

Case Study of Transboundary Dispute Resolution: Salween River

Authors: Aaron T. Wolf and Joshua T. Newton

1. Case summary

<i>River basin:</i>	Salween River (Figure 1, table 1)
<i>Dates of negotiation:</i>	Joint working group established in 1989
<i>Relevant parties:</i>	Myanmar, Thailand (directly); China (indirectly)
<i>Flashpoint:</i>	None
<i>Issues:</i>	Stated objectives: promote and coordinate joint development of hydropower projects within the Salween Basin
<i>Additional issues:</i>	Water-related: possibility of out-of-basin transfers to Thailand; Non-water: river flows through regions of ethnic unrest and drug trade; collaboration and support of a government in Myanmar that violates human rights; dam project could detrimentally impact the environment and disrupt the livelihoods of local peoples
<i>Excluded issues:</i>	China has not been included in any planning
<i>Criteria for water allocations:</i>	None
<i>Incentives/linkage:</i>	Possibility of linking water projects with transportation infrastructure
<i>Breakthroughs:</i>	None
<i>Status:</i>	Talks are in most-preliminary stage; meetings continue although no plan for the basin, nor any main-stem project, has yet been established



Figure 1: Map of the Salween River Basin (TFDD, 2007)..

Table 1: Features of the Salween watershed.

Name	Watershed features ^a					
	Riparian states (With % of national available water being utilized) b ^a	Riparian relations (with dates of most recent agreements)	Average annual flow (km ³ /yr.) ^c	Size (km ²)	Climate	Special features
Salween	China (19.3), Myanmar (Burma) (0.4), Thailand (32.1)	Cool to warm	122	244,000	Humid to tropical	Scheduled as conflict preclusion model/ workshop

a Values for lakes under "Annual Flow" are for storage volumes.

b Source: Kulshreshtha (1993) created in January 1993.

c Sources: Gleick ed. (1993); UN Register of International Rivers (1978)

Remaining data from TFDD, 2007..

2. Background

The Salween River (known as the Nu in Chinese) originates in the Tibetan plateau and drains an area of 320,000 km² in China, Myanmar, and Thailand before it flows into the Gulf of Martaban. Totalling 2,413 kilometers, it is the longest undammed river in mainland Southeast Asia. More than 10 million people from at least 13 different ethnic groups depend on the Salween watershed for their livelihoods: fisheries are a major source of dietary protein, and the river's nutrients nourish vegetable gardens in the dry season and fertilize farmland. The Nujiang, the section of the Salween that flows through China, is found in the Three Parallel Rivers area, a rich center of biodiversity recognized by UNESCO as a World Heritage Site. Despite the fact that studies since the 1950s have identified tremendous hydropower potential, the Salween is a relatively undeveloped basin—with only one major hydro-electric project at Baluchaung. However, it is likely that with economic development and more political integration in the region, development pressure in the river basin will increase, and there will be more demands to use the waters for irrigation, urban and industrial uses, and navigation. The power companies of Thailand and Myanmar, as well as private Japanese concerns, have pursued individual feasibility studies but it is only since the 1970s that the potential of the basin as a whole has been investigated.

Since he took power in 2001, Thailand's prime minister, Thaksin Shinawatra, has reversed past policy of distancing Thailand from Myanmar and is pursuing a policy of conciliation, cooperation, and public support. Thai businesses are encouraged to invest in Myanmar, Thailand has agreed to construct a bridge across the border to boost trade and tourism, and is proceeding with a hydroelectric dam project on the Salween River. Thailand's northeast region has always had inadequate water resources and in the last decade the rest of the country has also been suffering from water scarcity due in large part to massive deforestation. However, Thailand already has 28 large dams, 800 small dams and 1,000 low-capacity reservoirs, and is unlikely to extract more water from its own sources. As a result, the government has decided to channel water from Myanmar to solve its needs for irrigation and drinking water, and as a source of electrical power. In 1992, eight major hydroelectric dam projects were selected, some of which are entirely in Myanmar and others are on shared sections within the Salween River basin.

3. The problem

China, Myanmar, and Thailand do not yet have an agreement on the use of the Salween, thus allowing each of them free use of the river. Each of these countries has unilateral plans to construct dams and development projects along the Salween, but these sets of plans are not compatible.

Since December 2002, the Myanmar Military and the Electricity Generation Authority of Thailand (EGAT) have been discussing the possibility of constructing large dam projects on the Salween. Between October 1998 and the end of March 1999 several teams of experts—Thais from the MDX Power Co. and Burmese from a firm called Aye Chan Aye, assisted by about 20 Japanese specialists from the Electronic Power Development Corporation (EPDC)—inspected three sites in the Salween gorges about 120 km from the Thai border carrying out geological studies, test bores and feasibility studies. Depending on the site, the size and design of the structure, and the output of the hydraulic turbines, the cost of the dams would range from \$3.0 to \$3.4 billion, and it is not clear where Thailand and Myanmar would get funding. Total energy production is estimated at 3,400 megawatts (MW), a quarter of which would go to Myanmar, and Thailand would purchase the rest.

Some of the sites that have been studied are Tasang (in southern Shan State; estimated capacity at 3300-3600 MW; feasibility studies have been completed), Weigyí (on the Thai-Burmese border, west of Mae Sariang; estimated capacity at 4540 MW by; preliminary studies have been completed), and Dagwin (just below Weigyí; estimated capacity at 792 MW; preliminary studies have been completed). Of these, the planned dam at Tasang is proposed to be more than 180 m high, making it one of the largest dams in Southeast Asia.

As much as 10% of the Salween water could be diverted via channels and existing rivers, across a distance of 300 km, to join the Kok and Ping rivers in Thailand. There have not been estimates made as to the cost of transporting this water but would probably be high.

Thai and Myanmar officials have been working together discretely in an insurgent area where the Myanmar army has persecuted the Shan civilian population. This part of the Shan state is the operational base of the armed Shan nationalist resistance movement, which is opposed to the junta in Rangoon. With an already large number of Shan people being forced from the region, environmental groups and local populations are worried that the dam project will only exacerbate the problem. But, as Myanmar has a serious need for energy and has also felt the effects of drought, the junta has been willing to cooperate with Thailand (Le Monde Diplomatique, February 2000).

Environmental groups expressed concerns about the ecological effects of the projects, and human rights advocates warned against co-investing with a military junta that is oppressive, unpredictable, and might not respect benefit-sharing agreements. Nonetheless, in August 2004, Thailand and Myanmar agreed to set up a joint venture to construct five hydro-powered dams in the Salween river basin, beginning with Tasang dam.

Meanwhile, in 2003 China announced plans to build a 13 hydropower projects on the Nujiang River in China. More than 80 environmental and human rights groups in Thailand and Myanmar petitioned China to consult downstream countries before proceeding with the project. In April 2004, Prime Minister Wen Jiabao purportedly suspended plans for the massive dam system, and ordered officials to conduct a review of the hydropower project and an environment impact assessment. However, Li Yunfei, the director of the Nu River Power Bureau, said he had not heard of any changes and was still working on the project. According to Chinese media, the 13 dams would have a total generating capacity of 21.32 million kilowatts. Since electricity shortages forced some factories to close this past summer, the promise of a new power facility capable of generating this much electricity is very tempting. China is relying heavily on hydropower to meet its soaring demand for electricity, and officials plan to triple installed hydroelectric capacity to 270,000 MW by 2020 (<http://www.tew.org/editorial-oped/trin-gyi-pho-nya/0304.html>).

4. Attempts at conflict management

In June 1989, following a visit of a Thai government delegation to Rangoon, a joint technical committee was established between Thailand and Myanmar, made up primarily of representatives from the power companies of the two countries. Since that time, the committee has continued to meet and to pursue feasibility studies, but no project or management body has been implemented nor a basin-wide plan created. China has not to date been included in discussions, nor has it included Thailand and Myanmar in its plans for projects on the Nu River.

While there have been meetings and negotiations at the state level, local populations have not been included in the decision-making process. Thus, while efforts are being made in terms of river planning to avoid inter-state conflicts, large-scale water projects may create or exacerbate intrastate conflicts.

5. Outcome

As mentioned, the Salween is a basin in its earliest stages of development. What is noteworthy is that technical and management discussions have been proceeding in advance of major development projects, thus allowing for integrated management almost from the beginning.

Discussions have included issues outside of hydropower, and studies have suggested linkages between power, irrigation and drinking water diversions, barge transportation, and related surface infrastructure. Complicating management issues is the fact that sections of the watershed include regions of ethnic unrest and tensions brought about by the international drug trade. Nevertheless, the basin offers the opportunity for integrated management to be implemented in advance of any flashpoint brought about by

unilateral development.

6. Lessons learned

- *Tensions are created when a country within a basin acts unilaterally without consulting other nations.*
Thailand and Myanmar have been working together for some time on the development of the Salween River basin, but China has been acting unilaterally, potentially constructing up to 13 dams on the upper stem of the river. Without working with the two downstream nations, China risks creating conflict with Thailand and Myanmar.
- *Upstream nations with superior strength can hinder joint management of river basins.*
China, with far more military might and economic power than both Thailand and Myanmar combined, has little incentive to work jointly with them in the management of the Salween River. Thailand and Myanmar's water resources from the Salween may be at great risk depending on what China decides to do on the upper part of the river.
- *The importance of water cooperation/economic development can supercede working with an oppressive regime.*
Even though Myanmar is controlled by a junta that is blamed for human rights violations, Thailand is still willing to cooperate with their government in order to promote regional management of the Salween River. For Thailand, the development of the Salween River and the benefits received from such development takes precedence over working with an oppressive regime. National sovereignty to protect water resources goes beyond international pressure.
- *Lack of inclusion of populations of a shared river basin in the decision-making processes may cause conflicts.*
The local populations in both Thailand and Myanmar have not been included in decision-making processes with regards to major hydroelectric projects. Whereas Thailand and Myanmar may work cooperatively to avoid conflict, large-scale projects may create or exacerbate intrastate conflicts.

7. Creative outcomes resulting from resolution process

Even before a joint management entity has been created between the basin nations, cooperation exists between the countries far ahead of major projects thereby avoiding conflicts between the Thailand and Myanmar even though China is not a party to talks.

8. Timeline

- 1979 Electricity Generating Authority of Thailand (EGAT) initiates 14 projects to divert water from the tributaries of the Kong and Salween international rivers.
- 1985 Japan International Cooperation Agency (JICA) presents their study of the Khun Yuam Development Project to the National Committee on Energy. Included in the study are 10 hydro-powered dam projects on the Yuam, Mae Rid and Ngao Rivers.
- Jan 1989 Thai Cabinet appoints a committee responsible for the hydro-power dam projects on the Thai-Burmese border.
- Apr 1989 Representatives from the Thai Committee on the hydro-power dam projects on the Thai-Burmese border discuss the projects with the Myanmar Electric Power Enterprise, and together set up a joint committee.
- Jul 1989 Top officials from the National Committee on Energy visit Rangoon. The two countries enter into an agreement of cooperation in water development projects, and establish a coordinating team with the National Myanmar Electric Power Enterprise and the National Committee on Energy playing a key role.

- Nov 1989 Coordinating team calls for the first meeting in Bangkok. Seven hydro-powered dam projects are proposed. Thailand responsible for the study of the Khlong Kra Project, and Burma will the Mae Sai Project.
- Dec 1989 EGAT lists the Lama Luang and Nam Ngao hydropower dam projects in its 17-year power development plan (1990-2006). EGAT Executive Board approves the two projects that are based on the Khun Yuam Project of Jica. Under the plan, the two dams are to be completed by 2000.
- Aug 1990 Coordinating team meets for a second meeting in Bangkok where it agrees to speed up preliminary study of the remaining five dam projects.
- 1991 Coordinating team meets in Rangoon and decides that National Committee on Energy will ask the EPDC of Japan to conduct the feasibility study of the dam projects.
- May 1991 EPDC agrees to join the project and sends a survey team to Thailand.
- Mar 1992 EPDC completes study and proposes eight dam projects along the Thai-Burmese border.
- Aug 1992 Thai Cabinet gives approval to a plan to solve the water crisis in the Chao Phraya River Basin, which encompasses the Salween Diversion Scheme.
- Jan 1993 United Nation's People Organization (UNPO) holds a human rights conference at The Hague. The Shan State calls for international cooperation in condemning Slorc for violence against the Shan people, and for collaborating with the Thai Government on the Salween Dam projects.
- Oct 1993 Gen. Saw Bo Mya, leader of Karen National Union (KNU), declares at Manerplaw that the KNU is against the Salween Dam projects. He states they are willing to use armed force if peaceful protests prove useless.
- Mar 1994 The House Committee, led by northern MP Songsuk Pakkasem, announce they will organize a seminar to improve comprehension about the Salween water diversion scheme.
- 1997 Signing of Thai-Myanmar Memorandum of Understanding, which justifies the construction of large hydroelectric dams for electricity generation “for the mutual benefits of the peoples of the Kingdom of Thailand and the Union of Myanmar” (WRM Bulletin, 2000)
- Oct 2002 Thai Cabinet endorses the draft Inter-Governmental Agreement on Regional Power Trade in the Greater Mekong Sub-Region. The cooperation strives to enhance economic relations and improve environmental protection in Myanmar, Thailand, Cambodia, China, Laos and Vietnam (<http://www.irn.org/programs/mekong/030605.ratification.html>).
- Jun 2003 Thai Cabinet gives its approval for the ratification of a power supply pact between the six Greater Mekong Sub-region countries
- Dec 2003 Groups in Thailand and Myanmar protest China’s plans for 13 large dams on the Nu/Salween River
- Mar 2004 Approximately 80 environmental and human rights organizations protested China’s proposed dam projects on the Nu River (Yardley, 2004)
- Apr 2004 China Premier Wen Jiabao suspends dam plan for the Nu River.
- Aug 2004 Thailand and Burma agree to set up a joint venture for the construction of five hydro-powered dams in the Salween river basin, beginning with Tasang dam.

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