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## The Human and Social Development to Realize Environmental Responsibility in Khlong Sam Sub-District, Klong Luang District, Pathumtani Province

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**Key words:** Environmental management, environmental pollution, Khlong Sam Subdistrict administration organization, knowledgeable, awareness

**Abstract:** The research on human and social development to realize environmental responsibility in Khlong Sam Sub-district have a purpose to study environmental pollution conditions, public awareness and environmental behavior, potential management and environmental management of organizations, personnel and communities. To create a plan and methods for preventing and solving environmental pollution and to develop the potential of environmental management and management of organizations, personnel and communities and develop people and society to be environmentally responsible in Khlong Sam Sub-district. This research uses mixed method research between quantitative and qualitative research by distributing questionnaires for 400 elderly people. The qualitative research with in-depth interviews, focus group and community forum which are the organization executive, personnel related to environmental operations and the community president or local representative 50 people. The tools used in the research were questionnaires and group interviews and the community forum. The quantitative data analysis using descriptive statistics with percentage, mean and standard deviation. The qualitative data analysis using interpretation and conclusion. Environmental conditions and behavior in the area of Khlong Sam Sub-district Administration Organization, overall is at a high level. When considering each item found that most are consciousness, awareness and understanding, followed by behavior, environmental management and the last one is the environmental quality of Khlong Sam Sub-district. Environmental quality of Khlong Sam district, overall is at a medium level. When considering each item found that most of the level of residual waste problems in Khlong Sam sub-district, followed by environmental pollution in Khlong Sam sub-district due to lack of human consciousness. The lastly, environmental pollution in Khlong Sam district caused by markets/shops. The

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Page No.: 308-318

Volume: 15, Issue 9, 2020

ISSN: 1818-5800

The Social Sciences

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potential of environmental management and management of the Sub-district Administrative Organization, personnel and communities in the area of Khlong Sam Sub-district Administrative Personnel, there are personnel who are knowledgeable and capable. Both in the environment of public health or in other parts but not enough to manage. Management of Klong Sam Sub-district Administrative Organization, there are activities organized with the community. Provide both budget support being consultant in the event that the community does not understand how to handle certain environmental problems, awareness of how to do community plans correctly, so that, the community knows how to plan the operations themselves. For environmental management that is appropriate for their community. Budget, the procurement of garbage collection trucks was the most problematic. Participation, Sub-district Administration Organization and community are quite high participation.

The integration of leadership groups, network leaders, community groups in environmental management. Pilot experiment on potential development of environmental administration and management in Khlong Sam Sub-district by installing the grease trap 120 shops in Pruksa 12 village area. In which the grease trap is developed from research and allowing store operators to try assembling by themselves without having to buy ready-made models that are quite expensive. The results of the pilot installation of the store tank installation project in the area of Pruksa village revealed that the store operators and the public were interested in the project a lot. There is a need to install the self-assembled tank. Due to the fact that there is not much investment and want to solve the problem of water pollution in the community in order to solve the problem of flooding and odors that occur in the community.

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## INTRODUCTION

Klong Sam Sub-district, Klong Luang district, Pathumthani province under the responsibility of the Khlong Sam Sub-district administrative organization are located in the metropolitan area with rapid urbanization. There is an emerging community (Housing) large and rapidly increasing in quantity. As of October 2015, the Khlong Sam Sub-district Administrative Organization has 46 villages with only 16 traditional villages. Impact in many areas and tends to have the expansion of urban communities in the area. This will result in changes in both social, economic and environmental aspects especially environmental pollution caused by urban communities ([www.khlongsamlocal.go.th](http://www.khlongsamlocal.go.th)).

Khlong Sam Sub-district Administrative Organization has a total area of 48 km<sup>2</sup> or approximately 30,000 rai with housing and population increasing rapidly and is likely to increase considerably, making Khlong Sam Sub-district Administrative Organization look like a large city with qualifications equivalent to the municipality according to the criteria announced by the Ministry of Interior. Which is that there is enough income from the collection for management, it can collect income of >300 million baht per year, there are 58 villages with a total population of 74,407 people and a latent population of approximately 50,000 people, totaling approximately 124,407 people. With a nature that is a city at the city level with many populations and activities. This causes environmental problems in the disrepair Khlong Sam Sub-district administrative organization. Beginning to cause problems in many areas such as pollution of water, air, dust, noise, odors from the production process or the performance of entrepreneurs from both large industries

or the row house industry. With a lack of awareness of environmental responsibility, especially, about keeping clean along with the rapidly expanding community that continues to increase over time. Khlong Sam Sub-district Administrative Organization has to face a lot of problems with the collection and destruction of solid waste. Due to insufficient tools and equipment and insufficient waste disposal facilities and ineffective disposal. Thus causing an impact on the environment both direct and indirect pollution of sewage water is emitted from people's buildings. Throughout the dumping of solid waste into rivers and canals without consciousness which at present there is no good preventive measure. In addition, there is no waste water treatment before releasing into the river and canal, air pollution, air in the factory area. There will be a smell and haze from the vehicle exhaust during rush hour, residual waste due to the ineffective waste disposal system causing residual waste, causing problems, spoilage gives a foul smell disturb the local people. ([www.khlongsamlocal.go.th](http://www.khlongsamlocal.go.th)).

From the environmental conditions in the Klong Sam Sub-district Administrative Organization as mentioned above. It reflects the current problems approaching the crisis in the future. If no environmental pollution prevention and mitigation planning in the area by studying environmental pollution conditions public consciousness and environmental behavior. The administrative and environmental management potential of personnel organizations and communities in the Khlong Sam Sub-district area systematically. To apply the research results to the development of environmental management and management capabilities of the organization, personnel and communities and to develop people and society to be conscious of the environment in Khlong Sam Sub-district.

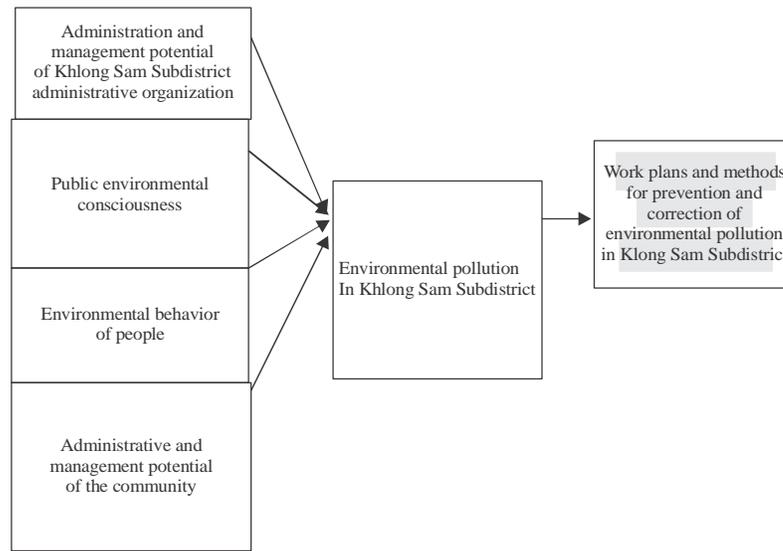


Fig. 1: Conceptual framework

**Research objective:**

- To study environmental pollution conditions, public awareness and environmental behavior, potential management and environmental management of organizations, personnel and communities
- To create a plan and methods for preventing and solving environmental pollution
- To develop the potential of environmental management and management of organizations, personnel and communities and develop people and society to be environmentally responsible in Klong Sam Sub-district (Fig. 1).

**MATERIALS AND METHODS**

**Study method:** Study documents related to the administration and environmental management of the Klong Sam Sub-district Administrative Organization.

**Set the source of information as follows:** Population and sample groups for distribution of environmental pollution questionnaires and environmental consciousness questionnaires and behaviors are people living in Klong Sam Sub-district. From the population of 86,498 people by calculating the number of samples from the Taro Yamane formula with a tolerance of not >5%, a sample of 400 people:

- Key informants for an in-depth interview group and the preparation of the stage has 3 groups as follows
- Administrator of Klong Sam Sub-district Administrative organization
- Personnel related to the environmental performance of the Klong Sam Sub-district Administrative Organization

- The chairman of the community or representative in the Klong Sam Sub-district area

**Develop research tools to collect information as follows:**

- Questionnaire for survey of environmental pollution conditions in Klong Sam Sub-district
- Questionnaire to survey environmental consciousness and behavior Public environmental management needs of the people of the area
- Group interviews and a forum. This is to study the administrative and environmental management potential of organizations, personnel and communities, guidelines and methods to prevent and resolve environmental pollution
- Observation form of environmental pollution in Klong Sam Sub-district
- Meeting to clarify details of the research and development project on human and social development to be conscious of the environment in Klong Sam Sub-district of the advisory team
- To collect information. Which collects two types of information
- Collection of quantitative data by distributing questionnaires of the population in the Klong Sam Sub-district
- Collecting qualitative data by collecting information from related documents. In-depth interviews group discussions, forums and observations
- Use the data from the collection to be analyzed in order to formulate plans and methods for prevention and mitigation of environmental pollution

- Development of environmental management and management capabilities of the organization, personnel and communities and development of people and society to be conscious of the environment in Khlong Sam Sub-district
- Summarize the research results and make recommendations for development

## **RESULTS AND DISCUSSION**

### **Research results**

#### **Quantitative research results**

**Analysis of general data of respondents:** The results of analysis of human and social development to be environmentally responsible for the environment in Klong Sam Sub-district, 400 people, classified by general data of respondents, were gender, age, highest education, occupation, average monthly income, status and length of residence in the sub-district area. Khlong Sam follows. By gender, most were 55.5% female and 44.5% male. By age, most were aged 51-60 years, 25.0%, followed by age 31-40 years, 19.7% and lastly. 7.8% younger than 20 years.

Classified according to the highest study found that most The highest education was lower than the high school 47.0% followed by the highest education high school/vocational certificate. About 29.2% and last The highest education is 1.8% higher than a bachelor's degree. By occupation, most were found to have private business occupations, 39.0%, followed by other occupations (general mercenary trade), 20.7% and lastly. Career in public service/government employees 4.8%.

Classified by average monthly income, it was found that most of them had the average monthly income 10,001-20,000 baht, 31.0%, followed by the average monthly income of 5,001-10,000 baht, 28.0% and lastly, the average monthly income was 50,001. Baht or more 0.3%. Classified by status found that most 61.8% had marital status, followed by 31.4% of marital status, and lastly 6.8% were divorced/widowed/separated.

Classified by length of stay in the area of Tambon Khlong Sam Found that most Having lived in Khlong Sam Sub-District for >10 years, 56.5% have lived in Klong Sam Sub-District for 6-10 years 23.0% and lastly, 6.3% had <1 year in the Khlong Sam Sub-district.

The results of analysis of environmental management behavior and conditions in the area of Khlong Sam Sub-district Administrative Organization.

Overall, the overall condition and behavior of environmental management in Khlong Sam Sub-District Administrative Organization area was at a high level when considered individually. It was found that most of them were consciousness, awareness and cognition, followed by behavioral aspects of environmental management and the last one is the environmental quality

of Khlong Sam Sub-district (problem, cause and effect). Condition and behavior of environmental management in the area of Khlong Sam Sub-district Administrative Organization. The environmental quality of Khlong Sam Sub-district (problem, cause and effect) was at medium level. When considered individually, it was found that most were the level of residual waste problem in Khlong Sam Sub-district, followed by environmental pollution in Khlong Sam Sub-district, caused by lack of human consciousness and lastly, environmental pollution in Khlong Sam Sub-district was caused by markets/shops. Conditions and behavior in environmental management in the area of Khlong Sam Sub-district Administrative Organization, in awareness, awareness and knowledge Overall is at a high level. When considered individually It is found that in large part, we should be aware of the need to protect the environment from today. So, that the future generations will not have to suffer the consequences and littering solid waste and sewage into rivers and canals will cause water problems. Followed by a campaign to promote water conservation and water sources is a matter that people can do together. And lastly, the rotten river and canal are not a problem for humans. Because at present, the water from the river and canal is not used directly.

Condition and behavior of environmental management in the area of Khlong Sam Sub-district Administrative Organization environmental management behavior. Overall is at a high level. When considered individually, it was found that the majority of this was the dumping of rubbish in the trash or provided, especially for the people of Klong Sam Sub-district, followed by the use of garbage. Such as paper, plastic bottles, scrap, glass bottles to be sold or reused by the people in Khlong Sam Sub-district and the last step is to treat wastewater before discharging into sewers or canal of the establishment/shop/factory in the area of Tambon Khlong Sam.

Condition and behavior of environmental management in the area of Khlong Sam Sub-district Administrative Organization. The readiness of the Khlong Sam Sub-district Administrative Organization for environmental management in overall was at a moderate level. When considered individually, it was found that the majority of which were Khlong Sam Sub-district Administrative Organization had sufficient powers, duties and laws for environmental management. Followed by the Khlong Sam Sub-district Administrative Organization, the Environmental Management Strategy Plan has been seriously implemented and evaluated and lastly, the Khlong Sam Sub-district Administrative Organization has allocated sufficient budgets for environmental management.

Condition and behavior of environmental management in the area of Khlong Sam Sub-district Administrative Organization. The readiness of the

community in environmental management of the Khlong Sam Sub-district Administrative Organization was at a high level. When considered individually, it was found that most of them were communities/villages. Environmental problems were collected and used to solve problems with Sub-district Administrative Organization or related departments. Followed by the community/village planning for environmental protection and conservation. And communities/villages has established a community management committee to take care of the natural resources and environment of the community. And lastly, communities/villages exchange and learn about environmental problems and management through various groups or clubs.

### **Qualitative research results**

#### **Environmental pollution in Klong Sam area**

**Wastewater in Khlong sam Sub-district administrative:** Organization has rapid expansion in emerging communities. Due to economic expansion Causing many housing projects to happen. In addition, the industry is growing at the same time. These developments and prosperity are also a source of wastewater. Water pollution arising from some of these pollution sources has been treated to water quality standards of the Department of Water Quality Control but many villages have not passed the quality assessment. The cause is wastewater from some villages that are not treated or inadequate therapy, then released into natural water sources and people lacking awareness of littering into water.

Garbage in the Klong Sam area, which is a community, most people have their own waste management methods. And still does not give importance to the classification of solid waste Some households do not have a container to support the garbage. The method will be collected in bags, combined with other types of waste and disposed of in public places along the sidewalks, roadsides, lawns, under trees and in waste canals that occur in the Klong Sam Sub-district Administrative Organization. Homes and communities Housing estate.

One of the main reasons is some people lack the awareness of littering in the wrong place such as littering on the street, especially, Foreign workers. Litter along the canal. Causing water spoilage (lack of awareness) and insufficient trash bin, no waste separation after storage. Sometimes people have already separated the garbage but when the storage goes, put it all together. There is a littering place which has trucks from outside the area to carry some rubbish. When there is a large quantity, then emits a fairly disturbing smell.

Weather, environmental problems. It is a matter of smoke, traditional communities have the problem of burning grass, burning charcoal, causing smoke in the community which in this part causes debris from burning

grass to float to urban communities, especially among the houses sometimes had smoke including debris from the burning of grass as well where the problem of aerosol flew in the village of village 1 encountered the problem of the dust from the burning, the village did not know that Where does the powder from the incineration come from? Car fumes and dust which in groups 1-7 which are urban communities will face problems from car smoke or dust caused by the car running all the time. The problem is caused by the over-age cars that emit black smoke. These include vehicles that are shuttle buses, resulting in health and respiratory problems that cause people to have a lot of problems with respiratory disease.

#### **Administrative and environmental management potential of the SAO, personnel and communities:**

Personnel Khlong Sam Sub-district has personnel with knowledge and capability. Both in terms of environment, public health or in other departments but there is insufficient management knowledge that can give advice when the community has problems. Sub-district Administrative Organization and received a satisfactory answer which reflected that the personnel had the knowledge and skills in the communication work. Khlong Sam Sub-district Administrative Organization has communicated with the community, namely sending letters or documents for invitations to participate in activities or to provide knowledge use a group line of Khlong Sam Sub-district administrative organization which is the use of social media in which if it is a community, town, legal entity or person responsible for the care of the village, it will be a member of LINE group, while the traditional community will have a representative, the SAO is a member SAO will be communicated together by members The SAO who is a member of LINE, the group will receive information to inform the people of the traditional community and is a voice-over communication, which has all villages, both urban communities and traditional villages.

**Management:** Khlong Sam Sub-district Administrative Organizationh as activities with the community. Provide both budget support Counseling in the event the community does not understand how to manage certain environmental issues. Educating in making proper community plans for the community to know how to plan their own actions for environmental management that is suitable for their community. Using online media as a communication channel for environmental management cooperation. The people will help each other to talk about environmental management in their communities.

**In terms of budget:** The budget for purchasing a garbage collection truck has the most problems, for example, people have proposed to separate waste. Increased waste

collection time but informed that there was not enough budget. Few of the garbage collection cars, no additional purchase budget.

At present, the SAO has 10 cars that serve the same garbage, currently ordering 4 more cars, totaling 14 vehicles to use the garbage cars to collect the waste, 1 reduction will consist of 1 driver and a person in the trunk and the other 3 people. The goal is to collect all the trash without residue. In which the waste of the SAO will be collected by villages or communities that can be operated for only 5%. However, because the Sub-district Administrative Organization has quite a lot of villages which villages are legal entities and collect waste or service fees will contract the private sector to collect their own village waste most of the housing estates now use private waste collection. This will be consistent with the interview, various legal entities that say that the private sector will come in to collect waste for the housing estate.

**Regulations or practices in this section:** the community wants to strictly enforce the management of the most impactful environment. The SAO also enforces rules or laws to deal with the environment, but there are also ways of seeking cooperation, sometimes not applicable to certain groups of people.

**Participation:** The SAO and the community have a high level of involvement. The SAO hurried to take care of the SAO asking for cooperation, the community would attend the meeting.

Integration of leadership group, community leader network in environmental management. The integration of leadership groups, community leader's networks in environmental management, goes beyond the involvement of people at the real community level is the contribution of the main or the leader of a group representative of the people's community, starting from drawing the lead into awareness and transfer to the people in their own community. And the Khlong Sam Sub-district Administrative Organization still gives importance to opening a forum to listen to the opinions of the people. So, that all citizens all sectors are involved in environmental performance of Khlong Sam Sub-district administrative organization.

Another way to solve the problem with the waste management of the Khlong Sam Sub-district Administrative Organization is the establishment of a volunteer group by receiving cooperation among youths who are volunteering at Dhammakaya Temple, joining together with the SAO. Then went to campaigning through villages to take care of the environment and waste. There was a volunteer group Have the village sorted the garbage and ran to buy it from the village. The SAO tries to make it a model village in sorting out waste but the volunteer groups sometimes have to adjust.

Causing the strength of the group is not as good as it should be gone, there is no sustainability. If this is to be made sustainable, the juristic person must take the action in regard to each village to separate the waste and the juristic person to set up houses to buy waste and have the store to buy waste to buy from a juristic person again, which is likely a thing that can be done.

**Potential in the community and related:** There are agencies that can help. For example, about the canal, it can be discussed with the Royal Irrigation Department regarding wastewater management. The village building project operators are willing to cooperate with the SAO to manage the wastewater by being able to find a guideline or method for water allocation. Because the project has a department dealing with the environment and there are architects who are able to come to brainstorm with the SAO.

**Work plans and methods for prevention and correction of environmental pollution in Khlong Sam Sub-district:** SWOT analysis results of human and social development to be environmentally responsible in the area of Khlong Sam Sub-district, Pathum Thani. The details are as follows:

**Strengths (S)** From an analysis of issues, group discussion and collecting a questionnaire of strengths of people and society development to be conscious of the environment in Khlong Sam Sub-district, Pathumthani Province in the following issues: Availability of Khlong Sam Sub-district Administrative Organization for environmental management It consists of having sufficient authority and laws to manage the environment, implementing an environmental management strategy plan to be rigorously implemented and assessed with a number of environmental management personnel with knowledge and working skills in communication, namely communication with the community includes. A letter or flyer is sent to invite you to an activity or give knowledge. Use LINE Group by a member of the SAO who is a LINE member. The group will receive information to inform the people in the community and voice over the line, which has all the villages, both urban communities and traditional villages can receive information via voice line, which has the ability to cooperate. With the community and related agencies or organizations with adequate environmental management tools and materials.

The readiness of the community for environmental management of Khlong Sam Sub-district administrative Organization is the community/village has gathered environmental problems and brought together solutions to problems with Khlong Sam Sub-district administrative organization or related agencies. Planning for environmental protection and conservation, a community administration committee was established to look after

natural resources and community environment. By joining together leadership groups, community leader's networks in environmental management rather than involvement of the people at the community level, it is the participation of leaders or group leaders, representatives of the people's communities, starting from pull the lead into awareness and transfer to people in their own community and the community has government agencies or the private sector involved to help support environmental management in the community.

Weaknesses (W) from the analysis of issues, group discussion and collecting questionnaires for weaknesses of human and social development to be conscious of the environment in Khlong Sam Sub-district, Pathumthani province in the following issues:

The readiness of the Khlong Sam Sub-district administrative organization for environmental management is that budget allocation for environmental management is limited and most of the personnel do not have direct knowledge of environmental management in order to be able to work on environmental management and can giving people less knowledge and understanding on environmental management. There is a small number of personnel, therefore, in the field of work, it is necessary to join with the local law firm and the relevant skilled departments.

Community readiness for environmental management of Khlong Sam Sub-district administrative organization, namely communities/villages, rarely exchanging and learning about problems and managing environmental problems through groups or clubs and people in the community/village are readily available to Sacrificing time and donating funds to solve environmental problems is minimal.

Opportunities (O) from the analysis of the discussion group and the collection of questionnaires. Opportunities for developing people and society to be environmentally responsible for the environment in Khlong Sam Sub-district, Pathumthani province in the following issues: People and juristic persons are ready to cooperate if there is an agency to seriously provide knowledge.

People and juristic persons are aware and have knowledge and understanding of their own environmental responsibility as an example of good corporate citizenship, showing responsibility, awareness of pollution and environmental degradation have knowledge and understanding about waste sorting.

Environmental management behavior of people in Khlong Sam Sub-district has the behavior of dumping into the garbage as provided and people in Khlong Sam Sub-district have used garbage that can be used such as paper, plastic bottles, iron scrap. Glass bottles are sold or reused or waste management based on 5 R principles. Reduce waste by reducing the use of reuse packaged products. Reuse such as glass bottles, paper boxes, printed

paper on the back, etc. Repairing and fixing various items to be able to continue to use reject avoiding the use of pollutants and recycle, conversion and recycling by reusing through the production process again. Some villages have set up a group to buy waste by a juristic person.

Problems and obstacles (T) from problem analysis, group discussion and questionnaire collection problems and obstacles to develop people and society to be conscious of the environment in Khlong Sam Sub-district, Pathumthani province in the following issues.

Environmental quality in Khlong Sam Sub-district There is a high level of residual waste problem in Khlong Sam Sub-district (Mean = 3.42). The problem arising from the increasing amount of solid waste and hazardous waste in the community and being unable to collect and dispose of it efficiently has a negative impact on the environment. Emits a bad smell, there are environmental problems related to wastewater by the cause of wastewater. The community is thrown into canals, food shops, fresh markets and entrepreneurs having environmental problems related to smoke caused by burning grass, burning charcoal, causing smoke in the community. There are environmental problems related to car smoke and dust. Aerosol occurs from the car running all the time. Including buses, resulting in health and respiratory problems that cause people to have a lot of problems with respiratory diseases. There are environmental problems related to pollution from solid waste and sewage, animal carcasses and plants.

Consciousness, awareness and knowledge and understanding of environmental responsibility. That is a minority of people lack consciousness, awareness and lack of knowledge and understanding of environmental responsibility. Most of the personnel are unable to integrate their knowledge and understanding of environmental responsibility into the local context.

Environmental management behavior is that the store still lacks wastewater treatment before discharging into the sewer or canal of the establishment/shop/factory and household. In Khlong Sam Sub-district, most of them will throw garbage at bus stops and throw them into the canal.

Problems on network cooperation Due to the community that lives of the Khlong Sam Sub-district Administrative Organization, if it is to proceed with the development for example, the development of a canal must be discussed with the Royal Irrigation Department and other related agencies of the state, because Khlong Sam Sub-district Administrative Organization is not responsible for all areas of the area, only one agency.

Environmental quality in Khlong Sam Sub-district is environmental pollution in Khlong Sam Sub-district, caused by factories, establishments, markets and shops resulting in conflicts or disputes in society and people's living in Khlong Sam Sub-district should promote or

campaign for the people or the community to see the environmental quality of the problems caused by the environment by engaging in close campaigning in the community.

**Environmental management and management capacity development:** Pilot Experiment for Development of Administrative and Environmental Management Potential in Khlong Sam Sub-district by installing a grease trap, 120 shops in the Prukha 12 village area. The grease trap is developed from research and allow store operators to experiment with their own assembly without having to buy a ready-made model that is quite expensive.

The pilot results of the installation of store grease traps in the Prukha village area showed that many merchants and the public were interested in the project. There is a need to install a self-assembled grease trap. Because he saw that he did not invest much and want to solve the water pollution problem in the community to solve the problem of flooding and the smell that occurred in the community.

**Strategies to develop people and society to be environmentally responsible in the area of Khlong Sam Sub-district, Pathum Thani province:** The researcher analyzed data from the 20-year National Strategy (2018-2037) on building growth on environmental friendly quality of life, the 20-year strategy of the Ministry of Natural Resources and Environment (2017-2036) and from group discussions and data from questionnaires to collect weakness, Strengths, opportunities and barriers (SWOT) and a matrix SWOT analysis. Related to the development of people and society to be conscious of the environment in Khlong Sam Sub-district to develop the administrative and environmental management capacity of the organization, personnel and community and develop people and society to be conscious of the environment in Khlong Sam Sub-district from the people Manage personnel related to environmental performance of Khlong Sam Sub-district Administrative Organization and community chair or representative in Khlong Sam Sub-District. The participants participated in a group discussion of 120 people and from 400 people living in Khlong Sam Sub-district. Results of SWOT Analysis and a matrix SWOT analysis, the researcher proposed strategies for developing people and society to be environmentally responsible for the environment in Khlong Sam Sub-district, Pathumthani province with details as follows:

**Vision:** Management and conserve the environment with sustainable community participation

**Mission:** Mission of the local government organization of Khlong Sam Sub-district:

- Promote and conserve natural resources and the environment
- Promote and develop people's quality of life

**Strategy 1 Management Sustainable environment**

**Goal 1:** To develop and promote a quality environmental management system.

**Strategy 1:** Establish administrative systems and mechanisms to monitor the environment.

**Strategy 2:** Promote environmental management suitable for the community's context.

**Goal 2:** To enhance the capacity for cooperation in environmental management of the public, private and public sectors.

**Strategy 1:** Increase efficiency in environmental management with good governance and keep pace with changes.

**Strategy 2:** Develop cooperation networks to enhance sustainable environmental management.

**Strategy 2:** Conserve and restore the environment with sustainable community participation.

**Goal 1:** Raising awareness of environmental responsibility towards society.

**Strategy 1:** Building knowledge and understanding of environmental impacts.

**Strategy 2:** Promotion of Morality Ethics for society environmental community.

**Goal 2:** Conservation and restoration of the environment for quality and the ability to bring things to be recycled:

**Strategy 1:** Creating added value from recycled waste.

**Strategy 2:** Promote production and create an environmentally friendly consumption society.

**Strategy 3:** Develop and restore a participatory environment.

From the study, it was found that the overall environmental behavior in the Klong Sam Sub-District administrative organization was at a high level such as the dumping of waste into the garbage bin or provided, especially for the people of Khlong Sam Sub-district. Bringing recyclable waste such as paper, plastic bottles, scrap, glass bottles to sell or reuse. The reason why

people in Klong Sam Sub-district have awareness, awareness and knowledge Caused by the Khlong Sam He Sub-district Administrative Organization, the importance of the environment and there are ongoing environmental projects and activities which corresponds to Wongsawan<sup>[1]</sup>. Factors or things that influence awareness can be divided into two large components is the nature of the stimulus and characteristics of the perceived person. The nature of the stimulus or the properties of the stimulus are external factors that cause the person to become interested in knowing which will lead to further awareness. The perceived nature of the person means how much a person becomes aware of a particular phenomenon depends on two factors physical factors were the performance of sensory organs, ears, eyes, nose, mouth. Psychological factors, namely prior knowledge, observation, attention, attention and readiness to perceive, appreciation, etc. which these things influences will cause different awareness.

The study found that the environmental quality of Khlong Sam Sub-district, overall is moderate. When considered individually, it was found that most of them were the level of residual waste problem in Khlong Sam Sub-district. This is a problem that arises in urban communities with activities that cause environmental pollution, especially, garbage which are consistent with Chankaew<sup>[2]</sup>. Community waste is the waste generated from a community/town or village. This type of waste structure contains up to 50% of the organic matter/food waste. The rest are usually plastics, metals, aluminum, iron, fibers, etc., respectively, although they contain quite a lot of food waste and organic matter. The contamination of the toxin remains relatively large as well.

From the study, it was found that the administrative and environmental management potential of the SAO, personnel and the community personnel at the Khlong Sam Sub-district administrative organization had personnel with knowledge and abilities. Both in terms of environment, public health or in other departments but not enough to manage. The specific agency of the Khlong Sam Sub-district administrative organization is in line with the basic concept of resource management decentralization. Nature and environment was also mentioned in the establishment of a specialized institution or administrative organization by Ostrom<sup>[3]</sup> management of Khlong Sam Sub-district Administrative Organization There are activities with the community. Provide both budget support counseling in the event the community does not understand how to manage certain environmental issues. Educating in making proper community plans for the community to know how to plan their own actions for environmental management that is suitable for their community.

Consistent with organizational theories and concepts indicating relationships and the nature of an open system organization of the local government organization that affect the administration for environmental management There are many commenters such as Laohawichien<sup>[4]</sup> had said that open system theory gives importance to the environment and interaction with the environment. Therefore, the organizational structure must depend on the nature of the environment and the state of the people in the theory of systems is to adapt to the environment. In the case of situation theory, the status of the people is people who have the ability to learn the response to the environment in the matter of restructuring, Bowonwattana<sup>[5]</sup> has mentioned the organization format as appropriate. Another organization format is organization, based on the principles of suitability. Also, known as Contingency or Situational models. The use of organizational methods as appropriate is considered the principle that good organization must take into account the type of organization that the organization is responsible for what kind of production system are there? A good organization is an organization that can choose a form of organization to suit the type of organization budget, budget for purchasing waste collection vehicles has the most problems, consistent with Smith. It was of the view that it was necessary to apply the principles of economics in environmental management in order to achieve success and participation. The SAO and the community have relatively high participation, the integration of the leadership group, the community leader network in environmental management. This is consistent with the proposal for decentralization and participation of Mektrirat<sup>[6]</sup> and Koontz<sup>[7]</sup>.

### **Suggestion**

**Policy suggestion:** Khlong Sam Sub-district Administrative Organization Regulations to regulate markets should be taken seriously in this part of the effluent market if regulations are used to help and understand the way people are required to operate in order to be regulated. By either giving a sign or a symbol that he does not release wastewater or which stall does not discharge wastewater, it will encourage people to shop in the market to choose to use the store more and to the market owner. That can campaign for market sellers, waste care symbols sorted before discarded, able to receive cooperation, custody or reward or except for some taxation or fines. The SAO must consider the rules or principles together with the merchants to create a serious cooperation in solving the problem of wastewater.

Khlong Sam Sub-district administrative organization should take care of the standard of waste collection, especially, the issue of tools and equipment that can efficiently collect waste and provide tools and equipment to prevent the garbage collector from getting toxic from

the garbage collection by taking the standard of storage and sorting of waste to make it more efficient or use technology to manage waste even more.

Khlong Sam Sub-district Administrative Organization should be a policy for separation and landfill. The sorting and landfill allows the private sector to take part and contract for sorting and landfill by the SAO will pay for the rent of the sorting pond and landfill in the area of the community where there is no housing yet.

Khlong Sam Sub-district administrative Organization should be regular communication with the community, for example sending letters or flyers in invitations to activities or giving knowledge. Use a group line of Khlong Sam Sub-district administrative Organization, which uses social media in which if it is a community, town, legal entity or person responsible for the care of the village, it will be a member of LINE, the traditional community group will be represented by the SAO who is a member. SAO will be communicated together by members The SAO who is a member of the LINE group, will continue to receive information to the people in the traditional community and it is a voice communication line where all villages, both urban communities and traditional villages can receive information through voice lines.

Khlong Sam Sub-district administrative organization should organize activities with the community provide both budget support counseling in the event the community does not understand how to manage certain environmental issues. Educating in making Proper community plans for the community to know how to plan their own actions for environmental management that is suitable for their community.

Khlong Sam Sub-district administrative organization should be allocated the budget for the purchase of a garbage collection truck that is sufficient for a large amount of waste that can serve housing as well.

Khlong Sam Sub-district administrative organization Participation must be emphasized, especially, in the leadership group, community leader network in environmental management. The integration of the leadership group, the community leader network in environmental management, goes beyond the involvement of people at the community level or the leader of the people's community representative group. It starts with drawing the lead into awareness and transfer it to the people in their own communities and the Khlong Sam Sub-District administrative organization should give priority to open a forum for public opinion. So, that all citizens all sectors are involved in environmental performance of Khlong Sam Sub-district Administrative Organization.

Khlong Sam Sub-district Administrative Organization should apply modern technology to environmental

management. Khlong Sam Sub-district Administrative Organization should develop a plan and implement an environmental management plan to be seriously and concretely implemented.

**Practical suggestion:** Khlong Sam Sub-district administrative organization should be used campaign or education to the community in treating wastewater and for each house to do good water before it is dumped into the market where wastewater is discharged. Also, want the market owner to have control to educate the sellers<sup>[8]</sup>.

Providing knowledge and understanding about the environment to people by government agencies related people by doing activities by making equipment or providing knowledge on waste water management by yourself. So, that the community or people can manage the wastewater by themselves. Such as making a waste water filter before throwing away garbage sorting the dumping of waste or chemicals into the trash should be bagged and tightly tied to the mouth to prevent chemical spills or the garbage collector gets toxic from operations. There should be a recycling program or project that will help bring waste to the community by doing seriously and having a continuous project. There is a supervising agency in order to coordinate with the community on the recycling of various forms of waste if the waste can be made into various products, it will help the public to be interested in waste separation and take care of the issue of littering even more.

Problems from dust, smoke and mist, mainly caused by burning charcoal or burning rice cobs, Khlong Sam Sub-district administrative organization should be made to announce an order to refrain from burning the grass, burn rice and then use the fermentation or landfill method instead before the next farming operation.

The problem of car smoke and dust, the Khlong Sam Sub-district Administrative Organization should proceed as follows: the SAO should cooperate with relevant agencies in the detection of black smoke and organize a periodic inspection kit. Such as the morning or evening hours to prevent the over-age vehicle or black smoke from emitting toxic chemicals during traffic jams. Sub-district administrative organization in collaboration with the traffic police, organize a new traffic system to prevent traffic jams and release toxic substances or mix dust and smoke when the car is running, it will cause black smoke or dust less to come out and to make the car able to run and not get stuck, emit black smoke or create more dust by smoothing the canal on the other side which wants the way the SAO has come up with a budget for the community that is a village or owned by the canal, willing to raise the place to the public in order to create additional roads to improve traffic and create prosperity for the local community of the Khlong Sam.

Khlong Sam Sub-district Administrative Organization should apply regulations or laws to manage the environment but there are still ways of asking for cooperation Which sometimes does not apply to certain groups of people.

Khlong Sam Sub-district Administrative Organization need to develop a volunteer group. To carry out environmental activities, such as campaigning in villages to take care of the environment and waste.

There should be concrete distribution of waste to be sold. Enhance public knowledge and knowledge about waste separation from waste sources by separating them into organic waste, general waste, recycled waste and hazardous waste. Reducing the amount of in situ waste production which is the best way to reduce waste and to prevent pollution problems that occur in the community in the future.

Khlong Sam Sub-district Administrative Organization should have projects on a regular basis to change the behavior of the people to be conscious. And raise awareness of environmental problem solving and management by the behavior that is appropriate It arises from decisions that come from knowledge, understanding, and self-actual practice. Engaging in environmental management, such as not violating laws and regulations. Helping to monitor and contribute to the environmental conservation of the community.

Khlong Sam Sub-district Administrative Organization to enforce the law seriously. Because in the area of Khlong Sam Sub-district administrative organization, there are diverse population. It is both an urban and rural community, so law enforcement should be implemented. To be the norm to be accepted in the same line Including strict enforcement of laws and regulations. There are measures to promote and support the strengthening of the community. This will help solve environmental management problems in a concrete and sustainable manner.

**The principle of 7R should be used. The idea is 7R as follow:**

- Refuse refusing or avoiding items or packaging that will create a waste problem as well as pollute the environment such as foam boxes or other toxic waste
- Refill selected refill products that use less packaging. Less waste as well
- Return selection of products that can be returned to the manufacturer such as different types of beverage bottles

- Repair appliance repair to be able to continue to use not to become garbage
- Reuse: reuse of used packaging such as shopping a cloth bag instead of a goblet bag
- Recycle separation of usable waste for easy storage and processing such as plastic packaging, glass, beverage cans
- Reduce reducing consumption and finding ways to optimize the use of appliances

**Suggestions for the next research:** Khlong Sam Sub-district administrative organization should study the feasibility of applying modern technology to be applied in environmental management.

Khlong Sam Sub-district Administrative Organization should study waste management and other environmental pollution by using economics. Khlong Sam Sub-district administrative organization should study the forms of participation in environmental management that are suitable for the context.

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