INTERNATIONAL RIVERS
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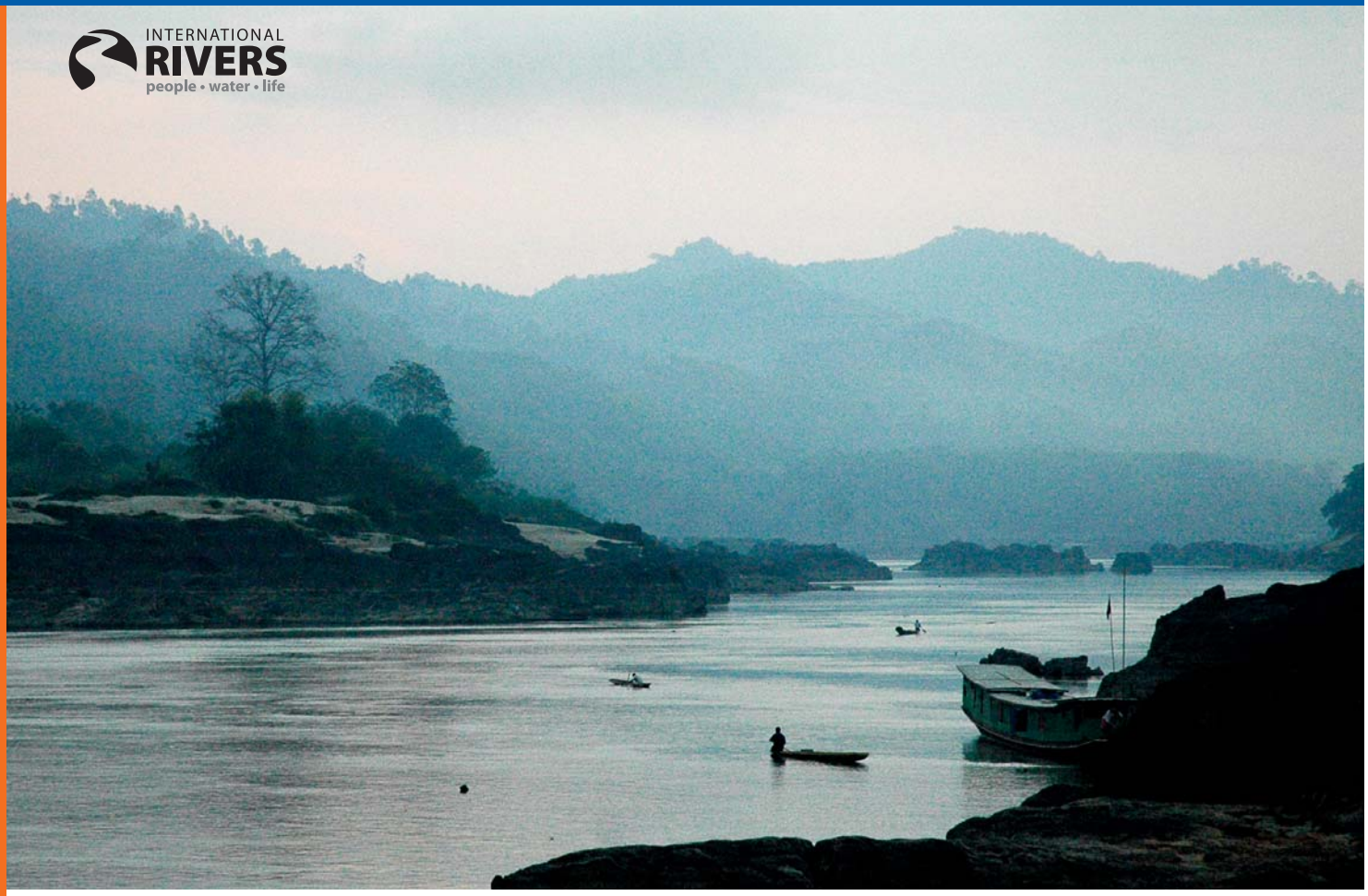


The Mekong River, downstream of the proposed site for the Xayaburi Dam

The Xayaburi Dam

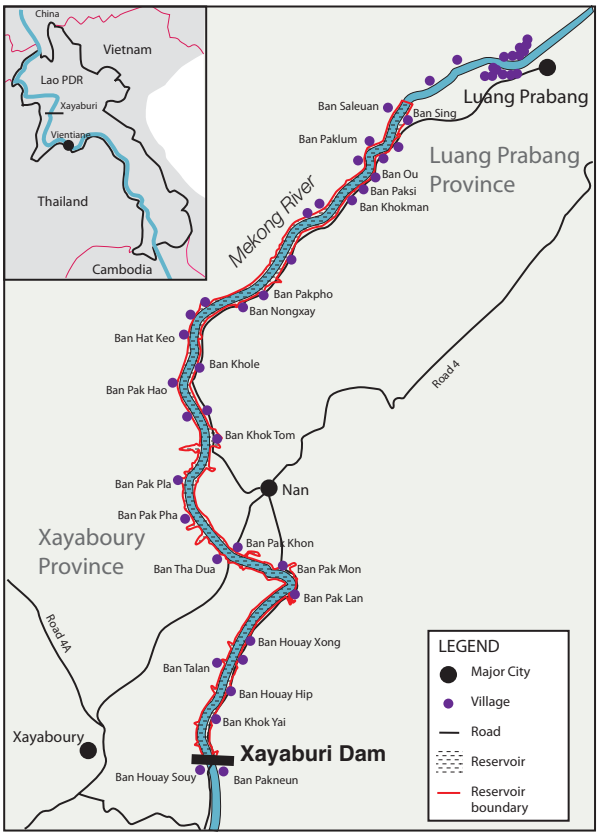
A LOOMING THREAT TO THE MEKONG RIVER

Located in a mountainous valley in Northern Laos, the proposed Xayaburi hydropower dam is the most advanced of eleven large dams planned for the Lower Mekong River's mainstream. If built, the dam will cause irreversible and permanent ecological change to a mighty river that feeds millions of people, forcibly resettle over 2,100 people and directly affect over 202,000 people, and could push iconic and endangered fish species, such as the Mekong Giant Catfish, to extinction.

The Lower Mekong River's distinctive annual flood cycle supports a vast and intricate web of life that is shared between the countries of Thailand, Laos, Cambodia and Vietnam. The Mekong is one of the most biodiverse river systems in the world and is host to the world's most productive freshwater fishery. Yet, this remarkable resource, which provides income and food for tens of millions of people, is under threat due to proposals to build the Xayaburi Dam on the river's mainstream that has the potential to irrevocably change the river forever.

Located in the mountainous and remote province of Xayaboury in Northern Laos, the Xayaburi Dam is at the most advanced stage of planning of eleven dams proposed for the Lower Mekong River's mainstream. In September 2010, it was the first mainstream dam to be submitted for approval by the region's governments through a regional decision-making process called the "Procedures for Notification, Prior Consultation and Agreement" (PNPCA), facilitated by the Mekong River Commission.

If approved, the dam would create serious environmental damage to the river's aquatic resources and fisheries both locally and basin-wide. Around 2,100 people would be resettled by the project, and more than 202,000 people living near the dam would suffer impacts to their livelihoods, income and food security due to the loss of their agricultural land and riverbank gardens, an end to gold panning in the river, and increased difficulty in accessing products from the forest, such as wild banana flower and rattan. The changes caused by the dam to the river's biodiversity and fisheries would be felt throughout the river basin, affecting millions of people.



THE XAYABURI DAM

Stretching across the entire channel of the Mekong River, the 810 meter long Xayaburi Dam would be located at the Kaeng Luang rapids, approximately 30 kilometers east of Xayaboury town in Northern Laos. The project is expected to generate 1,260 megawatts of electricity, around 95% of which will be exported to Thailand.

The Lao government signed a Memorandum of Understanding (MoU) with the project's lead developer, Thailand's Ch. Karnchang Public Company, on 4th May 2007. Discussion is now underway with other potential investors including the Lao government, Ratchaburi Electricity Generating Holding Company and EGAT International Company. The dam would take eight years to build and would cost approximately US$3.5 billion.

After the MoU, a Project Development Agreement was signed between the Government of Laos and Ch. Karnchang in November 2008, while the project's Environment Impact Assessment (EIA) report was first submitted to Laos for approval in February 2010. A Memorandum of Understanding for a Power Purchase Agreement was then signed between the Electricity Generating Authority of Thailand (EGAT) and the Government of Laos in July 2010, which will allow EGAT to purchase 1,220 MW of electricity at a cost of 2.159 Baht per kilowatt-hour through a 200 kilometer long transmission line that will travel from the Xayaburi Dam to Thailand's northeastern province of Loei.

While project documents such as the EIA are yet to be made public, the project now hopes to gain approval by the governments of Cambodia, Laos, Thailand and Vietnam by March 2011. In accordance with the 1995 Mekong Agreement, these lower Mekong River countries have adopted a protocol which requires them to notify, consult, and then reach agreement with their neighbors on proposed mainstream projects. In September 2010, the Xayaburi Dam became the first dam to ever initiate the PNPCA process. The announcement preempted by three weeks the release of a major Strategic Environment Assessment (SEA) report, commissioned by the MRC, which recommends that decision-making on mainstream dams, including Xayaburi, be deferred for 10 years due to the massive risks and impacts associated with the projects. Despite this clear recommendation, the decision-making process continues to move forward.

THREAT TO AQUATIC BIODIVERSITY AND FISHERIES PRODUCTIVITY

If built, the Xayaburi Dam would permanently damage the habitat and ecosystem of the Mekong River, placing at risk the rich species diversity of the Mekong. At least 41 fish species are at risk of extinction due to a severe change in their habitat. The Xayaburi Dam would also block a vital fish migration route that allows at least 23 migratory fish species to travel to the upper reaches of the Mekong to Luang Prabang in Lao, and Chiang Khong and Chiang Saen in Thailand, disrupting the lifecycle necessary for these fish, including their spawning, breeding and growth. One such migratory species that could be driven to extinction is the critically endangered and iconic Mekong Giant Catfish.

The dam will adversely impact the Mekong River's complex ecosystem, which has already been partially affected by the dams built on the river's upper stretch in China. Local *Kai* production, for example, would be destroyed by the dam's reservoir. *Kai* is a freshwater weed that serves both as an important food for fish, as well as a famous dish served in Luang Prabang. For Laotian women near the dam site, *Kai* is one of their key sources of income during the dry season when the Mekong's water is low and clear, which allows *Kai* to grow.

Despite the enormous impacts to the region's fisheries, the project's developers have ignored scientific consensus and downplayed the severity of the threat by claiming that two fish ladders incorporated into the dam's design will mitigate fisheries impacts.Yet since September 2008 and most recently

By harming the world's largest freshwater fishery, the Xayaburi Dam will reduce fish catches and fish biodiversity. This will have a significant cost on the livelihoods and food security of millions of people living along the river.

The Xayaburi Dam will threaten the last remaining population of the critically endangered Mekong Giant Catfish. (© Zeb Hogan)

in the MRC's SEA report, a group of globally renowned fisheries experts have unequivocally stated that fish ladders will not work due to the Mekong River's large biodiversity and its high number of fish. Even if the fish passages are designed for a few specific species, the SEA report warns that the Xayaburi Dam's height of 32 meters is higher than the maximum height at which fish ladders will work.

PEOPLE AND LIVELIHOODS

Located approximately 150 kilometers downstream of Luang Prabang town, a UNESCO World Heritage Site, the Xayaburi Dam threatens to resettle over 2,100 people in ten villages. The dam's reservoir will stretch to only 48 km below this historic town. The dam will also indirectly affect the lives of at least 202,198 farmers and fishers located in four districts in Laos, as well as countless people more widely throughout the river basin.

The fishers and farmers living near the dam site are of a variety of ethnic groups, who meet their daily needs through fishing, cultivating rice, gold panning, collecting products from the forest and growing vegetables on the riverbanks. Through resettlement or indirect impacts such as loss of land and access to resources, the unique livelihoods and lifestyles of these communities would be forever changed by the impacts of the dam.

Despite the serious impacts, local people in the affected areas in Laos and its neighboring countries have received little to no information about the dam. Those most adversely affected in Laos have received misleading and incomplete information from the project's developers and have had little opportunity to voice their concerns. People upstream and downstream in Thailand, Cambodia and Vietnam have received even less information, despite the expected transboundary impacts.

For the villagers in Xayaboury, Nam, Luang Prabang and Chomephet districts whose land and homes would be flooded by the dam and would be resettled, the future appears worrisome due to Lao's troubled record of dam development. The future is especially bleak for some households in Nam district who would be displaced for the fourth time in 15 years, after first being resettled from up-lands to low-lands, and then having to relocate twice more due to flooding without receiving any assistance. Low quality resettlement programs, unmitigated environmental impacts, and a lack of viable alternative livelihood options for resettled and impacted communities are all too common in Laos. With many outstanding problems in Laos, including a lack of institutional capacity and political will to enforce environmental laws and meet bare minimum social safeguards commitments, the Xayaburi communities are most likely to follow in the footsteps of other impoverished dam affected communities.

LOSSES FOR MANY, BENEFITS FOR FEW

The Lao government believes that the Xayaburi Dam will be an important source of government revenue, help attract foreign investment, and further national economic growth. Yet this argument is flawed as it fails to recognize how the Mekong River is already a valuable economic, social and cultural asset for Laos and the wider region through its highly productive fisheries, helping to meet food security, and providing fertile soils and water for irrigation for agriculture. All of these resources are essentially renewable and generated for free, yet depend on a healthy river system. By failing to equate the dam's actual costs associated with the environmental and social damage that will be caused to millions of people and the social and environmental programs that will be needed to mitigate and compensate for this damage, the project's true costs have not been adequately taken account of.

Gold panning during the dry season is vital source of income for many Laotian villagers, especially women, who can earn up to US$8.50 per household per day. Gold panning would no longer be possible if the Xayaburi Dam is built.

Ecotourism in Xayaboury Province

Xayaboury province is renowned for its rugged landscape, beautiful mountains and flower gardens, and its elephant festival, and its high potential for eco-tourism. Already many local people visit Pha Daeng, a small and beautiful cave with ancient manuscript adorning its walls, located near to the project site. Mekong River cruises traveling this stretch of the river are also a growing component of tourism. The province's picturesque scenery and valuable natural and cultural heritage will be altered forever by the dam's construction and operation.

The social and environmental costs and benefits of the Xayaburi Dam are also likely to be unevenly distributed, both between people and between the Lower Mekong countries. The dam's impacts would disproportionally affect communities whose livelihoods are dependent on the river's natural resources, which overall are also locations where high levels of poverty exist. In turn, this threatens Laos' progress towards meeting its poverty reduction goals and the Millennium Development Goals.

The Northern Lao Mekong Mainstream Hydropower Cascade

Of the eleven planned mainstream dams, the Xayaburi Dam is one of six hydropower projects proposed for the 1,100 kilometer stretch of the Mekong River that runs from Chiang Saen in Northern Thailand to Vientiane in Laos. This area is known as for its mountains and winding, steep narrow valleys. This cascade would produce nearly 7,000 megawatts of electricity, with the majority of the power being exported to Thailand and Vietnam.

The Northern Lao Hydropower Cascade has been promoted as being beneficial for the region through increased foreign direct investment and improved navigation along the river. The truth of these projects, however, reveals a much darker future. By disconnecting the upper and lower reaches of the Mekong River, the six dams would produce devastating changes to aquatic ecosystems. The MRC's Strategic Environmental Assessment report, launched in October 2010, reveals that approximately 80% of this stretch of the river would be transformed into a series of regulated reservoirs, inundating valuable agricultural land and riverbank gardens. Furthermore, the report states that the area would become "seriously impoverished" through biological impacts to breeding and spawning grounds necessary for the lifecycle of fisheries. This would result in an estimated loss of wild-capture fisheries of between 270,000 and 600,000 tonnes per year, which is equivalent to an annual protein loss equal to 60% of the current livestock production in Laos. Given the scale of these direct impacts to ecosystems and peoples' well-being, these dams are unlikely to contribute to the region's development, but rather reverse many of the region's achievements made in poverty reduction, improved health and nutrition, and sustainable development thus far.

THAILAND'S KEY ROLE

As the intended market for the electricity generated by the Xayaburi Dam, decision-makers in Thailand's Ministry of Energy and electricity utility EGAT will play a key role in determining whether the Xayaburi Dam is built or not. Furthermore, the lead project developer, Ch Karnchang, is Thailand's second largest publicly traded construction company. Finally, Thai banks are also considering providing loans to fund the project, with interest already expressed by Kasikorn Bank, Bangkok Bank, Krung Thai Bank, and Siam Commercial Bank, although the project fails to meet these banks' commitments to Corporate and Social Responsibility.

Thailand, which has already developed much of its domestic hydropower potential, faces strong opposition to further projects at home given its past record of projects, such as the Pak Mun Dam, and instead increasingly seeks to import electricity from neighboring countries where civil society is weaker and opposition is stifled. Thailand's civil society groups have questioned Thailand's power development plans, which heavily promote the development of new large-scale electricity generation plants, such as fossil-fuel fired power stations and hydropower dams. They conclude that future electricity demands are overestimated, and that the potential for energy efficiency measures, renewable energy, and decentralized energy options in Thailand are significant and viable if energy planning practices continue to be reformed.

PROTECTING THE FUTURE OF THE MEKONG

The regional decision-making process facilitated by the MRC over the Xayaburi Dam is expected to announce a decision as early as March 2011. Serious concerns have been voiced by local groups throughout the Mekong Region and by the Save the Mekong coalition, a network of local, regional and international organizations and individuals. Civil society groups have also called on the MRC and regional decision-makers to halt the Xayaburi Dam, while adhering to the recommendation of the Strategic Environmental Assessment to defer decisions over the Mekong for a period of at least ten years.

A free-flowing Mekong River represents security and prosperity for present and future generations. Significant knowledge gaps and a failure to meet international best practice standards of transparency, public participation and accountability mean that an informed decision over the fate of the river can not be made and the region risks jeopardizing the very resource that brings benefits to millions of people. In a world facing a growing food and water crisis, working together to protect and share the Mekong River's rich natural resources, rather than undermining them, should be a high priority for the region's decision-makers.

WHAT IS INTERNATIONAL RIVERS DOING?

As a partner of the Save the Mekong coalition, International Rivers is working to raise regional and international public awareness about the risks associated with damming such an important international river, and to demonstrate that there are more sustainable and peaceful ways of meeting people's energy and water needs.

JOIN US!

For more information, visit International Rivers' website: internationalrivers.org, and the multi-lingual website: savethemekong.org.