

The Salween Under Threat

**Damming the Longest Free River in
Southeast Asia**

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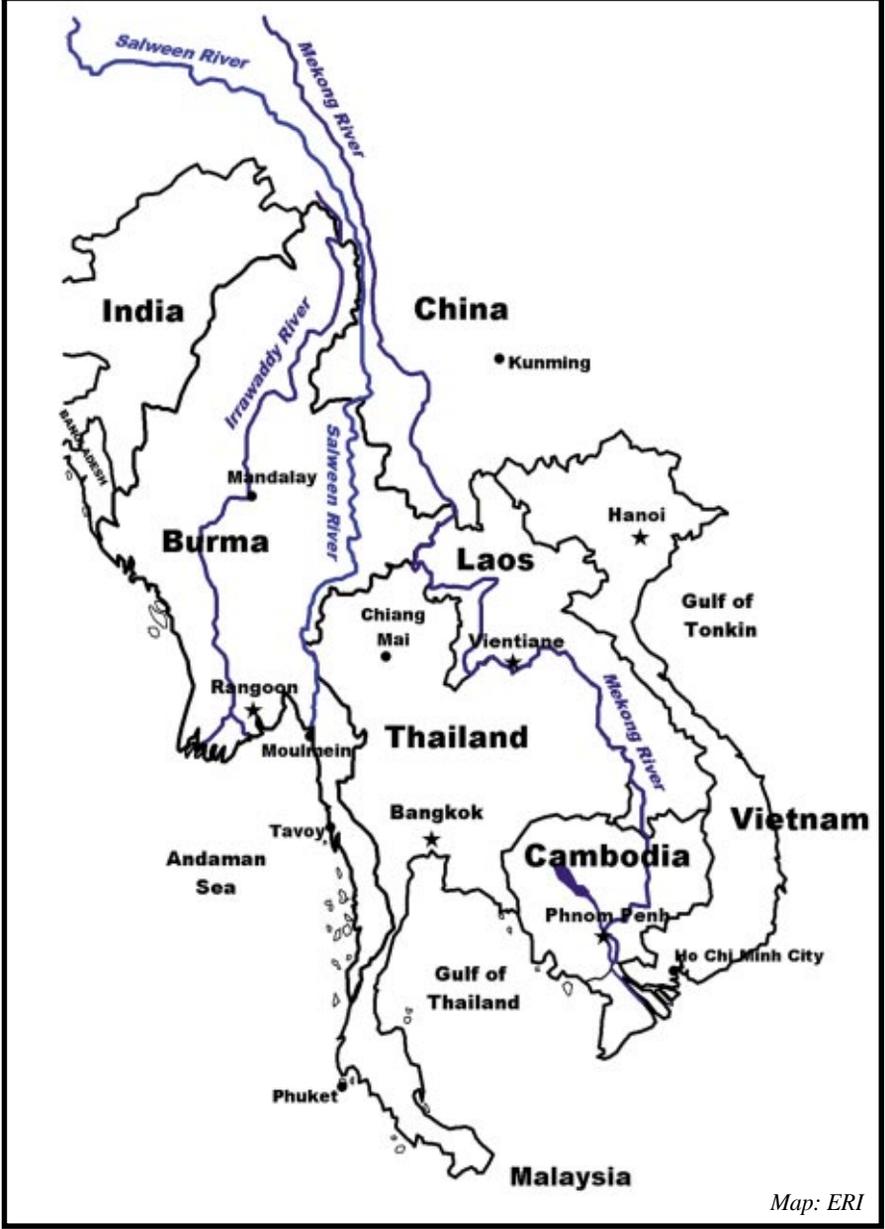
Acronyms

Acronyms

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
EGAT	Electricity Generating Authority of Thailand
EIA	Environmental impact assessment
EPDC	Electric Power Development Corporation
DSM	Demand-side management
GMS	Greater Mekong Subregion
IDP	Internally displaced person
JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
KNPP	Karenni National Progressive Party
KNU	Karen National Union
MEA	Myanmar Electric Authority
MEPE	Myanmar Electric Power Enterprise
NLD	National League for Democracy
ODA	Official Development Assistance
SHRF	Shan Human Rights Foundation
SMEC	Snowy Mountain Engineering Corporation
SPDC	State Peace and Development Council
SWAN	Shan Women's Action Network

The Salween Under Threat

The Salween: Southeast Asia's Longest Free River



Map: ERI

Introduction to the English Edition

The Salween Under Threat was first published by a collaboration of fourteen Thai and Burmese organizations under the title “*Tragedy of the Two Lands*” in Thai in 2003, edited by Southeast Asia Rivers Network (SEARIN) and Salween News Network. That book discussed the plans for hydro-power development on the Salween and its potential tragic consequences for both Thailand and Burma. Many concerned parties felt that the compelling case against damming the Salween needed to be presented to a wider international community. Therefore, the Center for Social Development Studies at Chulalongkorn University, SEARIN, and Salween Watch, a coalition of groups committed to preserving the Salween, produced this English edition.

We find ourselves at a moment in history when we have the chance to change the fate of the Salween River. This book calls for efforts to prevent destructive large scale hydro-power development on the Salween, and also to find low-impact models of development that can ensure a rising standard of living for the communities it supports. Our hope is that the international community will support the campaign to protect the Salween and its peoples in both Thailand and Burma.

The Salween: Longest Free-flowing River in Southeast Asia – for now

Among the major river systems in mainland Southeast Asia, the dam-building industry has successfully promoted construction of numerous dams on the Mekong River and its tributaries, causing the destruction of the environment and loss of livelihoods for millions of people. By contrast, the Salween River, which like the Mekong originates in the Himalayas and runs parallel to the Mekong for several hundred miles, remains the longest river in mainland Southeast Asia that flows freely, uninterrupted by dams.

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This does not mean that the Salween River has been free from efforts to construct dams in its basin. In fact, hydro-power developers and dam builders from countries such as Japan, China, Australia, and Thailand have long been attracted to the Salween River basin, along with public institutions that have a history of financing hydro-power development and dam construction such as the World Bank, the Asian Development Bank (ADB), and the Japan Bank for International Cooperation (JBIC). Feasibility studies already have been conducted at many sites, and the promoters of the dams are geared to start construction at any moment without either consulting the local peoples or considering the social and environmental impacts the dams will have. If current trends continue, it is only a matter of time before the Salween will forever cease to flow freely.

As with dam building in any other part of the world, the drive behind the plans to build dams on the Salween River does not necessarily stem from the quest for social or public welfare. While hydro-power may generate needed electricity, much of the push to dam comes from the ambitions of dam builders who stand to benefit from the consultancies, provision of equipment and building contracts. Chapter 2 examines the political and economic motives behind the plans to dam the Salween River.

Dams' Harmful Impacts

Construction of large dams in any part of the world is known to inflict severe, negative effects on the environment and the livelihoods of the local people, and the planned dam and diversion projects in the Salween River system are no exception. Moreover, the current situation in Burma will certainly further aggravate such impacts for those communities living in the project areas in Burma. Chapters 1 and 3 describe the situation along the Salween where the dams are proposed. Given the negative impacts that are certain to occur, alternative energy and water management options should be considered before final decisions are made to dam the Salween River. Chapter 7 examines the alternative options that are available, and presents recommendations to the international community.

Dam Plans on the Mainstream Salween River

To date, various feasibility studies have identified at least 12 sites where large dams may be built in the Salween River basin in Thailand and Burma. Disclosed information from these studies reveals several major prospective hydro-power projects on the mainstream Salween River in Thailand and Burma (see Box: Proposed hydro-power projects on the mainstream Salween River in Thailand and Burma). Of the above projects, there have been developments in the Tasang project in Shan State in Burma. Pre-feasibility and feasibility studies have been conducted for this project, and reportedly a road is being constructed from the village of Tasang to the dam site. Chapter 4 describes the Tasang project in detail. Feasibility studies also are being conducted at the Wei Gyi and Dagwin sites, and Chapter 5 describes these projects in detail.

In addition to the projects planned on the mainstream Salween in Thailand and Burma, China announced in 2003 plans to build a cascade of 13 dams on the Nu River (Nujiang), the portion of the Salween River that flows in China. A wide range of civil society groups as well as the government's own State Environmental Protection Agency have voiced opposition to the projects¹ and in April 2004, the Chinese Premier Wen Jiabao reportedly instructed a suspension of the dam plans. Information on the ground, however, suggests that the future of the dams is uncertain.

Water Diversion from the Salween River

In 1979, at the same time as it started the Mekong Water Diversion Project, the Thai government initiated the "Salween Water Diversion Project." The project proposed diverting water from the mainstream Salween River as well as from many of the main tributaries of the Salween River in Thailand (the Pai, Yuam, Mae Lamao, and Ma Jarao Rivers).

The Salween Water Diversion Project is closely related to some of the proposed dam projects on the Salween River, such as the dam in Burma opposite Wieng Haeng District and the dam at Wei Gyi, in that the dams will, in addition to storing water for generating hydro-power, serve to divert water to Thailand.

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Potential Dam Sites on the Salween River



Proposed hydro-power projects on the mainstream Salween River in Thailand and Burma

Proposals by Nippon Koei of Japan

Two dams, the upper and lower dams near the village of Tasang in Shan State, Burma, would have a combined capacity of 3,600 megawatts.² An additional dam situated north of the Tasang dam site would generate 3,200 megawatts.

Proposals by World Impact Co.

A dam located in Burma opposite Wieng Haeng District of Chiang Mai Province in Thailand would generate 4,000 megawatts. This dam would also serve to divert water to the Mae Chaem River and on to the Bhumipol Reservoir in Thailand.

Proposals by Electric Power Development Corporation (EPDC) of Japan³

Two dams would be built on the Salween River flowing along the Thai-Burmese border. The upper dam at Wei Gyi would generate 4,540 megawatts, while the lower dam at Dagwin would generate 792 megawatts. The Electricity Generating Authority of Thailand (EGAT) has proposed to build a dike on the Pai River, a tributary of the mainstream Salween in Thailand in order to keep the Wei Gyi dam reservoir from flooding the town of Mae Hong Son. This project would serve to divert water from the Pai River to the Bhumipol Reservoir.

Proposal by Nippon Koei, Myanmar Electric Power Enterprise (MEPE) and Myanmar Electric Authority (MEA)

A dam downstream from Dagwin at Hutgyi in Burma's Karen State would generate 300 megawatts. Three more dams may be built on the lower Salween River just before it reaches the Gulf of Martaban, with potential generating capacities of 5,850, 6,000 and 10,000 megawatts respectively.

Dams on the tributaries to the Salween in Thailand

Dams have been proposed on the Yuam and Moei Rivers in Thailand. In the early 1980s, the Japan International Cooperation Agency (JICA)⁴ hired EPDC to conduct feasibility studies for hydro-power projects on the Yuam River, and EPDC eventually proposed ten dam sites on the Yuam and its tributaries. Of the ten, EGAT chose two sites to develop: Mae Lamaluang and Nam Ngao, with generating capacities of 240 and 140 megawatts respectively. Although construction has not started yet, Mae Lamaluang and Nam Ngao dams have been included as part of the plan to divert water from the Salween River basin.

Thailand, Burma and Japan have proposed three dams on the Moei River where it forms the Thai-Burmese border. EPDC has conducted feasibility studies. Two more dam projects have been proposed on the Mae Kok and Mae Sai Rivers in Shan State in Burma, and in early 2004, Thailand and Burma signed a memorandum of understanding to jointly conduct feasibility studies of these dams. In addition, the Klong Kra dam has been proposed on the Kra River near Ranong in southern Thailand.

This means that once construction of these dams starts, it will give the Thai government more leverage to proceed with the water diversion projects. Chapter 6 describes the water diversion projects in detail.

Our Challenge

The Salween River is the longest major river in Southeast Asia that still runs free of dams, and plays a vitally important role in sustaining the livelihood of various local ethnic groups. All concerned parties must be aware of the significance of the river for the livelihood of local communities. Any decision-making concerning the projects that might affect the future of people and the

Introduction

river must take into account the sustainability of local communities' livelihoods.

There is an urgent need for concerned people to speak out, as local potentially-affected people face dangers if they choose to protest these disastrous projects. This danger is especially likely in Burma, where opponents of the dams inevitably will face a number of major challenges because dissidence is met with fierce and often fatal retaliation. Those who are able to express concerns, including indigenous communities and international NGOs working outside of Burma, therefore should challenge these projects. This challenge is likely to appeal to the deepest conscience of governments, financial institutions, the Thai public and concerned parties around the world. By encouraging the disengagement from any dam project on the Salween, we can help prevent a tragedy from unfolding, affecting our brothers and sisters in Burma's Shan, Karenni, Karen, and Mon States.

¹ See, e.g., the Nujiang River Sentiment at: <http://www.nujiang.ngo.cn/>.

² One megawatt is one million watts, or 1,000 kilowatts. One megawatt is sufficient power to light 10,000 100-watt bulbs, or enough electricity for about 3,000 households in an industrialized country. IFE Glossary, University of California, Berkeley, at: <http://www.nuc.berkeley.edu/thyd/icf/glossary.html>.

³ EPDC changed its name in March 2002 to "J-Power".

⁴ JICA administers technical assistance projects funded by Japan's Official Development Assistance (ODA). For more information, see: <http://www.jica.go.jp>.

CHAPTER 1

Livelihoods and Ecosystems along the Salween



Livelihoods and Ecosystems

The Salween River begins its journey at 4,000 meters above sea level, high on the Tibetan Plateau in the Himalayas. It runs through the mountains of Yunnan Province in China, passing through Shan and Karenni States in eastern Burma before forming the border between Burma (Karen State) and Thailand (Mae Hong Son Province) for about 120 kilometers. It continues south through Burma, meeting the Moei River in the Dawna Range before reaching the Andaman Sea in the Gulf of Martaban at Moulmein, Mon State. The total length of the Salween is approximately 2,800 kilometers. An international river, in Southeast Asia its length is second only to the Mekong River.

The Salween River basin covers 320,000 square kilometers, and the watershed area is located in China (53%), Burma (42%), and Thailand (5%). From the Himalayas to the Gulf of Martaban, the river is an integral part of the livelihoods and cultures of the ethnic peoples who live in the basin, which has one of the most diverse concentrations of such peoples in the world. At least 13 different groups live in the valleys and floodplain areas along the river and its tributaries in Burma and Thailand, including the Shan, Wa, Karenni, Pa-O, Palaung, Mon, Lahu, Padaung, Akha, and Lisu. Other ethnic peoples live along the river in China. As it travels its long journey, the river takes on as many names as the peoples it meets. It is called Nu Jiang (Nu River) in Chinese, Nam Khong (Khong River) in Shan, and Thanlwin in Burmese. “Thanlwin” was pronounced “Salween” by the British, and this name in English remains today.

The most populated section of the river basin is the fertile floodplain area in the delta that covers thousands of acres at the mouth of the river. There, most people tend paddy fields in the rainy season and vegetable gardens on the river bank in the dry season. They also fish all year round.

The Salween River basin area is an ecologically and culturally rich zone. UNESCO has designated as a World Heritage Site the area where the upper reaches of the Yangtze, Mekong and Salween run roughly parallel through the mountainous north-west of Yunnan Province in China. The rivers run through steep gorges which are 3,000 meters deep in some places and are bordered by glaciated peaks more than 6,000 meters high. According to UNESCO, the site is one of the richest temperate regions of the world in terms of biodiversity. The Thai government, too, designated the stretch of forest along the Salween

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River on the Thai-Burmese border as an important international wetland in 2000.

Thai villagers along the Salween River in Thailand and Burma say that there are about one hundred species of fish that migrate between the Salween and its tributaries. These fish are an important food source for people in Thailand as well as in Karen, Karenni, Mon, and Shan States of Burma. One of the best known fish species is the fish called “Pla Tu Na” or “Pla Sa Ngae” in Thai. This fish lays its eggs in the deep water of the Indian Ocean before migrating to the tributaries of the Salween, including the Pai, Yuam and Ngao Rivers.

The forest along the Salween River on the Thai-Burmese border lies on a biogeographic border that is rich in biodiversity. The Indo-Chinese sub-region meets the Sino-Himalayan (Indian) sub-region in the forest, so that in this area one may find plant and animal species that are similar to those found in the Himalayas and northern India, as well as those found in Indochina.

Not only is the Salween River basin abundant with wildlife and fish, but ecologists have identified the basin in Thailand and Burma as one of the world’s most fertile areas for teak. Teak forests in this area grow in great density along the river, making it different from the teak forests in other parts of Southeast Asia, which grow in smaller patches. The forest upstream and downstream from the proposed Tasang dam site is one of the last remaining stretches of forest in Shan State. Companies owned by high-ranking members of the Burmese military and Wa drug lords already are logging and destroying much of the forests in Shan State. Construction of the dam would only accelerate this deforestation.

The Salween River basin in Thailand and Burma is also an important historical area. Archeologists have found evidence of unique pre-historic artifacts that shed light on the origin and development of communities in Southeast Asia. Perhaps the best known site where such evidence has been found is the “Spirit Cave” in the mountainous area of Mae Hong Son Province in Thailand.



The “first bend” in the Nu Jiang (Salween), Yunnan, China. This area is designated as a UNESCO World Heritage Site. Photo: Salween Watch



The Salween forms the border between Burma and Thailand for about 120 kilometers. This area is slated for two dam sites (See Chapter 5). Photo: SEARIN



Paddy fields near Hpa-an, Karen State. Photo: Salween Watch



Fishing near the Thai-Burmese border. Photo: SEARIN



Biodiversity of the Salween includes not only the riverine forest ecosystems, but also the diverse river ecosystem itself. The Thai government has declared the area where the Salween represents the border between Thailand and Burma a protected international wetland. Photo: KESAN



Women buy and sell various fish from the Salween at a village market in Shan State. Photo: Salween Watch

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The Tasang, Wei Gyi and Dagwin dams, if built, would inundate a large expanse of forests that are rich in biodiversity and crucial to the livelihoods of local ethnic peoples. Forest cover on both sides of the Salween in Thailand and Burma is already threatened by legal and illegal logging. Some of the forests on the Thai side are now protected, but they would be permanently destroyed by floods and other impacts if construction of the Wei Gyi and Dagwin dams proceeds. The construction of the dams would destroy not only the forests, but also the section of the river basin declared as a protected international wetland by the Thai government. Further, the Wei Gyi Dam would inundate the Salween Wildlife Sanctuary, while the Dagwin Dam would flood the Salween National Park. Forests in Karen and Karenni States, which are also fertile land for teak, would also be submerged.

CHAPTER 2

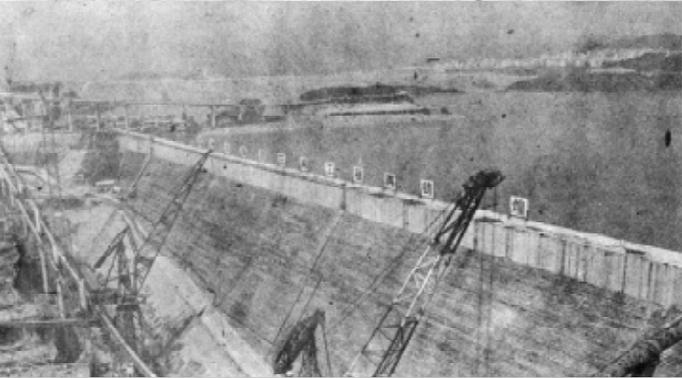
Politics Behind Dam Building

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Prime Minister General Khin Nyunt visits Three Gorges Dam in China

*Prime Minister General Khin Nyunt
on 14 July observes the
Three Gorges Dam Project being
implemented on
Yangtze River. - MNA*

Politics Behind Dam Building

“I have promised myself to see the Salween hydroelectric project realized while I am the EGAT Governor. The project is so huge that I might not have another opportunity to be part of it.”⁵

– Sitthiporn Rattanopas, former EGAT Governor, 2003

Dams as a Mark of Civilization and National Power

Large dam construction throughout the world has historically been linked with the aspiration to overcome the challenge of altering the flow of great rivers by construction and engineering, using state-of-the-art technology and mobilizing a huge amount of resources. Both engineers and national leaders have reveled in accomplishing these projects.

All over the world, many of the dams built during the colonial period were closely connected with the exploitation of resources used in European countries. For example, dams in South Asia and Africa were built for the benefit of farmers who could grow high-value crops that could be exported to Europe.⁶ Once the colonized nations gained independence, dams became tools for their own nation-state building. After the collapse of colonialism, the leaders of new independent nations claimed that dams were “symbols of liberty and progress.” A country with dams was considered “civilized”; having dams was on a par with having national stadiums, convention halls, or national airlines. Nehru of India compared dams to “modern temples,” while Nasser of Egypt compared the construction of the enormous Aswan High Dam on the Nile River to the construction of the pyramids.

Dam construction was also perpetuated in order to show the greatness of countries in the Cold War period, during which dams were built in many countries in order to demonstrate their engineering capability. This competitiveness among dam builders was so prevalent that when American engineers planned a large dam on the Mekong River on the Thai-Lao border, they initially aspired to make it twice as large as the Hoover Dam on the Colorado River in the United States.

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In recent years we have seen failures of many dam projects, as described in the 2000 report by the World Commission on Dams.⁷ This report showed that large dams often render fewer benefits than are promised by their proponents, and cause irreversible destruction of the environment and livelihoods. And while the major burdens of construction of large dams are generally borne by the poor, builders of the dams always enjoy the profits of the venture regardless of whether the dams serve their stated purpose.

Vested Business Interests behind the Promise of “Cheap Electricity”

“The River Quae Yai (Kwai) -- over which a bridge was once built for war -- now has a project to build a dam over the river, to promise peace.”
- EPDC brochure, 1980

In the decades since the world was ushered into the modern age of large dams, many dams have been constructed in the name of social welfare. In Thailand, for example, EGAT has promoted the dam projects on the Salween River as a new source of “cheap electricity” for Thai people. When one takes a step back and examines the background of the projects, however, one finds that motivations behind the dam plans in fact are often far removed from promoting social welfare, and that electricity generated by these prospective dams will not really be “cheap.”

The history of dam planning in the Salween River basin reflects the appetite of the construction and energy industries around the world. Indeed, dam planning in the Salween River basin seems to have been motivated more by business interests than by genuine concerns for social welfare. Hydro-power developers and dam builders from Japan, considered to be a dam superpower in Asia, have shown a particular interest in this regard.

Japan became involved in dam construction in the Salween River basin soon after World War II. The Japanese government was required to pay war reparations to Burma, and some of the reparations took the form of development aid for dam construction. Japanese business interests scouted

Profitability of dams on the Salween

An EGAT document dated February 12, 2003 to Thailand's Senate Committee on Foreign Affairs stated that the development of hydro-power dams on the Salween River on the Thai-Burmese border would "provide Thailand with a cheap power supply of 0.90 baht/unit" and that it would "help the country save 30 billion baht (about \$736 million) per year for at least 50 years." But is the electricity really so cheap?

Dam construction involves many factors that are not incorporated into the official calculation of costs, such as the risk to people's lives or to the environment. With the dams on the Salween River, people in Burma will likely be more vulnerable to human rights abuses. The social and cultural losses suffered by the diverse ethnic communities, as well as losses in environmental and historical resources, are all factors yet to be included in the investment costs of the dams. In addition, while financial costs for dam construction will create public debts to be repaid by Thai taxpayers, profits from energy production and sales will go to EGAT. Thus it is not a surprise that EGAT has promoted the construction of large hydro-power dams and plants, regardless of the negative impacts caused or whether the dams will operate efficiently.

out land for dam construction for which the Japanese government could provide bilateral development aid. The involvement of Nippon Koei in the construction of Baluchaung Hydro-power Plant No. 2 in Burma is an example of how Japanese business interests were behind the rush to dam in Southeast Asia .

Other companies started to follow Nippon Koei's example of using Japan's development aid to developing countries. They eagerly staked out sites for hydro-power development so that they might receive contracts for construction of or provision of equipment for projects funded by Japan's Official Development Assistance (ODA). Thus Japan's ODA began to benefit Japanese business interests. Japan claims that the aid represents both the Japanese government's and the recipient countries' interests, but too often

Nippon Koei and the Baluchaung hydro-power project

Nippon Koei was founded in 1947 by Yutaka Kubota, who was involved in the construction of several large dams in Asia, particularly in Manchuria under the occupation of Japanese troops before WWII. Initially, Nippon Koei focused on domestic projects in Japan. In 1953-54, however, Kubota traveled to different countries in Asia, including Burma, Vietnam, Laos and Indonesia, to scout out sites for hydro-power development.⁸ In Burma, he met with high-ranking officers of the Burmese government and proposed building a hydro-power plant on the Balu River (Baluchaung), a tributary of the Pawn River, which in turn is one of the largest tributaries of the Salween River. After the meeting, Nippon Koei conducted a feasibility study and submitted a project proposal to the Burmese government. The Burmese government could not afford the budget, but utilizing his connections with high-ranking politicians, Kubota proposed this project to the Prime Minister of Japan at that time, claiming that this project would benefit Japan's industry. Following the advice of Kubota, the Japanese government swiftly approved a budget for the construction of the power plant in 1954 as part of the war reparations budget. With a recommendation from Kubota, Kajima Corporation, a major general contractor in Japan, won the contract to build the power plant.

the dams built by ODA have proven to benefit only the builders.⁹

Japan's involvement in the Salween River basin did not stop.¹⁰ EPDC, which at that time was owned partially by the Japanese government,¹¹ developed plans for hydro-power projects in the Yuam River basin and identified ten potential sites where dams could be built, such as Mae Lamaluang and Nam Ngao. In the 1980s, EPDC also studied eight potential dam sites on rivers that border Thailand and Burma, including Wei Gyi and Dagwin.¹² In the early 1990s, Japan's NEWJEC carried out studies on water diversion from the Salween into the Chao Phraya River basin, with support from the World Bank.

Politics Behind Dam Building

Besides Japan, business interests from other countries also have been interested in large-scale projects in the Salween River basin. For example, Lahmeyer International, a consulting firm in Germany, conducted a pre-feasibility study of the dam at Tasang. In addition, Chinese business interests are prominently emerging as players in the hydro-power development of the Salween. It was reported in March 2003 that the president of a Chinese consortium that supplied machinery for the Three Gorges Dam in China met the Thai Minister of Energy and proposed a joint investment for the Wei Gyi and Dagwin dams.¹³

Thai companies also play a large role in promoting dam building in the Salween River basin. MDX is involved in developing the Tasang site in Shan State in Burma, and the World Impact Company is studying the dam site in Shan State, opposite to Wiang Haeng District in Chiang Mai Province. Meanwhile, EGAT is expanding into a major energy enterprise in the region and has been promoting dam construction in neighboring countries. Publicly, EGAT has stated that the construction of the Wei Gyi and Dagwin dams would be a boost to the declining Thai economy. One of the main arguments put forward by the government in support of the privatization of EGAT is that funds could be raised from the stock market to invest in capital intensive projects such as the Wei Gyi and Dagwin dams.¹⁴

Regional motives: The GMS and ASEAN power grids

“The dream of the ASEAN power grid cannot be realized without the Upper and Lower Salween dams.”¹⁵

– Sitthiporn Rattanopas, former EGAT Governor, 2003

Tasang, Wei Gyi and Dagwin dams are incorporated in regional power interconnection plans for Southeast Asia. Tasang is part of the planned power interconnection in the Greater Mekong Subregion, commonly called the Mekong Power Grid. The Mekong Power Grid is part of the Greater Mekong Subregion (GMS) economic cooperation program, which is strongly promoted and supported by the Asian Development Bank (ADB),¹⁶ where Japan and the United States are the two biggest shareholders. Broadly put, under the Mekong

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Power Grid plan, electricity generated by large-scale hydro-power plants in China, Laos, and Burma will be exported and consumed in Thailand and Vietnam. Almost all of the electricity from Tasang will be transported and integrated into Thailand's national power grid.

The ASEAN power grid plan is another power interconnection plan that encompasses mainland Southeast Asia. This power grid is larger in scale than the Mekong Power Grid, covering all the ten ASEAN countries. Since 2003, the Wei Gyi and Dagwin dam projects on the Thai-Burmese border have been promoted intensively by dam builders as being key to the success of the ASEAN power grid system. As with the Mekong Power Grid, the ASEAN power grid will have Thailand purchasing energy from surrounding countries.

Both of the grids are heavily dependant on centralization of energy control and large-scale hydropower dams. The grid plans are not supported by compelling financial and technical arguments and entirely externalizes environmental and social costs of building many large dams.¹⁷ Under such a system, energy monopolists would reap the benefits, but it is doubtful whether Thai energy consumers would actually benefit from the purchase of electricity from the dams on the Salween River.

⁵ *Bangkok Post*, April 9, 2003. Sitthiporn is referring to the Wei Gyi and Dagwin dams on the Thai-Burmese border.

⁶ McCully, P. (2001) *Silenced Rivers: The Ecology and Politics of Large Dams*, Enlarged and Updated Edition [hereinafter McCully], at 18.

⁷ *Dams and Development: A New Framework for Decision-making*, The Report of the World Commission on Dams (2000) [hereinafter WCD].

Politics Behind Dam Building

⁸The dams that Nippon Koei constructed include Asahan dam in Indonesia, Highland Lesotho dam in Africa, Nam Nguem dam in Laos, and Kulekhani dam in Nepal. Among these projects, the most scandalous was the construction of Asahan dam in Indonesia. Most of the electricity that the dam generates is used to serve a refinement factory that produces aluminum for export to Japan. The Asahan dam was also considered the most corrupt development project in Indonesia due to the collusion of Japanese businesses and Indonesia's former dictator Suharto. Pardy, R. et al (1978) *Purari: Overpowering PNG? International Development Action for Purari Action Group*, Victoria, Australia.

⁹ One striking example of this is the Srinagarind Dam on the Kwai River basin in Kanchanaburi, Thailand, for which EPDC conducted feasibility studies and the World Bank provided loans. Most of the construction and machinery were undertaken and supplied by Japanese companies, such as Toyo Menka, Marubeni, Nissho Iwai, Sumitomo Koshi, and Nippon Kokan. The budget for the dam was approved at 1.8 billion baht (about \$45 million), but the actual expenditure rose to 4.623 billion baht (about \$114 million). The additional funding was necessary to strengthen the foundation of the dam, which was built on an active fault line. The Srinagarind Dam proved to be a total economic failure. Despite this, EPDC was again hired as a consultant for the construction of the Tha Tung Na dam, a run-off dam of Srinagarind.

¹⁰ Among different types of Japanese ODA, technical assistance, which is often used for conducting studies of potential hydro-power development, is implemented through JICA. In Thailand, JICA is perhaps the most visible Japanese development aid agency for large-scale dams and infrastructure projects. This has been particularly true since the role of the United States in the region declined after the close of the war in Vietnam. In the Salween River basin, JICA has carried out studies of many potential dam sites, including ten sites on the Yuam River, a tributary of the Salween in Thailand.

¹¹ As explained in Footnote 3 in the Introduction, EPDC changed its name in March 2002 to "J-Power".

¹² In Thailand, EPDC has played a major role in the construction of large dams compared to consultancy firms from other industrial nations. EPDC was involved in the construction of Nam Pung, Sirindhorn, Nam Prom (Chulabhorn), Huay Kum, Srinagarind, and Tha Tung Na dams. It also conducted feasibility studies for several other projects that are yet to be implemented. EPDC's most recent project was the Lam Takhong pump storage hydro-power project. The budget approved for this project was more than 20 billion baht (about \$500 million). Although construction has been completed, the plant has yet to generate any electricity.

¹³ *Krungthep Thurikit*, March 20, 2003.

¹⁴ *Bangkok Post*, February 13, 2003.

¹⁵ *Bangkok Post*, April 9, 2003

¹⁶ Cambodia, Yunnan Province of China, Burma, Laos, Thailand, and Vietnam are in the GMS program. The ADB claims that the program will facilitate cross-border trade and investment and promote regional economic integration, which in turn will eradicate poverty in the region.

¹⁷ The Financial Times called the ASEAN grid plan "now in effect dead," quoting regional experts as saying that "carrying electricity over very long distances will not be financially viable." "Cost kills Asia's vision of energy sharing," *Financial Times*, February 5, 2004. See also *Trading Away the Future: The Mekong Power Grid*, International Rivers Network (2003).

CHAPTER 3

Conditions in Burma



Conditions in Burma

Destruction of forests and historic sites are not the only prospective negative impacts that construction of dams on the Salween River will have. In Burma, there is no rule of law, no opportunity for local people to participate in decision-making about these dams, and intimidation and suppression of opposition are widespread. Consequently, major construction projects such as large dam building almost certainly would lead to severe human rights abuses, including forced relocation and forced labor.

Burma's military regime has one of the worst records of human rights violations in the world. The regime, which calls itself the State Peace and Development Council (SPDC), has committed all conceivable forms of human rights abuses against its own people, from suppression of political rights, torture, extrajudicial killings, and forced relocation of rural villagers, to forced labor and forced portering of ammunition and food supplies for the military. People also are used as human shields or minesweepers during active combat against various armed ethnic groups.

In Burma, an increase in military deployment in an area leads directly to an increase in human rights violations. This increase has been seen in particular at locations of large development projects such as roads, gas pipelines, and dams, where troops are brought in to "secure" the area for the construction. Not surprisingly, the authorities never consult the local communities or disclose the possible impacts of the projects. Rather, local people are threatened into accepting such projects.

Forced Relocation

The Burmese military regime has conducted systematic forced relocation of people who live in ethnic minority areas of the country. Under such relocation programs, people from remote villages are moved by force into military-controlled resettlement sites. The villagers must abandon their cultivation fields and occupations with little advance notice, often at gun point and without any compensation. Once relocated, they cannot return to their villages or work in their fields. Resettled villagers live under tight military control and are often forced to work for the Burmese troops. Some resettlement sites

The Salween Under Threat

resemble slave labor camps where residents are forced to work on projects that provide convenient living support and income for the Burmese army.

The hydro-power projects on the Salween River almost certainly would increase and intensify the suffering of a large number of ethnic peoples. Conveniently, the designated project sites have been subject to a massive forced relocation program implemented by the military regime. When completed, the gigantic hydro-power dams will make it impossible for local people to return to their homes and to use their land and water resources. This may compel even more people to flee to Thailand or become internally displaced persons in Burma.

The Burmese military regime's systematic practice of forced relocation already has generated a massive flow of refugees into Thailand, as well as an equally large number of internally displaced persons. As of February 2004, about 142,000 people are living in camps on the Thai-Burmese border.¹⁸ This figure includes Karen and Karenni refugees in camps in Mae Hong Son and Tak Provinces. It does not, however, include the large number of Shan refugees for whom the Thai government has refused to establish refugee camps. Because of this, more than 200,000 Shan refugees have taken refuge in makeshift shelters along the rugged Thai-Burmese border in Chiang Rai, Chiang Mai and Mae Hong Son Provinces, or have entered Thailand to work as migrant laborers, often illegally.¹⁹

In its September 2002 report, the Burmese Border Consortium gave the following figures of internally displaced persons in Shan, Karenni, and Karen States, where systematic forced relocation campaigns were conducted. (See Table: Internally Displaced People in Shan, Karenni and Karen State).

Forced Labor

*"I helped construct a building near the dam site for the soldiers... I received no payment for my work, and I did not want to do the work. But I knew that if I refused, I would be arrested."*²⁰– Shan villager, 2001

Conditions in Burma

Internally Displaced People in Shan, Karenni and Karen States			
	Number living in military-controlled resettlement sites	Number of internally displaced persons	Total number of displaced people
Central Shan State	200,000	Approx. 75,000	Approx. 275,000
Karen State	99,765	96,469	196,234
Karenni State	6,850	Approx. 50,000	Approx. 56,850

“[I]t appeared that forced labor was used by the government [of Burma] in relation to...projects and public works such as dams...” ²¹

– International Labour Organization, 1999

As documented by the International Labour Organization (ILO) and many human rights groups, forced labor in Burma has been practiced widely in a brutal and systematic manner. The Burmese military regime is notorious for using forced labor and violence in connection with their development projects. Given its record, it is expected that the regime will use forced labor in the hydro-power projects on the Salween River. The Burmese troops deployed to the project sites are likely to forcibly conscript local people for portering and other forms of labor.

The ILO has recommended that its member governments, employers and workers review their relationship with Burma and take appropriate measures to ensure that the Burmese regime cannot take advantage of such relationships to perpetuate forced labor. Those interested in partnering with the Burmese junta in construction of the dams on the Salween River should take into account the ILO recommendation and not proceed with the projects until the situation of forced labor in the country improves.

Rape of Ethnic Women



According to the report “*Licence to Rape: The Burmese military regime’s use of sexual violence in the ongoing war in Shan State*,” between 1996 and 2001, at least 625 Shan women were raped by Burmese soldiers in Shan State, mostly in the central area, which includes Tasang.²² Only one rapist was punished. Similarly, in its 2003 report, Refugees International released findings from interviews with 27 women of Karen, Karenni, Mon and Tavoyan ethnic groups.²³ The women disclosed that they had been raped or sexually assaulted by Burmese soldiers or officers and knew of 43 other cases of

rape or attempted rape against women from different ethnic groups. Only two of the perpetrators were punished: one was charged 1,000 kyat (about one U.S. dollar) and another was arrested. The report asserted that rape and increased militarization are closely connected; when more soldiers are deployed in an area, more incidents of rape and violence against ethnic women take place. If development of dams on the Salween proceeds, the Burmese army almost certainly would send more soldiers to the project areas, and more sexual violence and other human rights abuses against ethnic women in Shan, Karenni and Karen States are likely to occur.

Environmental and Cultural Destruction

“The Salween River sustains the rainforest that supports the survival of different kinds of animals. The forest not only protects us from natural disaster and climate change but also provides cool shelter for people and animals.”²⁴ – Shan woman refugee, 2000

“Large dams generally have a range of extensive impacts on rivers, watersheds and aquatic ecosystems- these impacts are more negative than positive and, in many cases, have led to irreversible loss of species and ecosystems.”²⁵ – World Commission on Dams, 2000



These two women, living as IDPs in Shan State, come out from their hiding place to fetch water from the Pang River. Photo: SHRF



These IDP children's games reflect their dreams of having real homes. Photo: ERI



Victims of Burmese relocation inside Karen State near the area of the Salween dam project sites. These IDPs are not officially considered affected by the impacts of the dam projects.
Photo: Free Burma Rangers



The items in this picture are the only remaining belongings of this IDP family in Karen State.
Photo: Images Asia

Conditions in Burma

The Salween River flows through the heart of Shan, Karenni, Karen, and Mon States, and is the lifeline of people living along it. It is the source of great biodiversity, is vital for much farming and fishing, and contributes to the cultural richness of different ethnic groups. Hydro-power dams on the river would destroy the ecosystem and biodiversity downstream and upstream of the dams. Because the dams would block the flow of the river, the amount of nutrients carried by the water would decrease and the fertility of soil would diminish. The dams also would contribute to the destruction of river banks and to build-up of sediment at the bottom of reservoir beds. Dam-related reservoirs would spur the spread of diseases and destroy forests. The enormous volume of water in the reservoirs might become a high-risk factor for earthquakes. Such physical destruction would directly harm the local societies and cultures that are founded on the Salween ecosystem.

No Public Participation

*“The Tasang Dam in Shan State represents an extreme case of lack of public participation. The military junta’s record on this issue is consistent. They will abuse or kill anyone who dissents.”*²⁶

– Sai Win Pay, elected exiled Member of Parliament from Shan State, 2000

Under the authoritarian Burmese regime, genuine public participation in decision-making processes on development projects with possible negative impacts on the environment simply does not exist. The military regime holds absolute power and typically makes its decisions in a non-transparent and arbitrary fashion. Opponents of development projects do not dare speak out for fear of serious repercussions. Measures to protect the environment are non-existent or very weak, and citizens have no opportunity to file legal claims to seek compensation for damage and loss caused by development projects.

Dismal Record: Development Projects in Ethnic Areas

Large development projects often have extensive adverse impacts on surrounding communities and the environment. Because of the situation in

The Salween Under Threat

Burma described above, large development projects conducted in Burma cause even more severe harms. The Yadana and Yetagun natural gas pipeline projects, the largest foreign investment projects in Burma to date, provide an example of how development projects led to massive human rights abuses and environmental destruction, while bringing no benefit to the local population.

Yadana and Yetagun gas pipelines ²⁷

The Yadana and Yetagun pipelines were built to transport natural gas from offshore fields in the Andaman Sea, cutting across an area of pristine jungles and forests where indigenous peoples live in southern Burma and into Thailand. The project was implemented by a joint venture formed by western oil companies (TotalFinaElf, Unocal, and Premier Oil) and the Burmese military regime. The region along the pipeline route previously had little contact with the Burmese army, but the project brought about increased militarization of the region. The military first secured the region by forcibly relocating villages before work on the pipelines began. As additional troops were brought into the area, local Karen, Mon and Tavoyan villagers were forced to carry arms and supplies for soldiers patrolling in the pipeline areas, work on the construction of service roads and helipads, and set up camps and barracks for the troops. Women were raped. The project also has had significant negative impacts on the surrounding ecosystem, including forests and dozens of endangered species. Although the pipelines are now completed, civilians continue to be conscripted for forced labor by pipeline security forces.

The pipeline projects supply gas to a power plant in Thailand. Although Thailand currently has an energy surplus, under the contracts it still must pay for the gas at a price substantially above market value. Profit from this project enabled the Burmese army to obtain Mig 29 fighter jets from Russia.²⁸



Photo: ERI

Baluchaung Hydro-power Plants

The development of the dam and power plants on the Balu River, or Baluchaung, in Karenni State provide an insight into how the dam projects on the Salween River may be implemented. As discussed in greater detail below, over the past four decades, the local Karenni people have been affected by the development of the dam and power plants, and it is not clear when the suffering will end. From the very start, local people neither have been consulted nor have participated in the decision-making process. Local people have been forced to leave their land, work as slave laborers for the Burmese military, risk being landmine victims, and have been left with scarcity of water because of the project. Meanwhile, the electricity produced by the project has been for the benefit of urban centers.

The Baluchaung is a tributary of the Pawn River, which in turn is a major tributary of the Salween River. Baluchaung flows through Loikaw, the capital of Karenni State in Burma. The dam on the Baluchaung, officially named Mawbye Dam, is located on the border of Karenni and Shan States. The flood area of the dam, however, is almost entirely in Shan State.

The project is comprised of one large dam and two power plants, No. 1 and No. 2. The feasibility study of the plants was started soon after the end of World War II by Nippon Koei of Japan (see Chapter 1). Work began first on Plant No. 2, which was completed in 1960, with the cost completely funded by the Japanese government as part of World War II reparations. Plant No. 1, which was also funded by Japanese ODA, was not completed until 1992. Electricity generated from the plants serves cities such as Rangoon and Mandalay. With the capacity to generate 12-17 percent of the country's power, the two plants together remain the largest source of electricity in Burma.

The local Karenni people never have participated in the decision-making process of the power plant project. Nor has the majority of local people

Baluchaung Hydro-power Plants

had any access to power generated from the plants. Rather, since the beginning of the development of plant No. 2, thousands of Karenni and Shan people have lost their homes, land, livelihood and lives to the construction and operation of the dams and power plants. About 114 villages, or nearly 1,740 people, were relocated without any compensation out of the Mawbye Dam site before the end of 1969.²⁹ According to local sources, in 1972 the filling of the dam's reservoir caused displacement of over 8,000 families around Pekon Township in Shan State.³⁰ In 1990, 745 people from five different villages in Loikaw Township lost their homes and were moved to villages north of the town of Loikaw in preparation for the construction of plant No. 1.³¹ The designated sites where the people had to move to were not suitable for farming, and it was difficult to find food in nearby forests. After being uprooted from their homes, however, people were restricted in their freedom of movement.

Much forced labor was used in connection with the construction and maintenance of the Baluchaung power plants. Local people were made to clear canals, build fences around military units or camps guarding the plants, and to guard the power pylons. Forced labor continues today. Local people must serve as porters and provide labor for military units posted around the power plants. There also are reports of illegal detentions and torture to gain information about the movement around the plants of the Karenni National Progressive Party (KNPP), the resistance group active in the area. In addition, the Burmese military established a new headquarters north of Loikaw in September 2000, and Karenni people have been forced to work for this new military camp.

Further, due to its location in a highly militarized conflict area, the Burmese military has laid a large number of land mines around the Baluchaung-related dam and plants to prevent attacks from insurgency groups, especially in Loikaw. An unknown number of deaths, injuries, loss of livestock and farm land have resulted from this effort to secure the area.

Moreover, the construction of Mawbye Dam and the massive deforestation in the Shan Plateau upstream of the Baluchaung have caused Karenni farmers around Loikaw to be faced with scarcity of water for their farmland. The military government has made it clear that during times of drought, water must be prioritized for the hydro-power plant and agricultural water use would be restricted. In 1998-99, a major drought resulted in severe difficulties for Karenni farmers.³² Because of the forced relocations and other restrictions placed on their living conditions, thousands of Karenni villagers have become internally displaced persons, and thousands of others have fled to take refuge in camps in Thailand.

In May 2002, the Japanese government decided to extend a grant to the Burmese military regime to rehabilitate Baluchaung hydro-power plant No. 2. The grant, which the Japanese government planned to extend as humanitarian assistance, amounted to 628 million yen (about \$5.8 million). This rehabilitation almost certainly will lead to yet another increase in the number of troops, and in turn to more forced relocation, use of land mines, and forced labor.



The Salween Under Threat

The experiences regarding Yadana and Yetagun, as well as Baluchaung, are clear and disturbing indications of the problems that are likely to result from hydro-power development on the Salween River. The financial scale of the dam projects on the Salween River likely would be larger than that of the Yadana and Yetagun projects. As long as the political and humanitarian situation in Burma remains unchanged, it is probable that the Salween dam projects would inflict the worst human tragedy for local people, many of whom are of ethnic nationalities, in the history of Burma's development.

¹⁸ *Out of Sight, Out of Mind: New Thai Policy toward Burmese Refugees and Migrants*, Human Rights Watch (2004) [hereinafter HRW].

¹⁹ HRW.

²⁰ *Fatally Flawed: The Tasang Dam on the Salween River*, EarthRights International (2001) [hereinafter *Fatally Flawed*].

²¹ *Fatally Flawed*.

²² *Licence to Rape: The Burmese military regime's use of sexual violence in the ongoing war in Shan State*, Shan Women's Action Network and Shan Human Rights Foundation (2002) [hereinafter "Licence to Rape"].

²³ *No Safe Place: Burma's Army and the Rape of Ethnic Women*, Refugees International (2003).

²⁴ *Fatally Flawed*.

²⁵ WCD.

²⁶ *Fatally Flawed*.

²⁷ See generally *Total Denial Continues: Earth Rights Abuses along the Yadana and Yetagun Pipelines in Burma*, EarthRights International (2000).

²⁸ In July 2001, Burma bought ten MiG-29 fighter jets from Russia for \$130 million. The down payment of \$40 million was transferred in the same week that Burma received its initial share of royalties (approximately \$100 million) from Thailand for gas from the Yadana pipeline. Testimony of Stephen Dun, House International Relations Subcommittee on Terrorism, Nonproliferation and Human Rights and Subcommittee on Asia and The Pacific (October 1, 2003), citing the *Bangkok Post*, July 17, 2001.

²⁹ *Conflict and Displacement in Karenni: The Need for Considered Approaches*, Burma Ethnic Research Group (2000) [hereinafter BERG], 64-65.

³⁰ *Empowering Oppressors? The Sensitive Matter of Japanese ODA for a Power Plant in an Occupied Land – Restoring the Baluchaung Hydro-power Plants in Karenni State*, Burma, Images Asia and Karenni Evergreen, 2002, p. 26, citing an interview with Khun Marko Ban, a MP representing Pekon Township.

³¹ BERG, 64-65.

³² BERG, 71-73.

CHAPTER 4

Tasang Dam



Tasang Dam

*“If the dam is constructed blocking the river, not only will the Salween River stop flowing but so will Shan history. Our culture will disappear as our houses, temples and farms are flooded.”*³³ – Shan refugee, 2000

Although statistics are hard to come by, most estimates indicate that there are about 10 million people in Shan State, Burma. The majority of the population is Shan, but Palaung, Lahu, Lisu and many other ethnic groups also live in the state.

Tasang, a small ferry dock on the Salween in southern Shan State, has long served as one of the main crossing points on the river, as it links major roads leading to Murg Pan in the west and Murg Ton in the east. According to local people, if one travels to Tasang and looks up at the mountainside, one will see the likeness of an elephant’s head and trunk. Because of this, the mountain was called Loi Jang, or “Elephant Hill.” The ferry crossing at Tasang was therefore called Ta Jang, or “Elephant Dock.” The Burmese misspelled Ta Jang as Ta Sang, and so it is known by this name in English today.

The Salween is very wide at Tasang. During the rainy season the water becomes quite turbulent. When there is very heavy rain, this part of the river becomes a great whirlpool, similar to Wei Gyi further downstream (see Chapter 5). At times like this people would not cross the river by boat for fear of the turbulence. After a bridge at Tasang was completed in 1999, however, people began to use the bridge instead to cross the river. Various fees are extracted from vehicles crossing the bridge by the Burmese military and other officials stationed there.

Farmers and fisherfolk live along the Salween River and its many tributaries in Burma. The largest tributary to the Salween is the Pang River, which meets the Salween about 80 kilometers north of the Tasang dam site. The Pang River is very important for villagers in central Shan State. Until recently, about 60 communities lived on both sides of the Pang River in Kun Hing Township. The name Kun Hing comes from “Kun Heng,” which means “thousand islands” in Shan. Many villagers tended cows and buffaloes, and rice production was good on the islands as the land is very fertile. Most of these communities were Shan who had been there for generations.

The Salween Under Threat

Countless rapids in the Pang River are home and spawning ground for many fish, and villagers actually lived on many of the islands in the river. Fish from the Pang River are known throughout Shan State as being delicious. As well as selling their catch, people from Kun Hing Township would always bring fish and shrimp to their relatives who lived in other places. “There are many fish in the Pang River, so many that we cannot catch them all,” says one 60-year-old Shan man from Kun Hing. “Villagers fish in the river; it is very easy. During the rainy season when the water is very high, it floods into our paddy fields and fish from the river swim into our fields. We just use nets and catch fish this way right in our fields. The average weight of the fish we catch is 1.5-5 kilograms. Besides fish, there are shrimp and other aquatic life that we can catch.”

The Tasang Project

The prospective Tasang project consists of the building of upper and lower dams, with estimated total installed capacity of 3,300 megawatts. The dam site is about eight kilometers north of the Tasang bridge, east of Taunggyi, the capital of Shan State, and 130 kilometers from the northern Thai city of Chiang Mai. If constructed, the main dam would be one of the tallest dams in Southeast Asia, at an estimated minimum of 188 meters, and the reservoir would flood hundreds of square kilometers. The cost of construction is said to be at least three billion U.S. dollars.

The first study of the project was done in 1981 by Nippon Koei, the Japanese company that also developed the Baluchaung hydro-power project (see Chapter 2 and 3). In 1998, Thailand’s GMS Power Company and Myanmar Economic Corporation agreed to study the project. One year later, Lahmeyer International of Germany was commissioned to conduct a pre-feasibility study, and EPDC of Japan did a feasibility study after that. On December 20, 2002, MDX from Thailand signed a Memorandum of Understanding with the Burmese military regime to develop the project further. On the same day, a Thai company signed a contract with MDX to build a road from the bridge at Tasang up to the dam site. Soon after, Thai engineers and companies started traveling to the dam site.

Tasang Dam

Human Rights Violations in the Tasang Area

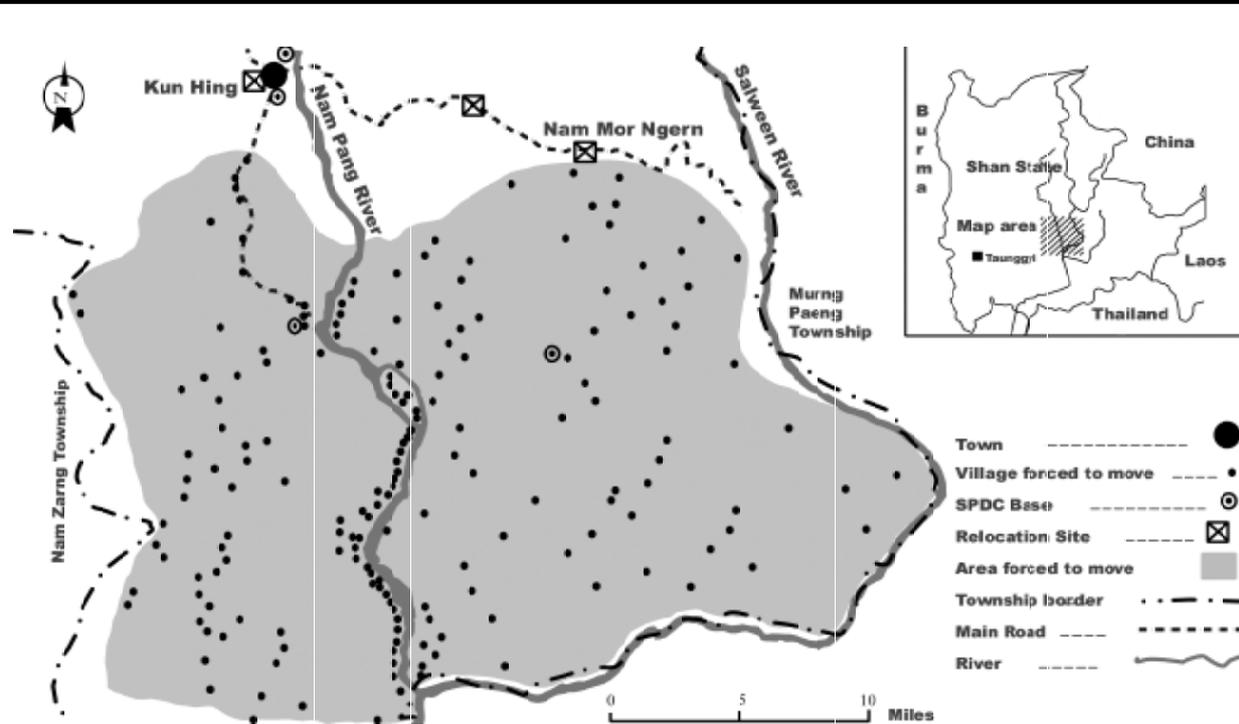
Beginning in March 1996, the Burmese military implemented a forced relocation program that continues today in Shan State. Under this program, villagers in central Shan State were forced out of their homes to move to relocation sites controlled by the Burmese military. The main objective of this program was to cut the lines of support to the Shan State Army (SSA), which is the armed ethnic group active in the area. Well over one thousand communities from eleven townships were forcibly relocated in 1996-98, often at extremely short notice. In just two years, 55,957 families, or about 300,000 people, were forcibly relocated. Out of this total number, at least 2,000 families were from the Pang River area, which would be flooded by the Tasang Dam reservoir.³⁴

Life in the relocation sites is difficult. The Burmese military does not provide relocated villagers with any assistance such as food or medicine, and they are not allowed to go back home to farm their old land. Many flee from the sites and live in the forest as internally displaced persons. These people depend on the forest and the river for survival. In 2003, it was estimated that among the 2,000 families relocated from communities along the Pang River, about 400 families were living in relocation sites in Kun Hing Township, about 600 families were internally displaced, living in the forest and on the islands in the Pang River, while about 1,000 families had fled to Thailand.

If the Tasang Dam is built, about fifty of the original communities and the forests along both sides of the lower Pang River would be flooded. This includes the areas where internally displaced people are living. If the dam is built, most of the 2,000 families that were relocated by the regime would have no chance to return to their homeland. Thus, the forced relocation program conveniently cleared out communities along the river so that if the dam is built, the military simply can say that no one is living in the area that will be flooded, thereby avoiding having to pay any compensation to those villagers who already were relocated.

According to Salween Watch, in December 2002 there were at least 17 Burmese military battalions in the areas adjoining the Tasang dam site.³⁵ Six

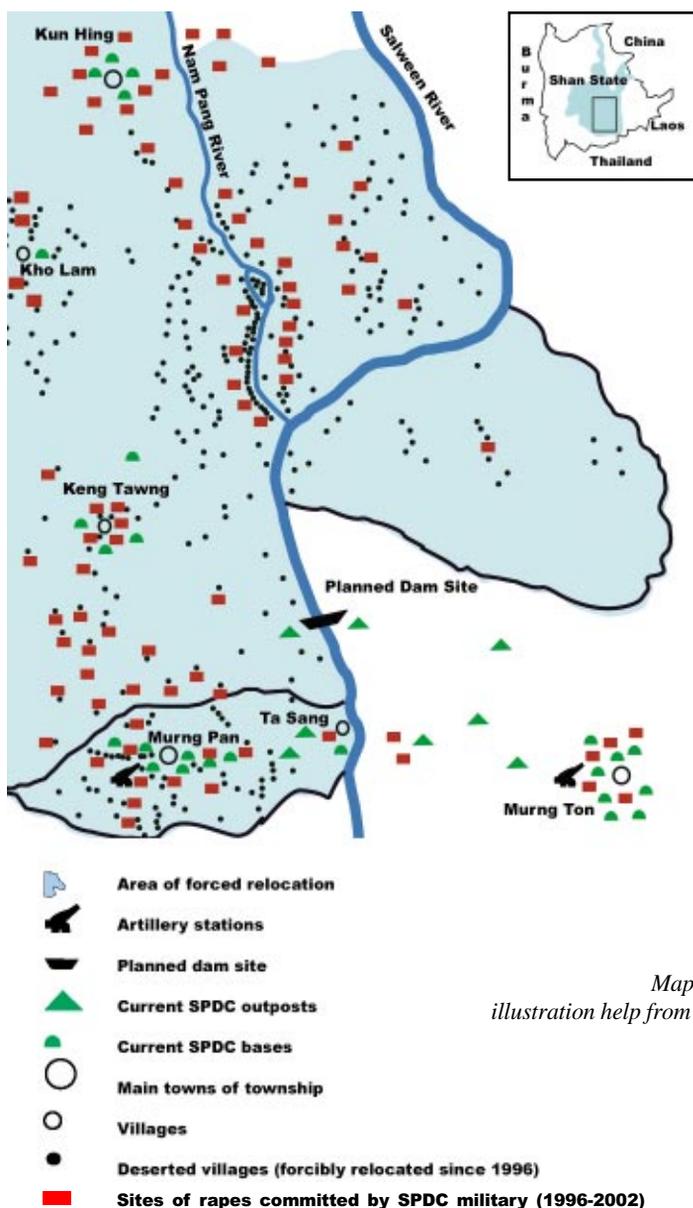
Villages Forcibly Relocated in Kun Hing Township (1996-1998)



Map: SHRF with illustration help from KESAN

Tasang Dam

Increased militarization and sexual violence around planned Salween dam site (1996-2002)



The Salween Under Threat

of them had moved into the area only one year before. Four battalions had also recently moved into Keng Tawng Township, northwest of the dam site, where previously there were no battalions. The Burmese military forced villagers to work for state and military projects, including building several new roads from Keng Tawng, setting up military camps, and portering supplies and ammunition for soldiers. If the Tasang project proceeds further, even more troops are likely to be deployed in the area, and many more villagers would be forced to work for them, and possibly on the dam project itself.

According to “*Licence to Rape*,” about 300 women have been raped in the area surrounding the Tasang Dam site and the area that will be flooded by the reservoir.³⁶ A 2002 report from the Shan Human Rights Foundation revealed that between February 27 and March 3, 2002, Burmese soldiers from Light Infantry Battalion (LIB) 519, which is in charge of the Tasang area, forced nine Shan women to work for them during the day and then raped them at night.³⁷

Torture and extrajudicial killing of local villagers by the Burmese military continues unabated in the Tasang area. According to Salween Watch, on September 24, 2002, Burmese soldiers from LIB 502 raped and killed three women and killed five men in Ton Kwaay village, which is fifteen kilometers west of the Tasang Bridge.³⁸ Probably the worst incident in the last five years happened in May 2000 in Kun Hing Township, when Burmese soldiers from Infantry Battalion 246 killed 64 men, women and children who lived near the Salween River.

³³ *Fatally Flawed*.

³⁴ *Mispossessed: A report on forced relocation and extrajudicial killings in Shan State, Burma*, Shan Human Rights Foundation (1998).

³⁵ *Salween Watch Update*, December 2002 (on file with authors).

³⁶ *Licence to Rape*.

³⁷ *Mothers of small children conscripted as porters, and raped, in Murng-nai*, Shan Human Rights Foundation Monthly Report (April 2002).

³⁸ *Salween Watch Update*, December 2002 (on file with authors).

CHAPTER 5

Wei Gyi and Dagwin Dams



Wei Gyi and Dagwin Dams

“We, all ethnic peoples in Burma, have always been oppressed by the Burmese regime and never feel free to speak, write or oppose any projects in our areas that will affect us. I know that Thai villagers will receive some compensation if the Wei Gyi dam affects their homeland, farmland and belongings, but there is no guarantee for us. If the Wei Gyi Dam is built, it will not only stop the river. The Karen and Karenni will lose their homeland, farmland... and culture. The dam will only support the regime, not the indigenous peoples of Burma.”

– Shwe Maung, a Karen man working in Thailand

The Salween on the Thai-Burmese Border

The Salween River forms the border between Karenni and Karen States of Burma and Thailand. As in Shan State, the river historically has been a major trade and transportation route for the people living in Karen and Karenni States of Burma as well as in Thailand. Thailand exports items such as cooking oil, mats, and slippers across the river to Burma while Burma exports chili and onions to Thailand.

It used to be that people could travel freely along this part of the river. After 1995, however, the SPDC and the Thai military set up numerous military camps along the river and established checkpoints. Now, every boat has to stop at these military checkpoints, and people simply do not travel in certain parts of the river.

The Salween flows through a narrow valley before emptying into a large whirlpool at Wei Gyi (“Wei Gyi” literally means “large whirlpool” in Burmese). The whirlpool is very dangerous in the rainy season when the water can be as deep as 20 meters. During this time, villagers avoid going near Wei Gyi. If they must go on the river, they try to stay near the banks to avoid getting sucked into the whirlpool. Most locals in the Wei Gyi area are members of the Karen or other ethnic nationalities that for generations have relied on the Salween and its tributaries for their livelihoods.

The Salween Under Threat

It is in this part of the river that Thailand is promoting a hydro-power project, officially called “The Salween Hydro-power Plant Project on the Thai-Myanmar Border.” The project consists of two dams on the border between Mae Sariang District in Mae Hong Son Province in Thailand and Karen State in Burma. The upper dam would be located in the Wei Gyi area, and the lower dam would be located at Dagwin. Dagwin is 35 kilometers downstream from Wei Gyi, across Tha Ta Fang village in Thailand.

The dam at Wei Gyi, which is 220 meters above sea level, has a proposed height of 168 meters, with an estimated installed capacity of 4,540 megawatts. The dam at Dagwin, which is 86 meters above sea level, has a proposed height of 49 meters and an estimated installed capacity of 792 megawatts. The upper dam would flood approximately 380 kilometers upstream, out of which 56 kilometers is on the Thai-Burmese border and the remaining 324 kilometers are in Karenni and Karen States in Burma.

EGAT, the agency promoting the project, has disclosed information only about the flood area on the Thai side of the border (about 2.1 square kilometers from the lower dam and about 31 square kilometers from the upper dam), which is very small compared to the probable flood area in Karenni and Karen States.

Situation in Burma near the Dam Sites

“There were a lot of people at the time when I lived along the river. I used the river to catch fish (by net), and to travel by boat. The villagers also used the river for watering plants and for drinking because in that area the Salween was the only river they could use. During the winter they would plant on both sides of the river. The vegetables were mainly for their own eating, but sometimes they would sell them, too. There were about 1,000 houses in the area and they all farmed along the river.” - Karen refugee, aged 64, who moved from the Wei Gyi dam site area in 1995 after living there for 30 years

Wei Gyi and Dagwin Dams

Most people in Karen and Karenni States cultivate rice paddy, sugarcane, chili, beans and coconuts. Along the Salween River and its tributaries in Karen State, there are fertile forests, especially of teak. There are also many medicinal herbs that villagers use in their daily life. These forests are home to leopard, tiger, wild ox, wild buffalo, bear, peacock, deer, bat, wild elephant and wild pig. There are also some lakes in the area where rhinoceroses and crocodiles have been seen. If the Wei Gyi and Dagwin dams are built, all this will be affected by the large flood area of the reservoir.

Situation in Papun District, Karen State

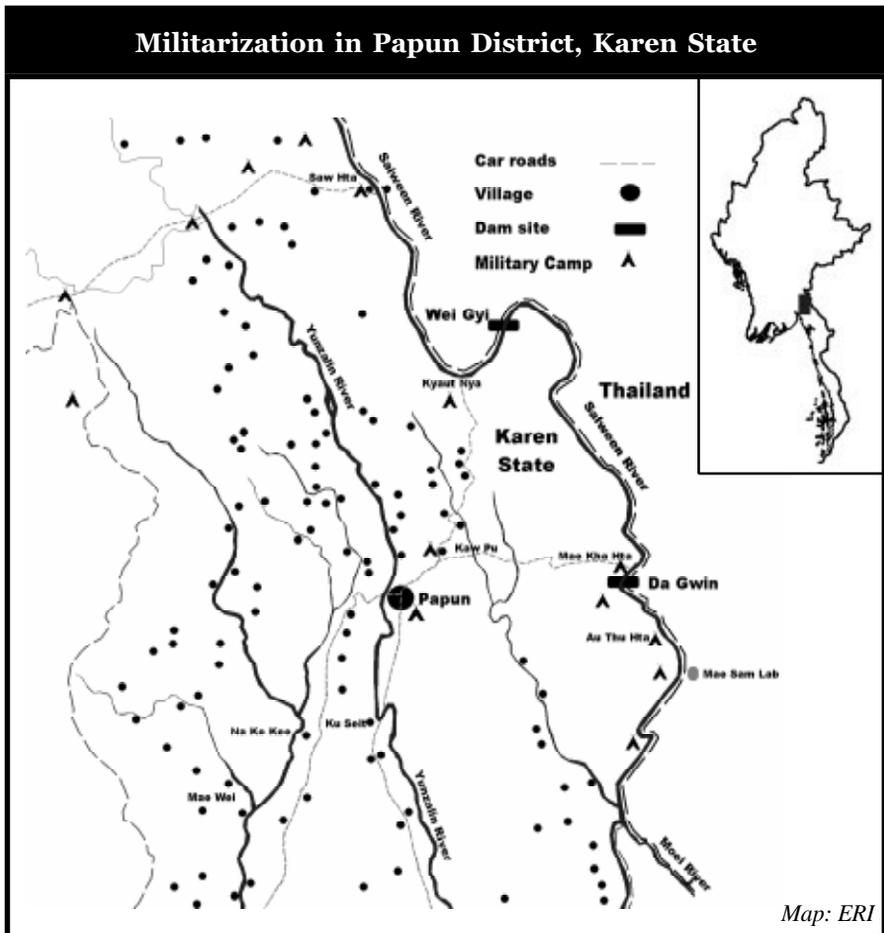
Papun is the district in Karen State that is closest to the Wei Gyi and Dagwin dam sites. It has also seen rapid militarization since the mid-1990s. Manerplaw, the headquarters of the Karen National Union (KNU), the armed ethnic group active in Karen State, fell to the Burmese military in 1995. Within a year, the Burmese military regime sent as many as 32 battalions into Karen State, with about 300-500 soldiers in each battalion. The increased military presence caused many human rights violations, including forced labor and portering for the military. The number of troops was reduced somewhat after human rights organizations publicized the situation to the international community. There still are four battalions in Papun District alone (LIB 340, 341 and 434, and IB 19). The Burmese army also launches operations in the district, and in cases of “emergency,” more troops are stationed there.

The Burmese regime has conducted systematic forced relocation programs in Karen State ostensibly to prevent villagers from providing support to the KNU. In Papun District, 12,200 villagers live in relocation sites controlled by the Burmese military.³⁹ After the people are relocated, the Burmese military destroys houses and fields to make it impossible for villagers to return to live or obtain food. Life is very difficult in the relocation sites, so some Karen choose to live in the forests and go back to their old village to farm or obtain food when they believe it is safe to do so. These people always have to be on the run to avoid the Burmese military. In 2002 alone, 6,617 families or 37,007 people in Papun District opted to live in the forest instead of at relocation sites. Today, some villagers from Papun District still live in their communities,

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some in relocation sites, some in the forests, and some have fled to Mae Hong Song Province in Thailand.

A recent refugee from Papun District said that there used to be many paddy fields along the Salween River and its tributaries, but that now only a few villagers have gone back to their old communities to cultivate those paddies. Most of the paddy fields have been abandoned since the military took control of the area.

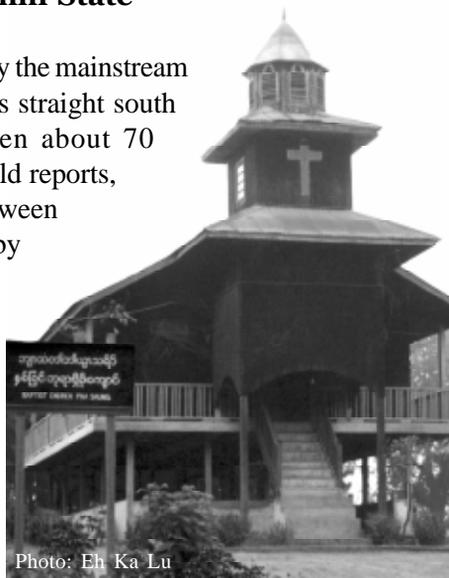


The Prospective Flood Area in Karenni State

The Wei Gyi Dam reservoir would flood not only the mainstream Salween but also the Pawn River, which flows straight south through Karenni State, joining the Salween about 70 kilometers north of Wei Gyi. According to field reports, there are at least 28 communities along the Salween and Pawn River areas that would be flooded by the Wei Gyi Dam reservoir (See Table: Potentially affected communities upstream of Wei Gyi Dam).⁴⁰ Notably, however, the promoters of the dam often have said that no one will be affected by the dam because no one lives in the upstream areas. The total number of families in these communities is 1,853, or 8,770 people.

Most of the people in these communities are Karenni and Shan. Villagers cultivate vegetables along the fertile Salween River banks during the dry season, growing tobacco, garlic, chili and onions. Villagers living along tributaries such as the Pawn River grow rice, sesame, corn, coconuts and other plants, as well as raise cattle. If the Wei Gyi and Dagwin dams are built, villagers in these communities would forever lose access to natural resources such as fertile land and forests on which their livelihoods depend. Moreover, the dams would affect the internally displaced persons living in the forest in this area who rely on natural resources from the Salween and its tributaries.

Many of the potentially affected communities have ancient temples and churches. In Haw Khan village, for example, there are historic buildings and a large copper bell. The bell used to belong to Prince Boepoedu who once reigned over the area, and was kept in his palace. About two hundred years ago, the army to the Burmese king burned down the palace, and the villagers hid the bell in a safe place in the village.



A church in Pa Saung village, Karenni State. The village will be flooded if Wei Gyi dam is built.

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Potentially affected communities upstream of Wei Gyi⁴¹			
Village	Households	Population	Location*
Pa Saung	400	1,500	Salween River
Ke Ma Pyu	15	50	Pawn River
Wa Aung	100	500	Salween River
Ye Ne Pauk	50	250	Pawn River
Nan Pei	60	250	Htoo Chaung River
Sa Lei Lone	60	250	3.2 km from Htoo Chaung
Nan Nauk	70	300	Pawn River
Chee Kwat	70	300	Pawn River
Wan Chei	60	250	Pawn River
Mine Htam	60	250	Pawn River
Baw Le Khe	300	2,500	Pawn River
Haw Khan	25	150	Pawn River
Saw Lone	25	150	Pawn River
Lei Waing	25	150	Pawn River
Htee Ta Hga	30	150	Pawn River
Wan Aung	50	160	Salween River
Wan Pa Lat	30	90	Salween River
Ko Sa Pa	8	40	Salween River
Meng Home	8	40	Salween River
Ywa Thit	250	800	1.6 km from Salween River
Pi Lu	25	80	Pawn River
Nam Ma Lin	25	80	Pawn River
Wan Lwet	15	50	Pawn River
Paw Kit Ta	15	50	Pawn River
Saw Law	8	50	Pawn River
Pun Chaung	12	50	Pawn River
Pa Pu	17	80	Pawn River
Nan Kit	40	200	Pawn River

*All villages situated on the side of the river indicated unless otherwise noted.



The Salween cuts through the mountains on the Thai-Burmese border. Photo: ERI



Karen villagers come together at the proposed Wei Gyi dam site to hold a ceremony for the river, forest, and mountains. They have constructed a small structure and pray to an animist god to protect the area. Photo: Karen Rivers Watch



Fishing near the Thai-Burmese border. Photo: SEARIN



Riverbank gardens like this one provide food security in the dry season. Photo: SEARIN

Wei Gyi and Dagwin Dams

Communities downstream from the dam sites would also be affected by the dams. The dams would block the flow of water, which would directly affect farming along the riverbank and fisheries downstream. Many fish populations would be destroyed.

Situation in Mae Hong Son Province, Thailand

To date, villagers in Mae Hong Son Province in Thailand have not received official information about the Wei Gyi and Dagwin dam projects. The promoters of the projects have not disclosed all relevant information about the area to be flooded or otherwise affected by the reservoir. This area is most likely to be bigger than official estimates. EGAT has said that the reservoir for the Wei Gyi Dam would flood the Pai River up to Mae Hong Son, and proposes to build a dike on Pai River so that water may be diverted to the Bhumiphol Dam. The dike would create an additional flood area. People who would be affected by this secondary reservoir are not considered to be affected by the Wei Gyi Dam.

The flood area on the Thai side of the river historically has been populated by Karen people. These people lived in the forests long before the area was declared a wildlife sanctuary and national park, but after the declaration they became “illegal residents.” Some of the villagers do not have Thai citizenship even though they were born and raised on Thai soil, so they have no right to protest or participate in the decision-making process about the dam project. They also have no right to compensation should they be forced to move.

³⁹ Burmese Border Consortium, 2002

⁴⁰ Earthrights International and Ngwe Taung Nature Network Field Document (April 2003) (on file with authors).

⁴¹ This table includes only those communities along the Salween, Pawn and Htoo Chaung Rivers. It does not include communities along other tributaries. Updated in April 2003.

CHAPTER 6

Salween Water Diversion Projects



Salween Water Diversion Projects

According to a legend told by villagers living along them, the Mekong and Salween Rivers do not get along. If one travels to the Mekong one should never talk about the Salween, and vice versa. Natives call the Mekong “Kong” and the Salween “Khong”. Once upon a time, before there were rivers in the world, Kong (the Mekong) and Khong (the Salween) were best friends living on the Tibetan Plateau. One day they decided to race and see which one of them could reach the sea first. The one condition of the race was that on the way, they had go through the valleys and plains, and never cut through the mountains.

In the beginning they followed the same route. Soon, Kong went south through the valleys and plains of eastern Shan State. He never broke the rule and did not go through the mountains. He ran through the plains and reached the South China Sea in Vietnam. His way became the Mekong River, the longest river in Southeast Asia. Because the river runs through many plains, the color of the river is muddy. Khong went south and quickly cut through many mountains. He ran through a small area of plains and reached the Andaman Sea at the Gulf of Martaban. His way became the Salween River, the second longest river in the region. Because the Salween runs through mountainous regions, the color of the water is clear.

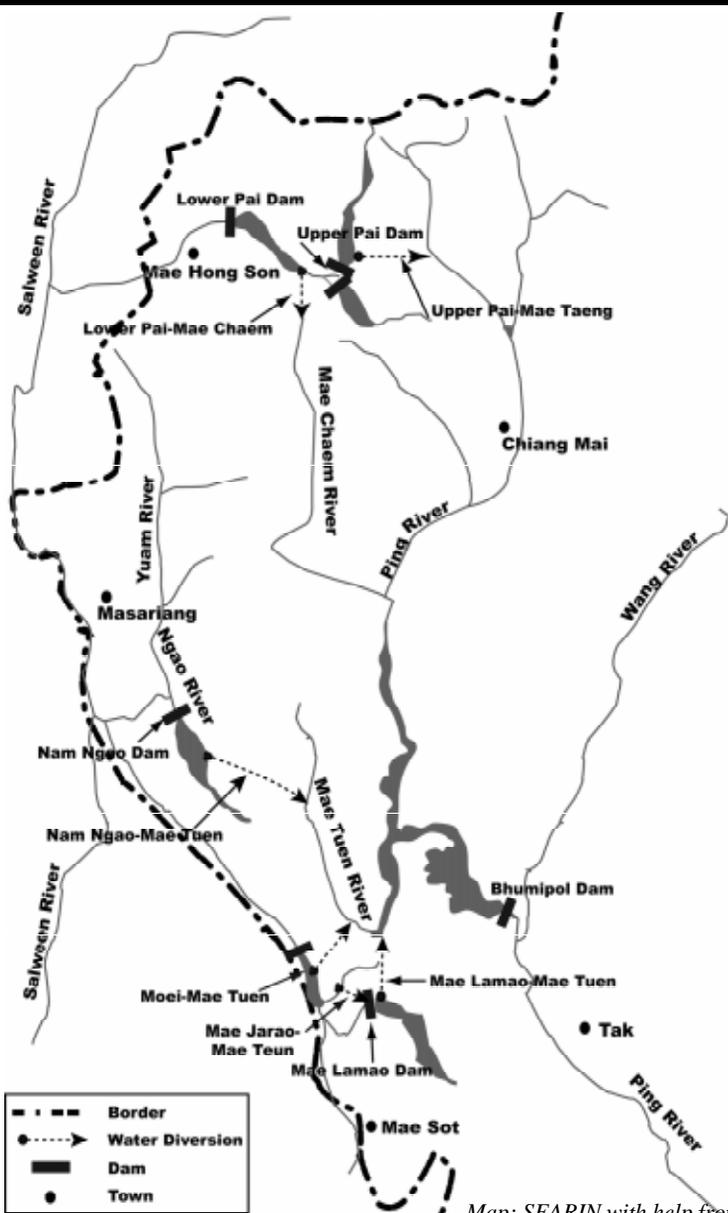
Kong lost the race because he spent more time on his journey to the sea. When he realized that his friend had broken the rule he got very angry and cursed, “if I ever meet Khong there will be a big fire.” So it is said that if one puts water from the Mekong and water from the Salween in the same glass, the glass will break. This story has been told for many generations and the locals along both rivers still believe in it.

Today, however, projects have been proposed to divert both the Mekong and the Salween such that water from both rivers will end up in the Chao Phraya River basin in central Thailand. Plans to divert water from the Salween and Mekong Rivers were started in 1977.

Initially, there were seven components for each river. In 1982, all components of the diversion for the Mekong River diversion were reorganized into a new package called Kok-Ing-Yom-Nan. The main component of this package is

The Salween Under Threat

Water Diversion Plans in Thailand



Map: SEARIN with help from KESAN

Salween Water Diversion Projects

the Kaeng Sua Ten Dam. With funding from JICA, the Irrigation Department of Thailand commissioned a Japanese company to study the Kok-Ing-Nan portion of the project.

As for the plan to divert water from the Salween River, it gained momentum in 1992 when the Thai government decided that it had to solve the drought problems in the Chao Phraya River basin. The plan consisted of dams, canals and tunnels around several major tributaries of the Salween on the Thailand side such as the Pai, Yuam and Mae Lamao Rivers. All of these diversion plans aimed to increase water in the Bhumipol reservoir, the first big dam in Thailand.

Further, project documents from late 2002 by EGAT claim that one benefit of building the Wei Gyi and Dagwin dams on the Salween along the Thai-Burmese border is that they can be used to divert water to the Chao Phraya River basin. Recent information from EGAT shows that EGAT proposes to divert water from the Pai River to Bhumipol Dam because the reservoir of the Wei Gyi Dam will flood the Pai River up to the town of Mae Hong Son.

Seven diversion routes have been proposed to divert water from the Salween River (see Table: Proposed Salween Water Diversion Projects). The Salween diversion plans have been driven by irrigation companies and development agencies from industrial countries such as Japan. The projects did not proceed unchallenged by affected villagers, however. In 1995, local people who would be affected by the Mae Lamao project, which the World Bank was considering funding, showed strong opposition to the project. Consequently, the World Bank pulled out of both projects and did not provide any funding.

Other components continued to be promoted, however. In February 1999, the Thai government approved the budget of 186 million baht (about \$4.6 million) in order for the Department of Energy Development and Planning to conduct in-depth feasibility studies to select one of three water diversion projects; the Huai Kanaeng-Mae Tuen and the Mae Lamao-Mae Tuen diversion projects, as well as a diversion route from the mainstream Salween to the Bhumipol Reservoir via the Yuam River. The budget included expenses for an environmental impact assessment and public relations. The studies for

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Proposed Salween Water Diversion Projects		
Project name	Status	Source of funding
Mae Jarao-Mae Tuen	Feasibility study done by NEWJEC in 1993	World Bank funded the feasibility study
Upper Pai-Mae Taeng	Preliminary study done by NEWJEC in 1993	World Bank funded the feasibility study
Lower Pai-Mae Chaem	Preliminary study done by JICA in 1981	
Nam Ngao-Mae Tuen	Preliminary study done by NEWJEC in 1992	
Moei-Mae Tuen	Preliminary study done by NEWJEC in 1992	
Huai Kanaeng-Mae Tuen	Studied by the Department of Energy Development and Planning	Considered by the World Bank, but dropped in 1995
Mae Lamao-Mae Tuen		

Table: SEARIN, June 2004

the Yuam route includes dam projects conducted by EPDC, commissioned by JICA.

Some question the motives behind the budget approval, pointing out that the budget benefits Thai consultancy companies who were involved in the diversion projects. After the approval, the Thai companies launched a “public consultation” process that they claimed involved potentially affected communities. Until this day, however, no study has been completely disclosed. But project information publicized by Panya Consultant Company, Southeast Technology Company, and Potential Engineering Company, all of which were subcontracted by JICA, reveals three proposed diversion routes. (See Box: Dams Proposed in Connection with the Salween Water Diversion Projects).

The experience of many water diversion projects in Thailand and the world suggests that not one diversion project is known that does not create social and environmental disasters around the river that is diverted. In Thailand, for

Salween Water Diversion Projects

example, the Kong-Che-Mun water diversion project cost one billion baht (about \$24 million) and has failed to bring any water to the target area. The project was situated on salt domes, and as a result caused widespread salinization throughout the northeast region. In sum, these destructive diversion projects cause environmental damage and violate the rights of peoples living in the river basins, pushing them even further to the margins of their societies.

Dams Proposed in Connection with the Salween Water Diversion Projects

- ✓ Diversion of water from the Ngao River (a tributary of the Yuam River) to the Bhumiphol reservoir would require a dam to be built on the Ngao River.
- ✓ Diversion from the Moei River to the Bhumiphol reservoir would require construction of dams on the Mae Song River. Alternately, water would be diverted from the Moei River to the Bhumipol reservoir via Mae Tuen River, which would require the construction of a dam at Huay Kanaeng.
- ✓ Diversion from the Pai River to the Bhumipol reservoir via Mae Jam would require the construction of the Lower Pai Dam.

CHAPTER 7

Avoiding Tragedy



Avoiding Tragedy

In addition to having an overwhelming record of serious environmental and social harm, the World Commission on Dams has stated that “[d]ams have proven to give low economic benefits.” A study of the world’s major hydro-power dams found that large dam projects often incur substantial capital cost overrun.⁴² The average financial cost overrun of dams was 56 percent. An EGAT report states that the construction of the Wei Gyi and Dagwin dams will cost 200 billion baht, making the total investment cost as high as 370 billion baht. This is an enormous investment, considering that Thailand’s entire budget totaled 990 billion baht in fiscal year 2001.⁴³

As a result, before large dam and water diversion projects are implemented, all available options concerning use of water and generation of energy should be explored. In order to minimize the substantial economic costs, as well as avoid the negative social and environmental consequences, alternative energy and water management options such as those described below should be given equal consideration to the options of building large dams and diverting water.

Alternatives to Building Large Dams

Thailand currently is not facing any energy scarcity.⁴⁴ The country’s energy demand inevitably will grow in the future, although the Thai energy planners’ assumption that electricity demand would raise steadily in lockstep with the government’s projection of GDP growth warrants questioning.⁴⁵ Given its past record of environmental degradation, pollution, and resettlement and compensation issues caused by the construction of large dams in the country, the following alternatives to large dams should be considered.

Utilization of existing power plants and demand-side management

There are several plants in Thailand that do not generate as much electricity as initially estimated. For example, the Lam Takong pump storage power plant, the construction of which cost 20 billion baht, with installed capacity of 1,000 megawatts. The power plant was completed in 2000, but has yet to generate any power. Before pursuing hydro-power development, such plants

should be fully utilized.

Demand-side management (DSM) is another highly feasible option that would incur minimal costs and enable sustainable energy use. Consumers and industries should be encouraged to reduce power consumption and use power effectively by making efforts to promote the use of energy-efficient equipment with subsidies from the state. It is estimated that though DSM, Thailand could reduce power consumption by 300 megawatts per year. This way, Thailand would gain the amount of electricity that is estimated to be generated by the proposed dams on the Salween in 10-15 years, with only a fraction of the cost.⁴⁶ Pursuing DSM, we would not have to face any of the negative environmental, social and other impacts that may arise from the construction of the dams.

Decentralized power management and development of “clean” energy

Centralized energy management has many flaws and often fails to serve people in remote areas. In Thailand, many people still have no access to electricity because the cost of the expansion of the transmission grid to rural areas is too high and not attractive to investors. The best solution for increasing access to electricity therefore is to introduce de-centralized, small-scale power projects such as biomass projects and small-scale hydro-power plants. These options can be implemented only when there is a shift in energy policy away from preference for large-scale power projects and the concept of “the bigger the better.” Small-scale hydro-power plants, those with less than ten megawatts of installed capacity, can be installed with local expertise and local resources, and cause minimal social and environmental impacts.⁴⁷

“Cleaner” renewable energy sources and technologies should be explored, including small-scale hydro, biomass, wind, solar, geothermal, and fuel cell. Among these, biomass is considered to have the biggest potential.⁴⁸ Solar also is promising, as Thailand has relatively strong sunlight all year round.⁴⁹ Wind is the fastest growing source of renewable energy in the world, and Thailand has areas considered suitable for generation of wind power.⁵⁰ A combination of these renewable energy sources would not only be “cleaner” but more reliable and cost-effective.

Alternatives to Water Diversion

De-centralized water management

The best way to distribute water to the poor in a fair and efficient manner is through de-centralized, small-scale water management, including small-scale reservoirs and drain water storage. The costs are minimal, and small-scale projects are effective in procuring water for people in rural areas to meet the demand for agriculture, livestock and household consumption. Local people could operate such small-scale water management projects with a fraction of the huge investment costs of the proposed Salween River water diversion projects. De-centralized management also prevents third parties from exploiting large-scale diversion projects for their own economic or political self-interest.

Improvement of existing irrigation systems

At present, the Chao Phraya River basin has the most number of dams in Southeast Asia, but Thailand still is facing water shortage. In fact, during rainy seasons many dams have to increase the discharge of water. Ironically, as the irrigation system in the Chao Phraya basin has been developed, the water shortage has become even more severe. This is due to the low efficiency of the irrigation systems, which reach only 24% of their fullest capacity. In other words, for every 100 liters of water, 76 liters are wasted. If the irrigation system in the Chao Phraya basin is improved, water shortage could be alleviated without having to implement the Salween water diversion projects.

Avoiding Tragedy

We urge the Burmese regime, Thai government, international financial institutions and other potential lenders, private investors, and engineering or construction companies to immediately suspend all plans to dam the Salween River. Similarly, all associated infrastructure plans in Burma, including those under the ADB-backed Greater Mekong Subregion economic cooperation program, should be abandoned to avert a tragedy on the Salween. Given the current political, social and human rights situation in Burma, adhering to basic and fundamental principles and safeguards for undertaking any large development project is not possible.

The Salween Under Threat

To review, in the proposed areas of the dams and their reservoirs in Burma, **the following conditions prevail:**

- An ongoing civil war and increasing numbers of troops deployed;
- Forced relocations of communities, massive internal displacement, and continuing refugee flows;
- Complete lack of security for refugees if repatriated;
- Ongoing gross human rights violations by state authorities, including the use of slave labor, extra-judicial killings, torture, sexual violence;
- Pattern of infrastructure development being used by the regime to extend and consolidate control of formerly inaccessible areas;
- Resources being expropriated to subsidize and strengthen centralized military control in Burma, without benefit for local communities;
- Continuing discrimination against ethnic nationalities, their culture and livelihoods;
- The lack of the rule of law and widespread corruption; and
- The absence of protection of fundamental human rights, including the rights to freedom of expression, assembly, and movement; the rights to health, livelihood and culture; and the right to access judicial remedies.

Under such conditions, stakeholders, especially affected communities, would not be able to participate in sound development planning and decision-making processes. **Under different circumstances, such processes would include the following:**

- Before any approval of dam and water diversion projects, comprehensive impact assessments must be carried out. The studies should include impacts throughout the entire river system, including impact on the ecology, agriculture, fisheries, mangroves and water supplies. The assessments must also cover displacement, health impacts, livelihood and the effects of increased militarization and influx of workers from other places. A full “rights and risk” analysis must also be carried out, and should include costs of compensation for all affected communities, including those already driven from their lands, disaster prevention and mitigation, debt servicing and future

Avoiding Tragedy

decommissioning. An independent committee acceptable to all concerned parties should conduct the assessments; the committee should include representatives from human rights and environmental organizations that are well aware of problems in the Salween basin, as well as representatives from different affected ethnic groups.

- Details of all dam plans, assessments, studies, and negotiations for financing must be made easily accessible to the public. All stakeholders should be given full and timely information. Local communities should have the information available in languages they can understand.
- All stakeholders, particularly affected local communities, including refugees and other peoples displaced from the dam areas, must have the right to meaningful participation in the decision-making processes related to all stages of the dam planning. The stakeholders must have the right to meet, consult with legal experts and other actors, and freely express their positions without fear of repercussions.
- Affected local communities must give their explicit endorsement with free, prior and informed consent to any dam plans before implementation.
- Stakeholders must comply with the Thai Constitution and relevant Thai and Burmese laws, and should abide by the decision-making framework of the World Commission on Dams.

In sum, we urge governments and planners to consider alternative water and energy management options in lieu of the dam proposals on the Salween. Only with changed political and human rights conditions in Burma will affected local communities be able to participate freely in decision-making, consultative processes and planning about development on the Salween watershed, and therefore, we urge that all plans to dam the Salween River be immediately halted.

The Salween Under Threat

⁴² Thailand's history of hydro-power dams is a good example. In the case of the Pak Mun Dam, the construction cost was estimated at 3.880 billion baht, but the actual cost turned out to be as high as 6.6 billion baht. An additional 1 billion baht was needed to resolve ensuing social and environmental problems caused by the dam. The permanent income loss in fishing activities of the Mun River basin residents was not taken into account in the construction cost estimate.

⁴³ The actual investment cost could be much higher than the initial estimate because the dams will be built on a major active tectonic fault zone with a record of frequent earthquakes. Hydro-power dams constructed on the same fault zone as that which underlies the proposed Wei Gyi and Dagwin dams incurred a much higher construction cost than estimated. (For example, the Srinagarind Dam, which was approved with a 1.8 billion baht construction budget, cost 4.6 billion baht. The Khao Laem Dam was originally estimated to cost 7.711 billion baht, but after the need arose to strengthen the structural foundation, the cost rose to 9.1 billion baht.) The latest data show that the Wei Gyi and Dagwin dams must be designed to withstand potential earthquakes at the scale of 0.7 G. This means that the construction will cost more than currently is estimated.

⁴⁴ In fact, currently Thailand has a large power reserve. In March 2003, EGAT announced that Thailand's power reserve was as high as 40%.

⁴⁵ Grainne Ryder, *Reforming Thailand's Power Sector: Towards a Sustainable Electricity Future*, Probe International (1997).

⁴⁶ See, e.g. *Positive Energy Choices: Greenpeace Energy Scenario for Thailand's future generation*, Greenpeace Southeast Asia, at: http://www.greenpeacesoutheastasia.org/en/rpt/rpt_ce_engsce_th.pdf [hereinafter Greenpeace].

⁴⁷ Palang Thai has conducted a project where micro hydropower plants were installed in remote Thai villages. See: <http://www.palangthai.org/en/microhydro>.

⁴⁸ Greenpeace, at 29.

⁴⁹ Greenpeace, at 26.

⁵⁰ For example, the Central Plains, the Chao Phraya Valley, the Northern Inter Mountain Basin, and the Korat Plateau. Greenpeace, at 23.

About the Publishers and Editor

The Salween Watch Coalition

Salween Watch was formed in February 1999 as a coalition of people from various community based organizations and NGO's in Thailand and Burma, with the primary aim of preventing the building of large hydro-power projects on the Salween River.

Using data collected by member groups, the coalition seeks to inform people at local and international levels about the impacts of the proposed hydro-power projects. Salween Watch thereby aims to alert and motivate key actors who are in a position to influence policy and block the financing of the projects.

The coalition strives to empower local communities by organizing trainings and forums, and encouraging them to protect their own rights and livelihoods by preserving the river ecosystem. Salween Watch seeks to strengthen and expand existing networks and propose alternatives to existing development paradigms.

Southeast Asia Rivers Network (SEARIN)

Southeast Asia Rivers Network (SEARIN) was established in 1999 by academics and environmentalists. SEARIN works to support local community's rights to their natural resources, to promote local knowledge-based sustainable water resources management, and to oppose threats to rivers and riverine ecosystems in mainland Southeast Asia.



Center for Social Development Studies (CSDS), Chulalongkorn University

Established in 1985, CSDS is a professional non-profit organization supporting research and teaching activities in the social sciences. The center commissions research projects by scholars and students that attempt to respond to contemporary social issues and debates.



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Cover

Boatmen paddle upstream on the Salween inside Karen State, Burma, as interests far away plan to dam the river. *Photo: Salween Watch*

Chapter 1

A man harvests beans on a river bank farm on the Thai side of the border. *Photo: SEARIN*

Chapter 2

The New Light of Myanmar reports a visit to Three Gorges Dam by Prime Minister Khin Nyunt, July 21, 2004 .

Chapter 3

This old woman from a village in Karen State has lost everything including her house that was burned down by the Burmese military regime during a routine military action. *Photo: Images Asia*

Chapter 4

The Salween River near the Tasang dam site. *Photo: ERI*

Chapter 5

A rock marks the spot at Wei Gyi. *Photo: ERI*

Chapter 6

Children play and wash on the banks of a free Salween. *Photo: Uzo Uda*

Chapter 7

A homeless family stands barefoot and destitute on the hot sands of the Salween. *Photo: Salween Watch*

Resources

Voices from the Salween Valley: true story behind the dam

A 19 minute VCD made by Karen Rivers Watch

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salween news network

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southeast asia rivers network

www.searin.org

shan herald agency for news

www.shanland.org

shan women's action network (SWAN)

www.shanwomen.org