



**Mekong Watch Briefing Paper
Pak Mun Dam**

Pak Mun Dam:
Run of River Dam Height 17 m Length 300 m
Installed Capacity 136 Megawatts
Location: Hua Hew Village, Khonjiam District, Ubon Rachathani Province
(at the mouth of the Mun River, 5.5 km upstream from its confluence with the Mekong)
Project owner : the Electricity Generating Authority of Thailand (EGAT)

Problems of the Pak Mun Dam

The Pak Mun Dam can teach societies of the Mekong Basin a variety of lessons on dam development on the Mekong River. It was said that there would be fewer environmental and social impacts from this dam, the first “run of river” dam built on the Mekong, but in reality, it has had a big impact, resulting in a drastic decrease in the amount of fish resources in the basin. Destruction of the ecosystem has led to poverty among the affected villagers. Projects failing to take the lifestyles of the villagers into account have led to a strong backlash against development, sparking large oppositional movements that will go down in the history of the Thai peoples’ movements. It was also an economic failure, as compensation initially budgeted for resettlement was insufficient, and none had been allotted for fisheries. It required a strong people’s movement to receive compensation, which in spite of inflating the costs of the dam tremendously has still been unable to make up for their loss of livelihood.

This dam was a project not only of the Thai nation, but also supported by the World Bank, so the failure of this development project has been noted widely around the world.

The first survey for the Pak Mun Dam was done by France in 1967, downstream from the dam’s present location. Its construction was postponed at that time, but after a subsequent survey in the 1980’s the decision was made to reduce the dam’s height from 113 to 108 meters above sea level. Proposals to reduce the impact on the villagers were accepted and in May 1990, the Thai government gave approval at a cabinet meeting for the dam’s construction. Work began in 1991 and the dam was completed in 1994.



The Pak Mun Dam and the World Bank

The Pak Mun Dam was built with partial funding from the World Bank.¹ From the time its construction began, residents working in fisheries, ichthyologists and NGOs were opposed to it, pointing out the effects it would

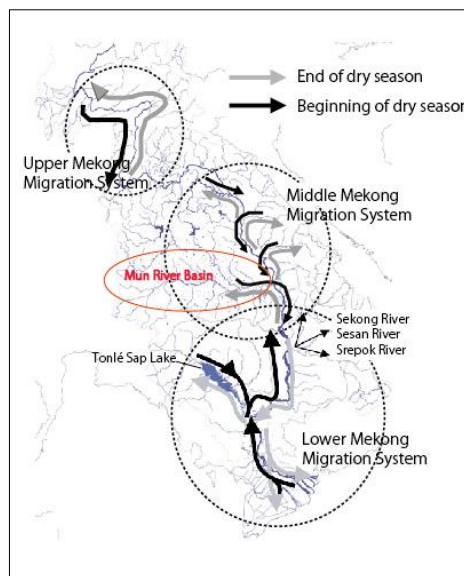
¹ The project received U.S.\$54 million as the Third Power Project (3) of the International Bank for Reconstruction and Development (IBRD).

have on many of the migratory fish that make their way up the Mekong to the Mun River. When the World Bank Board of Governors met to decide on funding in 1991, the representatives from the US, who had conducted their own environmental impact assessment, as well as from Germany and Australia were opposed to it, with Canada abstaining, but Japan’s representatives reportedly applied pressure to approve funding. In a follow-up assessment of the project in 1998, the World Bank claimed that resettlement implementation and outcomes were “among the best experiences with resettlement among Bank-assisted projects.”² This drew criticism from around the globe. From 1999, local people organized a large-scale movement demanding natural environmental restoration as opposed to compensation, attracting broad support. Attention was also drawn to the dam as an example of a World Bank development project failure, and it was selected as a case for investigation by the World Commission on Dams, which conducted a reevaluation of large dams worldwide.

The Mun River and Its Fish

Under the influence of the tropical monsoon, northeastern Thailand has a distinct rainy season and dry season. The name “Mun” means “heritage.” “Pak Mun” denotes the area around the mouth of the Mun River, so that was chosen for the dam’s name. The water level of the rivers in the lower reaches of the Mekong Basin rises during the rainy season due to the increased amount of rainfall. Many fish migrate upstream during that season, including into the Mun River. Also, during the dry season, when severe drying occurs, the fish return to the main stream of the Mekong, where water is still abundant. (See figure to the right.)

The lower reaches of the Mun River feature many rapids and pools, and the middle reaches have extensive inundated forests, making it a suitable place for fish in the middle reaches of the Mekong Basin to spawn. More than 270 fish species have been confirmed there in the past.³ Fish are known to be particularly abundant in the lower reaches of the Mun River, and although it is nowhere near the ocean, about 60 villages in the basin make their living through fishing rather than farming.



Fish migration in the Mekong (Source: MRC).

The Effects of Underestimating

The Mun River was one of the important spawning areas for fish migrating up from the Mekong River. The Pak Mun Dam is thought to have had a tremendous impact on fish in the lower reaches of the Mekong River, but this had not been investigated at all prior to its construction.

Moreover, compensation amounts awarded with regard to the dam’s construction have swollen to nearly three times the original estimates.

Planning vs. reality of the Pak Mun Dam compensation and mitigation plan

		Resettlement costs (baht)	Displacement	Agricultural land inundated	Mitigation project for fish (baht)
Planned		394.77 million (1988)	248 house-holds (1985)	--	--
Actual		1113.1 million (1999)	943 house-holds (1994)	706 house-holds (1994)	305.55 million (1995-1998)

(Source: Pak Mun Dam, Mekong River Basin, Thailand: A WCD Case Study. 2000)

The villagers were strongly opposed to the dam’s construction after it had gotten underway. The Thai government, however, would not review the project, so they changed their position to demand additional

² Recent Experience With Involuntary Resettlement: Thailand—Pak Mun.” World Bank Operations Evaluation Department. 2 June 1998.

³ According to a strategic environmental assessment by the Mekong River Commission (MRC).

compensation and continued protesting. In 1995, the Thai government approved an award of 30,000 baht per year to each family for the three-year period of the dam's construction as compensation for fisheries. It wasn't until 1999, though, that they finally paid the 90,000 baht award (30,000 baht in cash, with 60,000 baht deposited in agricultural cooperatives). The number of households compensated was 3,966, bringing the total awarded to 395.6 million baht.

The fish ladder built and aquatic resource recovery program instituted after the dam was completed have proven ineffective, and the region's fisheries have been ruined. The villagers have made their living as temporary migrant workers in the cities, but the effects of the currency crisis of 1997 caused many of the villagers to lose their work and return to their villages. There are increasing demands for more compensation among the villagers who have been unable to make a living through fishing. A cabinet meeting of the second term of the Chuan Administration in 1998 made a decision not to compensate villagers repeatedly for dam development projects when they had already been compensated.

The villagers lost hope in the government, but judging it difficult to recover their livelihoods with the compensation received, they renewed their calls for the dam's removal. In March 1999, a group of several thousand of them, including villagers affected by other dams, occupied the Pak Mun Dam site, creating the *Mae Mun Man Youn* (Eternal Mun River) Village as a forum for discussions. This action brought attention to the movement from all over the country. In addition, with construction of a new large dam in America halted, opposition to large dams was spreading globally, and attention was drawn to the Pak Mun Dam as an example of a failure of a World Bank-funded project, so the villagers' call for the dam's removal was became known worldwide. At that time, the number of households claiming to have been affected by the Pak Mun Dam had risen to about 6,000.

Test Opening of Sluice Gates and Re-evaluation

In 2001, the Thai Rak Thai Party, which supported Thaksin Shinawatra, declaring its concern for the impoverished, won an overwhelming election victory. Prime Minister Thaksin approved the short-term opening of the dam's sluice gates for survey purposes⁴ and ordered the local Ubon Ratchathani University to investigate and document the effects. After the sluice gates were opened, the river environment improved dramatically, and fish catches increased. The villagers and NGOs worked jointly on "*Thai Baan* (village people) Surveys," and presented the results of social surveys based on the villagers' knowledge. This received wide support from eminent researchers.

The university research team proposed keeping the sluice gates open year round on a trial basis for five years, citing figures on the degree of the villagers' impoverishment and the lack of any economic merits of the dam's electricity production, documenting recovery of fishery resources through opening the sluice gates, and noting that the gates' opening would have no impact on the electric power supply, but would improve economic conditions for the impoverished people in the villages. The Thai government, however, did not adopt the proposal and decided to open the sluice gates for only four months each year (from July to October).⁵

This way, while claiming to mitigate the impacts on fishery resources, they began opening the sluice gates at times that did not match the fish's migratory period.⁶



⁴ Initially, the sluice gates were to be opened for just a few months, but in accordance with the wishes of both the residents and Ubon Ratchathani University, they remained open from June 2001 to November 2002.

⁵ According to local NGOs, the four-month gate-opening period was set for the rainy season, when the Mekong's water level below the dam rises enough to eliminate the difference in water levels between the dam and downstream, and almost no electricity can be generated anyway.

⁶ Drawing on local residents' knowledge, the peak of the upward fish migration at the mouth of the Mun River occurs from the end of May into early July, and their migration downstream takes place around November.

Annual Four-month Sluice Gate Opening

The first four-month sluice gate opening in 2003 did nothing to improve the local fisheries, so the next year, in 2004, the villagers requested the government to change the timing of the gate opening to coincide with the fish migration periods. The cabinet approved a plan to open the gates from May 1 to August 31, and had them opened in June that year.

In 2007, however, the opening of the sluice gates was stopped. After the political turmoil that started with Prime Minister Thaksin's downfall and brought Prime Minister Surayud to power in a coup d'etat, the new cabinet decided to discontinue it, saying there had been 20,000 signatures petitioning the government to close the sluice gates. Negotiations between the villagers and the researchers and government representatives supporting the closure dragged on, with a committee for support of Pak Mun Reservoir operations established in 2008 in Ubon Ratchathani Province, after which the decision was made to open the sluice gates for four months. A new criterion was established to the effect that when the amount of water flowing past a certain observation point exceeded certain levels, the sluice gates were to be opened, but with continued changes in administrations, this arrangement has proven to lack substance.

Once again in 2011, lobbying by the villagers resulted in committees of experts being established and proposals made for opening the sluice gates, but the Thai government has not accepted them.

Recommendation:

As developments along the Mekong River negatively affect fish in the whole lower Mekong basin, recovery of the natural environment in the Mun River will have great significance for preserving ecosystems in the entire Mekong River. The Thai government should follow the recommendations presented by Ubon Ratchathani University in 2002, i.e., full opening of the gates for five years.