

Introduction to the Case Studies:

Mangrove Conservation Program
in Klong Klone Sub-District

and

Private Mangrove Plantation
in Yee San Sub-District

Samut Songkram Province

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Topics included:

- General Background
- Background of the study area
 - Area 1 (Klong Kone)
 - Area 2 (Yee San)
- Situation
- Exercise
- Annex 1: Aquatic animals
- Annex 2: Fishing gears
- Annex 3: Charcoal production
- Annex 4: Cost and revenue of fishery production



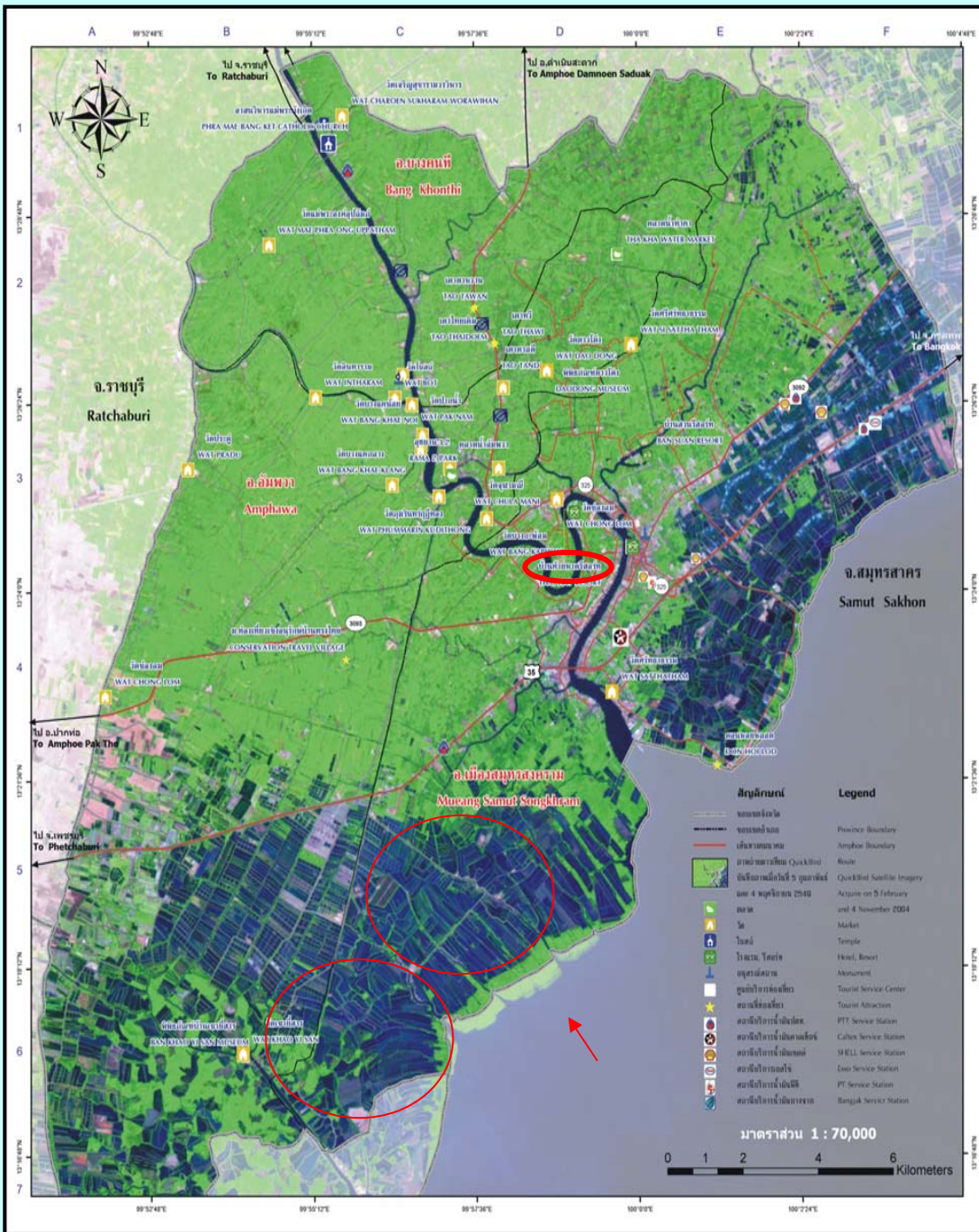
Thailand

Samut Songkram Province

Samut Songkram province is a province in the Central plain of Thailand located in the south-west coastal area near the gulf of Thailand. It takes about 72 kilometres from Bangkok. Total area is about 416.707 square kilometres or 260,441.87 Rai.



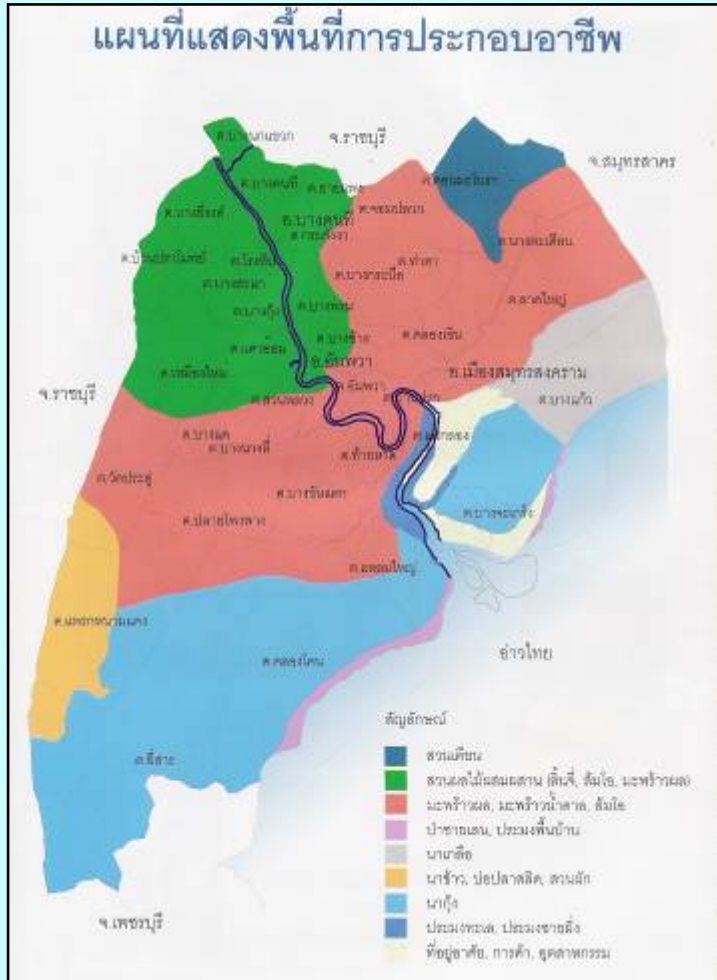
- Samut Songkram consists of 3 districts namely
1. Muang
 2. Ampawa
 3. Bang Kon Tee



Geography of Samut Songkram

- Coastal Area
- Mangrove Forest
- Mae Klong River

Natural Resources and Environment



- 1) Soil: salty soil, unsuitable for agriculture
 - 2) Water: Mae Klong river is the main water resources in the area, about 25 kilometre long.
 - 3) Forest: Mangrove forests use for
 - Study and research
 - Community income sources
 - Tourisms
 - Fishery
- Total mangrove area is >20,000 rai:
natural mangrove forest 10,000 rai (2008).

Note: 6.25 rai = 1 ha or 2.5 rai = 1 acre.

Case Study 1:

Mangrove Conservation Program in Klong Klone

Background

Klong Klone Subdistrict consists of 7 villages.

Moo 1 Ban Klong Kod

Moo 2 Ban Klong Klone

Moo 3 Ban Klong Klone

Moo 4 Ban Praek Ta Le

Moo 5 Ban Klong Chong

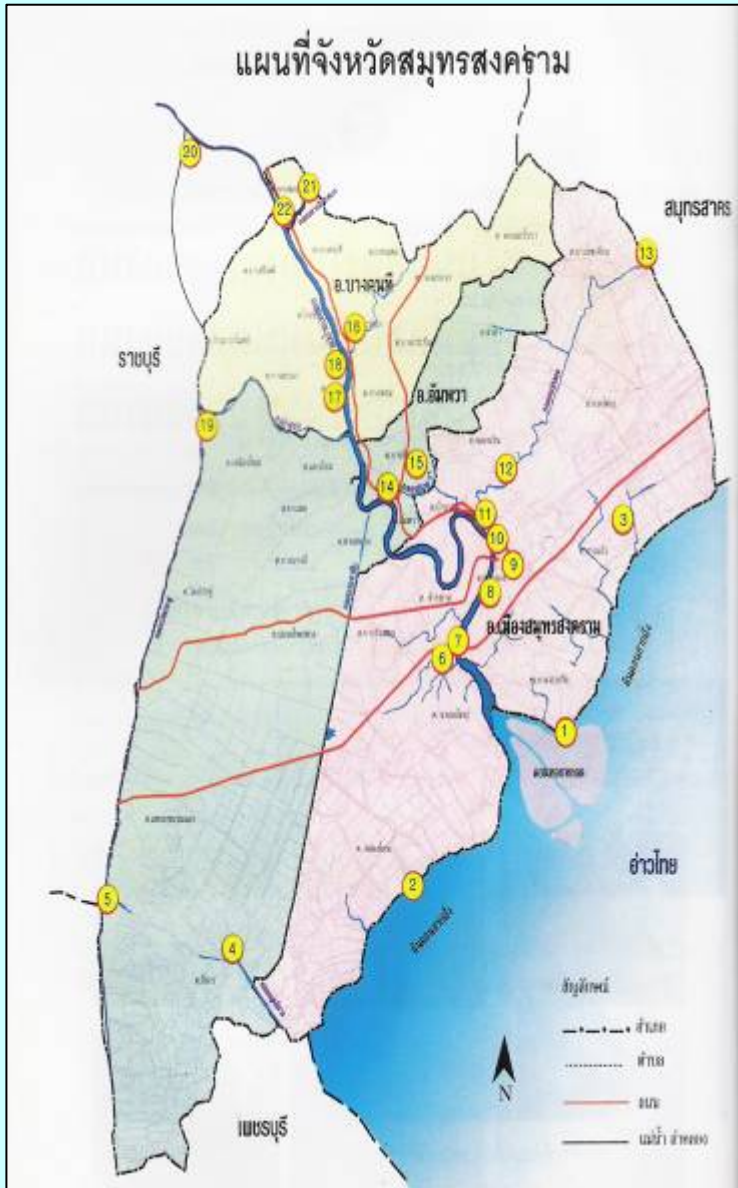
Moo 6 Ban Pracha Chomchuen

Moo 7 Ban Klong Chong Noi

- Total area of Klong Klone Subdistrict is 24,561.00 Rai or 39.30 square kilometres.

- Most areas are coastal resources, wetland, and mangrove forest.

- Main occupation of the community is fishery.



Households in Klongklone

Village no.	Total household	Fishery households	%
1	70	35	50
2	161	153	95
3	101	96	95
4	122	116	95
5	160	152	95
6	80	40	50
7	141	134	95
8	835	726	87

Background (cont.)

- In 1952, mangrove forest in Klong Klone was about 27,000 Rai.
- In 1984, the intensive Shrimp culture was boom in the area. Mangrove forest reduced to 800 Rai.
- In 1989, a big problem of water pollution from the intensive shrimp farming.
- In 1991, the Klong Klone community mangrove conservation program is established.
- Now (2008), about 7,000 Rai of mangrove are reforested.

Background (cont.)

Current benefits obtained by the community from the **Mangrove Conservation Program** in Klong Klone.

- Fishery
- Eco-tourisms
 - Boating
 - Food hut services
- Study and research
- etc.

Mangrove Conservation



Fishery



Eco-tourism



Case Study 2:

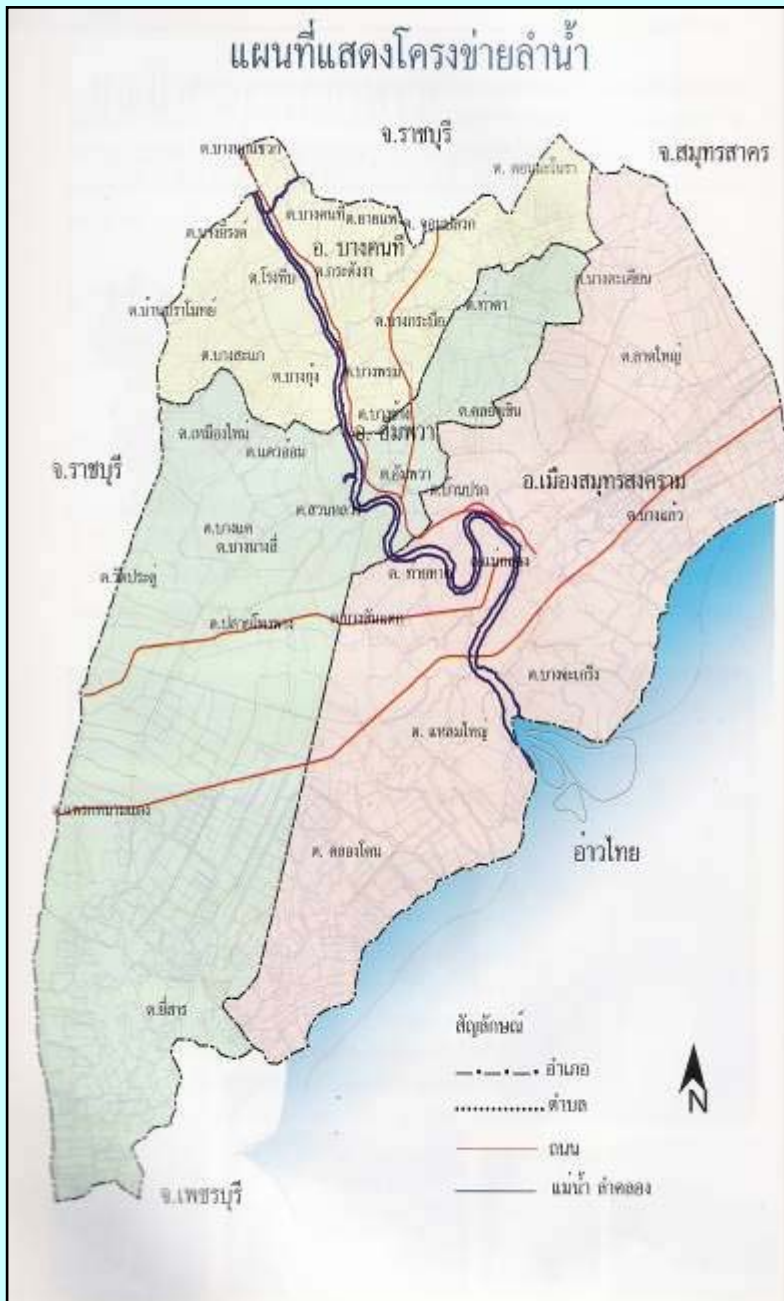
Private Mangrove Plantation in Yee San

Background

Yee San Subdistrict consists of 5 villages.

- Moo 1 Ban Kao Yee San
- Moo 2 Ban Klong Bannog
- Moo 3 Ban Ton Lampan
- Moo 4 Ban Don Jan
- Moo 5 Ban Klong Koodlek

- Total area of Yee San Subdistrict is 38,062 Rai or 60.90 square kilometres.
- Most areas are coastal resources, wetland, and mangrove forest.
- Main occupation of the community is fishery (60%), mangrove charcoal production (4%), working as hired labor (10%) and others.



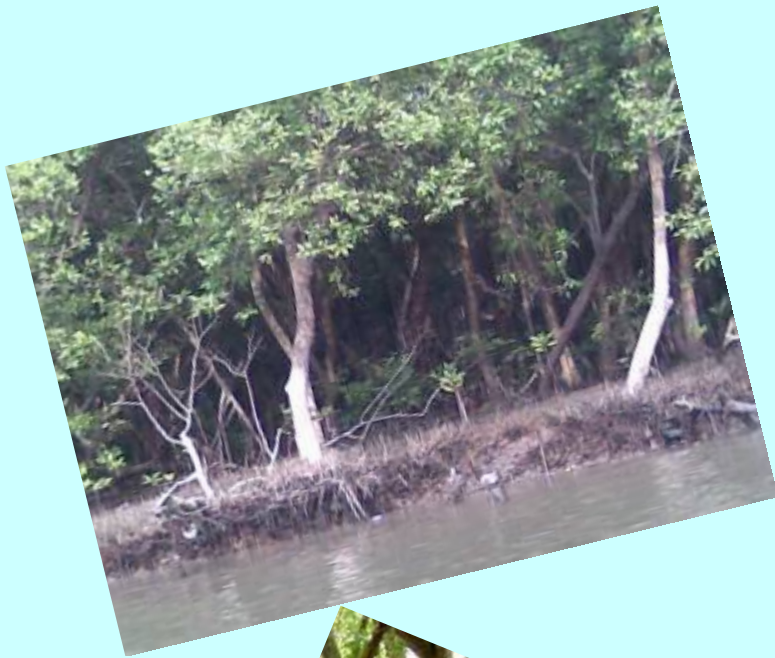
Households in Yee San

Village	Total households	Mangrove plantation households	%
1	195	10	5.13
2	91	7	7.69
3	154	9	5.84
4	109	2	1.83
5	167	—	—
Total	716	28	3.91

Background (cont.)

- In the past before 1932, mangrove forest area in Yee San was about 22,500 Rai.
- In 1932, natural mangrove forest was encroached by the community for the mangrove plantation.
- In 1973, land right was given to the area.
- In 1999, about 17,855 Rai of mangrove plantation for charcoal production were operated by 45 households in the area.
- As the intensive shrimp farming was boom since 1984, and parallel with the problem of sedimentation in the area of mangrove plantation. Plantation was declined.
- Today (2008), about 10,000 Rai of private mangrove forest are planted for sale privately owned by about 28 households in the area.

Mangrove Forest Plantation



Charcoal production



Charcoal Production Process



Background (cont.)

Benefits obtained by the private mangrove plantation in Yee San are such as.

- Income from mangrove wood and charcoal production.
- Indirect benefit of mangrove forest:
 - Shoreline stabilization
 - Salt water intrusion
 - Flooding control
 - Carbon sequestration
 - etc.

Given Situation for Impact Analysis

- Oil price rapidly increases (Table 1).
- As a consequence, there is a higher demand of wood and charcoal from the industries surrounding both areas.

Table 1: World Crude Oil, Petrol and Diesel Price

Year	Crude oil (\$/bl)	Petrol (B/l)	Diesel (B/l)
1995	16.86		
1996	20.29		
1997	18.68		
1998	12.31	11.53	9.37
1999	17.45	12.07	9.19
2000	27.61	14.69	12.08
2001	23.12	14.74	12.36
2002	24.25	15.04	13.67
2003	28.16	17.04	14.49
2004	36.06	18.54	14.64
2005	50.64	22.86	19.04
2006	60.81	26.46	23.59
2007	83.17	29.69	26.14
2008	99.84	33.44	29.84
2009	???	???	???
2010			
2011			
2012			
2013	???	???	???

Exercise

1. What would be the socio-economic impacts of the given situation to the goods and services of coastal habitats?
2. What goods and services should be primarily analyzed for the impact assessment?
3. What valuation techniques would you recommend to measure the value of the impacts?
4. What data would you need to conduct this case study?
5. What are the policy recommendations for the local government to help maintain the functions of coastal habitats?

