

# PEOPLE'S PARTICIPATION TOWARD RIVER MANAGEMENT IN PHRANAKHON SI AYUTTHAYA, PHRANAKHON SI AYUTTHAYA\*

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## Abstract

The objectives of this research were to study the level of people's participation in the management of rivers in Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, and to assess the participation amongst a sample of 399 persons. Data collection was done by questionnaires, and the statistics employed in data analysis were percentage, mean, standard deviation, t-test and one-way ANOVA, with level of statistical significance defined at .05.

The results of this study indicated that people in Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya had a moderate level of participation. Factors that influenced the people's participation in river management in Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, were age, education, income, occupation and duration of residence, whereas, gender was not of any influence.

**Keywords:** People's Participation, River Management, Civil Society

## Introduction

Rivers are natural resources of great significance to life forms, whether directly or indirectly. Human natural way of life originally began on lowlands, depended chiefly on river basins, and then communities and societies were built accordingly until civilisations have been established. Thai people are bound tightly with rivers, as observable from the practice of using rivers and canals as channels of transportation, from individual to industrial scale, and the existence of water markets and temples (i.e. monks used boats as a mean to seek offerings in the past). These are examples of a way of life, but today, as a result of civilisation, which has brought about convenience, or any other reason whatsoever, rivers, which have been of essence, have been being destroyed, and deteriorated from their natural states, which would sequentially become national issues and accumulate into problems of global warming in consequence.

In reality at present, no matter how progressed material cultures become, water resources should keep on existing without any decline in keeping with civilisation, and furthermore, the development in aspect of human conscious should have been progressed in accordance with the progression of the material cultures, so as to demonstrate the mindfulness toward the role to protect rivers. Be that as it may, the capitalistic economy system in the present time primarily pushes people to work to earn money, in order to spend those limited funds to satisfy their unlimited needs, and thus holding back the people from participating or cooperating in river management as they are supposed to since they are focusing on something they considered more significant to them, like making money. And

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\* A paper presented in the 1<sup>st</sup> International Conference on Security Studies held on 25<sup>th</sup> June 2014 at Town in Town Hotel, Bangkok, Thailand

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that has made humans the only life form that tortures themselves, that is, working hard to earn money and then use the money to cure sicknesses caused by such hardworking practice, or in other words, humans develop regions by destroying nature or making money by destroying nature, and use the money earned to travel to natural tourist attractions within their countries or the expensive ones outside.

River management is not just about accumulation of money, but also aggregation of knowledge, workforce, and consciousness of the people, so as to establish a true participation. As rivers are public property, it is not a duty of an individual or a group of individuals to deal with, that is, managing public rivers requires “people’s participation” which would help bring forth public interest, because, if we only keep on waiting for the amelioration from public sector, without any contribution from the social sector, the problems might not get resolved entirely and swiftly. However, the participation in civil society processes is still scarce, not widespread, and persisted with obstacles in many aspects. What is more is that the processes of civil society have also been debated on the ground of whether which cases of civil society are truly aiming for public interest or just the agendas of any interest groups.

Therefore, it is obvious that, regardless of the time, rivers would always remain significant, as the ways of life that still depend on rivers can still be seen in the present time, but about to become degenerated from their natural states, rendered unusable, not as it should, all by human doings. So, a substantial contribution towards river management is of necessity, stemming from the consciousness of individuals, or citizenship, so to speak, and then transforming into a composition of a body through to a participation for public interest to the greatest possible extent.

Hence, participation in river management is considered a good cause for the social sector to support, in cooperation with the public sector, to bring about public interest. Whether it is the sole doing of the social sector or results of cooperation in associative fashion between the public and civic sectors, still, there are obstacles persisted in the cooperation, namely the circumstances that the people do not participate, or participate merely to a minute extent, which could be caused by various factors, such as personal status, incomprehension of civil society process, perception of accurate news and information, and so on.

## Objectives

1. To study the level of people’s participation in river management in Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya
2. To assess the participation by personal factors, namely gender, age, education, income, occupation, duration of residence, perception of news and information concerning river management, knowledge of river management, and benefits gained.

## Research Methodology

### Research Design

This research is a survey research; partially selecting some of the population (Lumpai, 2006: 70) to be studied in a one shot study design, collecting data via questionnaires.

### Population

The population in this research were the citizens registered in the censuses of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, a total of 139,387 individuals (population data as of 16 July 2013 from Phranakhon Si Ayutthaya District’s registrar office, local

registration offices, Phra Nakhon Si Ayutthaya City Municipal, and Ayothaya Town Municipality, Phranakhon Si Ayutthaya Province) as basis of calculation. The determination of appropriate sample size was done according to Yamane's formula (1967). The sample of this study was composed of 399 samples.

### Random Sampling

When the sample size was determined, a number of 399 people, random sampling was implemented to seek for a sample to be employed in the study, divided into two steps as follows;

Firstly, determining the size of population required to be random sampled in each subdistrict by means of proportional stratified random sampling;

Secondly, simple random sampling; as the researchers divided the sample as per locations, the proportion of population number in each district was then calculated and random sampled by lots to select a sample from all of the population in each district as per the calculated proportions above without replacement.

### Research Tools

The tools used to collect data in this research were questionnaires drawn up through reviews of relevant literatures and researches, divided into 4 parts as follows:

Part one: six multiple-choice questions regarding general information of the sample, or personal information of the respondents, namely gender, age, education, income, occupation, and duration of residence;

Part two: questionnaire concerning the degree of perception of news and information on river management, that is, 10 close-ended four-scale questions regarding the sources and frequency of perception of news and information;

Part three: questionnaire regarding the knowledge and understanding of participation in river management, 8 polar questions, all in positive forms, using two rating scales;

Part four: 20 questions on the contribution to the four stages of participation processes, namely problem definition, participation policy formulation, implementation, and evaluation, using five-point Likert rating scale.

### Tool Validation

The researcher quality-tested the research tools for validity and reliability tests as follows:

1. Content validity test: the researcher submitted the questionnaires used in data collection to experts to assess their content validity, as in internal consistency and coverage of the content and the accuracy of the language used;

2. Reliability test: the researcher brought all the questionnaires to test on the population of Bang Sai District, Phranakhon Si Ayutthaya Province, a sample sharing common attributes of 30 people, and tested the questionnaires for composite reliability by means of Cronbach's alpha coefficient;

Measuring reliability thereby, the score of each items must be calculated for variance and total-score variance, which the results of alpha coefficients by means of Cronbach's were as follows

2.1 Alpha coefficient of the questionnaire regarding the reception of news and information on river management = 0.8054

2.2 Alpha coefficient of the questionnaire concerning the knowledge and understanding of the participation in river management = 0.9884

2.3 Alpha coefficient of the questionnaire on the participation in stages of river management = 0.9681

### Data Collection

The researcher collected data from two sources;

1. Primary data were the data collected through the questionnaires, with a procedure as follows;

1.1 Drawing up the questionnaires used to collect data

1.2 The researcher contacted the data collector to meet with the sample and circulate the questionnaires among the sample to fill in, and wait for their return

1.3 Check for completeness and accuracy of the questionnaires before processing

1.4 The researcher picked only the questionnaires that had been checked for completeness to be marked with codes as per the criteria of each section of the tools, and then move on to process and analyse in the next step.

2. Secondary data were the data collected through reviews of relevant literatures, textbooks, articles, researches, and various documents to be utilised in the formulation of conceptual framework of this research and used as references in writing the report of this research.

### Data Analysis

The researcher analysed and processed all the questionnaires with computer, using software suite; filling in the data from the questionnaire, copied onto the storage medium, and execute the software to instruct the computer to record the data.

### Statistics in Data Analysis

The statistics used in the data analysis were;

1. Percentage, to explain the comparison of general information of the sample

2. Mean and Standard Deviation, to explain the knowledge and understanding of river management, perception of news and information, and the people's participation

3. T-test, to test any hypothesis which incorporated independent variables that were assigned into two groups

4. One-way ANOVA, to test any hypothesis which incorporated dependent variables that were assign into three categories or more

The level of statistical significance herein was defined at .05.

## Results

In this research, the researcher selected a sample of citizens registered in the censuses of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, of 399 samples, and utilised questionnaires as research tools. The data derived from the sample's responses in the questionnaires were processed with computer software. The statistics used in data analysis were percentage, mean, standard deviation, t-test, and one-way ANOVA. The results could be concluded as such:

### Personal Factors of the Sample

The majority of population in the Phranakhon Si Ayutthaya District was female; 41-60 years of age; undergraduate; earned lower than or equal to 10,000 baht; worked as employees/privately; and had the duration of residence over ten years.

### Perception of News and Information on River Management

In overall, the level of perception of news and information on river management was at a high level, and when considering each of the choices, it was found that the sources of local government officials were the foremost source of perception, following by sources of

radio/television. As for the sources the sample least perceived news and information on river management from were other sources, followed by monks and local politicians, respectively.

### Knowledge of Participation in River Management

In overall, the level of knowledge of participation in river management was at a high level, and when considering each of the choices, the point that, as a citizen, we should be more conscious towards public interest over individual gains had the highest mean, followed by the point that everybody had the right to use rivers as long as it was not harmful thereto, the point whether or not participation of everybody in activities for general interests, regardless of status, wealth, gender, age, level of education, etc., was the essence of participation, the point that river management was beneficial to communities, localities, and the country, and the point that participation was a cooperation among the people themselves or a cooperation between the people and the public sector, not the people waiting for the public to order them to participate in activities, respectively.

### Participation in River Management

In overall, the level of participation in river management was at a moderate level ( $\bar{X} = 3.46$ ) and when considering each aspect, it was revealed that the evaluation stage, and the participation in the formulation of participation policy were the highest averages, followed by the participation in problem definition stage, and the participation in policy implementation, respectively.

### Hypothesis Testing Results

In this research's hypothesis testing, the researcher had constructed 6 hypotheses, and it has been found that, in general, the people with different ages, levels of education, and durations of residence would participate in river management differently, but the differences in gender, income, and occupation, had no effect on participation in river management.

**Table 1** Summary of Hypothesis Testing

Independent Variable	Significance Value	Participation in River Management	
		Supporting the Hypothesis	Rejecting the Hypothesis
1. Gender	0.57		√
2. Age	0.01*	√	
3. Education	0.01*	√	
4. Income	0.26		√
5. Occupation	0.06		√
6. Duration of Residence	0.00*	√	

\*at .05 level of statistical significance

### Discussion

The research on People's Participation toward River Management in Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, could be discussed as follows:

1. In terms of perception of news and information on river management, it has been found that, in overall, the sample of population of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, perceived news and information on river management at a high level, and the circumstance that the sources of other groups were least perceived from, followed by from

monks, was probably because it was not direct duties of monks to participate in the community as much, so the sample of population of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, did not perceive news and information on river management much therefrom.

2. In respect of knowledge on river management, it was found that, in overall, the sample of population of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, had a high level of knowledge thereon, and the point that, as a citizen, we should be conscious toward public interest over individual gains was regarded the highest among the sample, probably because the population of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, often suffered from water-relating problems, whether flood or water for agriculture. Whereas, the point that participation in river management is everyone's responsibility, whether the public, social, or private sector, the sample had the least knowledge thereon, possibly because most of the people often saw public agencies performing their duties in river management, especially the province, which the social and private sectors rarely had any involvement in the matter, along with the lack of publication for the people to be aware of which, so the people had only little knowledge thereon.

3. In regard to participation in river management, it was found that, in overall, the sample of population of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, participated in river management at a moderate level, and least participated in policy implementation stage, probably because the majority of the people still thought that it was the responsibility of public service, so the people merely participate in such stage.

3.1 Concerning the participation in the problem definition stage of river management, it was found that, in overall, the sample of population of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, participated in the problem definition stage of river management at a moderate level, and least participated in passing opinions on river problems to the community and reporting problems to government agencies, probably because the people who were tightly bound to rivers or interested in river management were the people living along the rivers and benefitted from rivers, which were just a minority of the population, accompanied by the lack of knowledge of river management and fear of contacting government agencies, so the people merely participated in said stage.

3.2 As for the participation in the participation policy formulation stage of river management, it was found that, in overall, the sample of population of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, participated in the participation policy formulation stage of river management at a moderate level, and in particular, the participation in proposing individuals for consideration to conduct activities, the sample had the least degree of participation therein, possibly because most of the people must spend most of their time to make a living so they did not pay much attention to river management, which was a public responsibility, so the participation in activities was scarce in all aspects.

3.3 Regarding the participation in the policy implementation stage of river management, it was found that, in overall, the sample of population of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, participated in the policy implementation stage of river management at a moderate level, and the aspect of participation in campaigning for river management, the sample had the least degree of participation therein, probably because the economic situations in the present time forced the people to concentrate on making a living for themselves, so they tended to neglect the matter of public interest, and also view such matter as something none of their concern if they did not gain any benefit from said management.

3.4 In respect of the participation in the policy evaluation stage of river management, it was found that, in overall, the sample of population of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, participated in the policy evaluation stage of river management at a moderate level, especially in the aspect of participation in the evaluation of

activities of river management, the sample had the least degree of participation therein, possibly because nowadays people do not depend much on rivers, so they did not pay much attention toward river management, thus no matter how the public sector manages rivers, the people would not be direct beneficiaries, so not much importance is given to the evaluation of the performance of river management committee in the community.

From the results of hypothesis testing as per table 1, it could be analysed as follows:

1. Personal factor of gender: from the study, it has been found that, in overall and in each aspect, the population of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, with different genders would participate in river management not significantly different in terms of statistics at .05 level of reliability, which rejected the hypothesis made, in line with the results of Submo (2003) which studied the participation of the people in conservation of Mae Klong River, and found that factor of gender had no effect on the people's participation, probably because the current state of society is the era of news and information which everyone in the society can access easily and quickly, along with the education system that allows people in the society to receive education opportunity equally between women and men, coupled with, in present time, women have more opportunities to participate in activities than ever before, such as participation in the locality to resolve problems, so different genders do not affect the participation in river management.

2. Personal factor of age: from the study, both in overall and in each aspect, except for the stages of problem definition and participation policy formulation, the population of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, of different ages participate in river management differently, consistent with the research of Macharoen (1996) which studied the degree of behaviour of the people in conservation of Mae Klong River and factors influencing such and found that the factors affecting the behaviour of conservation of Mae Klong River was the difference in age, and when considering each aspect, it was found that the population of different ages did not participated in river management in problem definition and participation policy formulation stages differently, probably because the problem definition and participation policy formulation stages were the stages that allowed people in the community to express their opinions, which the local people were all affected regardless of children, adults, or elderly, so when it comes to problem definition and policy formulation, they participate in river management all the same.

3. Personal factor of education: from the study, it was found that, in overall and the stages of policy implementation and evaluation, the population of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, with different levels of education would have different degrees of participation in river management, except for the stages of problem definition and participation policy formulation, which remain invariable, probably because although the people in Phranakhon Si Ayutthaya district were of different levels of education, whether undergraduate, graduate, or postgraduate, everyone lived in the area of Phranakhon Si Ayutthaya district all the same and being affected positively and negatively from river management. In river management, whether in the stage of problem definition or participation policy formulation, everybody want to participate therein as they are all affected by river management, so the differences in levels of education made no different to the participation thereof.

4. Personal factor of income: from the study, it was found that, in overall and the stages of problem definition, participation policy formulation, policy implementation, and evaluation, the population of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, with different income levels would have no difference in the degree of participation, which is consistent with the research of Sutipanwihan (1996), finding that income had no relationship to the participation of the people in all activities, including sub-activities, and the research of Submo (2003), studying the participation of the people in preserving Mae Klong River and

found that factor of income had no impact on the participation of the people. From the results illustrating that the population of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, with different income levels would have no difference in the degree of participation, probably because the individuals who are benefitted from the operation of river management are everyone in the locality, so they would be benefitted from the operation all the same regardless of income level.

5. Personal factor of occupation: from the study, it was found that, in overall and the stages of problem definition, participation policy formulation, policy implementation, and evaluation, the population of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, with different occupations would have different degrees of participation in river management, except for the stages of problem definition, participation policy formulation, and evaluation, which remain invariable, which is consistent with the research of Submo (2003), studying the participation of the people in preserving Mae Klong River and found that factor of occupation had no impact on the participation of the people, probably because, regardless of the occupation, the people in the locality, when affected, would want to participate in problem definition, policy formulation, and evaluation of the policy implemented all the same.

6. Personal factors of duration of residence: from the study, it was found that, in overall and all the aspects barring the problem definition, the population of Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, with different durations of residence would have different degrees of participation in river management, probably because different durations of residence would certainly create different degrees of bond with the area of residence, thus rendering the participation in river management to different degrees, but the problem definition stage remain the same due to the emergences of problems in each period have been the same problems for generations.

### **Recommendation**

From the results of the research on People's Participation toward River Management in Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, the researcher would like to express opinions and propose suggestions in each aspect as follows;

1. From the study, it has been found that the sources of perception of news and information on river management in Phranakhon Si Ayutthaya, Phranakhon Si Ayutthaya, from monks and local politicians were scarce. Hence, relevant agencies should encourage everyone in the community to participate in solving various problems of rivers in all stages by asking monks to instil consciousness toward responsibilities for public interest of the community when the people visit the temple to make merit, and call for cooperation from local administrative organisations, whether subdistrict administrative organisations, municipalities, or provincial administrative organisation, to brainstorm ideas for resolving such problems, as well as campaigning for publication of news and information on river management, such as in aspect of maintenance of benefits from river together, to the people in the community through government officials, which are the most perceived source of the people in the community, seeing that offspring, siblings, and relatives might work in various government agencies, as well as sources of radio/television and newspapers/documents, whether they are flyers or notices on bulletin board or in places where the people in the community regularly drop in on, so as to pass on extra information to the people in the community, as well as instilling the conscious to conserve into the people.

2. From the study, it has been found that the people had a high level of knowledge of river management, whereas in the point that participation in river management is the duties of every sector, whether the public sector, social sector, or private sector, is very low. As the people understood that the management of rivers was the duty of the public agencies



exclusively, relevant public agencies of localities and regions or community leaders should push forward the consciousness and responsibilities for public interest of the people in the community through awareness campaign, along with provision of knowledge on river management for the local people, which could possibly employ community leaders, who are closest to the people in the community, as the providers thereof, as well as campaigning for cooperation from local private sector. Furthermore, public agencies should formulate projects which involve local youths to distribute such knowledge in addition, such as Youth River Protector Project.

3. From the study, it is observable that the participation in the stage of policy implementation was found to be least participated by the local people, particularly in the aspect of participation in campaigning. Hence, relevant agencies should acknowledge the issues by bringing in the people in the community to participate in campaigning for ideas and approaches to problems by proportionating the commission to campaign for river management to consist of community leaders and people in the community to two-third ratio, as the local people are directly affected, and should conduct public hearing for the people in the community to express their opinions before implementing any policy to manage rivers.

### Acknowledgement

The author would like to hereby express his gratitude to Faculty of Humanities and Social Sciences, Phranakhon Si Ayutthaya Rajabhat, for the grant funding supporting this research, and especially, Assistant Professor Witchugon Nakthon, a former dean of the Faculty of Humanities and Social Sciences, and Assistant Professor Areerat Koondee, a former interim dean of the Faculty of Humanities and Social Sciences, as well as Assistant Professor Dr.Rong Boonsuaykwan, School of Liberal Arts, Walailak University, the Political Sciences Association of Kasetsart University, the registrar office of Phranakhon Si Ayutthaya District, and Warayu Intawongs, Faculty of Engineering, Ramkhamhaeng University, for their contributions to this success, along with the data collectors for their precious time to marvellously help in the data collection process, which consequently led to the success of this research.

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