



Buddhist monks celebrate the Mekong River during a Peace Walk in 2013, ©Suthep Kritsanavarin.

The Lower Mekong Dams:

A TRANSBOUNDARY WATER CRISIS

The governments of Laos, Cambodia, Thailand, and Vietnam are planning to build eleven large hydropower dams on the Lower Mekong River. If built, these dams would destroy the river's rich biodiversity and threaten the food security of millions of people.

A RIVER SHARED BY MILLIONS

The Mekong River is one of the world's great rivers. Starting on the Tibetan Plateau, the river travels through six countries before it forms the Mekong Delta in Vietnam and empties into the South China Sea. Although China has built several dams on the upper part of the river, the lower stretch—shared by Cambodia, Laos, Thailand, and Vietnam—continues to flow freely. Over 60 million people depend on the Lower Mekong River for food, income, health, and their cultural identity. Yet the four governments have revived plans to build a series of mega-dams across the river to generate electricity, even though better options exist.

Plans for a series of dams on the Lower Mekong River date back to the 1950s, but war and instability in the region made these proposals impossible for several decades. This has now changed.

In the 1990s, the Chinese government began to build a cascade of large dams on the Upper Mekong. In the mid-2000s, Chinese, Thai, Vietnamese, and Malaysian companies revived plans for eleven large hydropower projects on the Lower Mekong Mainstream. Nine of these proposed dams would be in Laos, and two would be in Cambodia. Most of the electricity would be sold to Thailand and Vietnam.

When the dams were first proposed, there was limited understanding of the ways that people depend on the Mekong River and its ecosystems. The dams' economic, social, and environmental risks were poorly understood. Now that the threats posed by the Mekong dams have become clearer, tensions have grown between the people who will profit from the dams and those who will bear the impacts.



CHINA'S DAMS ON THE UPPER MEKONG

China has moved forward with its own dams on the upper part of the river (called the Lancang) without consulting its downstream neighbors or sharing data about water flows. Five mega-dams have already been built, eight are underway, and several more are being planned in Tibet and Qinghai. So far, the completed Lancang dams include the Dachaoshan (2003), Manwan (2007), Jinghong (2009), Xiaowan (2010), and Nuozhadu (2012). The Chinese dams are changing the Lower Mekong River's natural flood-drought cycle, and reducing the amount of water, sediments, and nutrients that flow into the river basin and surrounding coastal areas. Impacts to water levels and fisheries have already been recorded along the Laos-Thailand border. Scientists have yet to study the cumulative impacts of these dams.

THE MEKONG FEEDS MILLIONS

The Lower Mekong River is a major source of food security in mainland Southeast Asia. Of the 60 million people who live in the river basin, an estimated 80% rely directly on the river for their food and livelihoods. It is the world's largest and most productive inland fishery. Scientists have identified around 850 fish species, but estimate that over 1,000 fish species exist. Over one-third of these species migrate more than 1,000 kilometers along the river to feed and breed. In some areas, peak migrations can reach up to three million fish per hour, making the Mekong home to one of the world's largest migrations.

Fish are the main source of protein for many people throughout the region. Research by WWF and the Australian National University has found that replacing this lost protein would be difficult. There is simply not sufficient land and water available in the Mekong region to raise the livestock needed to replace the protein provided by the Mekong fisheries.

The economic value of the Mekong fisheries is enormous. Each year, Mekong fish have a first sale value between US\$3.9 and \$7.0 billion, but their total economic value is much higher. This statistic does not include the countless other people who sell fish at markets, transport fish to cities, prepare food, and make related products and supplies. It also does not include the millions of people living along the river who catch their own fish and live largely outside the cash economy.

The river provides food in other ways as well. Millions of villagers grow vegetables in riverbank gardens. The highly productive agricultural and rice fields of mainland Southeast Asia depend on the nutrients that the Mekong River transports down from the north. River floodplains and wetlands trap

sediments and nutrients, keeping the land fertile and protecting it from erosion.

WHO WILL BEAR THE COSTS OF THE DAMS?

In 2010, the Mekong River Commission published a Strategic Environmental Assessment that examines what would happen if the eleven proposed Lower Mekong Dams were built. The study was conducted with input from many of the region's leading scientists, government officials, and the public. Before this study, the Mekong governments had limited understanding of the environmental and social costs of building the dams.

The Strategic Environmental Assessment concluded that the eleven dams would turn more than half of the free-flowing Lower Mekong River into stagnant reservoirs. The dams would block the migration of fish and change their natural habitats. This would reduce Mekong fish species by an estimated 26–42%, resulting in losses of US\$500 million per year. More than 100 species would be at risk of extinction. An estimated 106,000 people would be evicted from their homes, and the food security of over two million people would be threatened. Millions more would suffer impacts to their food, sources of income, and ways of life.

Agriculture would also be affected. The dams' reservoirs would flood over half of all riverbank gardens, many cultivated by subsistence farmers. The dams would block nutrients and sediments that flow down the river, affecting the fertility of the region's agricultural land. According to the Strategic Environmental Assessment, China's upstream dams are already expected to reduce the flow of sediments by an estimated 50%, and this would be halved again if the Lower Mekong Dams were built, leaving about 25% of the original levels. This, in turn, would destabilize the coastlines and flood plains of the Mekong Delta, threatening Vietnam's rice and agricultural fields.

BETTER WAYS TO PROVIDE ENERGY

Governments have tried to justify the Lower Mekong Dams as necessary to meet growing energy demand in the region. In fact, the mainstream dams would only contribute about 6–8% of projected power demand in the region by 2025, and alternatives already exist to meet this demand in a more

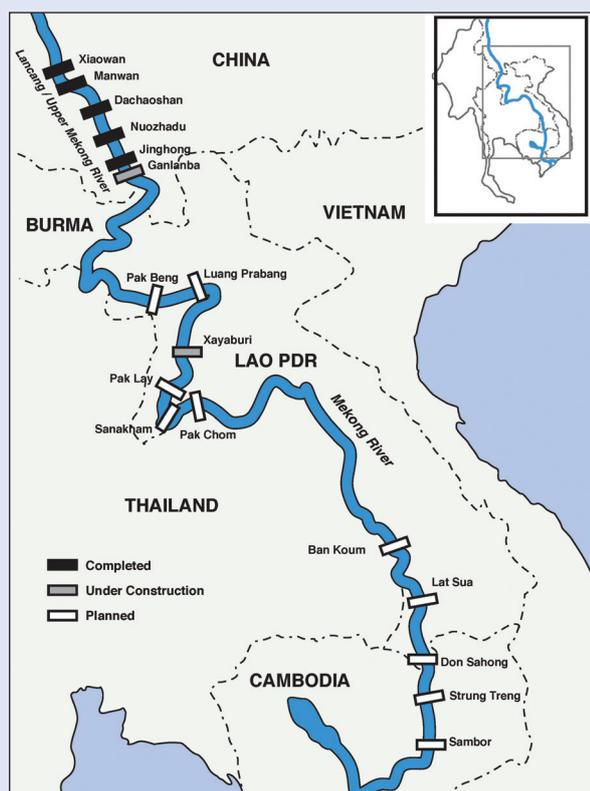


Women pan for gold near the Xayaburi Dam site in Laos, ©Suthep Kritsanavarin.

responsible way. Studies show, for example, that Thailand can meet its future energy needs without any additional hydropower imports, coal, or nuclear energy. Investments in energy efficiency, renewables, and co-generation could lower electricity bills for consumers by 12% by 2030, saving US\$67 billion. Nevertheless, corruption remains a strong driving force behind the dams. Many of the company and government officials who would personally profit from the dams also sit on government bodies that decide which projects will go forward. Transparent and participatory energy planning, involving wide consultations with the public, could help to ensure that governments make the best choices for their countries.

MEKONG DAMS ARE ADVANCING RAPIDLY

Several dams are already moving forward on the Lower Mekong River. In November 2012, Laos and Thailand held a groundbreaking ceremony for the controversial Xayaburi Dam. In fact, Laos and Thailand have been implementing the project since 2010, despite ongoing concerns from Cambodia and Vietnam about the dam's transboundary impacts. Laos might soon move forward with implementation on two other dams, the Don Sahong Dam near the Cambodian border and the Pak Beng Dam in northern Laos. None of these projects have received the approval of neighboring governments.



DAMS AND “DEVELOPMENT”

The Government of Laos plans to build nine of the eleven proposed dams, and envisions itself as the “Battery of Southeast Asia,” selling electricity to its wealthier neighbors. Lao government officials claim that the Lower Mekong Dams will create a cash windfall that will open the doors to rapid economic development. But revenue does not automatically lead to economic progress.

Much of the revenue will disappear as it travels from the dams to the Lao people. Laos lacks the institutions and capacity needed to manage the revenue effectively, and its government suffers from rampant corruption. Laos lacks a strong civil society and media to independently monitor how the money is spent. The Lao government has provided little information on how it intends to spend the revenue to improve people's lives. As with past hydropower projects in Laos, it is unlikely that the poorest Lao citizens living near the dams will see the benefits.

CHALLENGES OF SHARING A RIVER

In 1995, Cambodia, Laos, Thailand, and Vietnam signed a treaty to promote cooperation in their use and management of the Lower Mekong River Basin. They created the Mekong River Commission (MRC) to help implement the treaty and agreed to notify each other of planned projects. As part of the treaty, the governments also agreed to consult with one another on proposals for Lower Mekong Dams.

The four governments have found it difficult to implement the treaty. In 2012, Laos announced that it would move forward with the Xayaburi Dam, claiming that it has a sovereign right to do so. In fact, the treaty requires the governments to make



A woman in Cambodia makes fish paste near the Mekong River, ©International Rivers.

efforts to reach an agreement before any dams are approved. In 2011, the MRC governments agreed to conduct further studies on the impacts of dams, but Laos has refused to delay these projects while the impacts are studied. The Xayaburi Dam has set a dangerous precedent where Laos begins construction on dams without first addressing the concerns of its neighbors.

AN UNPRECEDENTED PUBLIC OUTCRY

Public awareness is growing about the plans to build the Lower Mekong dams and the threats these dams bring. A healthy Mekong River is priceless. Saving the Mekong will depend on the dedication and commitment of many people:

- **Concerned citizens** who demand cancellation of the dams, including global citizens who speak out when it is too dangerous for people in Laos or other countries to speak.
- **River communities** who demand that their rights are respected and upheld.
- **Journalists** who ensure that government leaders are accountable for their decisions.
- **Scientists** who fill the gaps in our understanding of the Mekong River and how people depend on it.
- **Government leaders** who call for a delay in future Mekong dams while further scientific and impact studies and consultations are carried out.
- **Environmentalists** who educate decision-makers about the cleaner, more responsible alternatives to large dams.
- **Companies** that invest in cleaner, more responsible energy technologies in the region.
- **Policymakers** who reform the Mekong River Commission so that it can effectively promote socially and environmentally responsible development in the river basin.



Can Tho, Vietnam in the Mekong Delta, ©PanNature.

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