

PUBLIC PARTICIPATION PRACTICE WITHIN THE ENVIRONMENTAL AND HEALTH IMPACT ASSESSMENT SYSTEM IN THAILAND

Chutarat Chompunth*

National Institute of Development Administration, THAILAND

*Corresponding Author, Received: 14 Sept. 2019, Revised: 20 Dec. 2019, Accepted: 02 March 2020.

ABSTRACT: The integration of public participation in Environmental and Health Impact Assessment (EHIA) is very significant in terms of its implication for sound decision-making and the sustainability of development activities. In this regard, the Thai EHIA system provides public participation in an implementation of mega development projects. This participation is carried out through a number of techniques, particularly a holding of public hearings. In public hearings within the Thai EHIA context, shareholders are brought together in a meeting to express their concerns and propose recommendations on a planned project in order to direct the decision-making process. Repeatedly, public hearing practice leads to violent conflict among stakeholders. This study is intended to state the significance of public participation in the Thai EHIA system and to evaluate the current practice of public hearing as participation practice in development of a coal-fired power station. The Krabi coal-fired power plant project was examined as the case study. The study discovered that the requests for public hearing as public participation practice in the EHIA system have been stimulated curiously by Thai laws and regulations. Thus, Thai citizens request meaningful participation in the decision-making processes concerning controversial issues. The suggestions for the development of a successful participatory process of project development must include the consideration by the government in having transparency in operations and listening to public opinion since the beginning of the process, in order to be informed of the real needs of people in affected area, and enhancing the capacity of the community academically.

Keywords: Public participation, Environmental and health impact assessment, Conflict, Public hearing

1. INTRODUCTION

The Thailand was one of the very first countries in Southeast Asia that implemented EIA [1]. The first institutionalization of the EIA process in Thailand began with the proclamation of the Enhancement and Conservation of National Environmental Quality Act B.E. 1975 (The ENQA 1975). Section 17 of this act authorized the ministers, with the approval of the NEB, to specify notification for the type and size of projects or activities requiring EIA. In July 1981, the first notification specifying types and sizes of projects and activities requiring an EIA was announced. This notification applied to either public or private projects. In the early stages of implementation, the contribution from political and economic institutions to the promotion of environmental impact assessment was low, and environmental institutions usually had less power than economic agencies. The ONEB was perceived as not having sufficient authority. The EIA process was also criticized as being a closed process; it was primarily conducted by the project proponent, and was not available for the public unless the project proponent was willing to involve them [1], [2].

Until present, a mass of environmental

problems and conflicts has occurred throughout Thailand. These controversies have dramatically increased public awareness of the deteriorating state of the environment and also the lack of an approach to deal with the country's natural resources. Thus, the government formulated a new Enhancement and Conservation of National Environmental Quality Act B.E. 1992 [3].

Currently, in Thailand there are both the EIA and EHIA system, which concerns health impact, processes are compulsory system of procedural control mechanisms under the NEQA 1992 and the 2017 Thai Constitution. The EHIA is a systematic process which aims to predict, determine, and evaluate the significant environmental and health impacts of development projects in advance. It is also regarded as a useful analytical mechanism by providing this useful information to the decision maker to manage the decision process more systematically, timely and effectively [4]. Regarding the 2017 Constitution, the EHIA procedures are described in sections 58 paragraph 1 that the projects or activities that might cause significant impacts to the environment must have an assessment of environmental impacts before the projects or activities are implemented. The projects or activities that are obligated by law to obtain

permission prior to construction or operation are required to prepare an EHIA report and submit it to the permitting authority [2], [3].

In practice, the Thai EIA/EHIA process is largely controlled by the government. An expert review committee has been established for the EIA/EHIA system. The expert review committee comprises of expert members who are qualified and specialized in various fields of related disciplines and the legal authority competent to grant permission for the project including: the secretariat of the OEPP as a chair, the head of the licensing agency, the head of involved governmental agencies, a maximum of seven environmental experts who are appointed by the ONEB, and an OEPP officer as a secretary [4].

Between the years 2007-2018, more than 100 EHIA were conducted in Thailand and all of these were the subject of public hearing as public participation technique. This paper attempts to explore where many development projects were subjected to public participation, what are the objectives and purposes, form and outcomes of public participation. In practically, the problems concerning to the public participation practice are investigate in order to find out alternative approach to improve the practice.

2. PUBLIC PARTICIPATION PRACTICE IN THE EHIA SYSTEM IN THAILAND

It is generally accepted that public participation plays an important role in the development process of the country. That is to say, participation is a social process that allows those involved 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 matter related to solving the problems of their community or locality. This is to achieve the real demands of the people and in accordance with government policies, in order to prevent, correct and manage the issue correctly and efficiently.

"Public participation" can be interpreted in many ways and can be changed according to the social, political and environmental context. The modern scholars and the public pays more attention to public participation, both in the context of governmental politics and environmental management [5]. However, most people in Thai society still confused the meaning of the word "public participation" with other similar words, especially the word "Community

Relations" or "Public Relation" which emphasize the presentation of the positive sides without presenting the disadvantages through only one-way communication. This is primarily to guide or convince the public to agree and conform to the policy or various development projects [6].

In practice, most public hearings as public participation process last for a period of about three to five hours and are well attended. In a particular case, as many as 100-500 people attended the meeting. These included community’s leaders, community representatives, government officials, the project proponents and the project opponents.

3. RESEARCH METHODOLOGY

Qualitative research was conducted utilizing a case study strategy of inquiry. A case study methodology is chosen as a key strategy to explain and conduct an in-depth study of a public hearing practice.

The data collection methods included in-depth interviews, non-participant observation, and documental review. A total of 34 semi-structured interviews were conducted with 17 community members, including community leaders and members, who participated in public participation of the case study and 17 government officials, NGOs and EHIA practitioners who were key players in the public participation processes, as showed in Table 1. Community participants were sought out using a snowball sampling approach starting with community leaders identified in EHIA reports and meetings with practitioners. The interviews took place in the participants' hometown and workplace.

All interviews and field notes were transcribed and coded into thematic categories. The data collected is often represented by quotes in the text below. These have been selected to highlight the intent and voice of our participants.

Table 1 Key informants of the study

No.	Participants
1-4	Central Government officers
5-8	Local Government officers
9-10	EHIA Practitioners
11-14	Academic and NGOs Community members
15-16	Project Developers
17-25	Local Leaders
26-34	Local people

4. RESULTS AND DISCUSSION

4.1 Background information of the case study: the krabi coal-fired power plant

The power plant is introduced by the Electricity Generating Authority of Thailand (EGAT) before 2012. This 800-megawatt power plant is designed for Krabi's Nua Khlong district, while the Ban Klong Rua coal port would be constructed at Ban Klong Ruo. The Thailand Power Development Plan for 2015-2036 forecasts this coal-fired power plant would be finished in 2019.

This case is one of a large-scale project in the south of Thailand which having significant environmental problems, in particular air pollutions. The project is located in Krabi province. According to the 2007 Thai Constitution, power plant projects that have a production capacity exceeding 100 megawatts per day, must conduct an Environmental and Health Impact Assessment (EHIA) study and submit this EHIA report before getting an approval from the Authority. Thus, the Krabi power plant project was required by law to conduct an EHIA study.

In 2014 it was stated that villagers in the southern province of Krabi had come out in strong opposition to the planned project, saying it would cause pollution and damage eco-tourism industries of local people. After a well-publicized people strike against the power plant, the Thai government agreed in July 2015 to set up a joint committee to review the environmental and health assessment of the project and consider renewable energy alternatives. While the coalition opposing the plant also wanted to stop the project's construction. The government agreed that bidding would proceed and promised that no contracts would be signed during the project's review [7].

In February 2017 a lot of people protested in front of the Thai Government House against a decision by the military regime to proceed with the plant. In response, the regime agreed to a fresh environmental assessment of the plant with proper public consultation. It will take 18 months to two years to conduct a new EHIA.

Accordingly, the Krabi coal-fired power plant is suitable to be examined how public participation process in managing environmental conflict control did not succeed since the project is having high level of controversy among stakeholders.

4.2 Rationales for public participations in thailand

In Thailand's context, most of the public and government officials, especially the rules of the

state, commented that public participation is to listen to public opinion only through the public hearing platform. It can be seen from various development projects that have passed from the past to the present. Those responsible for the process of public participation chose the method "Public Hearing" in listening to public opinion and using it as a tool to show that the project has an opportunity for the community to participate in that development project. This is done without considering the depth of information / opinions from doing "Public hearing" for making decisions by decision makers, without any guarantee that such information will be taken into the appropriate consideration process or will truly affect the decision of the decision makers. In the public hearing, the operator often only provides positive information. In addition, it is clear that the public hearings, as public participation technique, in Thai society often lead to confrontation between supporters and protestors which often ends in violence, abolishment of the public hearing and the incapability to resolve conflicts in society, such as the public hearing of Hin Krut Power Plant Bo Nok Power Plant Thai-Malaysia gas pipeline project and the case of the public hearing of the Krabi Power Plant Project, on 12 October 2014, where there was a confrontation between supporters groups and those who opposed the project with different opinions on the project. On the aforementioned case, there was no one acting as an intermediary to coordinate the understanding of both sides, causing the forum to be confronted.

The level of public participation can be divided into many ways and levels, depending on the purpose and resolution of the division. The main factor depends on whether the state or the authority decides to allow people to participate in decisions related to that policy, activity or development project. From relevant research; public participation can be ranked from the lowest level to the highest level out of 5 levels (adopted from [8], [9]), as shown in Figure 1.

1. Informing is the lowest participation level. The state or project owner must provide information related to the public when activities or various development projects have been initiated, with the right to access information only without any means of expressing opinions or relating to that decision. However, it can be said that the level of access to public information and those stakeholders is the beginning of the opportunity for people to participate. There are many ways to provide information, such as publishing through newspapers, distributing leaflets and creating exhibition.

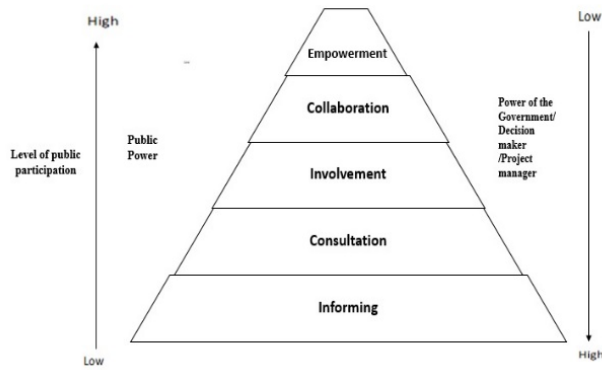


Fig. 1 The level of public participation

2. Consultation is the level that increases the opportunity of a dialogue among the policy makers, project owners, groups of affected people and the public, which aims to bring information and the results of the study to discuss with the public on the issue of alternative solutions related to that policy / project by allowing people to express their opinions. But there is no guarantee that those ideas will be brought into the appropriate consideration process and how it will affect the decision.

3. Involvement is a level that allows two-way communication, wider scope, and public hearing about the project. This provides the opportunity for joint planning in the preparation or implementation of the project, especially the opinions that lead to the reduction of the effects that may be caused by the implementation of the project or the reduction of conflicts. This method is suitable for considering complicated issues that may lead to many arguments, however, the decision makers still have the final decision-making power. Participation methods in the level of involvement includes participatory planning meetings, advisory group *etc.*

4. Collaboration is a level that decision makers, policy/project operator and the public together create or implement policies or projects that are in compliance with the policy or undertaking projects together to achieve the common objectives and goals.

5. Empowerment is the level that the public have the right to exchange with decision makers and can participate in the examination and monitoring of the results of activities or projects that may or may not achieve the objectives and the goals set. Public participation at this level will be beneficial to the implementation of policies and development projects, especially the conservation of natural resources and the environment. This is due to the fact that the public will act as surveillance; maintain the role of monitoring and warning, especially on activities or projects that affect the quality of public health, society and environment. The form of monitoring and the

evaluation may be in the form of the establishment of a central committee consisting of stakeholders from all sectors.

It can be observed that the role of the public will increase as the level of participation increases. In addition, for the public to be able to participate at a higher level, they must have proper participation at the lower level first. This is because if the public does not receive all the relevant information, the public will not be able to comprehend, analyze data for commenting on the issue, consult, make decisions, track and check as well as following with policies or carry out the project effectively [6], [8], [9].

It can be said that most participation process in Thailand is at this level, by which Thailand has implemented public participation in projects that affect public health and the quality of the environment. At this level, through various relevant laws, namely the Office of the Prime Minister's Regulation on Public Opinion, BE 2548 and the Ministry of Natural Resources and Environment's Notification on the topic of determining the type and size of the project or business which leads to the report preparation of Environmental Impact Analysis and Criteria, Procedures, and Guidelines for Preparation of Analysis Results Report Environment 2553.

Moreover, a study of relevant research resulted in the formulation of a set of the purpose for engaging the public in the EHIA practices, which can be illustrated in Table 2.

Table 2 Defining purposes for public participation in the EHIA practice

Broad purpose	Specific purposes / activities
Provide public inputs and concerns into decision-making process	<ol style="list-style-type: none"> 1. Deliver information to public 2. Enhance transparency and accountability in decision-making process 3. Data contestability 4. Social capacity developing
Share decision- making with all stakeholders	<ol style="list-style-type: none"> 1. Reveal democratic philosophies 2. Democracy in practice 3. Pluralist depiction
Resolve conflict and achieve consensus	<ol style="list-style-type: none"> 1. Involve marginalized collections 2. Consensus on decision making 3. Establish marginalization 4. Problem solving

In practice, the Thai laws and regulations have composed for the holding of public participation on 35 types of development projects for EIA and on 12 types of mage-development projects, EHIA. This can be attributed to the need to relocate or resettle affected communities as well as the strong

public concerns expressed about the overall impacts of these projects.

5. RESEARCH FINDINGS

The 2007 Constitution and The 2017 Constitution evolved public participation to be active contribution in environmental management. Both Constitutions state that implementation of projects or activities that may have serious effect on the community in terms of environmental quality, natural resources and health will not be commenced until the people 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 authority in charge should address a public hearing process for the public and stakeholders. The stakeholders in this case include independent organizations, representatives of private organizations, experts from the environment and health departments. In addition to these, representatives of higher education institutions that manage environment and the natural resources should also be present in the public hearing. The government should give importance to people's participation as the opinions of the stakeholders and the representatives will help in reducing the negative impact of a project on the public.

In the context of Thailand from the past to the present, activities or projects for national development, especially the government sector provides the opportunity for people to participate in activities or project at a low level or almost no participation at all. Most of them are in the manner in which the state is the initiator that gets to decide to initiate an activity or a development project and then notify the public later. Therefore, the participation in this form is a top-down approach [2], [10]. It is a participation that is not really caused by the true needs of the people. The important issue that should be considered in the implementation of public participation is "Who is the final decision maker" in implementing policies or development projects?

One key weakness in Thai society is that the state or the authority maintains the role in approving any activity or development project which will provide opportunities for people and the public to participate in the decision-making process and how satisfied are the people with the opportunity to participate?. Although, there are many laws in Thailand that show the intent and importance of public participation, but there is no law that gives the power or role of the people to the level of real participation in the decision. At present, various relevant laws, in particular, the 2017 Constitution, stated that any activities or

projects that affect people's health and safety or severe environmental quality must go through the procedure of an environmental and health impact assessment and they must prepare preventive measures, solve problems and impacts that are expected to occur from the implementation of such activities or projects, including mitigation and monitoring measures. However, the aforementioned act does not allow the public to make the decision on various actions and the opinions of the people do not have the adequate influence on the decisions of the decision makers. It can be seen that the level of public participation is quite low. The staff involved in the participation process should clearly explain to the public on the goal of participation, in order to prevent exaggerated expectations, including preventing conflicts that may occur between stakeholders from such policies or development projects.

The government agencies have to comply with the law and follow the social policy-oriented stream of public participation in operations. This leads to the present time where the government sector is more concerned about the public sector by opening a forum to listen and provide participatory opportunity for the public to participate in the discussion. However, it still does not allow civil society to have access to the level of cooperation or decision making, with appropriate laws or regulations.

At the high level of public participation, people are initiating, thinking, deciding on activities or any development project, in some cases, may cause problems as well. This is true in the case of urgent decisions that must be decided immediately because the participation process requires a period of time to proceed. However, when the responsible officer is unable to create a participatory process, it is necessary to create a public understanding of the reason to prevent conflicts among stakeholders. This goes the same way in the event that any activity or project needs to be supported or assist by the government, which in practice may not be successful due to no approval from the decision makers [10]. It is accepted that management will be most effective when receiving serious cooperation from both parties by integrating management. The government must provide all the necessary information to the public, including the opportunity for the public to participate to express opinions, participate in such activities or projects and make decisions on activities or projects based on comprehensive information. This is especially crucial in terms of information or the demands of stakeholders. As for the public sector, they must open their hearts to receive comments and consider various information carefully, including offering alternative solutions and analyzing that chosen alternative thoroughly.

The interesting issues and studies are the evaluation of the success of the public participation process. The crucial aspect for the evaluation is for the definition of “effective participation” to be clearly defined, including the clarity of criteria used in the evaluation on the success of the participation process. This is to know whether the process of public participation is successful or not, and which elements should be improved to make the process more effective.

It can be said that it is difficult to clearly define the word "Effective public participation", as the needs of stakeholders from any policies and development projects are different and making all parties accept the same outcome is difficult. From the study of relevant academic documents, the definition of effective participation may be defined through elements that are generally accepted as meaningful elements of public participation as showed in Table 3, adopted from [5], [11], [12].

Table 3 Contributing factors to effective public participation

Factors	Definition
Early involvement	The participatory process must occur before the decision by the decision maker is made.
Clear objectives and goals	The objectives and goals of the participatory processes must be clearly defined.
Inclusiveness	Participation of people must consist of all stakeholders from every sector that are affected from the decision, in an appropriate manner.
Multiple and suitable techniques	The participation process should consist of a variety of participatory techniques that are suitable for each different target group.
Transparency	The process of public participation must be transparent, investigable and the communication used in the participation process must be a two-way process.
Influence	Suggestions and summaries obtained from the public participation process must be clear and open to the public. It must be able to track and verify itself on the question of “How do those suggestions affect the final decision?” And if those suggestions do not influence the final decision, appropriate explanations from decision makers must be provided.
Suitable level of participation	The decision-making process must consist of the process of real and appropriate level of public participation in every step.

From the case study, it can be said that meaningful participation or the effective participation of people refers to the public participating with enthusiasm. The participation process is an ongoing process that can sometimes provide information at a certain period of time, while other duration consists of discussions and understandings or period of decision makings. This may be implemented by using different tool and participating stakeholders. All of this requires the planning and design of the participation process before the actual process begins.

Furthermore, stakeholders should have a bargaining power in the decision-making process in that activity or project, including participation in social targeting and resource management to achieve the objectives, through voluntary participation. Once the staff involved in the process of participation finally understands the real meaning of participation, they can then finally create criteria assessment based on such relevant factors as the basis and evaluate the success of participation to develop and improve the process to be more efficient.

6. REASON LEARNT FROM THE CASE STUDY

It is important to the government that the findings of public participation have had considerable influence on the EHIA study. In some cases, certain aspects of the project proposal had to be altered, additional mitigation proposals and commitments were made and final decision on projects delayed until substantive issues were addressed. For instance, in this case study, the public participation showed that an important group was not represented on the community and therefore were creating problems for the power plant in its concerns.

Another important factor is the efficiency of the participation process. In the process of extensively analyzing stakeholder groups from any policy or development program. This is because the process of public participation is often a problem and is unsuccessful because participation does not extensively cover stakeholders from policies or projects in all sectors.

It can be said that for any decision in the policy or development project to be effective and successful, it must include information, opinions and demands of the public and stakeholders from activities and the extensive impact of that decision in all sectors. Consequently, the information obtained from the stakeholders will confirm that the objective and activity is appropriate and receive the results that truly meet the demands of that community [13], especially the environmental decision-making process, which is located in a specific time context and places that are strongly associated with local people. The process of stakeholder’s identification must be done with care and caution, in order to prevent the process of public participation. This crucial in the consultation meeting, as the majority voice would come from the interest group rather than representing the needs of the impacted people. There are doubts on many of the events in Thailand on how the public participation is considered a set up scene by entrepreneurs or government agencies, in order to create legitimacy that there are people who justly support the policy

or project. Therefore, it is necessary that the process is to be conducted by a person or organization that is recognized as neutral and transparent.

As clearly presented in this case study, when the public participation was set up too late, it could not resolve conflict among stakeholders, and the situation became more controversial. This statement was supported by one key informant from this study that:

“In the Thai’s experience, we hardly found a successful public participation. Indeed, Thai citizen ordinarily preferred to avoid controversy. However, in this case when people’s voices were not heard, they started to oppose the project. Public hearings could easily lead to confrontation among stakeholders. Importantly, the lay people were more likely not to listen to others’ concerns. Confrontation might work in a strong democratic country but not in Thailand. We were different. In my opinion, the public hearing might not suitable with the Thai context”.

Moreover, in some cases, the process of public participation needs to be relevant to specific scientific knowledge which requires specialists, especially in research studies and explain for the general public to comprehend. Therefore, academics/specialist experts play an important role and should participate in the participation process. This is due to the fact that specific information or scientific data creates a balance in targeting the goal and resource allocation, which leads to the creation of consensus to resolve conflicts between stakeholders from various policies or development projects [14], [15].

7. CONCLUSION

Evidently, in the Thai EHIA’s system, public participation processes are mandated by law. The aim of incorporating public participation is to have a comprehensive list of opinions before implementing any project to help reduce the potential social conflicts caused by neglecting the opinions of the public and the stakeholders. This is especially the case if public participation are held late in the planning process, and there were no, or few, previous attempts to engage the public.

The significant issue that should be considered, and is important in the Thai society, is an element or factor that may result in unsuccessful public participation. In the context of Thailand, these factors may include lack of promotion from the government, lack of transparency in management of participation and non-extensive covering of stakeholders or those involved resulting in the results of participation not being accepted. Furthermore, there are still ongoing conflicts that occur in the society due to various decisions that are not resolved. These factors can be said to be

institutional constraints. In addition, the author added to the stakeholders’ analysis that key stakeholders, especially the executive level (Chief Executive or Top Man), either in government or private organizations, often do not care or pay attention to the participation of people. This includes not being aware of the budget, including the time required to invest in organizing the process, participating in various projects, which, if there is no real participation, may cause problems later. This is due to the fact that such organizations may have to spend a lot of time and budget, rather than supporting real participation from the beginning of the process.

Public participation is also active in managing conflict because effective participation generates an environment where all stakeholders are equivalent and have equal chances to participate, share their views and concerns, make rational arguments, develop an understanding of the alternatives of all stakeholders, and create a sound environment. Thus, in Thailand, public participation should be constantly moved from “Involvement” to “Empowerment” as shown on the Model (Figure 2). At the higher level of public participation, the purposed of participation relies greatly on pinpointing shared values. This ensures that all stakeholders have chances to contribute to the dialogue, keenly listen to other stakeholders, and come to desirable promises together.

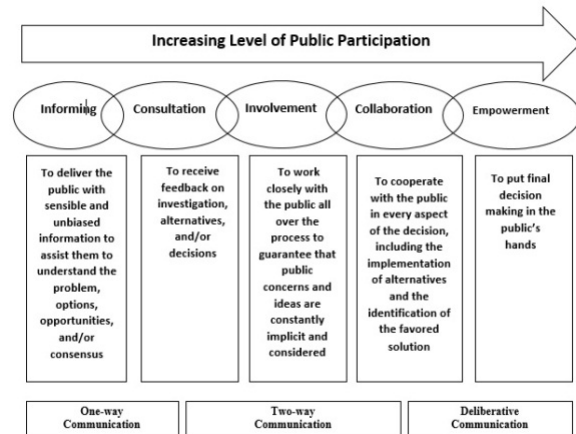


Fig. 2 Public participation continuum model

In Thailand, government administrations are often accustomed to central planning or receiving missions from top to bottom only. In addition, most of the government administration work involves budget allocation, authorization, regulation, etc., which are usually centralized authority decisions by claiming performance issues. However, the process of public participation has the opposite concept. It is a process that requires decentralization, distribution of responsibility and empowerment of decision-making for people. Therefore, the usual process of the government

making a decision before starting the public participation process. This results in making the participation process of people in Thailand quite limited and cannot be developed properly.

This institutional solution requires a lot of dedication and effort by government officials in changing the way they think, their attitudes, management approaches and decision-making processes that are familiar with the process of only receiving orders which is considered a public administration initiative. This is done by inserting the process of public participation into the government's work plan to strengthen the community and encourage the participation of people at a higher level.

The key lesson is that public participation in EIA practice is essential and may lead to substantial benefits for both the project's proponent and affected community. Indeed, the participatory process of the public helps the authorities to make the decision-making process effective. It has been recognized by various stakeholders as a process that encourages cooperation and exchange of ideas among stakeholders to develop solutions to common problems. Initiating public participation since the step of planning and implementing the project is also considered to be a positive factor in developing good relationships among stakeholders of development projects. Where it is ignored it leads to conflicts and problems for every development project implementation, acceptability and sustainability.

8. REFERENCES

- [1] Chesoh S., Environmental Impact Assessment of Power Development Project: Lessons from Thailand Experiences, *Asian Social Science*, 7(9), 2011, pp. 119-123.
- [2] Chompunth C., Public Participation in Environmental Management in Constitutional and Legal Frameworks, *American Journal of Applied Science*, 10 (1), 2013, pp. 73-80.
- [3] Ogunlana S. O., Yotsinsak T. and Yisa S., An Assessment of People's Satisfaction with the Public Hearing on the Yadana Natural Gas Pipeline Project, *Environmental Monitoring and Assessment*, 72(2), 2001, pp. 207-225.
- [4] Manowong E. and Ogunlana S.O., "Public Hearings in Thailand's Infrastructure Projects: Effective Participations?" *Engineering, Construction and Architectural Management* 13(4), 2006, pp. 343-363.
- [5] Creighton J.L., *The Public Participation Handbook: Making Better Decisions Through Citizen Involvement*, San Francisco, Jossey Bass, 2005.
- [6] Chaisomphob T., Sanguanmanasak J. and Swangjang K., Role of Public Participation in Planning Power Plant Project in Thailand, *Thammasat International* 9(1), 2004, pp. 67-73,
- [7] Mueanhawong K., "Krabi power plant public hearing went smoothly. Protesters boycott event." *The Tiger News*, 2018.
- [8] Arnstein S.R., "A Ladder of Citizen Participation." *Journal of the American Institute of Planners* 35(4), 1969, pp. 216-224.
- [9] Petts J., "Barriers to Deliberative Participation in EIA." *Journal of Environmental Assessment Policy and Management* 5(3), 2003, pp. 269-293.
- [10] Chompunth C., "Role of Public Participation in Environmental Impact Assessment in Thailand." *International Journal of GEOMATE*. Vol. 12(33), 2017, pp. 109-113.
- [11] Bond A., Palerm J. and Haigh P., "Public Participation in EIA of Nuclear Power Plant Decommissioning Projects: A Case Study Analysis." *Environmental Impact Assessment* 24(6), 2004, pp. 617-641.
- [12] O'Faircheallaigh C., "Public participation and environmental impact assessment: Purposes, implications, and lessons for public policy making." *Environmental Impact Assessment Review* 30 (1), 2010, pp. 19-27.
- [13] Gunes Y. and Coskun A.A., "Legal Structure of Public Participation in Environmental Issues in Turkey." *Journal of Environmental Assessment Policy and Management* 7(3), 2005, pp. 543-568.
- [14] Halvorsen K.E., "Assessing Public Participation Techniques for Comfort, Convenience, Satisfaction, and Deliberation." *Environmental Management* 28(2), 2001, pp. 179-186.
- [15] Almer H. L. and Koontz T.M., "Public Hearings for EIAs in Post-Communist Bulgaria: Do They Work?" *Environmental Impact Assessment Review* 24(5), 2004, pp. 473-493.