

Executive Summary of Rasi Salai Thai Baan Research >>

Rasi Salai Thai Baan Research was carried out by Thai Baan researchers from 36 villages affected by the construction of Rasi Salai Dam in three districts including Rasi Salai (Srisaket), Ratanaburi (Surin) and Pone Sai (Roi-et). Started in April 2003, the research was completed in September 2004 and has been based on the utilization of local wisdom.

Research topics were selected from the brainstorming sessions among local villagers including (1) social and cultural characteristics of dwellers in the Rasi Salai freshwater swamp forests, (2) the ecology of the Rasi Salai freshwater swamp forests, (3) local faunas in the Rasi Salai freshwater swamp forests, (4) biodiversity of fish species in the Middle Moon River Basin and the Rasi Salai freshwater swamp forests, (5) fishing gears: local wisdom in the utilization of tools, rights and the way of life in the freshwater swamp forest, (6) Rasi Salai freshwater swamp



forests : the ancient salt pits, (7) agriculture in Rasi Salai freshwater swamp forests, (8) traditional water management, and (9) cattle raising in Rasi Salai freshwater swamp forests. The study of each topic took place in three different phases for comparative purpose in relation to the construction of the dam, including the period before the dam construction, during the closure of the sluice gates and during the opening of the sluice gates.

Recruitment of researchers in each topic was implemented during the main meetings of villagers from 36 villages. The criteria were based on background knowledge and skills of each researcher. Then, the researchers of each topic met and share basic information with help from research assistants to take note.

During the meetings, decision was also made on the dates for the field research with an attempt to collect data from the day-to-day living. Utilizing participatory observation methods, the researchers in each group would go separately to the sites and collect relevant data, after which they would share the information to each other during the lunch break and the assistant researchers took note. This raw data would then be compiled and considered during the meeting of the whole group again.

In terms of social and cultural characteristics of communities around the Rasi Salai freshwater swamp forest, it was found that residents in the 36 villages shared many similarities in their day-to-day livelihood and traditional culture based on the "Heat Sib Song Klong Sibsi" tradition, which has been inherited since time immemorial among people in the Northeastern Thailand.

The ecology of the freshwater swamp forest is very unique and different from other kinds of forests, as the forest is flooded during rainy season, and become dry during dry season. Based on these unique bioregional characteristics, local villagers divide season into four seasons-dry season, muddy water season, flooding season and lower water season. The fresh swamp forest here is one of the most abundant of its kind in the Middle Moon River Basin and is consisted of 12 ecological subsystems according to local knowledge including Non, Hong, Nong (pond), Lerng, Mab, Kood, Huay, Wang (whirlpool), Had, Nam Chan, Nam Sub, and Bor Klue (salt pit).

Predominantly deciduous forest, the freshwater swamp forest here is home to small faunas, shrub, brier, grasses and riverine plants. These plants are persistent to chronic floods. There are as many as 224 species of faunas found in the forests, each of which contributes to local livelihood. At least 123 species are found to essentially contribute to food security of local communities.



Of these species, 98 species are herb, and 64 species are used for other purposes. Some plants have multi-purpose use.

There is a great diversity of fish species in the ecological system of the freshwater swamp forests. According to the research, 115 fish species were found-79 indigenous species, 33 species of fish from the Mekong River, and other 3 non-indigenous species which have been raised and then spread in the forest and the Moon River. In addition, based on this traditional knowledge, it was found that 58 species of fish feed and live off the Moon River, 63 species live in Kood, Nong, and Hong, 22 species feed and live in rock holes, 25 species feed and live on logs, 28 species feed and live in whirlpools (Wang), 10 species feed and live in ponds and rice fields, 26 species feed and live in flowing water, 20 species feed and live in shrubs in the swamp forests. Several species of fish live in more than one ecological subsystem.

Based on the comparative study of fish species and impacts of the dam construction, it was found that during the sustenance of the Rasi Salai reservoir, from 1993-2000, 15 species had been lost. After the dam gates were opened in 2000, some fish species have returned, and we managed to find 108 species among which eight species were completely disappeared during the reservoir period.

Fishery is one of the main occupations of local communities as a local saying goes "ones who do not fish are the living dead". Local villagers fish in various sources in the freshwater swamp forest year round for their own consumption and sale and use as many as 47 types of fishing gear. Each of the gears is developed by traditional wisdom and locally available materials from the freshwater swamp forest. It was further found that during the initial period that Rasi Salai Dam started to store water, the number of fishing gears used by local villagers reduced from 48 to 11 types. However, three years after the dam sluice gates have been opened (from 2000-2003), the use of 46 fishing gears has been restored.

During dry season, parts of the forests are covered with salt as the sun light causes water to evaporate and the spread of salination. The areas are called "Bor Klue" (salt pits). According to the Thai Baan research, 150 salt pits were found, and this salt contributes to ecological balance of the freshwater swamp forest. Local villagers have been able to adapt themselves to live with the salt with no problems and to use it for their benefits including boiling the salt for their own consumption, to trade with rice and other stuff and to sell. Some landless peasants or those who do not have enough land to till live off salt production year round. In addition, it was found that this salt also makes the forest become



a salt lick where fish can get necessary minerals, similar to the importance of salt licks for wildlife in the forests.

According to the study by the Thai Baan researchers, after the Rasi Salai Dam started to store water, salination has spread into agriculture land of the villagers causing damage to rice and vegetables. Big trees were found to stand dead in the rice fields. After the dam gates have been opened, salination problems have reduced and the freshwater swamp forest started to recover itself giving the opportunities for local villagers to have an access to natural resources in the forests again.

During rainy season, rich minerals are flushed down the river and spilt into the freshwater swamp forests making the land in this area fertile for rice farming, after the water level declines. They grow as many as 17 varieties of rice along with 45 kinds of vegetables in the rice fields and around the man-made and natural ponds

Based on the field research on traditional irrigation, we have learned about the differences of each water source-Nam Chan, Hong, Nong, Kood, Deep Well, Artesian Well-which provide different benefits for the locals. It was also found that around the Rasi Salai freshwater swamp forests, traditional irrigation has been practiced with the man-made waterways to harness water

into the rice fields similar to the "Muang Fai" system in the North, but here, they use water pump to suck water from the ponds, rather than damming.

The Rasi Salai freshwater swamp forests are one of the largest cattle raising grounds in the middle reach of the Moon River Basin due to its vast forest coverage, which is home to the abundant supplies of foods for cattle. Also, natural salt licks spread around the area and provide fine minerals for cattle. Cattle raising methods vary to seasons in the freshwater swamp forests. Cattle are not raised for just labor, but they can be an economic assurance for the local villagers, as they can sell them in case they are in need of money. According to the research, each family raises about 10-30 cows and/or buffaloes.

Statistics of cattle raising before the dam was built (1992), during the reservoir period (1996) and one year after the dam gates were opened (2001), shows that during the reservoir period (1996), the number of cow raised by local villagers reduced by 65%, and buffalo 60%. Two years after the dam gates have been opened, cattle raising has returned and the number of cow has risen by 131.21% and buffalo 121.19%.

It is obvious that the freshwater swamp forests are one of the most important fundamental resources for villagers from



the 36 villages living around the forests. Local communities utilize resources in the forests year round as a saying of Thai Baan researchers goes "The freshwater swamp forests are like our supermarket, our food cabinets". They also provide the sources of herbs, raw materials for different uses. Salt which is an essential mineral for both human beings and animals, as well as contribute to security and livelihood of local villagers in terms of their food security, health and economic security.