Quality of life and Environment of Communities along Saen Saeb Canal: A Guideline for Reform (Phase II)

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Abstract

The operation study quality of life and environment of communities along Saen Saeb Canal in phase 2 was conducted for the purpose of finding authentic solution for developing the quality of life and the environment of the community along Saen Saeb canal. Considerable agreement exists that quality of life is multidimensional. The guidelines for solving the problem must be conducted with the collaboration from the community in order to consistently gain insight knowledge in many different aspects. The operation emphasized on finding the format for the development in different dimensions. The study was divided into five dimensions; environmental dimension, physical and mental health dimension, economic dimension, preservation conception and behavior dimensions, and social relation dimension (law). It was separated into 7 activities. A study performed by continuing the study in 1st year for further guideline and measurement in developing the quality of life and the environment that is appropriate for the context of each community

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1. Introduction

In the past river and canal in Bangkok was an important role in the communications, commercial, agricultural and domestic consumption. Communities along the canal occurred. Today the social and economic environment had changed. Urban society expanded from inside to outside. Metropolitan area buildings are concentrated along the canal. Residential and business information sources including the water transportation. Rapid changes made quality of water worse to any canal including Saen Saeb Canal. The rotten state affected to mind and emotions of the spectator and residents along canal. One of the reasons affected the pollution of the water in the canal was that human did not see the importance of water in the canal used in life. The water supply system was accessible

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in almost every household and people thought this was a drainage canal of sewage. The state of pollution of the water in the canal was intense and grew more problem [1].

Due to the direct and indirect issues that occurred to Saen Saeb canal, government officials, organizations, and several parties had made contribution to solve the problems. Nonetheless, different areas of Saen Saeb canal contained different conditions. Therefore, the development of the quality of life and the environment was often related to the consciousness of people in the community, economic, sanitation, aquatic environment, culture, architecture, and the landscape of the community as well as the community law [2]. Hence, the guidelines for solving the problem must be conducted with the collaboration from the community in order to consistently gain insight knowledge in many different aspects. The operation in phase 2 was conducted for the purpose of finding authentic solution for developing the quality of life and the environment of the community along Saen Saeb canal. The operation emphasized on finding the format for the development in different dimensions. It was performed by continuing the study in 1st year for further guideline and measurement in developing the quality of life and the environment that is appropriate for the context of each community. The study was divided into five dimensions; environmental dimension, physical and mental health dimension, economic dimension, preservation conception and behaviour dimensions, and social relation dimension (law). It was separated into 7 activities. The population of the study was the communities along Saen Saeb canal selectively appropriate for each activity.

2. Purpose of Research

To find the guideline and measurement in developing the quality of life and the environment that is appropriate for the context of each community.

3. Conceptual framework

The operation to study quality of life and environment of community along Saen Saeb Canal in phase 2 was conducted for the purpose of finding authentic solution for developing the quality of life and the environment of the community along Saen Saeb Canal. It was performed by continuing the study in the 1st year for further guideline and measurement in developing the quality of life and the environment that was appropriate for the context of each community. The operation emphasized on finding the format for the development in different dimensions. The study was an adapt definition of “quality of life” by WHO[3] for appropriate context area in study and divided into five dimensions.

Fig.1: Conceptual framework for study
4. Research Methodology

4.1 Population

Communities and households that live along Saen Saeb Canal.

4.2 Sample

People and communities leader who live along Saen Saeb Canal between Mahanak canal to Bang-Nam-Preaw District, Chachoengsao Province by Multi-stage Sampling

1. Explore the communities along Saen Saeb Canal and divide 4 area include
   1) Inner area of Bangkok: area from the Mahanak canal to Pratoonam Port
   2) Middle area of Bangkok: area from the Pratoonam Port to Klong-Tan Port
   3) Outer area of Bangkok from Klong-Tan Port to Nong Chok District
   4) Chachengsao Province: from edge of Nong Chok District to the Bang-Prakong River in Chachengsao Province

2. Quato Sampling to select communities from 4 areas in the same ratio.

3. Purposive sampling to select a community nearest Saen Saeb Canal each area. Finally, Select 10 communities from Inner area, 12 communities from Middle area, 29 communities from Outer area and 6 communities from Chachengsao Province.

4. Collect information from sample Unit by community leaders, headman of village and people who live along Saen Saeb Canal.

5. Data Collection and Instrument

The study was divided into five dimensions; environmental dimension, physical and mental health dimension, economic dimension, preservation conception and behavior dimensions, and social relation dimension (law). It was separated into 7 activities to find the format for the development in different dimensions. The study was consistent with the context of different instrument, data collection and data analysis for appropriate dimension as follows in table 1.

Table 1: Activities, Data collection and instrument in the study

| Activities | Instrument | Data collection method | Data analysis |
|------------|------------|------------------------|--------------|
| Activity 1: The development of water quality and environment along Saen Saeb Canal project. | • The interview record | • In-Depth interview | • Content Analysis |
| | • Observation record | • Observation | |
| | • Questionnaire | • Participatory brainstorming | |
| Activity 2: The development projects on architecture, art and the landscape according to community requirement. | • The interview record | • In-Depth interview | • Content Analysis |
| | • Observation record | • Observation | |
| | • Focus group | | |
| Activity 3: The development projects on health and quality of life. | • The interview record | • In-Depth interview | • Content Analysis |
| | • Questionnaire | • Purposive Survey | • Descriptive statistics |
| | • The satisfied survey about the health care book | | |
Table 1: Activities, Data collection and instrument in the study (Con.)

| Activities | Instrument | Data collection method | Data analysis |
|------------|------------|------------------------|--------------|
| **Activity 4:** The promote and development project on economic community. | • The interview record | • In-Depth interview | • Content Analysis |
| | • Observation record | • Observation | |
| | • Observation record | • Participatory brainstorming | |
| **Activity 5:** The development projects on conservation environment along Saen Saeb Canal. | • The interview record | • In-Depth interview | • Content Analysis |
| | • Observation record | • Observation | |
| | • Media exposure, knowledge, attitude and behaviour of people towards conservation scale | • Survey | • Descriptive statistics |
| | • The satisfied about preserve media and activity | | |
| **Activity 6:** The study in law of quality of life and environment in communities along Saen Saeb Canal. | • The interview record | • In-Depth interview | • Content Analysis |
| | • Questionnaire about the community law | • Observation | • Descriptive statistics |
| | • Observation | • Survey | |
| **Activity 7:** The Research and development in Geographic Information System application for support the environmental education activities for communities along Saen Saeb Canal. | • Satellite imagery | • Focus group | • Content Analysis |
| | • Aerial photograph | • Design and development program | • Descriptive statistics |
| | • Topographic maps | | |
| | • GIS software and Hardware | | |
| | • Vector data map and Raster data map of Bangkok and Chachengsao | | |
| | • GPS | | |
| | • Scanner size A0 | | |
| | • Laser altimeter | | |
| | • Computer server | | |
| | • The satisfied survey about system | | |

6. Result and Conclusion

The research results were found as follows:

**Physical and environmental dimensions**

It was found that the successful restoration of water quality for Saen Saeb Canal must be conducted with the participation of people in the community and the reinforcement of the public sector network. The restoration of the water quality for Saen Saeb Canal was done by applying environmental technologies in the form of biological fermented liquid and the biological cleaning liquid. The improvement of the landscape must be done by reinforcing integrative construction to provide guidelines for the development of the community that related to the outside community and also to provide social opportunities in learning the history and culture of Islamic
community without affecting the privacy of the community. The center for public hazard rescue and the position of essential utilities system should be increased for the area that contained old and contemporary buildings. The preservation plan for valuable historical building along with the improvement of landscape for the pathway along the canal should be made for a simple, durable, and a modern one which is consistent with the local architecture and reflects the community identity.

**Physical and mental health dimension**

It was found that the guideline for promoting public health was to provide healthcare knowledge for people in the community. The 4 main knowledge points that should be provided were 1) the knowledge about Saen Saeb Canal 2) the physical sanitation that the residents along Saen Saeb Canal should practice 3) the mental health that they should be aware 4) the basic information about public health organization that was responsible for the area throughout Saen Saeb Canal.

In providing the health care guide book it was found that the electronics book was more satisfied than the printing media but comprised less contribution. Both types of media received the satisfactory level regarding their usage at a good level.

**Economic dimension**

It was found that factors affecting the campaign for establishing a sustainable community market centre for agricultural products were the appropriateness of the location, the convenient of the transportation, the market located in the community area, the expertise of the people in the community in producing the main products of the market, and the strength of the community. Meanwhile, the obstacle factor consisted of the lack of the budget in infrastructure development, the inconsistent and the lack of variation for the products and activities, the lack of an overall marketing management, and the lack of advertising and public relations. Nonetheless, with cooperation of the residents in the development of the community market centre for agricultural products (Bangkok floating market), it can provide career opportunities and income for people in the community. It was also found that this area can be developed as a floating market for cultural and ecological tourism in the future because of its high potential regarding areas and natural resources.

**Preservation conception and behaviour dimensions**

It was found that the most effective media was the poster set “3 methods for bringing back the clean canal” followed by the brochures of the same topic. The activity that received high levels for evaluation was (1) the “Love Saen Saeb Canal ” activity and (2) the “Dream together, clear water for Tepleela”. These activities were aimed to create the understanding, the attitudes and the awareness in preserving Saen Saeb Canal. It was essential for the campaign to receive the cooperation from the representatives of the community, government, and organizations to increase social network and create participation of the target group. This will consequently create the awareness for Sean Seab preservation in the long run. The problems for the target group were the large organizations and the habit of the residents. Projects and activities in the campaign must be continuously conducted. It should also include reinforcement and punishment in order to achieve residential collaboration and become truly successful.

**Legal dimensions**

It was found that people in the inner and middle area of Bangkok recognized regulations and laws at intermediate to high level. However, people in the outer area and Chachoengsao recognized regulations and law at medium level to none. It was also found that possessing many laws caused problems in enforcing and was not appropriate in preventing and resolving issues that occurred at the present. The enforcement was still not consistent and lack equality. The channel for complaints was not easily approached and not convenient enough. The government officials or related officers did not operate immediately in responding to the complaints. It was considered that the legal measurement will help to improve the quality of life and the environment of the community effectively. However, the issuance of the law should involve the community participation in the designing. The laws enforcement must include criminal punishment by determining the fine cost regarding to the
restoration of the affected environment. In addition, although the civil penalty was conducted there must also be
punishment. This should be done by assigning the responsibility to a single organization or agency.

The development of Geographic Information System (GIS) of the community along Saen Saeb Canal

A program application was developed to use in displaying and storing the data related to the activities to
support environmental education of the community along Saen Saeb Canal for easier access to information and
management. The core element consisted of 3 sections: the user section (Client), the software section, It was
found that the appropriate software was the UMN Map Server., and the system's Database section, the
appropriate database system was the Rational database management system, which the researcher selected to
apply MySQL. The researchers had developed a program application for geographic information system to
support the activities of the Community environmental education which was the innovation from this research
and development. The details of the information that will be displayed in the program information section were
divided into 2 parts which were 1. The management information system (MIS) consists of the information of
buildings, project activities, location, cities, provinces, knowledge management, complaints, and board of
discussion 2. The geographic information system (GIS) consists of 9 data layers including the building, the area
of authorities, the city map data, the important venue information, the transport station, the transportation route,
the canal information, and Saen Saeb Canal information.

7. Discussion

The development of the quality of life and the environment was often related to the consciousness of people in
the community, economic, sanitation, aquatic environment, culture, architecture, and the landscape of the
community as well as the community law. Hence, the guidelines for solving the problem must be conducted with
the collaboration from the community in order to consistently gain insight knowledge in many different aspects.
The communication about the pollution and effectiveness in life for community can motivate awareness for
preservation. Community, government, and business organizations must cooperate together. The increase of
social network which create participation projects and activities in the campaign must be continuously conducted.
It should also include reinforcement and punishment in order to achieve residential collaboration and become
truly successful.

As follows by Figure 2
The individual course relate quality of life and preserve environment for community along Saen Seab Canal.

The Health care guide book

Grease traps for Household/biological fermented liquid and the biological cleaning liquid

Surveillance community network

Applying environmental technologies

Improvement of the landscape and city plan consistent with modern or local architecture and reflects the community identity

Surveillance community network

The market located in the community area

The issuance of the law for communities along Saen Seab Canal

The enforcement/ Reinforcement

The Continue Activity and Media

The individual course relate quality of life and preserve environment for community along Saen Seab Canal.

Fig.2: The guideline and development of study for each area
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