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**Participatory Community Appraisal in Srisa Jorakae Noi Village,
Bangsaothong Minor-District, Samutprakarn Province, Thailand**



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1. Acronyms and terms

AIT	Asian Institute of Technology, Bangkok
KU	Kasetsart University, Bangkok
<i>klong</i>	Thai name for canal
KVL	Kgl. Veterinær-og Landbohøjskole
NIHE	National Institute of Health and Epidemiology, Hanoi
PAPUSSA	Production in Aquatic Peri-Urban Systems in Southeast Asia
PAFPS	Peri-urban aquatic food production systems
PCA	Participatory community appraisal
PU	Peri-urban
PUAFPS	Peri-urban aquatic food production system
RIA1	Research Institute for Aquaculture No. 1, Hanoi
RUA	Royal University of Agriculture, Phnom Penh
SOS	State of the System
UAF	University of Agriculture and Forestry, Ho Chi Minh City
UD	University of Durham, UK
UOS	University of Stirling, UK
HHs	Households

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5. Introduction

A workshop on Participatory Community Appraisal (PCA) was held at Srisa Jorakae Noi Village, Bangsaothong Minor- District, Samutprakarn Province, on November 7-12, 2003.

The community of Srisa Jorakae Noi Village represents peri-urban aquatic food production systems in Bangkok producing a variety of freshwater fish for domestic markets. The community was thus ideal in meeting the objective of PCA which was to study the aquatic production systems in peri-urban areas around Bangkok. To carry out this assessment a workshop was organized to learn about the community's livelihoods, history, special characteristics, activities, resources utilization, food consumption and seasonal variation; also to study impacts of peri-urban aquatic production systems on health and hygiene, as well as to find solutions to problems voiced by the villagers.

Results of the workshop were later presented to the villagers for validation and comments before revising and submitting to the SOS meeting.

This report provides an overview of Srisa Jorakae Noi Village with a focus on issues that are relevant to the project such as wastewater, environmental impacts and health problems. However, the forthcoming development of the new international airport is unavoidable and will have considerable impact on Srisa Jorakae Noi Village via housing estates and factories expansion in the near future.

6. Description of Srisa Jorakae Noi Village

6.1 Location

Study areas of Srisa Jorakae Noi Village are:

Coverage	25.48 km ² or 15,925 rai ; Around 25 km. from the centre of Bangkok Metropolitan Area in the North; Srisa Jorakae-Yai Sub-District in the South ; Bang Sao-Tong Sub-District in the East; Bang-Plee District in the West.
Geographic features	Floodplains connected by 13 canals (klongs).
Man-made reservoirs:	42 deep wells.
No. of villages:	12 villages.
Occupations:	Agriculture including fish and fruit cultivation, and water mimosa farming as well as employees as labourers in factories and industries.
Schools:	2 Primary schools.
Public health:	1 Local public health center.
Infrastructure:	4 concrete roads with one main road and 10 lanes in this village

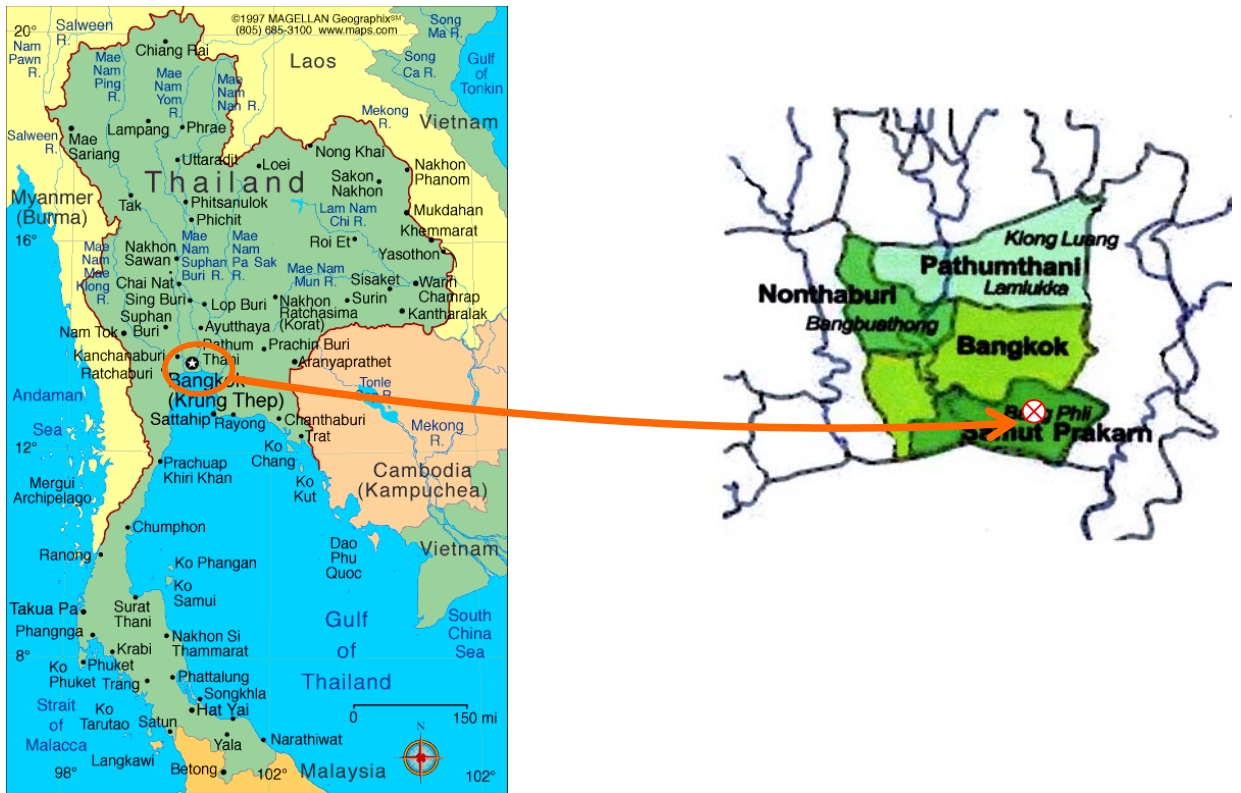


Figure 1 Map of Thailand showing the overview of peri-urban areas surrounding Bangkok with the location of the Srisa Jorakae Noi Village in Samutprakarn Province.

6.2 Population

The village accommodates a total of 6,422 individuals, consisting of 3,197 males and 3,225 females. Average population density of the village is 252 individuals/km².

Most villagers were relatively wealthy due to the high value of their land. Some have sold their land to the private sector for building factories such as food processing factories, chemical factories, and plastic and metal products factories or to the government for construction of the new international airport which is expected to fully operate in the Year 2006.

Occupations in Srisa Jorakae Noi Village addressed by Srisa Jorakae Noi Tambon Executive Organizer were presented in Figure 2. Over half of the population were involved in fish polyculture. Despite large migration of labourers from Northeastern Region into the area, fish farming in this village however was found to be on the decline. This was mainly due to an increase in land value and the continuously urbanization expansion which effectively caused some villagers to relocate and continue fish farming elsewhere.

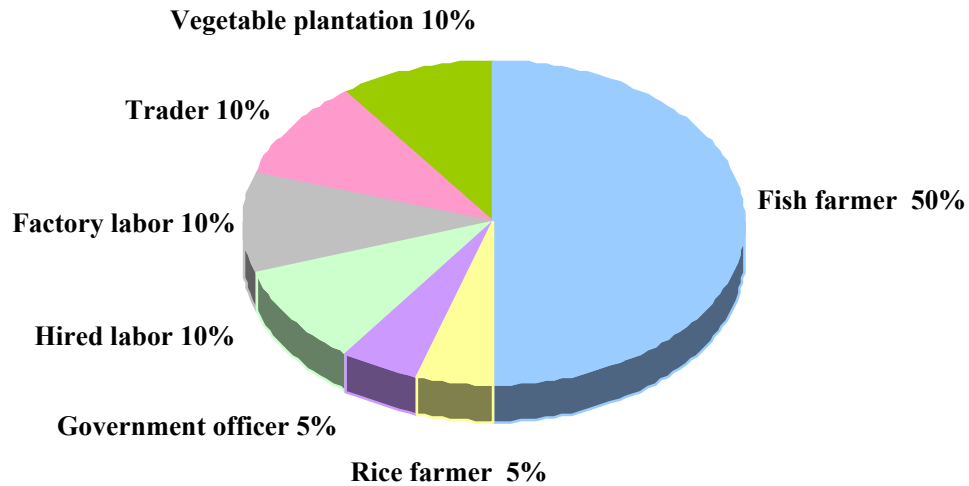


Figure 2 Occupations in Srisa Jorakae Noi Village.

6.3 Ethnic composition

All villagers are Buddhists.

7. Social characteristics of the community

7.1 Socio-economic status of Srisa Jorakae Noi village

A study on socio-economic conditions of the residents was coordinated by Mr. Prajuab Yusabai, the village headman, who provided the study team with a list of households. A total of 62 households was included in the list, accounting for total population of 177 individuals (89 males and 88 females). Yusabai along with two local officers also contributed to assessment of villager's living conditions based on the following criteria:

1. Land ownership
2. Size and conditions of house
3. Motor vehicles
4. Occupations

With these criteria, living conditions of villages can be summarized in the following Figure 3.

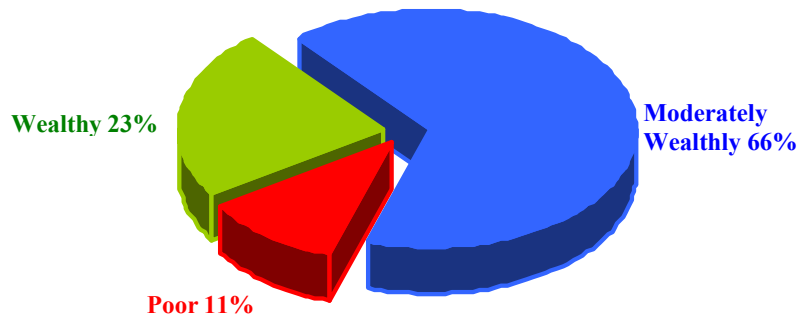


Figure 3 Living conditions of residents in Srisa Jorakae Noi Village

7.2 Food consumption

Types of food, consumption, and sources of food were obtained from the villager representatives during the PCA workshop as shown in Table 1. Pork, poultry and fish were the main protein diet of villagers. These foods are often bought from nearby markets or from mobile merchants. The villagers also consumed fish from their own ponds as well as shared fish with neighbors. Vegetables are grown in every household while fruits are cultivated only in orchards. Other foods may also be acquired depending on their seasonal availability.

Table 1 Food consumption throughout a year

Kind of Food	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Rice	—————→											
Pork	—————→											
Beef	—————→											
Chicken	—————→											
Fish	- - - - -→→ —————→											
Common Vegetable→ —————→											
Fruit→ —————→											
Can Food	—————→											

Note: —————→ → - - - - -→
 Purchase Self-Produce Available in Nature

7.3 Activities profile

Men and women were separated into 2 groups to perform their daily activities. Daily activities of men and women villagers are shown in Figures 4 and 5.

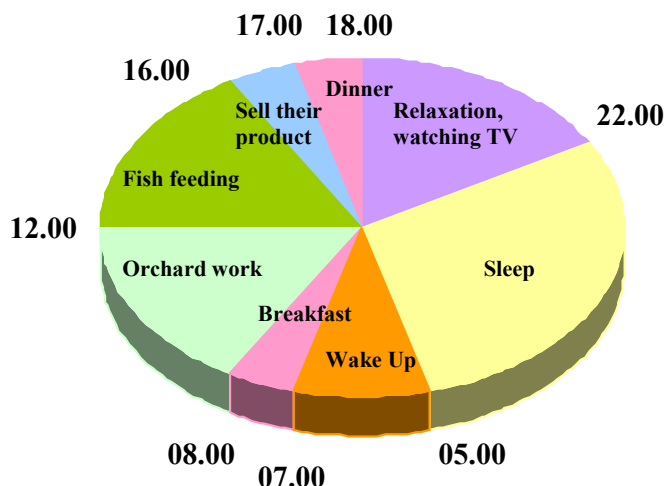


Figure 4 Daily activities of men villagers

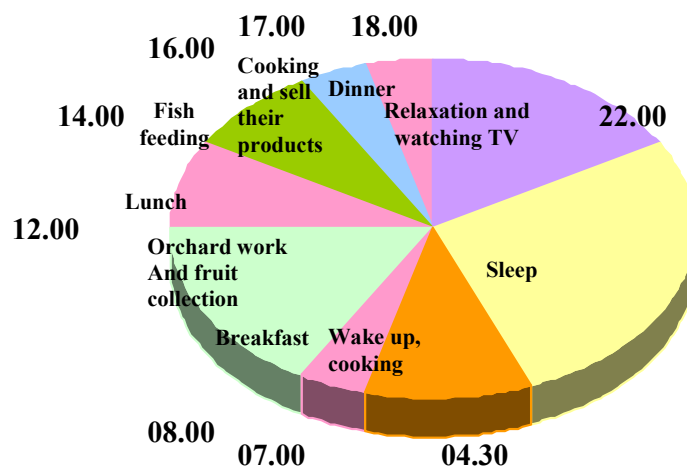


Figure 5 Daily activities of women villagers

The study shows that women get up earlier than their male counterparts (4.30 a.m. to 5-6 a.m.) in order prepare breakfast and take care of their housework. Both of them were known to leave home at 8 a.m. to work in their fish ponds or orchards (collecting fruits, etc.). They return home for lunch and go back to work at 2 p.m. At 4 p.m. men were found to take their products to market while women return home to prepare dinner. Both were found to have dinner at 5 p.m. and go to bed around 10 p.m.

7.4 Resources utilization

Mapping of resource utilizations enabled the study to identify location of the villager's activities and resource utilization outside the community. Resources utilization in the villages can be described with the Figures 6 and 7:

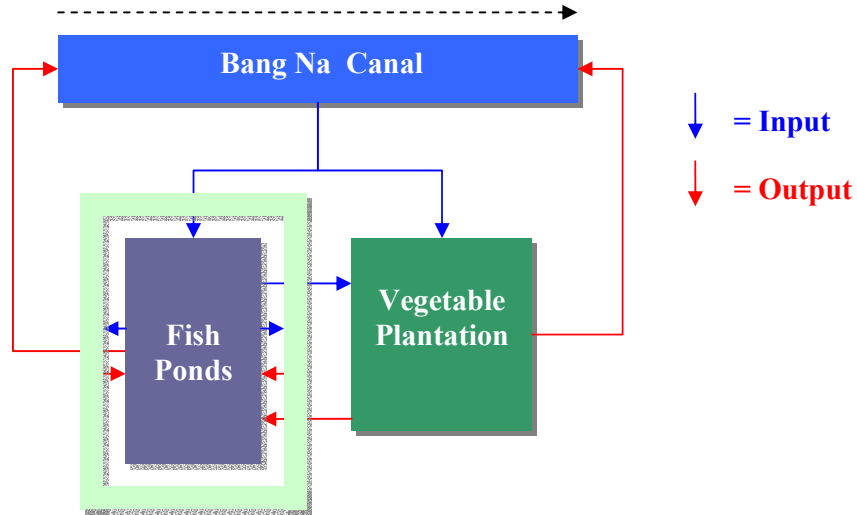


Figure 6 Water supply in Srisa Jorakae Noi Village

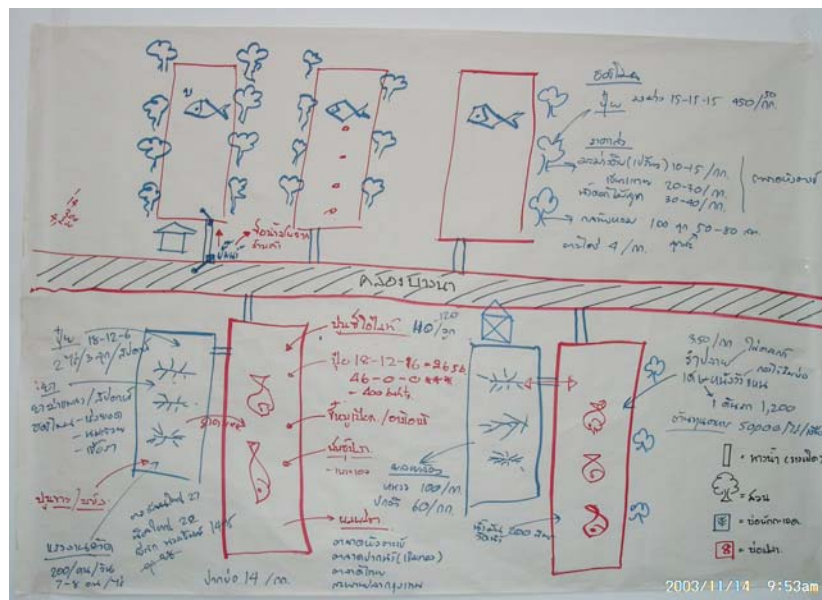


Figure 7 Map for important resources in Srisa Jorakae Noi village as drawn by participants from the village

8. Characteristics and resources of the community

8.1 Map of the community

Map of the community was drawn by the villager representatives during the workshop as shown below in Figure 8.

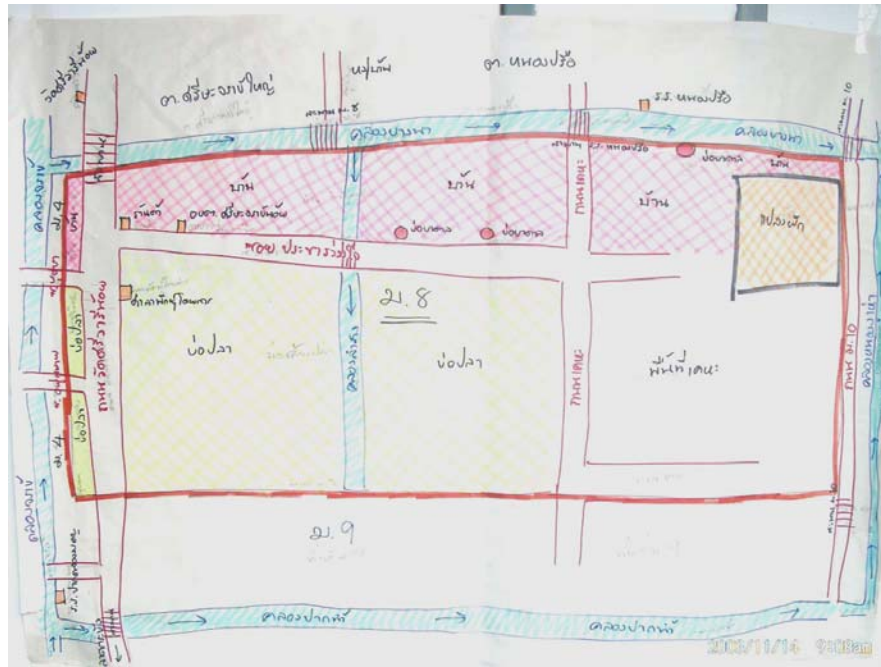


Figure 8 Map of the community in Srisa Jorakae-Noi Village

8.2 All year round activities

The pattern of all year round activities of the better-off and worse-off people in the community were obtained from the villager representatives during PCA workshop (Tables 2 and 3). These show that fish farming (both polyculture and breeding), cultivation of aquatic plants and fruit plantations are among the activities carried out by the villagers all year round. Polyculture operation was identified as the main occupation of the residents who grow a variety of fish species such as Tilapia, silver barb and Rohu in their farming. Fish farming often begins in January with fish harvested in August (8 months production cycle).

The fruit (coconut, jack fruit, banana, mango, etc.) are cultivated along the pond dikes and mostly harvested from January to April. Vegetables are often planted between trees in the farms using water from adjacent fish ponds to irrigate them.

Fish farming was introduced to the village 10 years ago. Since then the villagers have gradually acquired experience in aquaculture and recently are adopting new technologies. Water mimosa is the only aquatic plant farming found in the area. This water mimosa farm may also be jointly operated with a fish polyculture. Most of the hired laborers were employed by factories.

Table 2 Seasonal calendar for better-off people in Srisa Jorakae Noi Village

Month	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Weather	Winter	Late Winter	Summer		Early Rainy season	Rainy season				Early Winter	Winter	
Economic activities Polyculture Culture	All Year Round											
Breeding and Nursing Freshwater Fish	All Year Round											
Horticulture	All Year Round											
Traders	All Year Round											
Captivation of Field Crop Water Mimosa	Planting	Harvesting			Planting	Harvesting		Planting	Harvesting			
Livestock Fish Culture	All Year Round											

Table 3 Seasonal calendar for worse-off people in Srisa Jorakae Noi Village

Month	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Weather	Winter	Late Winter	Summer		Early Rainy season	Rainy season				Early Winter	Winter	
Economic activities Hired Labor	All Year Round											
Caltivation of Field Crop Water Mimosa	Planting	Harvesting			Planting	Harvesting		Planting	Harvesting			
Fishing	All Year Round											

9. Historical timelines

The historical timelines of the village were produced from the brainstorming of villager representatives who participated in the PCA workshop. It is not known when the village was first established. However the study found that the main source of water was from Bang Na and Jor-Ra-Kai Canals, has long been used to support rice cultivation as well as local water borne transportation. In 1973, the government decided to build a new airport at nearby Nong Ngu Hoa (Cobra Swamp) and thus asked the villagers to surrender their lands to the government. Due to postponements in the actual construction, farmers were allowed to continue rice farming on their land.

In 1975 an electricity service became available for the communities along the Bangna Canal. Access to the village was significantly improved in 1977 with completion of (Lard krabang and Bangna) Trad Roads which remain as the main transportation routes until today. With better infrastructure fish cultivation was introduced, firstly as a part of integrated cropping of rice. After the flood in 1983, other fish species such as silver barb were further introduced into the village. Completion of Pracharuamjai Road in 1985 connected Watsriwarenoi with the community, and the roads became main transportation routes for the villagers, whilst the boats were used for more short-distance trips. After a severe flood 1987, many farmers gave up rice farming and sold their lands. Some switched to fish farming, vegetable cultivation and fruit plantation. Those who took up water mimosa cultivation however later became the main restarted suppliers to wholesale markets in Bangkok. In 1994 the government began construction of a new airport causing people around 500 families to move out of the village. The adjacent motor-ways were also completed during this period. District administration was established in 1995 and has continued to operate ever since, while the airport construction is still on-going and expected to be done and opened within the Year 2006.

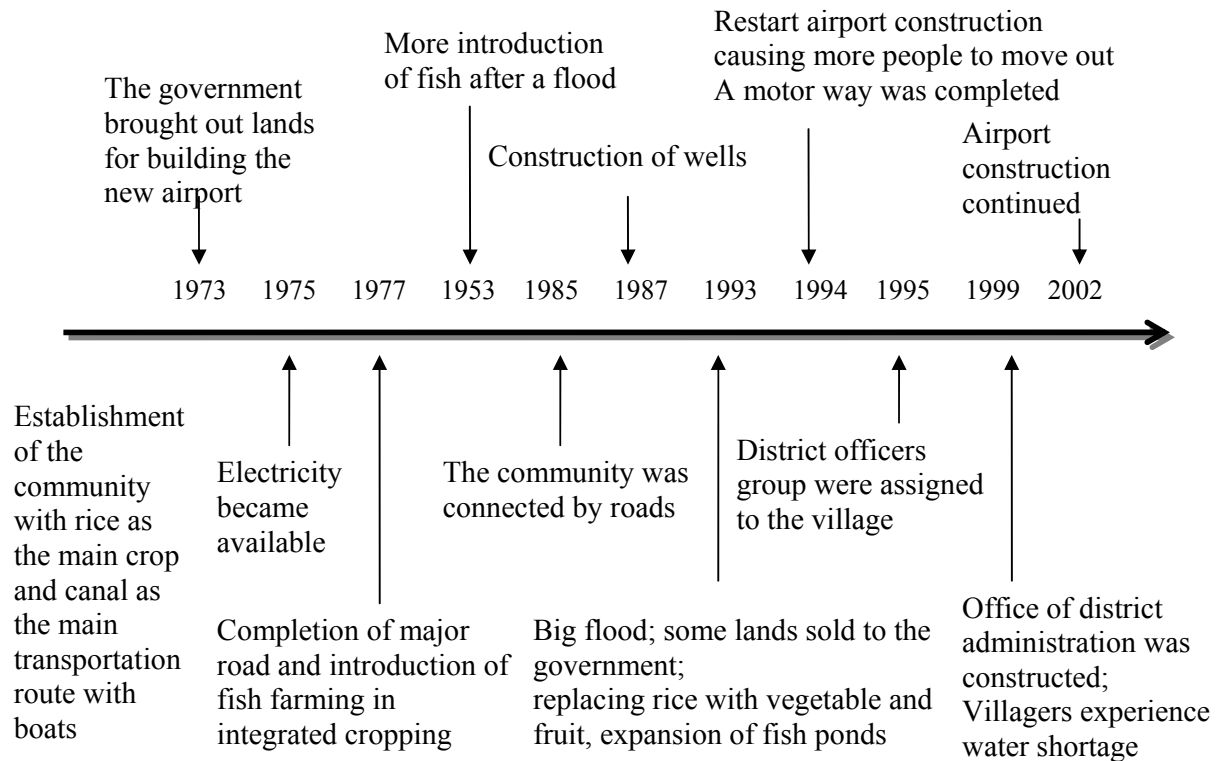


Figure 9 Historical timeline of Srisa Jorakae Noi Village

10. Priority problems

Each villager who participated in the PCA workshop received twenty black bean seed before scoring to freely vote on the proposed lists of serious problems facing their village. Men and women gave a score separately. One seed means one mark of voting. Ranking problems were considered based on the results of both men and women but overall ranking could not be done due to an unequal number of men and women.

List of problems and their causes identified by the workshop participants are as follows:

Problem: Low commodity price

Causes:

1. High domestic production from fish farming.
2. Over supply of fishes in the market demand.

Problem: Expensive inputs

Causes:

1. Inefficient pelleted feed compared with trash fish - The pelleted feed is not cost-effective.

Problem: High cost of living

Causes:

Close proximity to Bangkok Metropolitan area where cost of living is comparatively higher than earning of the villagers.

Problem: Air pollution (dust)

Causes:

1. Constructions of the new international airport.
2. Air quality is expected to worsen by increasing road traffic when the airport is completed.

Problem: Waste pollution

Causes:

1. Discharge of wastewater from housing estates and factories into Bang Na Canal

The above mentioned problems were ranked in accordance to views of villagers as shown in the following Table 4.

Table 4 Priority problems of Srisa Jorakae Noi Village expressed by men and women.

Problem issue	Male	Ranking	Female	Ranking
Low commodity price	22	1	7	2
High cost of input	17	2	9	1
Fish disease	5	6	3	4
Dust from of the new airport construction	13	4	4	3
Wastewater discharged by industries by occasion	12	5	3	4
Crime	2	9	-	
Drugs abuse	4	7	1	7
High living cost	16	3	2	6
Pests	4	7	-	
Golden apple snail	2	9	-	
Not integrated fish culture	1	12	-	
Pollution from the airport	2	9	-	

Summary of the workshop:

Residents at Srisa Jorakae Noi Village were found to be moderately wealthy. They were known to earn their living mostly from polyculture of fish and water mimosa farming. Some were also found to work as hired labour or operate their own retailing businesses. Low commodity price, expensive inputs high cost of living and dust from of the new airport construction were identified as priority problems of both representative male and female participants of the villagers. Agricultural activities are mainly associated with the Bang Na Canal. However, in the near future this village is expected to undergo more urban and commercial developments due to the establishment of the new international airport. This probably direct effects to the increasing of land price and farmers will soon make decisions to sell their own lands to either the government or any private real estate development. However, the new airport might bring any benefits to the community such as jobs, employment, chances of opening secondary business-shops, restaurants and new service industries, etc.

Appendix



Scoring the priority problems given by participants

Results showing the priority problems of Srisa Jorakae Noi community



Workshop brainstorming by participants