

Role of Public Participation in an Environmental Impact Assessment System in Thailand: A Case of Rayong Industrial Estate (Ban Khai)

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Abstract

This research has the objective to study the public participation's process in EIA (Environmental impact assessment), including evaluation of the effectiveness of the public participation and recommending new processes in developing the development of public participation processes in EIA in the case study of The Rayong Industrial Estate Project (Ban Khai) Zone. This research uses semi-structured interviews, non-participatory observation, and site survey with the stakeholders of the project as methods of data collection. The study indicates that the public hearing has obstacles and does not cover all stakeholders. Furthermore, some citizens are not informed of the project which leads to the protest from the opposing groups against the participation in every activities. For the participation of citizens, it was found that citizens do not have enough time to prepare for the hearing of the project. As a result, the citizens do not have confidence in the decisions of government. In order for the development process with public participation in environmental impact assessment to be successful, government and project developers have to realize the importance of the participation of the public, transparency in operations and provide accurate and complete information about the project. Also, they have to be ready to receive the public's feedback from the start of the project to know the real demand of the people in the area. The public needs to learn about the environmental impact assessment, participation of citizens and relevant legislations.

Keywords: Public Participation, Environmental Impact Assessment, Environmental Conflict, Industrial Estate, Legislations

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บทบาทของการมีส่วนร่วมของประชาชน ในระบบการประเมินผลกระทบสิ่งแวดล้อมของประเทศไทย: กรณีศึกษา นิคมอุตสาหกรรมระยอง (บ้านค่าย)

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บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อศึกษากระบวนการมีส่วนร่วมของประชาชนของระบบการประเมินผลกระทบสิ่งแวดล้อม รวมถึงการประเมินประสิทธิภาพของกระบวนการมีส่วนร่วมของประชาชน และเสนอแนะแนวทางในการเสริมสร้างกระบวนการมีส่วนร่วมของประชาชนในกระบวนการประเมินผลกระทบสิ่งแวดล้อม กรณีศึกษา นิคมอุตสาหกรรมระยอง (บ้านค่าย) งานวิจัยนี้ใช้วิธีการเก็บรวบรวมข้อมูล คือ การสัมภาษณ์แบบกึ่งโครงสร้าง การสังเกตการณ์แบบไม่มีส่วนร่วม และการสำรวจพื้นที่ กับกลุ่มผู้มีส่วนได้ส่วนเสียของโครงการ ผลการศึกษา พบว่า กระบวนการมีส่วนร่วมของประชาชนประสบปัญหา อุปสรรคและไม่ครอบคลุมกลุ่มผู้มีส่วนได้ส่วนเสีย โดยประชาชนบางส่วนยังไม่ทราบข้อมูลข่าวสารเกี่ยวกับโครงการ นำไปสู่การรวมตัวคัดค้านไม่เข้าร่วมกระบวนการมีส่วนร่วมของประชาชนของกลุ่มผู้ต่อต้าน ประเด็นด้านกระบวนการรับฟังความคิดเห็นของประชาชนพบว่า ประชาชนมีระยะเวลาไม่เพียงพอในการเตรียมตัวเพื่อเข้าร่วมกระบวนการรับฟังความคิดเห็นของประชาชน ส่งผลให้ประชาชนขาดความเชื่อมั่นต่อกระบวนการตัดสินใจของภาครัฐ ส่วนแนวทางในการส่งเสริมกระบวนการมีส่วนร่วมของประชาชนในการประเมินผลกระทบสิ่งแวดล้อมให้ประสบความสำเร็จนั้น ภาครัฐและผู้พัฒนาโครงการควรตระหนักถึงความสำคัญของกระบวนการมีส่วนร่วมของประชาชน ความโปร่งใสของกระบวนการปฏิบัติงาน การให้ข้อมูลของโครงการอย่างถูกต้องและครบถ้วน นอกจากนี้ ควรต้องจัดให้มีกระบวนการรับฟังความคิดเห็นของประชาชนตั้งแต่เริ่มพัฒนาโครงการ เพื่อให้ผู้พัฒนาโครงการทราบถึงความต้องการที่แท้จริงของประชาชนในพื้นที่ ภาคประชาชนต้องทำความเข้าใจ เรียนรู้เกี่ยวกับกระบวนการประเมินผลกระทบสิ่งแวดล้อม กระบวนการมีส่วนร่วมของประชาชน รวมถึงกฎหมายต่าง ๆ ที่เกี่ยวข้อง

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Introduction

The development of Thailand, in the past, has led to the use of natural resources as a cost to build various development projects for economic and industrial development and to increase income and raise the status of the people. Various development projects have both benefits and negative impacts, especially large-scale development projects that may affect the spread of pollution to the environment and people. In addition, the environmental and natural resource problems that arise are the result of rapid economic and industrial expansion, together with wasteful use of resources and no process of proper planning. This results in the remaining natural resources being deteriorated, especially several large projects that take place to support the development of the economy. Environmental impact assessment is therefore very necessary to help solve environmental problems arising from various development projects and also help in preventing future environmental problems.

The Environmental Impact Assessment (EIA) is a measure that must be implemented in accordance with the applicable legal framework and specified in the current constitution. Therefore, it is important to have people within the affected area participate, think, and take part in the decision-making process that will occur, which will result in meaningful participation from the public, implementation of the development program for sustainable development goals and preservation of the integrity and diversity of natural resources, especially for people whose livelihoods are dependent on natural resources. Therefore, public participation in environmental impact assessment is extremely important.

Rayong Industrial Estate Project (Ban Khai) is a project of IRPC Public Company Limited, located in Nong Bua Sub-district and Bang Son Sub-district, Ban Khai District, Rayong Province, on Hua Chua-Rong Nam Road, which is separated from Route 3138 (between km 59- 60). This project is implemented with the goal of establishing an industrial estate, in order to support the expansion of the industrial sector, as well as development planning for community agriculture promotion , social development and the quality of life of nearby communities by promoting environmentally friendly alternative industrial activities.

In Thailand, there are many environmental conflict cases from the implementation of development projects. It is often found that public participation practices, in particular, the public hearings often lead conflicts among stakeholders which often ends in violence. An abolishment of the public hearings is clearly presented the incapability to resolve conflicts in society. The environmental conflict cases were such as the public participation of Hin Krut Power Plant, Bo Nok Power Plant, Thai-Malaysia gas pipeline project and the latest case of the public hearing on the Krabi coal-fired power plant. The confrontation between supporter groups and those who opposed the project with different opinions on the project are increasing numerous in the Thai context (Chompunth, 2015).

Due to the resistance of the public against the aforementioned project, the researcher therefore is interested in studying the problems or obstacles of public participation in the environmental impact assessment of the project and finding guidelines for promoting and supporting the participation of people in environmental impact assessment, in order to bring meaningful results that can be used in the process of public participation in a meaningful and beneficial way to make decisions in the implementation of successful large-scale development projects in the future.

This research aims to study the process of public participation in environmental impact assessment with the concept of related theories and research as follows:

Public Participation

Public participation is a process by which people or stakeholders have the opportunity to express opinions, suggestions or exchange information, in order to find alternatives for joint decision making about the project appropriately. Bureau of Environmental Impact Analysis (2011).

The International Association for Public Participation has divided the level of public participation into 5 levels, as shown in Figure 1 , with the following details: Creighton (2005) and Petts (1999).

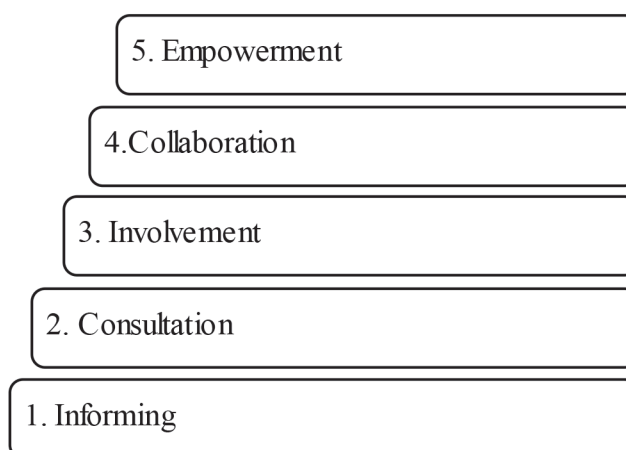


Figure 1: The Level of Public Participation

1. Informing is the lowest level of public participation, yet still important because it is an opportunity for people to participate in various matters. The main objective is to provide information to the public and enhance public understanding about issues, options and solutions using various channels such as documents, publications, media, newsletters, exhibitions, press conference, online media etc.

2. Consultation is a process that allows people to participate in providing information, facts, and opinions to be a part of the decision for the project. The objective is to receive information and opinions from the public about the problems and solution, in order to be used in the decision-making process, which may be implemented through public hearings, poll, public forum, group meeting, online media comments etc.

3. Involvement is an opportunity for people to participate in the operation or suggest ways to make decisions, in order to create confidence for the public that information, opinions and needs of the people will be considered as an alternative to the management of the project. This can be done through using the workshop method to consider public policy issues, public hearing, establishment of a working group to suggest policy issues, etc.

4. Collaboration is the participation between a group of the people and public sector representatives, in order to allow the public to participate in every step of the decision-making process and have ongoing activities together with the project. This can

be done by using various methods, such as appointing a member of the public as a director of a committee or determining a collective decision-making process.

5. Empowerment is the stage that gives the highest level of public role, allowing people to make decisions such as a referendum on various public issues or technical support etc.

Public Participation in the Environmental Impact Assessment Process

Environmental Impact Assessment: EIA is a regularly used as a decision-making tool in environmental management area and public participation is acknowledge as a key component of EIA. It is mostly accepted that public participation plays a vital role in the development process of the country. That is to say, participation is a social process that allows those engaged as stakeholders to have access to information, problem analysis, commenting, implementation, cooperation and monitoring the impact of operations as well as being involved in any aspect related to solving the problems of their community or area. Public participation in the environmental impact assessment process is a process established in the EIA process of the project with the objective of participation for the people, NGOs, as well as various agencies affected by the project in participating, commenting and presenting information or suggesting ideas related to environmental impact assessment. This is to achieve the actual demands of the public and in accordance with government policies, in order to prevent, correct and manage the issue correctly and efficiently. Regarding the basic rights, Thai people and the local communities are permitted to be involved in all aspects of the government administration, in particular the management of natural resources and the environment in the EIA system in Thailand. This right is provided in many laws and regulations (Chompunth, 2015).

In the process of public participation, it is necessary to work with people who possess knowledge, understanding and experience in working with the community. The operation must therefore be used by those who understand the principles and guidelines for successful participation. Public participation must therefore be planned out in steps, as well as having problem and success assessment in each step. Then, the result must be brought in and used to improve the next operation to be suitable for each context. Therefore, the process of public participation should be managed by adhering to the 4S principles as follows:

1. Starting Early. The process of public participation must start from the beginning, by providing information to encourage feedback and receiving public opinion before making a decision. In addition, implementing the public participation into the process from the beginning helps people to be able to think of more appropriate alternatives or ways to solve community problems and can provide further information for project development.

2. Stakeholders coverage or related parties is another important principle of participation. This process is to allow people to participate extensively. Those who are affected, whether directly or indirectly, are considered a stakeholder. They should have the opportunity to participate in the participation process. However, groups that are directly affected may be considered as a higher priority and may be chosen to listen to information or discuss before others.

3. Sincerity, participation is a delicate process and is related to relationship between the agencies responsible for organizing the process of participation and the public. This is considered an important dimension in managing a successful participation. The state agency that is the owner of the project or the agency, who has the authority to approve, must provide a process that is honest, open, honest and bias-free to respect each other and have two-way communication at all times, especially providing accurate and adequate information to respond to the needs and concerns of stakeholders. This includes the need to report progress of the project or changes made to the project.

4. Suitability: The last important principle of participation management is the selection of techniques or patterns of public participation that are considered appropriate, by considering the type and size of the project, the diversity and the different characteristics of the area and the stakeholders, as well as differences in culture, society and values, levels of community interest in issues or projects, capabilities and readiness. This also includes the limitations of agencies responsible for organizing the participation process.

Laws Related to Public Participation in Environmental Impact Assessment in Thailand

From the Constitution of the Kingdom of Thailand, B.E. 2550 there are laws relating to the participation of people in environmental impact assessment in Thailand as follows:

Section 57, A person shall have the right to receive information, explanation and reasons from a government agency, state agency, state enterprise or local government organization before granting a license or undertaking a project or activity which may affect the quality of the environment, health and sanitary conditions, the quality of life or any other material interests concerning him or a local community and shall have the right to express his opinions on such matters to the concerned agencies for their consideration.

The state shall arrange for a comprehensive public consultation process prior to the implementation of a social, economic, politic, and cultural development plan, the expropriation of immovable property, the determination of town and country plan, the determination of land use, and the enactment of a rule which may affect the material interests of the public.

Section 67 (paragraph two) Any project or activity which may seriously affect communities with respect to the quality of the environment, natural resources and biological diversity shall not be undertaken, unless its impacts on the quality of the environment and health of the people in the communities have been studied and evaluated and consultation with the public and interested parties have been organized, and opinions of an independent organization, consisting of representatives from private environmental and health organizations and from higher education institutions providing studies in the field of environment, natural resources or health, have been obtained prior to the operation of such project or activity.

The 2017 Constitution of Thailand has arranged many advantages for environmental management area in many sections. It endorses and supports the principle of public participation to have a vital role in decision making and project development in particular, the EIA system. Section 58 states that, "Implementation of any projects or activities that may have massive impact on the community in terms of environmental quality, natural resources and health will not be conducted until the stakeholders involved carry out studies and assessment on the impact of the proposed project on environmental quality, and the health of the community. After the impact assessment, the decision-makers in charge should set up a public hearing process for the public and stakeholders. The government should give importance to public participation process as the views of all stakeholders will help in reducing the negative affect of a project from the public. Moreover, the NEQA 1992 and the NEQA 2017 stipulates requirements for the Environmental

Impact Assessment (EIA) procedure making the EIA process more practical and reducing the time needed for its completion. In practice, the Thai laws have composed for the holding of public participations on 35 types of development projects for EIA and on 12 types of mage-development projects, EHIA. This provided the need to pay attention to the affected communities about the overall impacts of these projects. In practice, the EIA report should comprise of a pollution mitigation plan as well as a pollution monitoring program which have to be judged by the assessment committee prior to the project approval. In some significant cases, such as a huge project that may cause harmful effects to the wider public, this kind of project must be permitted by the cabinet (Chompunth, 2017).

From the study of public participation in environmental impact assessment, the researcher found the relevant research as follows:

The results of the study of the Public Participation in Environmental Impact Assessment, Natural Gas Separation Plant-Malaysia Project showed that most sample households and key informants agreed that they should be able to participate in the environmental impact assessment of the project. The sample group of households saw that the public should be allowed to participate in the survey process and the public education results should be published. The main informant saw that, due to the implementation of the project, it may affect the way of life of people in the area. People who are affected should therefore receive adequate information, opportunity to share opinions and exchange information. The public should be able to participate from the step of planning, follow-up, and evaluation in the implementation phase. The problems and obstacles in participation in environmental impact assessment are caused by inadequate information given to the public, misunderstanding of information and difficulty of data that may be difficult to understand. This may cause the public to be disinterested in the process of participation and some of the public may still lack the proper understanding about participation. The process of suggestions and guidelines on public participation should disseminate educational results thoroughly, implement meetings to clarify and listen to comments on the environmental impact assessment thoroughly and frequently. Also, the project manager should publicize the project thoroughly by using a variety of media, including the coordination for local leaders who have been accepted as the core in persuading more people to participate.

The assessment of public participation in environmental impact assessment in the case of Khao Hin Son Coal Power Plant Chachoengsao province found that, in the context of the project, the process of is still a new matter which requires time for the public to learn and get used to. In the public sector, there is still a lack of proper understanding about public participation in environmental impact assessment. The project operator has implemented the process of public participation in assessing environmental impacts appropriately, but there are still some stakeholders who didn't participate in the process. This results in the lack of coverage of stakeholders. The impact of the use of public participation processes in environmental impact assessment since the project feasibility study will reduce conflict, including the organization of activities by project operators to benefit the people in the area as much as possible. This will lead to sustainable coexistence between the project and the people. The success factors in the operation are enhancing knowledge and understanding in the process of public participation for all sectors.

Chutarat Chompunth (2013), Good governance and public participation in the decision-making process in the development project, the study found that the past development of the country has used natural resources as a cost of activities and various development projects for economic and industrial development to increase national income, which results in abundant natural resources that are diminished and deteriorated, especially the large development projects that affect the environment and health of people in the area. This leads to environmental conflicts between project owners and local people. The problems and obstacles to the creation of good governance and public participation in the decision-making process in development projects in Thailand are top-to-bottom order, lack of promotion from the government, lack of transparency in project development management, lack of coverage for stakeholders or related parties in all sectors in the process of public participation. Also, the level of public participation in decision making is low, which cause the results of participation to be inefficient. This leads to conflict within society because most decisions are not accepted by the public.

Manida Fuangchoonuch and Chutarat Chompunth (2017) found that the participation of people in environmental and health impact analysis: a case study of Krabi power plant expansion project, the related laws contains loopholes which makes such participation process still unable to achieve the true intent in practice. Furthermore, the public faces obstacles in obtaining information, which may not be sufficient for the decision-making

process because the information presented to the public is one-sided and not clear enough. This causes people to be confused. As for the environmental and health impact analysis report, it was found that the country's health database system was not able to analyze the environmental impacts and health impacts of the project, leading to unclear measures in decreasing health effects. In order to establish the guidelines for a successful development of participatory processes of the project, the government sector should consider modernizing the law to clearly determine the penalties of relevant laws, develop a health database system with transparency within the operation process, listening to public opinion from the beginning of the process, in order to know the real needs of people in the area. Also, the project manager should enhance the academic capacity of the community. The public sector should be open to accepting both positive and negative information about the project without prejudice.

From the study of concepts, theories and related research, the conceptual framework for research is as shown in Figure 2.

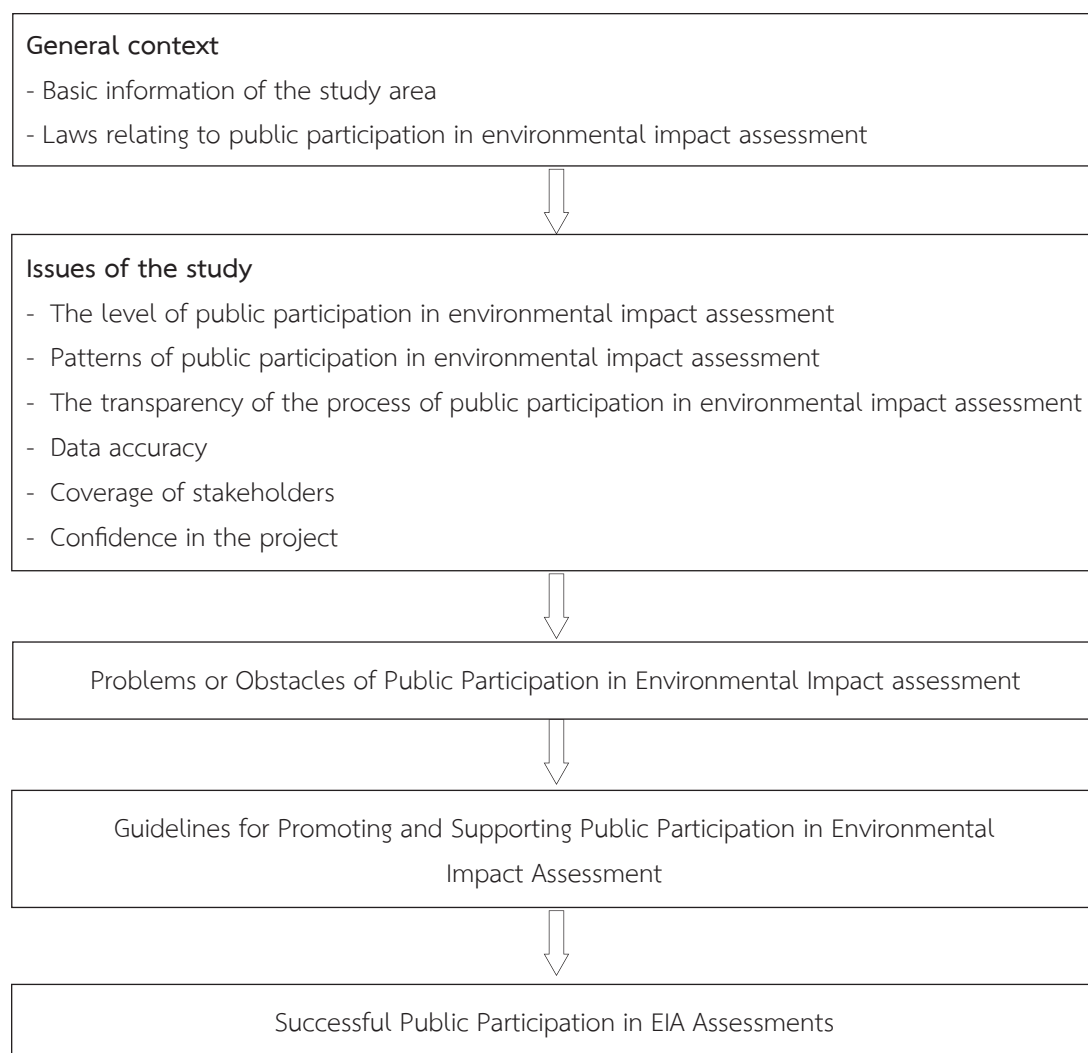


Figure 2: Research Concept Frameworks

This study has the objective of research 1) to study the process of public participation in environmental impact assessment of Rayong Industrial Estate Project (Ban Khai) 2) to study the problems or obstacles of public participation in the evaluation of the Environmental Impact of Rayong Industrial Estate (Ban Khai) and 3) to propose guidelines for promoting and supporting the participation of the public in the Environmental Impact Assessment of Rayong Industrial Estate Project (Ban Khai).

Research Methodology

1. Data collection method

The public participation research in environmental impact assessment in the case of Rayong Industrial Estate (Ban Khai), Rayong Province is a qualitative research by semi-structured interviews with stakeholders of Rayong Industrial Estate Project (Ban Khai) in conjunction with non-participant observation and document research. Afterwards, the data was compiled and analyzed, using the triangulation technique to find information from multiple sources. It is also a study that seeks truth in the natural conditions. The research tools used in this data collection are semi-structured interview forms, which is characterized by open-ended questions.

2. Target groups and key informants

The researcher determined the target groups and key informants, consisting of 5 groups, including 30 key informants, including 1) People and community leaders in Nong Bua Subdistrict and Bangbut Subdistrict Ban Khai District, Rayong Province 2) Central and local government officials involved 3) Consulting companies 4) Environmental academics and 5) Environmental NGOs. The researcher began to interview the community leaders who had initially known and then inquired the next person using the Snowball Technique, while the central and local government officials, including consulting companies, environmental scholar and environmental NGOs are chosen by using purposive selection method of selection.

Result

The results of the study public participation in environmental impact assessment in the case of Rayong Industrial Estate (Ban Khai) project can be summarized as follows:

1. The level of public participation in environmental impact assessment from the study found that the project has provided project information to the public, which is in the level 1 of public participation. This refers to the provision of project information to the public by community leaders in Bangbut Subdistrict. The second person gave an interview and stated that “The project operator gave out all the documents. There are also forums to provide project information to the public because they had to complete

the EIA process. Therefore, they provide high level of information because they had to do this through the hearing process.” The first person from Nong Bua district also claimed that “First, there was someone who came to talk first about the process of this project. But the information was not sufficient, and it wasn’t delivered directly to the villagers. That person talked to the leader first, not the villagers. However, there was more distribution of information later on.”

2. The method of public participation from the study, it was found that the method of public participation in the environmental impact assessment that the project operators and consulting firms chose is still not correctly in accordance to the principles and is not consistent with the community conditions and the characteristics of people in the area. The 4th person from Bangbut Subdistrict gave an interview and stated that “I think the participation of the project is not appropriate. They should give more importance to the villagers. They came to explore the village but didn’t ask us everything. Also, when they held a forum to listen to comments, not everyone knew about the forum. There was only a few people and the forum was very short and they did not allow the villagers to participate by asking questions or inquiries” and the 1st environmental NGOs member claimed that “Project operators should choose to use community participation methods appropriately, which may require many methods. In order to choose a method that is suitable for the area and community conditions, I think that various development projects should be used in many ways to cover stakeholders. I believe this will enable the public to open up more to the project.”

3. Transparency: From the study, it was found that the project operators still lacked transparency in the various operations by the staff of Nong Bua Subdistrict Administrative Organization. “The process of studying the effects contains some uncanny loopholes. For example, when preparing a small meeting, they will take the documents to the villagers to sign with no other supporting documents. There is no telling to what the document is about or for. they did it only to complete the legal process. However, they did not explain to the villagers to understand how this study will be done.” A community leader in Bangbut Sub-District gave an interview that “Formerly, the area was a green area. The law defined it as a green area, which is an area for agriculture. Therefore, it is prohibited to build a factory. I don’t really know how they managed to occupy the area. Many villagers are not satisfied at this point.”

4. The accuracy of the data from the study found that people in the area received insufficient information. In addition, some people are unable to access the project information and the information is still unclear. People in the area are still confused about the information provided by the project on whether they will operate or not and the kind of project that will be implemented. The 4th person from Nong Bua Subdistrict stated in an interview that “I don’t know how much the project information is complete and accurate because they provided very little project information to villagers. Therefore, the villagers can’t judge anything. Some villagers only know that they will build a factory, but they don’t know the types of factory and the impact that the public will face in the future. The thing is that we know very little of the project information and there is no clear information.” The third Bangbut Sub-district member gave an interview that “Is the information correct? I don’t know. Because I rarely get information, therefore I have no idea if they are going to really create the project or not. The communication is not clear at all. They have held public hearings to clarify project information, but it wasn’t official. We didn’t know what they were planning to do or how they were going to do it. There were no clear details. Even the officials who come to clarify the project information weren’t clear at all.”

5. Coverage of Stakeholders: From the study, it was found that the scope of the study area is mainly focused on people in the study area, 5 kilometers radius around the project area, which may not yet cover the area and people that may be affected by all relevant projects. Additional context and factors should be considered by the people of Nong Bua Sub-District. “I don’t know who the stakeholders of the project are. But I think that the project haven’t covered all of the stakeholders yet because the villagers in the area are not well aware. Most of the project information will be directly informed to village leaders or leaders. Some villagers do not have the basic information on the project at all, while other has a moderate amount of knowledge and background information that varies.” This is true in the case of the 2nd member from Bangbut Subdistrict, who stated that “I didn’t receive information from the project. There were no meetings, only distant news that the project operator were coming. But there were no discussion or information provided. They will come only in this zone. I am a little too far away. They probably thought that my area was not affected or not in the radius, therefore they gave less importance to this path.” And the second environmental scholar also gave

an interview that “I think that the procedure of defining the stakeholders of the Office of Natural Resources and Environmental Policy and Planning or the Ministry of Industry has a certain level of coverage. But the project must look at the condition or context of the area, as well as whether or not it is appropriate to add stakeholders to suit the area. This is because each area is different; the project should be adapted to suit each specific area.”

6. Confidence in the project: The study found that people in the area do not believe in the project, due to seeing the past impact that occurred in other areas that the project operator is responsible for. The 2nd community leader from Nong Bua Subdistrict gave an interview that “We think that the project is not reliable because we have seen in the past that the industry, in which they operate, is a petrochemical industry. This means that it will make an impact on other areas. If this project is implemented, it’ll have many effects on the villagers who will definitely be affected.” And the second officer of the Bangbut Subdistrict Administrative Organization gave an interview that “In the past, the factory had caused many impacts in Rayong city. How would they make people trust them when the public already lack trust in the project because the effects of the environmental impact is a significant factor. If the factory is implemented, the villager would surely be affected through their health and agriculture product, not to mention the long term effect on future generations.”

For problems or obstacles of public participation in environmental impact assessment, it was found that most people in the area still lack knowledge and understanding about the process of public participation in environmental impact assessment and there are also concerns that the project will affect the livelihoods and the agriculture sector. This is because the public have already seen the impact that occurred in other areas that the project operator is responsible for, which caused the public to oppose the implementation of the project. In addition, it was found that project operators and consulting firms provide vague information that does not thoroughly cover stakeholders. People get confused by project information which leads to the public not placing their trust in the project.

The guidelines for promoting and supporting the participation of people in the EIA can be divided into 3 parts by

The government should enact laws regarding the environmental impact assessment in Thailand and give priority to creating a clear scope and criteria, In order for law enforcement to be effective. In addition, the EIA laws should be improved to be consistent with the current situation. The last suggestion is that the relevant departments should undergo training to create knowledge and understanding for people in the area, In order for them to be able to understand the public participation process in assessing the environmental impact correctly.

For the entrepreneur / private sector, project operators and consulting companies must be aware of the importance of the process of public participation in environmental impact assessment by providing information to interested parties, as well as listening to opinions from stakeholders fairly. Also, they should conduct an environmental impact assessment with transparency, which means that the assessment must provide accurate data to stakeholders and can be verified. There must be an implementation of a plan or preparation of project information ready before the information is published to the public for acknowledgment. This is to ensure that the public will not be confused by the information received. This should ultimately encourage the public to participate at a higher level, so that people can play a greater role in participation. Furthermore, they should choose a suitable method of participation for the area and community conditions, which will help reduce conflict problems and can increase the credibility of the project.

For the public sector, people in the area should have more knowledge about the applicable laws and the environmental impact assessment process, in order to be able to obtain basic understanding. Also, they should prioritize the process of listening to project information, keep an open mind to accept information and cooperate in the environmental impact assessment process to benefit the community and the project. However, the public participation pattern in the EIA can be summarized as follows in Figure 3:

General context

- Preliminary information of the study area: consider the condition of the area, community condition, occupation and community culture
- Laws relating to public participation in environmental impact assessment: There should be improvement of relevant laws, method of guidelines for preparation and consideration of reports for standards



Educational issues

- The level of public participation: allow people to participate at a higher level to enable the public to play a greater role in participation
- Public participation method: choose the method of participation to suit the area and community
- Transparency: should be sincere, transparent, able to be verified in the implementation of various projects
- Accuracy of information: provide accurate and clear project information to the public
- Stakeholders' coverage: setting the boundary of the study area around the project area, this may not yet cover areas and people who may be affected by the whole project. However, additional context and factors should be considered
- Confidence towards the project: The project must be approached by the public sincerely with complete and clear project information and listen to public opinion fairly.



Guidelines for promoting and supporting public participation in environmental impact assessment government

1. Laws on Environmental Impact Assessment in Thailand should give priority to clear boundaries and criteria to make law enforcement effective
2. The law on EIA should be improved to match the current situation
3. Relevant agencies should have training to create knowledge and understanding for people in the area to be able to understand the public participation process in assessing the environmental impact correctly

Entrepreneur / private sector

1. Be aware of the importance of public participation in environmental impact assessment by providing information to interested parties, as well as listening to opinions from stakeholders fairly
2. The environmental impact assessment should be conducted with transparency which means that they can be checked and provide accurate and clear information to stakeholders
3. There should be a plan or preparation of project information ready before the data is published to avoid confusion of information
4. They should allow people to participate at higher levels to allow the public to play a greater role in participation and should choose a method of participation to suit the area and community conditions, which will help reduce conflict problems and can create credibility of the project

Public sector

1. Learn more about the environmental impact assessment law, in order to use as a basic understanding
2. Focus on listening to project information, keep an open mind to accept information and cooperate in the environmental impact assessment process to benefit the community and the project

Figure 3: The Model of Public Participation in the Successful EIA

Summary and Discussion of Results

In the issue of public participation in environmental impact assessment, it was found that the public participation method of the project is still not in accordance with the principles, procedures, and does not correspond to the community conditions and the characteristics of people in the area. This results in the public joining the opposition of the project, which is in accordance with the study of Chutarat Chompunth (2017), who found that the project owner should choose the appropriate participation method by considering the factors of community conditions and the characteristics of people in the area. This is also In accordance with the results of the study of the group, Thomas C. Meredith (1992), in which it was found that the guidelines for public participation should be disseminated thoroughly, there should also implement meetings to clarify and listen to comments on the environmental impact assessment thoroughly and frequently. Also, there should be use of publicity through publicizing thoroughly by using a variety of media, which is in accordance with the results of Pichet Soponpats and Chutarat Chompunth (2012) who found that the use of public participation in environmental impact assessment from the first step of the study of project will help prevent and reduce conflicts, which will lead to sustainable coexistence between the project and the people. Therefore, it can be concluded that public participation in environmental impact assessment methods should choose a method that is suitable for the community conditions and the characteristics of people in the area, which will create alternative or useful information for the development of the project.

In the issue of transparency of participation, it was found that project operators still lack transparency in the various operations of the project, resulting in people lacking confidence in the project. This is in accordance with the results of the study of Marasri Bouchum. (2011) who found that transparency in the work must be based on honesty, creation of mutual trust among all relevant personnel. Also, there must be publication of straightforward information in a language that is easy to understand, clear and can be verified for the personnel and stakeholders to be informed. Therefore, it can be concluded that project operators must conduct public participation in the EIA in a transparent, straightforward and informative manner, which will help increase the trust and faith in the project placed by the public and stakeholders.

The issue of accuracy of information found that people in the area received inadequate and incomplete project information. Moreover, some people are unable to access the project information, including information from the project. This results in confusion among the public about the project's information, which is in accordance with the results of Manida Fuangchoonuch and Chutarat Chompunth (2017) who found that people have obstacles in obtaining information that may not be enough for the decision-making process. This is because the information presented to the public is one-sided and is not clear enough that cause people to be confused. Therefore, it can be concluded that project operators must provide project information that is accurate, complete, clear, and disseminates information by choosing the appropriate method for stakeholders. This will allow stakeholders to understand the project information and helps to reduce prejudice towards past development projects.

For the coverage issues stakeholders, it was found that most people in the area know the information of the project, but the information is unclear and people who live far away from the project did not receive adequate information. This shows that the provision of information did not cover all stakeholders. This evidence is in accordance with the study of Chutarat Chompunth (2013), it was found that the identification of stakeholders must be done with prudence. This is to prevent the process of public participation, particularly consultation or public hearings from which mostly becoming only a voice from the interest group rather than representing the needs of the people. Therefore, it can be concluded that project operators must conduct public participation in environmental impact assessment to cover stakeholders. for the understanding of all parties, successful results for the project. Also, this can help reduce problems that may arise from the issue of inadequate provision of information that does not cover stakeholders. For the public's confidence issues, it was found that people in the area do not believe in the project due to past impact that occurred in other areas that the project operator is responsible for. This includes provision of unclear project information which does not cover all stakeholders. As a result, people are not convinced that entrepreneurs will establish an eco-friendly industrial project, this is therefore in accordance with the study of Satien Rujiravanich (2010), it was found that the public's confidence in the implementation of the project will occur when the project operator builds confidence about ways in solving problems with the public, including the ability in the mass relations which will reflect

the success of the project. The aforementioned method will result in the public having confidence in the project. In conclusion, the project operators must conduct suitable level of public participation in environmental impact assessment for community conditions, provide complete and accurate information, listen to public opinion, and allow the public to participate in the environmental impact assessment. This will help to increase the public's confidence to believe in the project more and also help reduce conflicts.

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