

# **COMMUNITY RESPONSES TO ENVIRONMENTAL ANALYSIS AND MANAGEMENT OF WATER TOURISM: A CASE STUDY OF TALING CHAN WATER TOURISM MARKET, BANGKOK, THAILAND**

by

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## **ABSTRACT**

Water tourism is currently a rapid growth of Gross Domestic Product (GDP) of Thailand. As a result, distribution of incomes to locals is enormous. Thai government urged to promote tourism, especially, water activities so-called "Water Tourism Market" as water possesses natural attractions such as rivers, streams and market to the tourists. We described how public participation was involved to analyze causes of problems and to provide solutions related to water resources management in Taling Chan Water Tourism Market, Bangkok, Thailand. Strategic planning on environmental issues for sustainable river tourism was concerned. Community responses were the major factors to be considered. This work was carried out fewer than three main purposes. Firstly, to analyze the key causes of environmental problems regarding water resources, waste disposal and noise problems of the Taling Chan Water Tourism Market. Secondly, to study community responses on environmental issues, i.e. physical and chemical properties of waste water, water market waste, generated noise regarding the tourism activities. Finally, to provide water tourism best practice for environmental management within Taling Chan Water Tourism Market. Totally 500 questionnaires were used as tools to enquire 400 tourists and 100 entrepreneur in the area. Level of community responses related to water resources was shown excellent. Personal factors in relation to community responses were shown significantly difference at 95% level of confidence. To conclude this, the analysis of environmental problem of water tourism market is necessary for tourism market sustainable development. The process of mutual learning was to raise awareness for conservation, maintaining an attractive landmark for the community and appreciate the real value of local wisdom with a sense of affection.

## **KEYWORDS**

Community, Tourism, Water, Strategy

## **INTRODUCTION**

Taling Chan Water Tourism Market is situated next to Chakpra Canal, in front of Taling Chan District office, Bangkok since 1987. It was announced by the governor as a new water tourism market due to the policy of tourism promotion. This market was located within the heart of the city but it was full of nature and remaining the folk way of lives. With the extension of many roads into the community, water transportation has become lower importance nowadays. This effected waterway markets which could lead to an end. Therefore, the water tourism was announced, at least, to maintain the way of local people' living and promoting water tourism

Taliang chan water market in the early period provided agricultural products, with stores on both sides of the garden, surrounded by orchids and native fruits. Food products were available on the corridor, including plenty of food. After the concept of ecotourism has introduced, the number of tourists has been rapidly increased. The natural environment was destroyed and affected economic, social, cultural, and natural balance system including waste water from the community. Water tourism market activities effected environmental issues in terms of increasing total suspended solid, coliform bacteria, phosphate, fat and oil. Most of the sewage was directly exposed into the river without the treatment by sewage system. As a result, the water source of the Taling Chan Floating Market became contaminated. It was also created problems with waste management in term of separation of waste disposal systems, including participation in waste management of both tourists and vendors. These environmental problems were not affected only the people in the community but but also affected travelers as well. If environmental issues of water tourism sites had not been solved, a negative impact on public health in the community would have occurred, and influenced overall impact of tourism.

As a result, we have studied the involvement of the community response to environmental management of water resources as a guide to the development of future Taling Chan water tourism market. It is also useful to maintain natural environment and provide good practice for sustainable water tourism.

## METHODOLOGY

### Population

Samples used for this study were vendor and tourists visiting Taling Chan water tourism market, Bangkok. The statistic from Taling Chan District Office declared 170 vendors and 600 tourists a day. (Taling Chang District Office, 2011)

### Sampling sizes

There were two sampling groups for this research, consisting of vendor and tourists. The sampling size was obtained from Taro Yamane formula (Jalan, 2006) as shown in formula 1

$$n = \frac{N}{1 + N(e)^2} \quad (1)$$

Whereas  
 n = number of required vendors and tourists  
 N = number of total vendors and tourists  
 e = absolute error at confidential level 0.05

Therefore, calculation of vendors sampling size was shown as follows

$$n = \frac{170}{1 + 170(0.05)^2} = 119.298 \sim 120 \text{ vendors}$$

Therefore, calculation of tourists sampling size was shown as follows

$$n = \frac{600}{1 + 600(0.05)^2} = 240 \text{ tourists}$$

Total sampling sizes were consisted of 120 vendors and 240 tourists within Taling Chan water tourism

### Research tools

Two types of questionnaires were used in this data collection, for vendors and tourists. Five rating scale as classified by Likert scale (Ron Garland, 1991) as follows:

- Rating scale 5 denotes very high level of participation in water resource management
- Rating scale 4 denotes high level of participation in water resource management
- Rating scale 3 denotes moderate level of participation in water resource management
- Rating scale 2 denotes low level of participation in water resource management
- Rating scale 1 denotes very low level of participation in water resource management

### Data analysis

Data was analyzed using SPSS for windows, means and standard deviations

### Research framework

This research was carried out in two main issues, i.e. the community participation and the SWOT analysis of environmental management, which led to the guidelines for environmental management of the Taling Chan Water Tourism.

## RESULTS

### Community participation in environmental management of the Taling Chan Water Tourism

There were 7 issues for community participation in environmental management within Taling Chan Water Tourism, comprised of local-problem finding, policy and environmental planning, cooperative practicing, market-problem solving, maintenance, monitoring, and broadcasting. The average ( $\bar{x}$ ) of this community participation issue and standard deviation (S.D.) was shown in Table 1.

**TABLE 1**  
**AVERAGE VALUE ( $\bar{x}$ ) AND STANDARD DEVIATION (S.D.) AND**  
**LEVEL OF PARTICIPATION IN ENVIRONMENTAL MANAGEMENT**

Community participation in environmental management of Taling Chan water tourism	( n = 100 )		Level of participation
	$\bar{x}$	S.D	
• Local-problem finding	2.87	0.36	Moderate
• Policy and environmental planning	2.92	0.39	Moderate
• Cooperative practicing	3.23	0.61	Moderate
• Market-problem solving	2.91	0.37	Moderate
• Maintenance	2.86	0.39	Moderate
• Monitoring	3.44	0.61	High
• Broadcasting	2.77	0.46	Moderate
Overall	3.00	0.46	Moderate

he meaning of interval values was shown as follows Table 2.

**TABLE 2**  
**THE MEANING OF INTERVAL VALUES**

Value of	Means of level participation in environmental conservation
4.21 – 5.00	very high
3.41 – 4.20	high
2.61 – 3.40	moderate
1.81 – 2.60	low
1.00 – 1.80	very low

It was found from Table 1 that the overall level of community participation to environmental management in Taling Chang Water Tourism was moderate, with average value of 3.00. Also, the monitoring issue has shown high level of community participation to environmental management with the value of 3.44. The average values of the remaining issues were ranking from cooperative practicing, policy and planning, market –problem solving, local-problem solving, maintenance and broadcasting as shown 3.23 ,2.92 ,2.91 ,2.87,2.86 and 2.77, respectively.

### SWOT analysis of environmental management of Taling Chan Water Tourism

SWOT Analysis was carried out to provide good practice for the environmental management of Taling Chan Water Tourism as shown in Table 3

**TABLE 3**  
**SWOT ANALYSIS OF TALING CHAN WATER TOURISM**

<b>Strengths</b>	<b>Weakness</b>
1. From water analysis, water quality was not lower than standard values	1. Problem of garbage in the water resources
2. Fertility of natural environment	2. Insufficiency of garbage bins, causing sanitation problem
3. Cleanliness and tidiness of resting site	3. Small area of resting site, lack of strength
4. Community planning and problem-sharing	4. Insufficiency of toilets for tourists
5. Variety of tasty food	5. Parking area was not sufficient for the tourists
6. Availability of traditional and contemporary performance on stage	6. Tourism site was rather small
7. Agricultural products of "OTOP" and plants are available	7. Insufficiency of sanitary officers
8. Availability of boat trip for sightseeing way of live along canals	8. Not enough campaign on cleanliness
9. Friendliness of vendors	9. Lack of overall cooperation
10. Easy to access	10. Plenty of irritating local dogs in the area

  

<b>Opportunities</b>	<b>Threat</b>
1. More attempts on public relations of this tourism site will be done in all aspects. English brochure will be made for broadcasting purpose.	1. Unawareness of people in the cleanliness
2. Using reusable or recycle food utensil or environmental-friendly utensil rather than foam utensil	2. Insufficient budget in extending the tourism site
3. Provision of sufficient toilet for vendors and tourists	3. Insufficient operative staff
4. Provision of parking lot for the tourists	4. People are still violate the law and regulations
5. Extension of area to provide sufficient resting area for the tourists	
6. Keeping the tourism site clean and provide strong foundation of all constructions	
7. Increase number of sanitation office to provide well-look after the whole area	
8. Installation of sewage system for the better quality of effluent and announce laboratory test of water quality on weekly basis	
9. Fine should be seriously applied to the wrong doers. e.g. fine for not throwing garbage in the bin	

### CONCLUSION

It can be concluded from community responses to environmental analysis and SWOT analysis on the management of water tourism as follows:

- 1) Community agreed to provide enough area for washing and cleaning. Also community agreed to install sewage system for the waste from food production.
- 2) Community agreed to open the water gate to let the flow of floating garbage and water weed to connecting canals.
- 3) Community agreed to provide more staff to remove floating garbage out of the water resource on weekly basis.
- 4) Community, together with District Office, agreed to provide the sign and to apply 2,000 THB fine to the violators who throw rubbish into the water.
- 5) Community, together with District Office, agreed to test water quality twice a year.
- 6) Community agreed to support water-sightseeing tour for income distribution to local people. In doing so, oxygen in water can be increased.

7) Community agreed to provide more advertisement of Taling Chang Water tourism for the public and maintain the surrounding cleanliness.

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#### **REFERENCES**

Jalan Jantalakkana (2006) *Statistic Analysis and Research Plan*, Bangkok, Kasetsart University. (Thai book)

Ron Garland (1991) "The Mid-Point on a Rating Scale: Is it Desirable?", *Marketing Bulletin*, Research Note 3, No 2, pp. 66-70.

Taling Chang District Office (2011) <http://www.bangkok.go.th/talingchan/>