History of a Saiyok Community: A case study of Thasao Community

Boonrod Chalarak* and Pairot Chalarak
Kanchanaburi Rajabhat University, Kanchanaburi, Thailand
**e-mail: boonrodch@hotmail.com*

This research entitled "History of a Saiyok Community: A Case Study of Thasao Community" was historical research which aimed at studying the origin and development of Thasao Community, Amphoe Saiyok, Kanchanaburi Province, in particular how the community formed and developed it's characteristics, culture, and economics, and it's political development. The techniques employed for data collecting consisted of searching all relevant documents from various sources, traveling and surveying throughout the area, and interviewing local informants. All collected data were analyzed and rechecked before writing for descriptive presentation. The tentative findings from the data indicated that Thasao Community had apparently been formed after the end of W.W. II (B.E. 2488). Prior to this, the area of Saiyok appeared to be a large, rich jungle full of natural resources, such as various kinds of woods and wild animals like tigers, elephants, bears, hogs and deers. There were a few Karen, Khamhu, and Mon who impermanently earned their living by taking profits from natural wild products. After the end of W.W. II, "The Death Railway" was in use so that many Thai people from nearby areas started to come for cutting bamboo, working in sawmills, and also doing some trading and planting, and finally settling permanently into an agricultural occupation. The numbers of immigrants kept on rising continuously so that the numbers of Karen, Khamhu, and Mon decreased.

Management of local wisdom concerning bamboo utilization in Tambon Thasao, Amphoe Saiyok, Kanchanaburi Province

Anyanee Klaisuban[1] and Pornrat Prasitkusol[2]
Kanchanaburi Rajabhat University, Kanchanaburi, Thailand

Preliminary results showed that the local community mainly utilized wild bamboo more than planted bamboo, which is rare. However, the proper harvesting of wild bamboo, in terms of season, age and stem length, would prolong the wild bamboos available in this area for years. Consequently, it would also affect conservation and propagation of bamboo. There were two main uses of bamboo: the shoots were used in numerous dishes, and the stems were used for different purposes in daily life. Bamboo was also used in local culture in a few cases. This local wisdom has been transferred from generation to generation orally and by practice but not recorded in any literature. As a result some of this local wisdom no longer exists while some has adjusted to the present conditions.

Economic and capital analysis of planted bamboo in Thasao Sub-district, Saiyok District, Kanchanaburi

Pawinee Thana-a-nawat
Kanchanaburi Rajabhat University, Kanchanaburi, Thailand
e-mail: sakeera@hotmail.com

It is well-known that Kanchanaburi is one of the Provinces of Thailand with many bamboo forests. Bamboo is a natural resource that has been used for a long time. The Thasao community is a community of Kanchanaburi that is rich of bamboo. Villagers use bamboo to produce goods for sale as well as for home use. However, use of bamboo is increasing while planting bamboo for replacement is not done, so that the amount of bamboo in the forest is being reduced. That is why this research is about planted bamboo. By studying agriculturalists' general information, production factors, capital for planting, and monetary factors of families that plant bamboo have been determined.

From a six-month study at Thasao sub-district, Saiyok District, Kanchanaburi, it was found that, there are nine agriculturalists who plant bamboo. Eight of these agriculturists plant bamboo on their own properties. Of these eight, there are 5 persons, who plant one kind of bamboo, two persons, who plant two kinds of bamboo, and one person who plant three kinds of bamboo. After using bamboo for their own families, agriculturalists who plant bamboo will sell both bamboo and bamboo shoots to earn added income for their families.

Capital management and production value assessment of bamboo products for sustainable development: A case study at Thasao Sub-district, Saiyok District, Kanchanaburi

Kwannaree Klaprabchone, Charuwan Chanphen, Nithikorn Phunmares and Dunagnapa Tancharoonrat
Kanchanaburi Rajabhat University, Kanchanaburi, Thailand

A study of capital management and assessment of production value of bamboo products for sustainable development at Thasao sub-district, Saiyok district, Kanchanaburi, was conducted in order to get data for planning, controlling, and decision making. Such information can help people know how to use bamboo in worthwhile and efficient ways as well as use it sustainably.

To collect data, the researcher did a field-work study by observation, questionnaires, and in–depth interviews. Data were then analyzed using descriptive and quantitative methods. From a six-month study, it was found that people in 4 villages produced bamboo baskets. Capital production is as follows: bamboo, plastic strips, other materials, equipment and machines, wages, electricity, maintenance, and transportation. Problems in production are weather, agreement between communities and the Forestry Department, and leftovers from production that are useless.

Biotic community of the bamboo ecosystem at Pu-teuy community forest, Tambon Thasao, Saiyok District, Kanchanaburi

Piyaporn Pitaktunsakul*, Sudarat Peansamer and Jiraporn Phongam
Kanchanaburi Rajabhat University, Kanchanaburi, Thailand
**e-mail: nok0823@hotmail.com*

This research aims to compare the diversity of biotic communities found in different types of bamboo. The experiment comprised 4 treatments; *Gigantochloa albociliata* (Munro) Kurz, *Thyrsostachys siamensis* Gamble, *Gigantochloa densa*, and a mixture of *G. albociliata* (Munro) Kurz, and *G. densa*. Each treatment was replicated 3 times. Animal species were collected from 20x20 m permanent sample plots. Animals were separated into groups: macroscopic soil animals, insects, vertebrates especially amphibians and reptiles, birds and mammals. The data is being collected from December 2007-November 2008 and covers all seasons.

Preliminary results indicate that there are more than 18 species of ants, 15 species of birds, and some species of reptiles such as *Chameleo* sp. and *Sphenomorphus* sp. Most organisms were distributed in all permanent sample plots.

Screening of phosphate-solubilizing bacteria from bamboo root soil in Pu-Teuy community forest, Saiyok District, Kanchanaburi Province

Samaporn Ruangsanka
Kanchanaburi Rajabhat University, Kanchanaburi, Thailand
e-mail: samako@ yahoo.com

Pu-teuy community forest comprises various plant and animal species as well as soil microorganisms. Soil samples from the bamboo rhizophere in the zone of swamp forest were taken for study of physical and biological parameters. The pH of soil samples ranged from 6.68-8.98 showing weak acidity. The moisture content of soils were in the range of 10.12-17.76%. Total P was 628.9-2558.8 ppm as P_2O_3, whereas soluble P was only 95.3-343.1 ppm as P_2O_3. These results indicate that there is plenty of P in the soil but it is in an insoluble form that cannot be utilized by plants.

Based on the idea that phosphate-solubilizing microorganisms are a key factor for plant growth, such functional rhizospherous microorganisms were screened using Pikovskaya's media. Twelve isolates showed remarkable growth performance with clear zones on these solid media. The most effective solubilizing bacteria were selected; these were 5 strains, A14, A2, A5, A6 and A7, that gave halo:colony ratios of 3.5, 3.1, 2.49, 2.16 and 2.00 mm respectively. Then, the specificity between species of bamboo and p solubilizing bacteria were analyzed. The results showed that A14 was specific to 'Kaow-Lam' bamboo while A2 and A3 were found in 'Roag' bamboo. In addition, A3 could be found in 'Noul' and 'Pag' bamboo. Of the strain A5 was found in both 'Ta-Dum' and 'Plong-Yaw' bamboo. The last strain, A6, was found only in the rhyzophere of 'Nam' bamboo.

Steamed bamboo shoot production in Thasao community, Saiyok District, Kanchanaburi Province

Kanchana Chiangthong* and Lalida Chayawat
Kanchanaburi Rajabhat University, Kanchanaburi, Thailand
**e-mail: Chiangthong@hotmail.com*

Thasao Sub-district, Saiyok District, Kanchanaburi, is located in an abundant forest area where the community obtains many advantages. Bamboo shoots (*Thyrsostachys siamensis* Gamble) are one of the valued plant products that can be gathered in large amounts during the rainy season. Thasao villagers gather bamboo shoots for domestic consumption and pack the surplus in plastic for a steaming process. They steam bamboo shoots to gain some extra income. But this process in which villagers steam bamboo shoots in plastic bags can result in chemical contamination from the plastic bags. This problem made the researchers aware of its danger and resulted in this study of the production of steamed bamboo shoots by the Thasao community. After analyzing physical characters, contaminants and duration to expiry, the researcher determined 3 ways of production as follows:

1) Boil unpeeled bamboo shoots, then peel them before steaming the bamboo shoots that are packed in plastic bags.

2) Peel the bamboo shoots before packing them in plastic bags and steaming.

3) Peel the bamboo shoots and cook them in steam and pack them in plastic bags.

The factors used for physical analysis of the processes were the general characters, color, odor, texture, and diluted substances. The quality control standard for steamed bamboo shoot products for local products are *pH* between 5.07-5.48 and lead level in range of 0.038-0.185 milligram per kilogram. From the study, raw bamboo shoots that were steamed before being packed in plastic bags could be kept for more than 60 days. But raw bamboo shoots that were steamed in plastic bags could be kept for 30-60 days and bamboo shoots well-cooked before being packed and steamed could be kept for not more than 30 days.

A study of local people's knowledge on non timber product utilization and the transformation to local production

Jiranan Piyaphongkul[1,*], Oratai Neumsuwan[2], Nantana Gajaseni[2], Teerasak Aurbsapab[1], Sopa Luadsong[1], Panomwan Yuprom[1] and Tanyarat Wongpan[1]

*[1]Kasetsart University, Kamphaengsaen Campus, Nakhon Pathom, Thailand, *e-mail: faasjnt@ku.ac.th, [2]Chulalongkorn University, Bangkok, Thailand*

The aim of this study was to investigate the diversity of species used for non–timber forest products (NTFPs) in a Thong Pha Phum plantation, Kanchanaburi. The methodology consisted of 3 parts: 1) to investigate the relationship between socioeconomic factors and NTFP utilization level by using 137 questionaires, 2) to investigate utilization by using 42 questionaires, 3) to explore species diversity of plants used as NTFPs by collecting plant samples for identification. From the results, we found that plants used for NTFPs were very diverse and could be classified into 3 groups according to regular utilization:

1) herbs species with 49 species, different parts of each herb were used with the leaf component having the highest utilization,

2) Edible wild plants with 41 species, as well as animal groups in the study area, which were classified into 22 species. The main method of transforming edible wild plants into local food product was by fermentation. Some animals were transformed into local food products by fermentation and by drying,

3) Handicraft plant species; 13 species were found. Utilization patterns were different depending on the handicraft plant species. Thus grass was transformed into various local handicraft products such as roofs of huts, hats and brooms. Bamboo was transformed and used as many handicraft utensils, while hardwood was transformed into charcoal.

Changing ecosystems and its impact on biodiversity and local knowledge in the Greater Mekong Sub-region

Yos Santasombat
Chiang Mai University, Chiang Mai, Thailand
e-mail: santasombat@yahoo.com

This project aims at a better understanding of transnational mega projects and their impact on changing ecosystems and the lives and livelihoods of marginal communities in the Mekong region. The focus is on marginal fishing communities along the Mekong and its tributaries and to understand how changing ecosystems have impacted upon fish ecology, and the impact of changing ecosystems on local economies, life-styles, and cultural practices.

For the studied communities presented in this research, the ongoing economic and social transformations are resulting in increased vulnerability and environmental degradation. While depicting a stark future for less advantaged Mekong communities, the research still gives reason for hope by pointing out that these communities have the capacity to react. Their local knowledge is continuously transformed into adaptive responses that allow them to cope with evolving historical realities. For instance, in response to erratic fluctuation of water levels, many local communities have devised conservation measures to regulate the timing and extent of fishing. In this sense, the research contends that if the value of this knowledge is recognized, and local communities are included in regional and national planning, a sounder natural resource management system can be fostered. Consequently, the research advocates the incorporation of bottom-up planning processes in the development of the GMS. Communities, however, may not be able to spur a more inclusive approach on their own, considering the unequal power structure within and across countries. Here is where the project emphasizes that the formation of 'transnational civil society' alliances between local groups and regional and international organizations is crucial to more balanced development in the GMS.

The relationship between agro-biodiversity and community livelihood in Thung Kula Ronghai

Tawin Chanaboon*, Sudarat Thanonkeo, Surapon Yodsiri, Panida Laotongsan, Pattana Pasorn, Nipat Boonmahome and Warawut Phusompao

*Walai Rukhavej Botanical Research Institute, Mahasarakham University, Maha Sarakham, Thailand, *e-mail: Tawin.c@msu.ac.th*

The objectives of this research are to study ecosystems, plant and animal diversity and their relationships with community livelihoods in Mek dam and Nong Bua Kaeo sub-districts, Phayakkhaphum Phisai district, Maha Sarakham, and to evaluate biodiversity used by the local community. During the primary study, we determined 117 plant species, 160 animal species and 69 topics of local knowledge. Within our study area, 5 terrestrial ecosystems and 4 aquatic ecosystems occurred. We also found a close relationship between livelihood and biodiversity for food and other uses for daily life. Once completed, this research will provide us with an improved understanding of the value of biodiversity used by the local community and baseline information for use and conservation of important biodiversity in the area.

Seasonally flooded forest and household subsistence livelihoods: A case study of the lower Songkhram river basin

Phruek Jirasatayaporn
Mahidol University, Bangkok, Thailand, e-mail: pop_env020@hotmail.com

The study aimed at determining the contribution of seasonally flooded forest to the subsistence of local households and exploring the factors affecting household subsistence livelihoods. Structured questionnaires and in-depth interviews were used as key tools for data collection. The sampled population consisted of 269 household heads in 12 villages located on both sides of the lower Songkhram River in Nakhon Phanom Province. Data were collected from October 2005 – January 2006.

Two indices were used to indicate household subsistence livelihood. The first index was the proportion of the total amounts of products that households actually harvested from seasonally flooded forest per year over the actual amounts of products consumed by households per year. The second index was the proportion of the actual amounts of products consumed by households over the standard amounts of products which Thai people should consume.

The results revealed that most sampled households had subsistence livelihoods; 61.3 %, 69.5 % and 69.1 % of the households had sufficient rice, vegetable and fish consumption, respectively. Amounts of rice, vegetables and fish products that households could harvest from seasonally flooded forest areas per year exceeded the actual amounts consumed by households per year. 82.5 % of households consumed more rice than the standard (Department of Health: 1997). However, 85.1% and 97 % of households consumed less vegetables and fish, respectively, than the standard (Department of Health: 1997).

It was concluded that seasonally flooded forest had contributed significantly to household subsistence and livelihoods. Any change or damage to the natural characteristics of seasonally flooded forest needs careful thought.

Risk assessments of damage by tourism to resources and of dangers to tourists in Huai Yang Waterfall National Park, Prachuap Khirikhan Province

Sirintip Juntueng
Mahidol University, Salaya Campus, Nakhon Pathom, Thailand
e-mail: Sirintip_J@hotmail.com

The three main objectives of this study were to study the characteristics of the water, forest and wildlife resources in Huai Yang Waterfall National Park, to study tourist behavior and tourist dangers and to assess the risk of resources damage by tourism and dangers to tourists. Data was gathered by various methods. 160 tourists were interviewed and the resulting data were analyzed using the Statistical Package for Social Sciences (SPSS). In-depth interviews with park officers and risk assessments of each tourism site were conducted by 5 specialists plus the researcher.

The study found that water quality of Huai Yang waterfall in the dry season and rainy season was under the standard quality for every parameter of surface water type 2 according to the Department of Pollution Control. The Panda crab, the only endemic wildlife species, and the Malayan Tapir, Serow and Banteng, which are rare wildlife species, were found. Rare or endangered plant species were not found on nature trails near the waterfall. Investigation of tourist behavior found that more than 50 percent of tourists followed the national park's suggestions. The most important tourism activity was viewing scenery. The main danger to tourists was insect bites and the most dangerous area was Pa Ta Kae. The tourism sites most at risk were the Hub Ta Khien area, followed by Yot Khao Luang and then Huai Yang Waterfall. The most dangerous area in terms of tourist accidents was Huai Yang Waterfall, especially the 2nd, 3rd and 5th stages. As for risk assessment of dangers to tourists, the study found poisonous animals were the most dangerous, followed by flash floods, and then slippery areas.