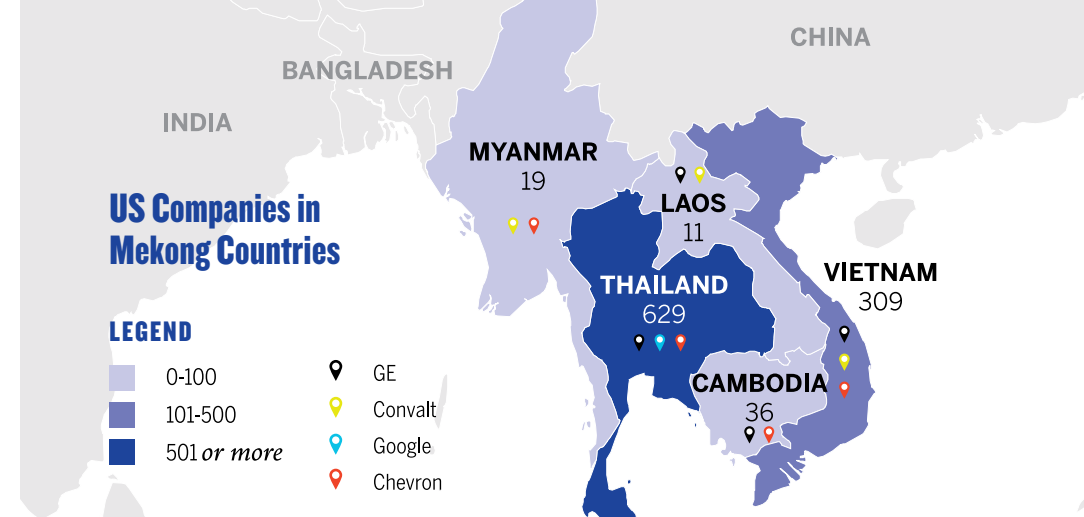
Many companies leverage production platforms in Myanmar, Thailand, Laos, Cambodia, and Vietnam as an entrée to the ASEAN market as well as other countries around the Indo-Pacific which have free trade agreements with ASEAN.

COUNTRY	US FDI TO COUNTRY (% CHANGE PREVIOUS YEAR)	COUNTRY FDI TO US (% CHANGE PREVIOUS YEAR)
Thailand	\$15 billion (-16.7%)	\$2.9 billion (1.5%)
Vietnam	\$2.4 billion (17.3%)	\$37 million (-49.3%)
Cambodia	\$151 million (11.9%)	\$5 million
Myanmar	N/A	N/A
Laos	N/A	N/A

According to the 2019 ASEAN Business Outlook Survey of US companies investing in ASEAN, 61% of respondents indicated that they believed ASEAN would be increasingly important in terms of worldwide revenue. 60% of respondents aim to expand operations in their current country of investment. When companies were asked which additional ASEAN countries they wanted to expand into in coming years, Vietnam and Thailand were the top two destinations. Respondents cited lower cost of operations as the highest consideration, which is not surprising given the relative wage competitiveness and increasing level of physical connectivity among the Mekong countries.

In 2018, Thailand revitalized its Ayeyawady Chao Phraya - Mekong Economic Cooperation Strategy (ACMECS) to attract high-quality infrastructure investments to the region with focus on connectivity and digital infrastructure investments. In August 2019, the United States announced it will be an ACMECS development partner.

Source: Office of the United States Trade Representative country profile websites.
Sources: Uniworld Business Publications (accessed January 2020), individual company websites.



SELECTED STORIES: US COMPANIES OPERATING IN THE MEKONG

GENERAL ELECTRIC (GE)

GE has been present in ASEAN for over a century, and today it supports the region's infrastructure development by providing products and services in the energy, healthcare, water, and transportation sectors. GE began selling lightbulbs in Thailand in 1900, and today supplies equipment to projects producing more than 30% of Thailand's electricity generation. GE was active in Vietnam before the embargo was lifted in 1993 and supplied equipment for Vietnam's first wind project. GE more recently entered Cambodia (2007), Myanmar (2012), and Laos (2017), where it plays a supportive role developing infrastructure.

GOOGLE

Google's mission is to organize the world's information and make it universally accessible and useful. Thailand is one of the top users of Google services globally, so it is no surprise that Google opened a Bangkok office in 2014. Internet use in Southeast Asia has grown explosively: the region's Internet economy surpassed \$100 billion in 2019, and 90% of the population connects to the internet daily. Google actively supports digitization around the region, focusing on education, small and medium sized enterprises, and building out digital content and a digital workforce.

CHEVRON

Chevron is a global energy company that has pioneered oil and gas exploration in the Mekong region since 1962, when it was awarded the first exploration rights in Thailand. Today, Chevron is the top oil and gas supplier in Thailand and supplies approximately 35% of Thailand's natural gas demand. Chevron has also been active in Myanmar for more than 20 years through its subsidiary Unocal. Chevron Lubricants produces fuel and automotive products in Vietnam and in Cambodia.

CONVALT ENERGY

Founded in 2011, Convalt Energy is a portfolio company of the ACO Investment Group which primarily focuses on energy generation, transmission and distribution assets. Convalt is gearing up to become a global Independent Power Producer in renewable energy technologies including but not limited to solar, onshore and offshore wind, hydropower, waste-to-energy, and energy storage. Convalt is currently developing a solar farm in Myanmar; a wind project in Vietnam; as well as two solar farms and a transmission line in Laos.

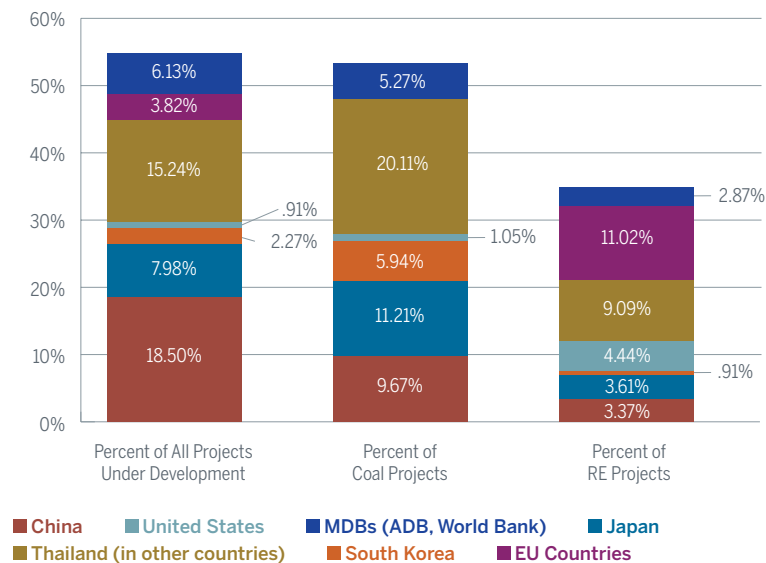
Mekong Power Sector Profile

THE ENERGY INFRASTRUCTURE GAP IN SOUTHEAST ASIA

Energy access underpins the drivers of economic growth in developing countries, but Southeast Asia faces a significant infrastructure gap. The International Energy Agency (IEA) estimates that Southeast Asia needs at least \$2.7 trillion invested in electricity transmission, power generation, and energy efficiency measures through 2040.¹ This will require an allocation of about 6% of regional GDP annually through 2040, which is significantly more than the average of 2.1% spent by ASEAN governments across all types of infrastructure.²

Outside investment will be key to bridging the gap. Although China's Belt and Road Initiative (BRI) is often portrayed as the largest contributor to recent infrastructure needs, China is by no means the only player. China is involved in the development of 18% of all existing, under construction, and planned energy projects in the Mekong region, competes with Thailand (15%), Japan (8%), and many others for influence.

Percentage of Mekong Power Sector Investment by Country



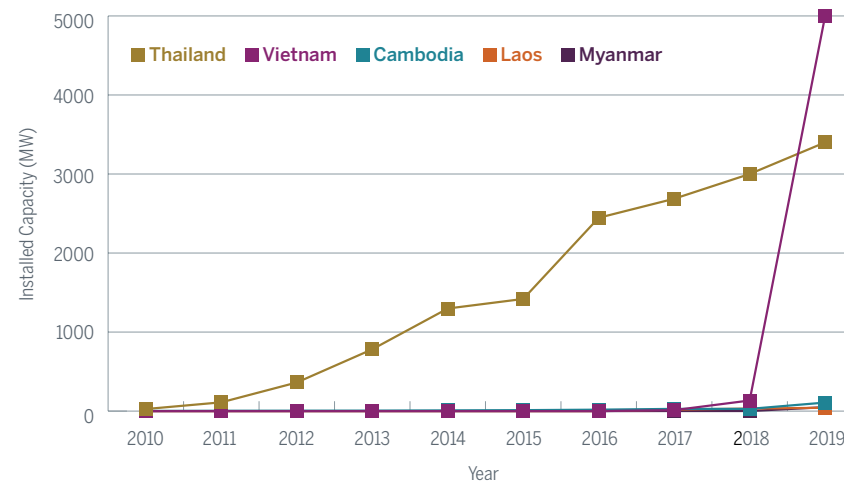
Source: ¹IEA, Southeast Asia Energy Outlook, 2017, page 14.
 Source: ²ADB (2016a); Country sources; Investment and Capital Stock Dataset, 1960–2015, IMF; Private Participation in Infrastructure Database, World Bank; World Bank (2015a and 2015b); World Development Indicators, World Bank; ADB estimates.
 Source: ³Data in table drawn from the Stimson Center's Mekong Infrastructure Tracker geodatabase.

No individual country is capable of single-handedly filling its energy infrastructure gap with domestic investment. Multinational development banks and individual donor countries face funding limitations, making the private sector's investment vital for meeting Southeast Asia's energy infrastructure needs.

While the United States is not a major infrastructure investor abroad, it has an opportunity to address regional needs through engagement with regional governments on regulatory and technical obstacles as well as through the American private sector's direct investment. Asia EDGE—the US government's Indo-Pacific Energy Initiative—includes provision of technical, regulatory, and financing support aimed at stimulating commercially viable investment from the private sector. The BUILD Act has overhauled US development finance by significantly increasing the funding available and adjusting the requirements to better meet regional needs. Overall, US policies under the Indo-Pacific Strategy emphasize the need for high-quality infrastructure that meets best international standards.

The United States has an opportunity to distinguish its vision for the Mekong region by targeting support towards the global energy transition. Regional interest in solar energy has exploded since 2016, as solar prices have dropped and pressures to diversify have risen. Thailand and Vietnam lead this charge, but there are opportunities to expand US technical and financial assistance on the effective integration of renewable energy alongside liquified natural gas and smart grid technology. Targeting funds under the Development Finance Corporation (DFC) and technical support specifically towards the integration of variable renewable energy could not only differentiate the United States from China—which primarily supports coal and hydropower projects—but also open doors for other American companies to follow in the footsteps of GE and Convalt Energy.

Installed Solar Capacity in Mekong Energy Sector



US-Mekong Partnership

THE MEKONG IN AMERICA

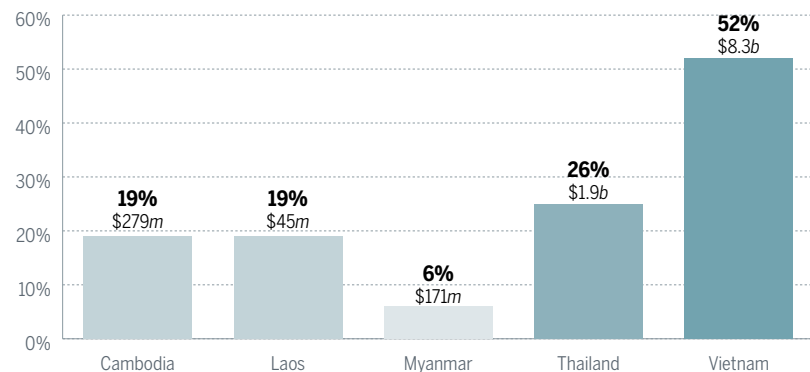
The United States has been diplomatically and commercially engaged in the Mekong region for more than 200 years. The United States and Thailand established a relationship in 1818 and officially formalized relations in 1833. Diplomatic relationships with Laos, Vietnam, and Cambodia were conducted through the French and British colonial governments until the countries won independence in the mid 20th century, but the United States traded with the region throughout the colonial period.

The US relationship with the Mekong region changed after World War II. Between 1950 and 1975, the United States experienced a slow pickup in immigration from the Mekong region, largely tied to educational exchanges and economic immigration. More than 3.4 million Americans served in the Southeast Asian theater during the Vietnam War, and after the war ended in 1975, approximately 761,000 refugees from Vietnam, Laos, and Cambodia were resettled in the United States.

As of 2017, approximately 3.5 million Americans are immigrants or descendants of immigrants from the Mekong countries, and most (2.1 million) are Vietnamese. Many retain close connections with family in the Mekong countries: Remittances from the United States make up half of all remittances to Vietnam, and approximately one-fifth of all remittances to Thailand, Cambodia, and Laos.

US Remittances to Mekong Countries

US share of each country's total remittances received



Remittance Source: World Bank Bilateral Remittances Matrix, 2018 data
 US Census Data Source: US Census Bureau American Fact Finder, 2017 data.
 History sources: State Department Office of the Historian individual country pages; US Department of Veterans Affairs; and Linda Gordon, "Southeast Asian Migration to the United States."



US GOVERNMENT ENGAGEMENT WITH THE MEKONG

The United States has significantly stepped up engagement with the Mekong countries in recent decades. In 1995, the United States normalized relations with Vietnam, transforming a formerly adversarial relationship into a partnership that continues to benefit the entire region's stability and economic development. To date, the United States has allocated over \$500 million in foreign assistance to programs in Vietnam, Laos, and Cambodia to remove mines and unexploded ordnance left over from the war and to remediate land contaminated by dioxin, commonly known as Agent Orange. In 2019, nine US Senators standing alongside high-ranking Vietnamese officials launched a \$181 million cleanup campaign of the Bien Hoa airbase. This is the US's largest Agent Orange remediation project to date in Vietnam. The United States and Thailand have been security allies since 1962. The US-Thai partnership includes cooperation on a range of regional challenges such as health, wildlife trafficking, and cultural exchange.

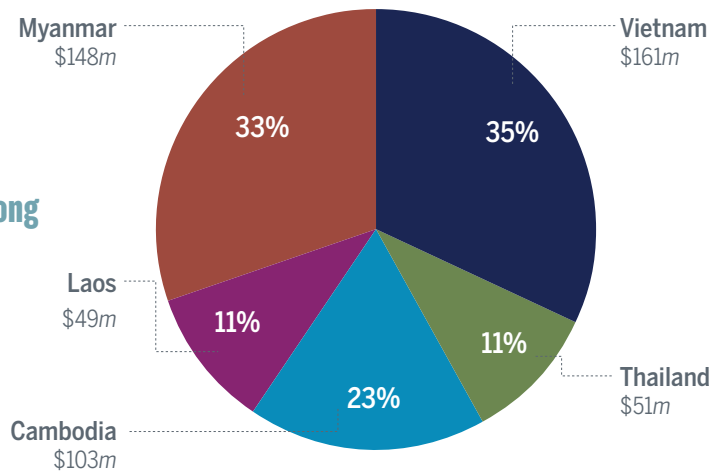
In 2009, the United States partnered with Cambodia, Laos, Myanmar, Thailand, and Vietnam to create the Lower Mekong Initiative (LMI), a multilateral partnership to address complex, transnational development and policy challenges. Since the creation of the LMI, the United States and Mekong countries have exchanged 58 visits between heads of state and Secretary-level officials. Nearly half of these have been with Vietnam and Vietnam currently enjoys the status of a comprehensive partner with the United States. Despite the legacies of the Vietnam War and a 20-year interruption of diplomatic relations, the two countries have forged deep political, economic, and security ties.

Under the Indo-Pacific Strategy, the Mekong region has gained additional support and attention. The overhaul of US development finance through the BUILD Act will bring an additional \$30 billion in financing to bear to address global investment needs. US government initiatives like Asia EDGE and the Infrastructure Transaction Network (ITAN) will bring additional technical and human capacity resources to the region.

High-level Visit Sources: US Cabinet departments and White House press releases, 2009–2019 data
 Data includes visits by heads of state as well as cabinet secretaries and ministers.

MAJOR US INITIATIVES IN THE MEKONG	
Japan – US Mekong Power Partnership \$29.5 million 2019–Ongoing	Smart Infrastructure for the Mekong \$30 million 2018–Ongoing
Digital Connectivity and Cybersecurity Partnership \$25 million 2018–Ongoing	Asia Enhancing Development and Growth through Energy (Asia EDGE) \$250 million 2018–Ongoing
Indo-Pacific Transparency Initiative \$600 million 2018–Ongoing	US – ASEAN Smart Cities Partnership \$10 million 2018–Ongoing
Asia Counter Trafficking in Persons (CTIP) \$35 million 2016–2021	USAID Clean Power Asia \$16.3 million 2016–2021
USAID Green Invest Asia \$19 million 2018–2022	Connect Mekong \$50 million 2012–2015
Asia Pacific Strategic Engagement Initiative \$50 million 2012–2015	Connecting the Mekong through Education and Training (COMET) \$12.3 million 2014–2019

US Foreign Aid to Mekong Countries



US Foreign Aid source: USAID Foreign Aid Explorer, FY2018 data.



SECURITY COOPERATION

Southeast Asia plays a critical role in the regional supply chain, and important sea lines of communication pass from the Indian Ocean through the region and Pacific Ocean. This includes the South China Sea, where \$3.4 trillion in global trade—including \$208 billion in US trade—passes through disputed territory each year. Equally important, Southeast Asia is vulnerable to a range of natural disasters including typhoons, earthquakes, and tsunamis. These risks are on the rise due to climate change and sea level rise. The 2020 Global Climate Risk Index ranked three Mekong countries—Myanmar, Vietnam, and Thailand—in the top ten countries most affected by climate change from 1999–2018.

Regional security and stability are therefore of major interest to the United States, which provided \$534 million to the Mekong countries in 2017 to support humanitarian assistance and disaster relief. The United States also engages in a series of military exercises with its partners in the region to improve coordination and preparedness.

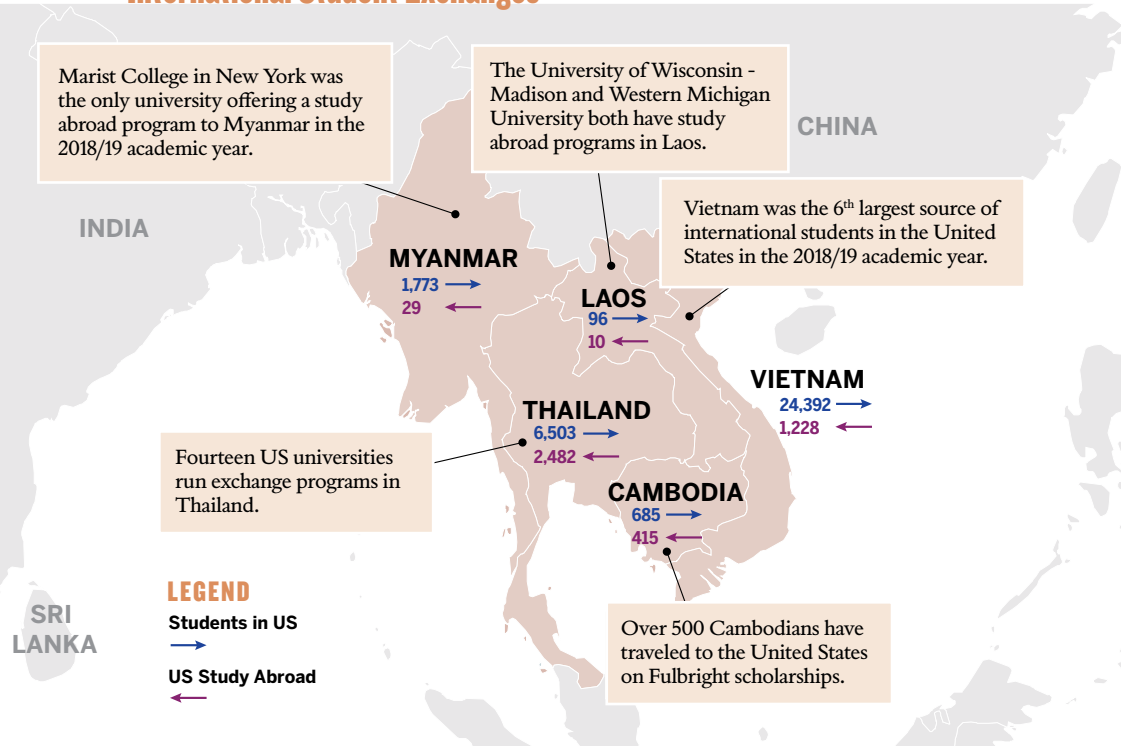
Military exercise sources: US Navy, US National Guard, various news outlets; 2018–2019

Educational Exchange

More than 33,000 students from the five Mekong countries studied abroad in the United States in the 2018–2019 academic year. The vast majority of these came from Vietnam, which sent over 24,000 students to the United States in 2019. Vietnam has consistently sent the 6th largest number of international students to the United States since 2015, far outstripping all other Southeast Asian countries.

The number of US students studying abroad in the five Mekong countries has risen by 70% since 2007, reaching 4,164 in the 2017–2018 academic year. Thailand and Vietnam have continuously been the most popular destinations, attracting 55% of all American students studying abroad in the ten ASEAN member states. This may be due to the high number of US universities running their own study abroad partnerships. In 2019, 14 universities had their own study abroad programs in Thailand and 9 ran programs with Vietnam, compared to only 3 in Cambodia, 2 in Laos, and 1 in Myanmar.

International Student Exchanges



US STUDY ABROAD PROGRAMS IN THE MEKONG COUNTRIES		
1	The Asia Institute	🇹🇼 🇵🇭 🇻🇳 🇹🇭 🇸🇩
2	Where There Be Dragons	🇹🇼 🇵🇭 🇻🇳 🇹🇭
3	Marist College	🇹🇼 🇻🇳 🇹🇭 🇸🇩
4	University of Wisconsin Madison	🇹🇼 🇵🇭 🇻🇳 🇸🇩
5	Northern Illinois University	🇹🇼 🇻🇳 🇸🇩
6	Western Michigan University	🇵🇭 🇻🇳
7	Western Washington University	🇻🇳 🇸🇩
8	CIS - Abroad (Center for International Studies Abroad)	🇻🇳 🇸🇩
9	Center for Study Abroad	🇻🇳 🇸🇩
10	International Student Exchange Programs (ISEP)	🇻🇳 🇸🇩
11	San Diego State University	🇻🇳
12	University of Minnesota	🇻🇳
13	St Mary's College of Maryland	🇻🇳
14	Michigan State University	🇻🇳
15	University of California - Davis	🇻🇳
16	North Carolina State University	🇻🇳
17	Kansas University	🇻🇳
18	Webster University	🇻🇳
19	University of California - San Diego	🇻🇳
20	Council on International Educational Exchange (CIEE)	🇻🇳
21	University Studies Abroad Consortium (USAC)	🇻🇳
22	Connecticut College	🇻🇳
23	State University of New York - the College at Brockport	🇻🇳
24	James Madison University	🇻🇳
25	University of Illinois Springfield	🇻🇳
26	Loyola University - Chicago	🇻🇳
27	School for International Training (SIT)	🇻🇳
28	School for Field Studies (SFS)	🇻🇳

Source: Institute of International Education Open Doors Report 2019
 Source Study Abroad Students: Institute of International Education (IIE), Open Doors Data.
 Source Study Abroad Programs: individual university and program websites.
 Chart created with Datawrapper

Water and Energy Engagement

The Mekong countries have achieved unprecedented economic growth in recent years, ranging between 5–8 percent annually. But this rapid economic expansion has come at a significant social and environmental cost, with growth fueled by increased energy consumption that is supplied mostly by hydropower and coal. Plans for more than 400 dams in the Mekong Basin—most of them built by foreign developers—and an excessive buildout of coal power plants represent growing threats to natural resource security in the Lower Mekong and are a source of political tension among these countries.

Perhaps nowhere in the world better represents the tight linkage between healthy ecosystems and benefits for people than the Mekong. The Mekong, its tributaries, and floodplains contribute more than 20% of the global catch of freshwater fish. Southeast Asia's largest lake, the Tonle Sap, alone produces an annual 500,000 ton fish catch—more than 13 times the total fish catch of North America's rivers and lakes combined. Importantly, the sediment that the Mekong carries is crucial to maintaining its delta in Vietnam, which is home to more than 20 million people and a vitally important agricultural landscape.

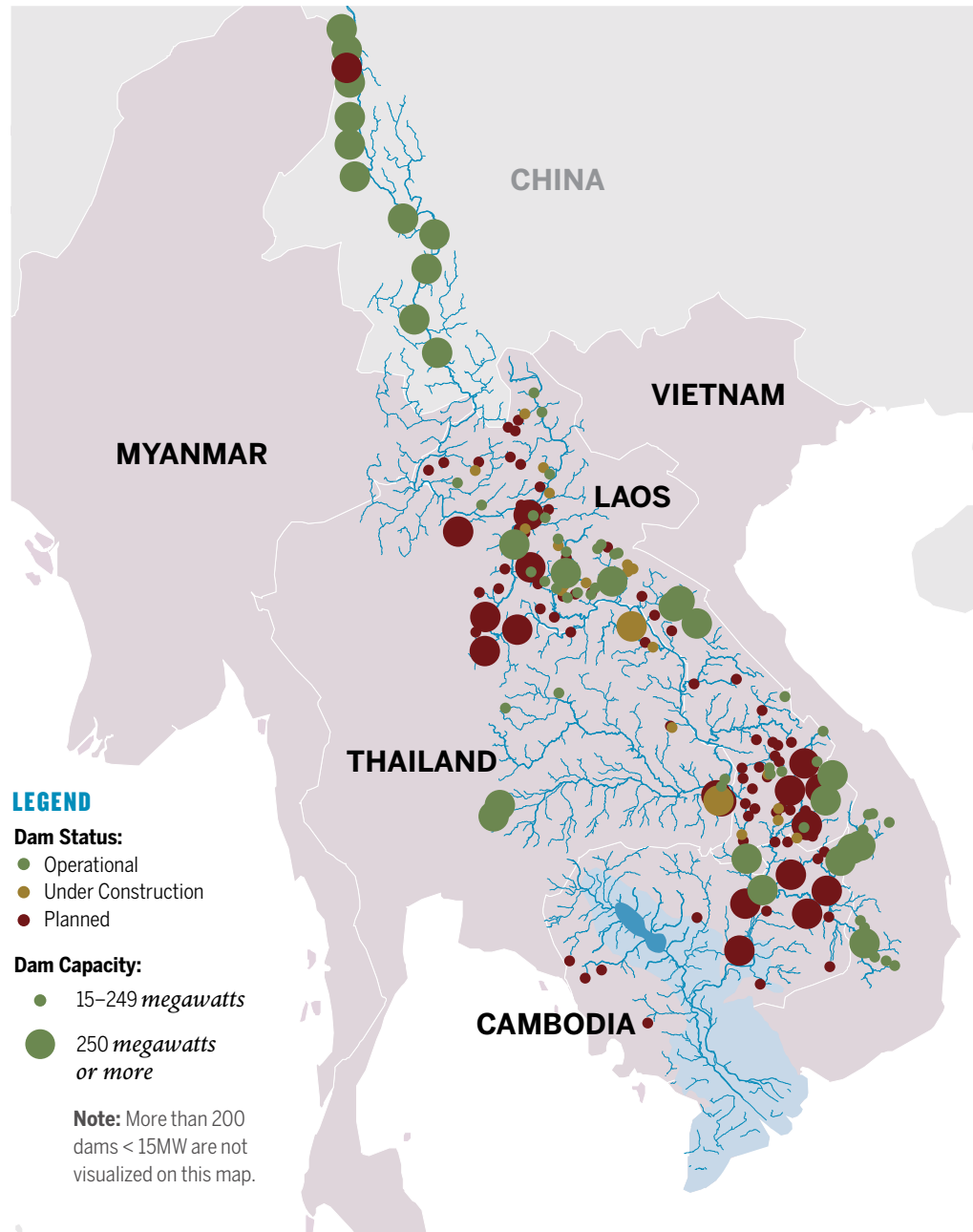
Dams block the migratory pathways of fish and trap sediment behind their walls. Already more than half of the Mekong's 165-million-ton sediment load has been trapped by eleven mega-dams on the Mekong mainstream in China. Unregulated sandmining from the riverbed and lax land-use policies also chip away at the Mekong's mighty ecosystem. In 2019, an El Niño-induced drought exacerbated the negative impacts of dams, and Tonle Sap fishing communities reported 80–90% catch reductions into 2020. Future climate change impacts will reduce freshwater availability throughout the basin and inundate the low-lying areas of the Mekong Delta.

A stable and reliable supply of clean, efficient, and affordable energy is fundamental for securing sustainable economic growth and development in the region. But so is the protection and conservation of the Mekong's natural bounty. US engagement in the Mekong can forge linkages between smart energy planning, river resource conservation, and climate change adaptation.

Photo credit: USAID Wonders of the Mekong



Over-dammed, Under-coordinated



Source: Stimson Center

The Mekong River Basin produces 20% of the world's freshwater fish catch, sustaining life and driving the heavily agricultural economies of Vietnam, Cambodia, Laos, and Thailand. However, Mekong countries are moving ahead with uncoordinated plans to construct dams—which create local and transboundary impacts by changing water flow, capturing sediment, and blocking fish migration. Already more than 100 dams are operational in the Mekong Basin with over 300 more under construction or in the planning stages.

To protect the Mekong's natural resource base, countries must consider alternative power sources to reduce the cumulative impacts of dams and coordinate with one another on the planning and operation of dams deemed essential.

Today's cost-competitive renewable energy technologies can enable Southeast Asian countries to strengthen energy, water, and food security by building systems that provide reliable power in harmony with the natural environment, avoid further damming of rivers, and eliminate harmful atmospheric pollution.

To date, national energy planning processes remain largely separate from regional discussions on water and energy planning. Despite the efforts of the Mekong River Commission (MRC), an inter-governmental river basin organization working to jointly manage the shared water resources and sustainable development of the Mekong River, projects continue to be developed with low levels of regional collaboration or technical cooperation.

Without coordinated and systematic energy planning at a regional level, the Mekong region's *de facto* energy policy will lock these countries into a sub-optimal development pathway that will continue to cause unnecessary and irreparable social and environmental damage.

The United States is well positioned to deploy resources and efforts from a wide variety of government and non-government organizations to promote a sustainable future in the Mekong.

The following profiles represent some of the many impactful efforts that US government agencies and stakeholders are already deploying in the Mekong. Preventing an environmental crisis, the scale of which could undo the region's hard-won stability, will require deepened and sustained engagement from US stakeholders and like-minded development partners.

1970

1980

1990

2000

2010

2020

MAJOR DROUGHTS AND IMPACTS IN THE MEKONG RIVER BASIN

1976 to 1978: Laos's national rice harvest dropped 40% in 1977 due to severe drought conditions. Southern provinces experienced declines of up to 95% in rice yields.

1991 to 1994: In 1992, drought affected 46 provinces (61%) in Thailand; up to 5.4 million people were affected in Vietnam and Cambodia by 1994. In these three countries, economic losses from damages mostly to agricultural yields amounted to approximately \$320 million.

2002: In Cambodia, a major drought in 2002 affected over 2 million individuals across eight provinces. Direct damages to 130,000 hectares of rice crop resulted in a loss of \$9 million.

2008 to 2010: The 2009 drought adversely impacted 4 million people in Thailand mainly through damages to agricultural production with losses totaling \$46 million. Agriculture on 29,000 hectares of land were damaged the same year in Cambodia.

2015 to 2016: The drought in 2015 to 2016 affected 2 million people in Vietnam, and 2.5 million people in Cambodia. Up to 70% of rice production areas, or 170,000 hectares of crops, experienced extreme drought in Vietnam.

1987 to 1989: In Laos, annual rice production decreased by one-third in the years 1988 and 1989. Drought affected 730,000 people in the country during December 1988.

1997 to 1999: The 1998 drought caused 3.1 million people in Vietnam to face severe water shortages and impacted 72 provinces (95%) in Thailand. In these two countries, agricultural production suffered losses of approximately \$700 million.

2003 to 2005: Drought in the years 2003 to 2005 affected more than 10 million people across Vietnam, Thailand, and Cambodia. These three countries, as well as Laos, faced crop reductions on over 3 million acres and production losses of approximately \$450 million.

2012 to 2013: Between 2007 and 2013, 14.9 million people (21.9% of the population) in Thailand faced drought throughout 59 provinces. Damages on 614,680 acres of farmland resulted in losses of \$23.2 million.



2019 to 2020: In 2019, drought impacted 138,000 households in Vietnam, with estimated economic losses of \$6.5 billion or 3% of the country's GDP. In Thailand, the drought affected 43 provinces and reduced agricultural growth between 2 and 4.6 percentage points.



Lower Mekong Initiative

Active in 

Project Partners: Governments of the United States, Cambodia, Laos, Myanmar, Thailand, and Vietnam

Level of funding: \$3.5 billion

Project term: 2009 – Present



MISSION:

The Lower Mekong Initiative (LMI) is a decade-long multilateral partnership between the United States and the five Mekong countries that addresses complex, transnational development and policy challenges in the region. The LMI aims to deliver equitable, sustainable, and inclusive economic growth by promoting connectivity and collaboratively addressing regional transboundary development and policy challenges. LMI activities are coordinated across two interdisciplinary pillars: the Nexus Pillar (environment, energy, water, and food), and the Human Development and Connectivity Pillar (covering economic integration, education, health, and gender).

KEY MILESTONES:

The Lower Mekong Initiative was founded in 2009, and the ten years of engagement have reaped real, on-the-ground impacts. These include:

- \$17 billion of US investment in the region by 2017, a 70% increase since the launch of LMI in 2009
- 70 technical teams providing support for 45 sustainable infrastructure projects
- Training in technical English for 3,800 government officials, teachers, and students for professional development
- 340,000 people have been given access to drinkable water
- 72,000 Mekong country citizens participated in the US-supported Young Southeast Asian Leaders Initiative program as of 2018
- The launch of the Mekong Water platform for water data sharing

LMI ACTIVITIES:

The LMI has a broad range of past and ongoing activities in Southeast Asia run through both the State Department and USAID. We profile here some of the flagship projects tied to this issue's theme of water and energy.

For more information, check out lowermekong.org/


FLAGSHIP PROJECTS:

- **Smart Infrastructure for the Mekong**, a program which trains Mekong government officials on best practices for natural resource management
- **The Sister River Partnership**, an annual exchange between the Mekong River Commission and the Mississippi River Commission
- **The LMI Pacific Resilience Disaster Response Exercises and Exchanges**, a US Army Corps-led set of events to improve regional preparedness for floods, droughts, and other natural disasters
- **Connecting the Mekong through Education and Training (COMET)**, which over five years has trained 1,150 teachers from Mekong countries on Science, Technology, Engineering, and Mathematics (STEM) education and supported education for 68,000 students around the region
- **The Third Country Training Program**, which is a partnership between the United States and Singapore that has provided technical training for more than 1,200 officials from other Southeast Asian countries
- **The One Health Program**, which created a network of health officials from around the Mekong to identify and address mosquito-borne diseases like malaria, Zika, and dengue
- **The LMI Young Scientists Program**, an annual competition for students to win seed money for innovative solutions to environment, water, energy, and food security challenges
- **The Commercial Law Diplomacy Program**, which trains Mekong government officials in best practices for public procurement.

Photo courtesy of US Department of State Flickr account.



Wonders of the Mekong

Countries of engagement: 
Project Term: 2017–2023



MISSION:

The Wonders of the Mekong project aims to maintain the ecological, cultural, and economic integrity of one of the most important river and delta systems in the world through:

- Applied, interdisciplinary research to improve understanding, management capacity, and appreciation of a functional and healthy Mekong River for fish, wildlife, and people
- Training, capacity building, and workshops to gain and share knowledge and perspectives on sustainably managing the Mekong system, particularly in the context of anthropogenic environmental change
- Communications and media products in English and Khmer designed to increase the public's and government's valuation and conservation of the Mekong River's ecosystem services, habitats, cultural heritage, and biodiversity

RECENT HIGHLIGHTS:

- Research and conservation activities focused on Critically Endangered species, investigations of important fish migration pathways and habitats, modeling and analysis of ecosystem health and function, and examination of our current understanding of the interplay between fisheries, hydropower, and hydrology
- Conservation actions resulted in the reduced mortality of endangered species, while simultaneously increasing awareness about endangered species issues
- Capacity building workshops provided hands-on training to approximately 500 managers and decision makers
- Initiated a unique partnership with the Royal University of Phnom Penh, the University of Nevada Global Water Center, and the Fisheries Administration so that early career professionals and Fisheries Administration staff could earn advanced degrees while conducting applied research with the project

- The Young EcoAmbassador Program engaged approximately 100,000 Cambodians at events including a STEM fair organized by USAID, field trips, and professional lectures series
- News articles, magazine stories, and other communications products and outreach on biodiversity conservation, hydropower development, and fisheries health reached between 300,000–500,000 Cambodians and an audience of tens of millions globally

“Wonders of the Mekong has engaged with many Cambodian students and young professionals who are interested in environmental issues and understand the role of sustainable development in ensuring a bright future for all Cambodians. We’ve found our project partners and stakeholders enthusiastic about opportunities to share knowledge, improve professional skills and networks, embrace and promote the role of educational institutions and non-governmental organizations in civil society, and actively organize environmentally-themed events and activities.”

—DR. ZEB HOGAN, WONDERS OF THE MEKONG AND HOST OF NATIONAL GEOGRAPHIC'S MONSTER FISH

Photo Credit: Wonders of Mekong Young Eco-Ambassador Program



Sustainable Infrastructure Partnership

Headquarters: Bangkok, Thailand

Countries of Engagement:



Project Term: 2016–2022



**SUSTAINABLE
INFRASTRUCTURE
PARTNERSHIP**

MISSION:

The Sustainable Infrastructure Partnership (SIP) helps promote economic development, environmental conservation, and climate resilience in the Lower Mekong countries through promoting sustainable infrastructure. SIP has three goals: to improve the capacity of government officials for infrastructure planning, design, and operation; to improve joint infrastructure planning and coordination between LMI countries; and to deploy new technologies, approaches, and methodologies for sustainable infrastructure around the Mekong region.

ACTIVITIES:

In 2020, SIP has a twin focus on training and capacity building for managing interactions between the water-energy-food nexus and on sharing water data through the Mekong Water Data Initiative (MWDI). MWDI encourages Mekong stakeholders to share water and water-related data and collaborate to ensure the long-term sustainability of the Mekong River basin. MWDI's online data-sharing platform, Mekong Water, was founded in 2019 and allows users to create, upload, and share data and access publicly available water and water-related data, tools, and services from global partners.

Professional training activities are centered around active learning through workshop presentations, training modules, and discussions. Activities include:

- Strategic environmental assessment and cumulative impact assessment training sessions designed around open dialogue, field studies, and knowledge exchange about methodologies to consider impacts of multiple projects
- Energy security assessments which consider alternative energy development scenarios, opportunities presented by the renewable energy transition, and good governance
- A cascade hydropower management network of experts and stakeholders to build capacity to manage cascades of dams and identify more sustainable development options
- Web-based tutorials and in-person trainings to develop and support MWDI's user community

USAID Clean Power Asia

Countries of Engagement:

Project Partners: USAID Missions across Asia, Chulalongkorn University, US National Renewable Energy Laboratory, Hawaii Natural Energy Institute, USAID Scaling Up Renewable Energy, Japan International Cooperation Agency, ASEAN Centre for Energy, Global Green Growth Institute

Level of funding to date: \$16.3 million

Project term: June 2016–June 2021

MISSION:

The United States Agency for International Development Clean Power Asia program (USAID Clean Power Asia) works with Lower Mekong countries and other ASEAN member states to encourage smart investments in clean, grid-connected, renewable energy sources, and is delivering on objectives outlined under Asia EDGE, a US whole-of-government effort to grow sustainable and secure energy markets throughout the Indo-Pacific. USAID is helping its partners to understand the lifecycle costs and benefits of energy sector investments and use this information to craft plans, policies, and incentives that encourage the rapid adoption of state-of-the-art energy technologies.

HIGHLIGHTS:

- **USAID supports ASEAN Interconnection Masterplan Study (AIMS) III**
USAID Clean Power Asia and the US National Renewable Energy Laboratory are working with the ASEAN Centre for Energy to update the AIMS III analysis and inform ASEAN Ministers of Energy as they chart a course toward achieving ASEAN's goal of securing 23% of primary energy from renewable sources by 2025. The revised study will seek to identify where and how commercially viable solar and wind power projects to complement existing hydropower resources to deliver cheaper, more resilient power to the region. The revised AIMS III study is expected to be completed by mid-2020.
- **Integrated Resource and Resilience Planning (IRRP)**
USAID Clean Power Asia is helping Lao policymakers understand current and future energy sector challenges and opportunities such as managing their reliance on imported transportation fuels and integrating renewable power and battery storage into the electric power grid. IRRP seeks to balance projected energy supplies and demands at a reasonable cost and strengthen the Lao power system's resilience to increasingly frequent storms and droughts. USAID Clean Power Asia is currently helping the government to design and launch its first pilot solar auction in 2020.

Additional US Government Programs

- ▶ **Asia EDGE**—the **Enhancing Development and Growth through Energy Initiative**—was launched in July 2018 and is a whole-of-government effort to support energy security and sustainability throughout the Indo-Pacific. Asia EDGE has four objectives: strengthening energy security of American allies and partners; creating open, rule-based, transparent, and efficient energy markets; improving energy trade relationships; and expanding access to affordable and reliable energy.
- ▶ The **Japan – US Mekong Power Partnership (JUMPP)** is a partnership launched in 2019 to develop a more secure, affordable, reliable, and sustainable energy sector through developing high-quality infrastructure. JUMPP has a focus on improving institutional and regulatory frameworks, attracting private sector investment in the power sector, and supporting regional transmission and an open electricity market for cross-border power trade. JUMPP is a part of the Japan – US Strategic Energy Partnership.
- ▶ Funded by USAID Regional Development Mission for Asia and coordinated by the US Department of Interior—International Technical Assistance Program, **Smart Infrastructure for the Mekong (SIM)** is a demand driven, government-to-government technical assistance program initiated by requests from governments of the five Lower Mekong countries. SIM uses US science and engineering expertise to help Mekong countries safeguard the environment from the effects of hydropower dams and other infrastructure.
- ▶ The **USAID-NREL Advanced Energy Partnership for Asia** is a partnership between USAID and the US Department of Energy’s national laboratory, led by the National Renewable Energy Laboratory (NREL). The partnership supports Asia EDGE and other development priorities by providing technical leadership and US expertise and experience on scaling-up deployment of advanced technologies and practices in the energy sector.
- ▶ **SERVIR-Mekong** is a partnership between USAID and NASA that harnesses publicly available geospatial data to help address on-the-ground development challenges related to a changing climate. SERVIR-Mekong works with governments, regional institutions, and other key stakeholders in the Lower Mekong to prepare for and respond to disasters, manage natural resources, and improve food security.



Jeff Opperman

Global Lead Scientist for Freshwater
World Wildlife Fund (WWF-US)
Twitter: @jjopperman



Jeff Opperman works with teams and partners around the world on applied research and the integration of science into conservation strategies for the Mekong region. WWF supports and conducts research to understand and quantify the Mekong’s ecosystem processes and services. His research shows the rising threats to the health of the Mekong—but also highlights opportunities for better outcomes.

PROBLEM SOLVING:

"Recent research has shown that the sediment supply delivered to the Mekong Delta has been cut by more than half, primarily due to sand mining and the trapping of sediments in the reservoirs behind dams. Deprived of sediment, the Mekong Delta is now sinking and shrinking at an accelerated pace. Continued development of hydropower following current projections would eliminate nearly all the remaining sediment supply, greatly increasing risks for the delta and its inhabitants from storms, floods and erosion.

But other research points to more sustainable energy pathways for the region. WWF analyses found that Mekong countries could meet future electricity

demand with low-carbon power systems with far fewer hydropower dams than current projections—for lower costs (and the costs of wind and solar have continued to drop since that analysis was conducted). And dams that are built can be sited to have far lower impacts. We worked with Rafael Schmitt of Stanford University who demonstrated an approach to planning dams to meet energy targets with a fraction of the impact on sediment supply (see diagram). We now need to put this research into action, with the government actions and financial mechanisms to promote dramatic expansion of wind and solar for the region."





Juliet Nadeau Lu

PhD Candidate,
University of California, Berkeley
Twitter: @_JulietLu

Juliet Lu studies the political economy of Chinese land and forest management, the promotion of tree and agricultural plantation investments, and the expansion of Chinese development aid across the Mekong region. Chinese interventions in a number of development and environmental issues contrast those of traditional aid organizations in the region, and those differences are often treated with suspicion without being rigorously analyzed.

She focuses on large-scale rubber plantations, which drive deforestation and dispossession across the region. China is the top consumer of natural rubber globally and one of the leading investors in rubber plantations in the region. She maps the region's rubber trade and collaborates with civil society organizations interested in engaging Chinese investors to make rubber supply chains more sustainable.

PROBLEM SOLVING:

"As China becomes an increasingly dominant trade partner and land investor in the Mekong Region, experts are needed with on-the-ground experience in both China and Mekong countries to bridge cultural and political divides and move engagements beyond adversarial approaches. Outsiders often presume that China uses its new economic might to unilaterally influence its neighbors, but in reality, Chinese investors have to navigate (often unsuccessfully or with steep, costly learning curves) complex domestic politics and forms of social resistance to which they are unaccustomed.


I believe there are far more opportunities for mutual learning and collaboration between civil society and international development organizations, investors, local communities, and state officials from both China and other countries across the Mekong Region than is commonly



recognized. I seek collaborators invested in long-term engagement and dialogue with Chinese private sector actors and research initiatives focused not solely on official state perspectives but also on local voices, case studies, and on-the-ground perspectives."

US-ASEAN Business Council

Location: Washington, DC

Countries of Engagement: 

usasean.org



For 35 years, the US-ASEAN Business Council has been the premier advocacy organization for US corporations operating within the dynamic Association of Southeast Asian Nations (ASEAN), serving as the leading voice of the US private sector in promoting mutually beneficial trade and investment relationships between the United States and Southeast Asia. The Council believes opening and investing in the sustainability of efficient, resilient and competitive markets are critical to continued growth, innovation, and job creation in the United States and Southeast Asia. The Council is the only US-based organization recognized in the ASEAN charter as a supporting organization of ASEAN. The Council leads major business missions to all 10 ASEAN countries and is the only US organization to be given the privilege to raise member company concerns at the annual meetings of the ASEAN Economic, Energy, Finance, Transport, Travel & Tourism, and Forestry & Agriculture Ministers, as well as the ASEAN Customs Directors-General.

SUCCESS IN SOUTHEAST ASIA


In 2011 the US-ASEAN Business Council Institute established a training program for Small and Medium-Sized Enterprises (SMEs) at the request of the ASEAN Economic Ministers (AEM). In March 2014, the Institute, USAID, and the US Mission to ASEAN launched the US-ASEAN Business Alliance for Competitive SMEs. The Business Alliance has two objectives:

- ▶ To support the efforts of ASEAN SMEs to become more competitive in domestic markets, and to take better advantage of opportunities provided by the ASEAN Economic Community.
- ▶ To support the efforts of high-performance SMEs to become regional business leaders and world-class suppliers in the global value chain.

Since its founding, the Business Alliance has administered training sessions on a range of topics to more than 7,000 SMEs in all 10 ASEAN countries. Stakeholders it has collaborated with include the Lao Department of SME Promotion (DOSMEP); the Union of Myanmar Federated Chambers of Commerce and Industry (UMFCCI); the Federation of Thai Industries (FTI); the Thailand Office of SMEs Promotion (OSMEP); the Vietnam Ministry of Planning and Industry; and many more. In 2016 the Business Alliance launched the ASEAN SME Academy, an online portal with interactive training, mentoring resources, and business information for ASEAN SMEs.

Future H2O, Arizona State University (ASU)

Location: Tempe, Arizona

Countries of Engagement: 

futureh2o.asu.edu/



Future H2O seeks to change the narrative about water from scarcity to abundance. Our goal is to create opportunities for change at scale in regional, national and global water systems. We envision wiser design principles, new data and algorithms for better water governance and business outcomes, and scalable, nature-inspired technologies. In choosing this new path, we will become nimbler in the face of a changing climate and rise to the challenge of water security.

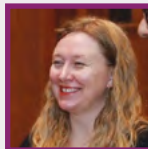
Our Sustainable Mekong Livelihoods Project (SMLP) explores the tradeoffs between hydropower production and food security and finds opportunities to synergize these objectives through strategic dam operations.

- ▶ We leverage and expand on an existing hydro-fisheries models developed in collaboration with the MRC to explore alternate dam operations that simultaneously allow fish population to flourish.
- ▶ We develop rice growing models coupled with hydrologic models and have begun to develop data driven approaches to predicting food futures with calories and nutrients as the predicted output.
- ▶ We explore the use of hands-on nutrient indicators to identify the local communities' nutrition needs.
- ▶ We seek to apply NexView to the entirety of the Mekong Basin to further explore the opportunities and barriers of coordinating cascading dam operations to sustain food production, to reduce flood and drought risks facing climate change, and to explore policy recommendations for sustainable resources use.

FUTURE H2O IMPACT MAKERS




So Nam,
Fisheries Programme
Coordinators, Mekong
River Commission
Secretariat (MRCS);



Jennifer Shinen, Ph.D.,
Senior Water Advisor/Water
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of Conservation and Water,
Bureau of Oceans and
International Environmental
and Scientific Affairs, US
Department of State &
NexView coordinator

Stimson Center Southeast Asia Program

Location: Washington, DC

Countries of engagement: 

stimson.org/program/southeast-asia/

STIMSON

Stimson's Southeast Asia Program supports the renewable energy transition in the Mekong Basin and designs approaches that optimize tradeoffs to the food-water-energy-environment nexus. We help stakeholders in the Lower Mekong move toward an alternative pathway that protects the Mekong River's core ecology while meeting the region's energy needs to support robust levels of economic development. We promote a system-scale planning approach that identifies less impactful ways to build out hydropower and strategically substitutes non-hydro renewables for unnecessary hydropower and coal. We build technical and decision-making capacity through evidence-based processes and sustained local engagement. We lead the public discourse on ways to optimize development tradeoffs in Lower Mekong countries.

Our approach is unique because we strive to execute our work alongside local stakeholders in order to build capacity and increase momentum for implementation. Our Mekong Basin Connect program is co-chaired with the International Union for the Conservation of Nature and supported by UC Berkeley's Energy resources Group, Stanford University's Woods Institute, and the University of Manchester's Future Dams Project. Additionally, we curate the Mekong Infrastructure Tracker in cooperation with USAID and The Asia Foundation to take inventory of infrastructure projects in the Mekong region and track their impacts.

Our work has resulted in the offerings of numerous competitive grants issued by the US State Department and USAID for development interventions in the Mekong region. Our local engagement has shifted Vietnam and Cambodia's domestic power sector toward more non-hydropower renewables, and these countries are now engaging with neighbors to develop a more strategic and sustainable vision for bilateral power trade in a way that protects their own river resources.

STIMSON CENTER IMPACT MAKERS



Brian Eyer, Director
and author of *Last Days
of the Mighty Mekong*



Courtney Weatherby,
Research Analyst

Further Reading



America Matters for the Mekong

PUBLICATION DESIGN AND ILLUSTRATION

MASTERS GROUP DESIGN
Philadelphia, PA
mastersgroupdesign.com

TOP SHELF DESIGN
Washington, DC
topshelfdesign.net

THE ASIA MATTERS FOR AMERICA INITIATIVE

Asia Matters for America/America Matters for Asia is an interactive resource for credible and nonpartisan information, graphics, analysis, and news on US-Indo-Pacific relations at the national, state, and local levels.

AsiaMattersforAmerica.org

ACKNOWLEDGEMENTS

The Stimson Center expresses its gratitude to the East-West Center for including *The Mekong Matters for America* in its *Asia Matters for America Initiative*. This project was supported with funding from the US Department of State East Asia-Pacific/Multilateral Affairs and the Lower Mekong Initiative Small Grants Program as well as support from the Chino Cienega Foundation and the McKnight Foundation.

THE MEKONG MATTERS FOR AMERICA/AMERICA MATTERS FOR THE MEKONG



**Chino Cienega
Foundation**

This project explores the robust and dynamic relationship between the United States and the five countries of mainland Southeast Asia tied together by the Mekong River: Myanmar, Thailand, Laos, Cambodia, and Vietnam. The river, its resources, and the millions who depend on the mighty Mekong are increasingly impacted by globalization, development, and climate change. Part of the East-West Center's Asia Matters for America initiative, this publication and the AsiaMattersforAmerica.org and along with the stimson.org/program/southeast-asia/ websites are resources for understanding the robust and dynamic US relationship with the Mekong countries.

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