

## Procedural Participation in the Philippine Environmental Impact Assessment System and the Population's Attitude\*

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The study evaluates "Procedural Participation" in the Philippine Environmental Impact Assessment (EIA) system and how it affects the attitude of the people affected by the implementation of a controversial project. The "San Roque Multipurpose Project" is used as the case study for collecting data about the people's perception and to verify a hypothetical model. The results show that: (1) The unsuitable implementation of the Procedural Participation has a negative impact on the attitude of the population; (2) The unsuitable implementation of Procedural Participation has made the media more influential in shaping the attitude of the population and; (3) Public interest on the project is a crucial factor in altering the population's attitude to the project.

### Philippine EIA\*\*\*System and Due Process

Southeast Asian countries have high social infrastructure needs such as roads, bridges, and power plants to support their rapid economic growth. However, the scale of the projects has the tendency to enlarge for the purpose of showing off a statesman's political power. The projects sometimes infringe on the rights of the people around the project site causing conflicts. The environmental impact assessment (EIA) system was introduced so that serious environmental destruction and social problems will not arise whenever a project is enforced. The Marcos administration introduced the EIA system in 1978 and is continuously being implemented up to the present with some revisions.<sup>1</sup>

Nonetheless, the Philippine EIA system has problems, such as in the formalization of procedures and shortage of staff and budget of relevant

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\*\*\*The Philippine EIA system is also called "EIS" (Environmental Impact Statement). The acronym EIA will be used in this paper.

agencies. Hence, there is an indication that it is not fully functioning.<sup>2</sup> In addition, although the importance of procedural participation of NGOs or local residents is recognized, only few persons actually participate.<sup>3</sup> The participation of such people to the procedure becomes important especially when the project will entail a serious social impact. Local people are the ones who will first receive the negative impact of the project. The act becomes contrary to public interest when people's interests are disregarded just to advance the project, or when the impact of the project corresponds to certain infringement. It is thought that the defect in the participatory procedure and its unsuitable practice often have a grave impact on the causes of conflict. In many cases, the contents of project itself are the main concern. There is a low consideration for the procedure which will consider the arguments against a public project.

### The Concepts of Conflict and Due Process

Generally, the term "conflict" can be defined as the social processes where groups are opposed to one other, with two or more groups' holding up a certain target, respectively, and those targets being mutually incompatible.<sup>4</sup> Since it is thought that protracted conflict is not desirable for persons concerned, they will search for a certain form of solution. Although processing by using the power of a third person may be needed in resolving conflict, the persons involved must be convinced of the legitimacy of the power being used. One form is "due process" as a conflict-resolution rule. Due process is important in the decision-making process of a public project because it sets the object of EIA before the stage where the conflict arises. We can say that an unsuitable procedure itself causes conflict.

There are various views on the concept of due process. According to Taniguchi,<sup>5</sup> for the Anglo-American Law tradition, "security of suitable notice" and "hearing" are the due process's most important elements. There are three conditions in its formation: 1) procedural participation by persons interested, 2) security of realm and 3) corroboration as a result of participation. It is making the affected people participate in the procedure even in the most elementary request, and form an opinion advantageous to themselves, which are the important contents of the process. These forms of participation are of three types: 1) the persons interested participate directly in the procedure (direct participation); 2)

the opportunity of participation is being given (security of a participation); and 3) participation by a representative (indirect participation).

### Previous researches and the viewpoint of this research

The existing research on the Philippine EIA system is classified based on three categories mentioned—1) the participatory procedure itself, 2) the organizations or systems supporting participation, and 3) the review systems. About the research under the second and third classifications, Tolentino<sup>6</sup> mentions the problems of shortage of staff, budget and guidelines. The EIA has turned into formalism in indulging in a project. The same knowledge has also been made by researchers, such as Abracosa and Ortolano,<sup>7</sup> Lim,<sup>8</sup> and W. A. Ross.<sup>9</sup> About the research under the first classification, Cooper and Elliot<sup>10</sup> suppose that a problem lies in participation by representation and at the project level. Compared to previous researches, the newly studied value is comparatively substantial while scarce in the research under the second and the third classifications. Although this study is classified under the research on participatory procedure itself, it also focuses on the relation of participatory procedure to the cause of conflict and the processes not present in previous studies.

### Procedure of the analysis

In order to carry out the purpose of this study, two analyses were performed. As Analysis 1, the main participatory procedure of the EIA system was analyzed using Philippine government publications (a) to know whether the most important requirements of "procedural participation" under a due-process concept would be satisfied. Analysis 2 used the knowledge which were obtained in Analysis 1 and related data (b, c, d, e, f, g). The hypothetical model was built to show the relation of the attitude of affected peoples to the procedural participation. The validity of the model was verified by a "Covariance Structure Analysis" (CSA). The San-Roque Multipurpose Project (SRMP) which was implemented in recent years as a flagship project was taken as a case study. It focuses on the peoples in the upper river where the conflict arose. The SRMP was adopted in Analysis 2 because a conflict situation can be clearly observed and it is considered as a mega project in the Philippines.

### **Analysis 1: Due process in the Philippine EIA system**

In the Philippines, the enforcement, supervision and examination of EIA are the responsibilities of administrative authorities. The Environmental Management Bureau (EMB) which is a subsystem of the Department of Environmental and Natural Resources (DENR) performs the supervisory function. In 1977, Presidential Decree No.1151 was enacted as an environmental law. It was followed by four system revisions in 1981, 1986, 1992, and 1996, which continues up to the present. The greatest purpose of the present EIA is not only to perform an impact assessment but also to examine the social acceptability of a project. It is expected to ensure social acceptability, broad public participation, and transparency. Since the focus of the present system is on social acceptability, each participatory procedure is positioned as an execution means. For this reason, participatory procedure is prepared in the system at large (Table 1). Moreover, each procedure is evaluated according to the forms of procedural participation which are conditions of due-process (Table 2).

In general, although it can be said that each procedure satisfies the requirements of procedural participation, there is a point which one should be aware of. Since it is only the representatives who participate in scoping, the problem of power oppression may arise in an area where boss rule is rampant. The use of the media, such as newspaper and radio, for the issuance of notice of participatory procedure, is more effective among the residents of urban areas. However, access to information becomes a problem since facilities, especially dam and power plant projects, are planned in rural area. Furthermore, since participation in a formal procedure like scoping is basically done by the proponent in an 'invitation system', misapprehension of the DENR and the possibility that a suitable person will not participate also add to the problem.

### **Analysis 2: The Impact of Procedural Participation on Attitude to Project**

The case study is located at the boundaries of Itogon, Benguet and the municipalities of San Manuel and San Nicolas of Pangasinan. The area has a population of 113,231 (1995 statistics) with agriculture and forestry as its major industries. The upper river of the construction area is part of the mountain range called the Cordillera region. The Ibaloy tribes which have a language based on original tradition are the indigenous peoples living in the area.

**Table 1: Contents of participatory procedure in the Philippines EIA System**

Scoping	<p>The scoping is considered as the most important procedure among the EIA processes. The purpose is to narrow down the range and kind of subsequent investigations or impact prediction of the problem being checked. Participation of various persons concerned is ensured by issuing notices of activities especially if the area is large and appointment of abundant and trusted facilitators. It is implemented by issuing a notice of scoping, spreading information about the Information Education Communication (IEC), visiting the local people, among others. The proponent gives a letter of invitation to a representative of a peoples' organization. The representative is determined by performing various kinds of meetings called "Social Preparation Process", which is held before scoping. In addition, since scoping is one of the formal procedures, it is carried out by complete instructions from the DENR.</p>
Public Consultation and Presentation	<p>The purpose of a Consultation or a Presentation is to provide opportunities for extensive discussions among citizens, spread information to residents and listen to their opinions. Although it is not a formal procedure in the EIA guidelines, the proponent recommends it for implementation. Although it is usually carried out in a meeting form, an on-the-spot inspection called Walk-Through is also performed. There are no clear standards pertaining to the issuance of notice to participants. The holding of meetings is arbitrarily done based on the judgment of the proponent who issues appropriate notices and invitations to the peoples concerned.</p>
Public Hearing	<p>The public hearing is specified as a formal procedure of EIA. The design of a public hearing, which facilitates exchange of opinions between the proponent, the government and affected peoples, is determined by the DENR. The DENR hold public hearings if they are needed, when cases affect a large number of residents, when there are requests to hold the project, and when contrary opinions are received. However, the DENR's judgment is not always executed properly according to the situation. The notice of a public hearing is performed for two consecutive weeks, 15 days before its dissemination to the media, in the newspaper, at least. Posting of conspicuous notices in different places is also carried out. There is no restriction in the number of participants. Participation is determined by prior registration. All statements are received this time. All possible notices are recommended for the purpose of maximizing participation.</p>
ADR (Alternative Dispute or Conflict Resolution Process)	<p>ADR is executed when a serious problem, which was not resolved in the usual process, surfaces or a majority of related subjects strongly oppose and are contrary to the proponent's reasoning, after the issuance of an ECC (Environmental Compliance Certification). It is carried out in workshop form with the participation of related subjects and specialists with advanced facilitation skills who serve as mediators. There are five required items in forming the group: a diagnostic person who can accurately grasp a problem, a designer who builds the strategy of a suitable plan of action, a teacher who from abundant experiences can give suitable information, a mediator who can enter between subjects in a state of dispute, and a professional who has the skill and the knowledge on dispute settlement. A MOA (Memorandum of Agreement), which serves as a certificate of dispute settlement, is issued and exchanged between related subjects. The proponent and the DENR are responsible for the enforcement of the ADR. Although there is no clear regulation, since it is based on a conflict situation, it is thought that the form of participation is the same as that of Scoping.</p>

**Table 2: Evaluation of the three forms of procedural participation in the Philippine EIA system**

Procedure name	Three forms of procedure participation		
	direct participation	security of a participating opportunity	indirect participation
Scoping	Not satisfied: It is only the representatives of the residents who participate. Each resident's direct participation cannot be performed.	Satisfied: A notice is performed by notice activities, IEC, visit to localities, etc., and a letter of invitation is forwarded to a participant.	Satisfied: The participant is a representative of the organization in an area.
Public Consultation and Presentation	Satisfied: Concerned residents of the affected area can participate.	Somewhat satisfied: Although issuance of notice and invitation are performed to a participating candidate, they are not put into practice as a duty.	
Public hearing	Satisfied: Through open meeting, people who are interested can also participate in addition to the persons concerned.	Somewhat satisfied: Although a notice is performed through media, such as a newspaper and radio, there is no guarantee that the notice will reach the persons concerned.	
ADR	Although there is no clear standard since it is designed by the situation, it is thought that it is almost equivalent to scoping.		

The SRMP aims to generate 345 MW of power, establish irrigation and flood control systems and preserve water quality. The proponent is the San Roque Power Corporation (SRPC), a joint-investment foreign company. The EIA is being implemented through the National Power Corporation (NPC). The SRMP began from the NPC plan which made the Agno River watershed in 1974. Before this project, two dams called the AMBUKLAO and the BINGA were built upstream of the watershed. The SRMP was planned as the third most important project of NPC. However, the project was once frozen due to the political and economic situation in the 1980s, which caused the withdrawal of foreign funds and strong opposition by the local people. The SRMP resumed in 1993 when the central government proclaimed it as a flagship project of "Philippines 2000". The EIA was applied to SRMP from the early stage of 1995 and a total of six participatory procedures have been carried out in the upper river (Table 3). The conflict already arose in the area even before the EIA was implemented. Each participatory procedure was started in the midst of the conflict. The residents learned the existence of the project through ways other than EIA. Opposition intensified more and a conflict situation continued even after the EIA was finished.

The scoping which is the most important procedure in the EIA was not carried out in the area. Furthermore, the ADR was not executed in spite of the clear conflict situation. The DENR-EMB issued the Environmental Compliance Certificate (ECC) despite these problems. The unsuitability of participatory procedures lowered the status of the people of the upper river as an affected people. The delay of such procedures and their unsuitable implementation had a negative impact on the people's attitude and made the conflict intensify more.

**Table 3: EIA participatory procedure in the upper river and the main occurrences**

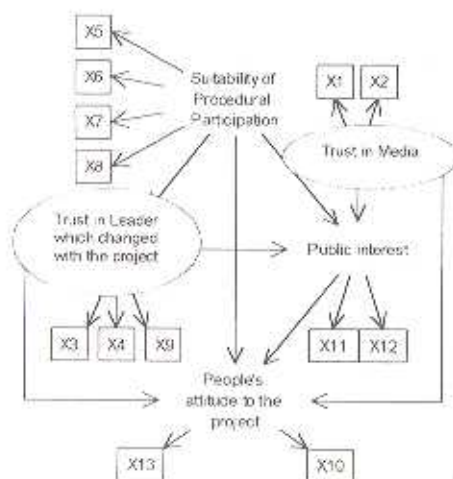
04/1995: Start of report about the SRMP in a newspaper
06/1995: Signatures of opposition by the residents
06/1995: Formal opposing resolution by the local government (Itogon) to the project
08/1995: Social Survey (by EIA)
02/1996: Consultation meeting (by EIA)
02/1996: Formation of an opposition movement by the organizations
03/1996: Ibalois' opposition to the project was expressed to the government.
03/1996: Consultation meeting (by EIA)
02/1997: Consultation meeting (by EIA)
07/1997: Presentation (by EIA)
09/1997: Presentation (by EIA)
02/1998: Issuance of ECC (by EIA)

### Construction of the hypothetical model

A hypothetical model was built in order to analyze the impact of the procedural participation upon the attitude of affected people to the project under conflict situation (Fig. 1).

#### *Suitability of Procedural Participation*

By the result of analysis 1, it became clear that each participatory procedure of the EIA covers three forms: "direct participation", "security of a participating opportunity", and "indirect participation". Thus, the observed variables about the suitability of procedural participation for affected peoples were specified. Two points are important in direct participation. First is that those who should be classified as a "person



- X1 Accuracy of media
- X2 Neutrality of media
- X3 Representation of the leader which changes with the project
- X4 Relation of the leader which changes with the project
- X5 Fairness of proponent's explanation
- X6 Equality of participatory opportunity
- X7 Sufficiency of information offered by proponent
- X8 Equality of information offered by proponent
- X9 Benefits which the leader got from the project
- X10 Perception about the project undertaken before
- X11 Benefits of the project
- X12 Disadvantages of the project
- X13 Right or wrong about the project

There are five grades of reply to each question (from 'very much' to 'I don't think so at all'). Numbers from 1 to 5 which correspond to each reply were used for quantification.

Fig. 1: Hypothetical Model

concerned" must be properly chosen and secondly, in order to judge, exact and enough information must be given. Therefore, "Fairness of proponent's explanation", "Sufficiency of information offered by proponent", and "Equality in participatory opportunity" were made as observed variables. Moreover, in indirect participation, since information gap and "Security of participating opportunity" can pose a problem, "Equality in participating opportunity" was made as an observed variable. As mentioned above, the combination of these four observed variables comprised the "Suitability of Procedural Participation".

### **Public Interest and People's Attitude to the Project**

As an observed variable of "People's attitude to the project", "Right or wrong about the project" was set up to ask for the direct pros and cons of the project. Based on the existing data, the people of the area had serious experiences due to the building in the past of the AMBUKLAO and BINGA Dams at the same watershed. They have a perception that their experiences will be repeated if the SRMP will be pursued. For this reason, "Perception of the project undertaken before" was added as an observed variable. Moreover, it is thought that "Public interest of the project" also impact upon "People's attitude to the project". Therefore, "Benefits of the project" and "Disadvantages of the project" were added to the model as observed variables.



### ***Other influence factors***

In addition, the use of media, such as newspaper and radio, for the issuance of notice of participatory procedure, is an important means of information acquisition about the project. The people's trust in the media may impact upon their attitude to the project. For this reason, "Trust for media" was added to the model and "Neutrality of media", and "Accuracy of media" were made as observed variables.

Since scoping is an indirect participation through representatives, it is also assumed that the political structure of the area (e.g. relations between a leader and ordinary people) affects the attitude to the project. Therefore, "Trust in the leader which changed with the project" was added to the model using the three observed variables: "Representation of the leader which changes with the project", "Relation of the leader which changes with the project" and "Benefits which the leader gets from the project".

### **Outline of the survey**

In order to determine and create measurement items about the people's attitude to the SRMP, data from a study area which served as a pilot survey were collected. Related data were considered as reference. The four villages of Itogon municipality - Dalupirip, Ampucao, Tinondan, and Poblacion - serve as target areas wherein we can observe a clear conflict situation. The surveys were divided into two periods: January 21-22, 2000, and February 7-8, 2000. They were performed by six investigators who interviewed the specimen extracted at random. The survey target's attributes are shown in Table 4.

### **Analysis**

In order to judge whether the obtained data can be used for CSA, I examined the calculation results of the reports of investigators and the amount of descriptive statistics. According to their reports on the items of a leader, various targets have various interpretations of whom they recognize as leader in the group. Since confusion arose, it was judged that it was an unsuitable data to be used for this analysis. One unobserved variable ("Trust in the leader which changed with the project") and three observation variables about leader (X3, X4 and X9) were deleted from the hypothetical model. However, the use of "X6: Equality of participating opportunity", an item about a leader, was

**Table 4: Attributes of Target peoples**

Attributes	Distribution
Sex	Male 49 (44.5%), Female 59 (53.6%), unknowns 2 (1.8%)
Age	Teens, 8 (7.3%); Twenties, 20 (18.2%); Thirties, 24 (21.8%); Forties, 21 (19.1%); Fifties, 15 (13.6%); Sixties, 13 (11.8%); Seventies, 7 (6.4%); Eighties, 1 (0.9%); Unknowns, 1 (0.9%)
Occupation	Farmers, 49 (44.5%); Fishermen, 7 (6.4%); Foresters, 4 (3.6%); Gold Panners, 13 (11.8%); Engineers, 9 (8.2%); Public officers, 6 (5.5%); House wives, 6 (5.5%); Services, 7 (6.4%); Students, 5 (4.5%); No Occupation, 3 (2.7%); Others, 0 (0%); Unknowns, 1 (0.9%)
Situation around the residential area	Urban area, 0 (0%); Urban and rural, 8 (7.3%); Rural, 102 (92.7%)
Experience on seeing a report about the project on media	Experienced, 79 (71.8%); Inexperienced, 31 (28.2%)
Experience of participation to a presentation meeting	Experienced, 67 (60.9%); Inexperienced, 43 (39.1%)
Experience of participation to a public meeting	Experienced 65, (59.1%); Inexperienced, 45 (40.9%)

retained since it has a concrete question and there was no confusion observed. The amount of descriptive statistics of the observed variables which were not deleted previously is shown in Tables 5 and 6. Consequently, it was decided that they would be used for all analyses since their extreme decline in distribution was not seen.

The correlation matrix between the observed variables is shown in Table 6. AMOS4.01 of SPSS Corp. was used as the software for this analysis, and the maximum likelihood method was used for presuming the number of mothers. In the analysis, the references by Toyota<sup>1</sup>, and Yamamoto and Onodera<sup>2</sup> were used. The standardized result is shown in Figure 2 while the index of measures can be seen in Table 7. Even if the original model does not suit the Chi-square test (five percent standard) and other indices, it does not mean that the conformity of the model is high. Hence, it was modified within limits that can be possibly interpreted in the real world by modifying the indices of AMOS. The newly added path as a result of modification is expressed with the dotted line in Figure 2. The result of the Wald's test, concerning the path value of "People's attitude to the project" (with five percent level) was rejected. It was considered that there is a close relation between "People's attitude to the project" and "Public interest in the project". Therefore, the Basic model 2 was created which compounded both variables. The model was modified in the same procedure. Consequently, the path rejected (with

the five percent level in Wald test) was lost. The model which was finally considered was made into "the modified model 2".

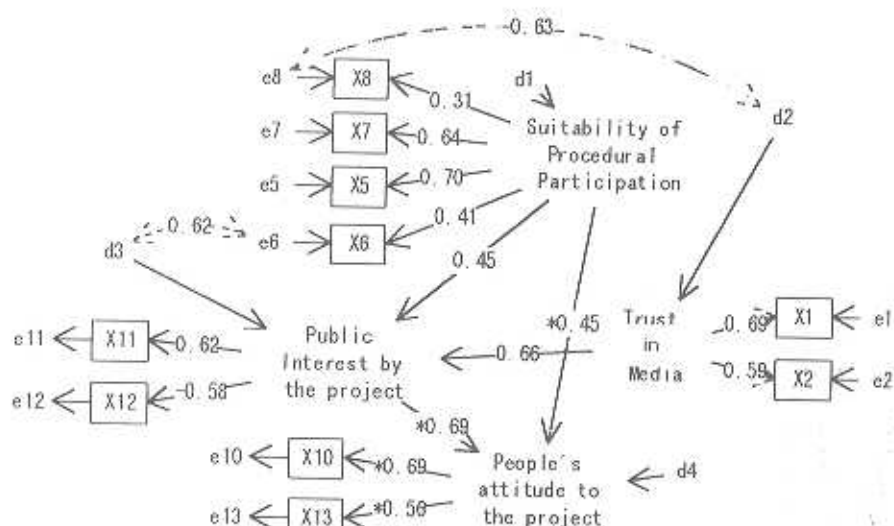
**Table 5: Amount of descriptive statistics**

	Average	Standard Deviation	Kurtosis	Skewness
X1	3.391	0.899	-0.749	0.064
X2	3.109	0.912	0.018	0.224
X5	3.555	1.063	-0.146	-0.799
X6	2.991	1.088	-1.022	0.192
X7	3.255	1.302	-0.909	-0.689
X8	3.518	1.038	-0.738	-0.175
X10	3.864	1.145	-0.206	-0.848
X11	3.582	1.199	-0.954	-0.148
X12	1.827	1.132	0.493	1.197
X13	3.991	1.215	-0.160	-0.982

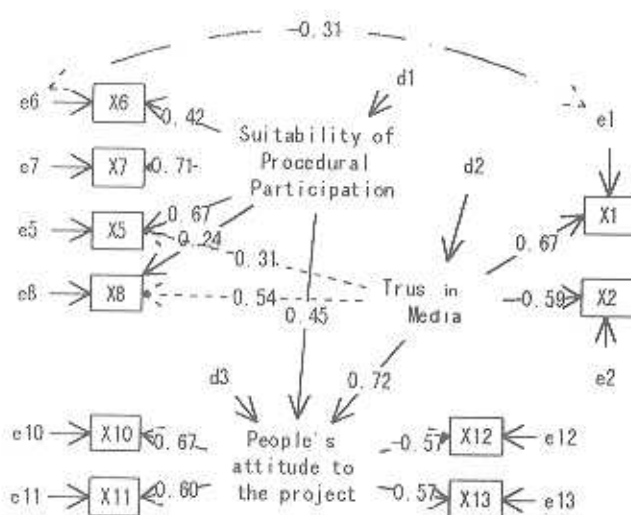
**Table 6: Correlation matrix of observed variables**

	X1	X2	X5	X6	X7	X8	X10	X11	X12	X13
X1	1									
X2	0.417	1								
X5	0.174	0.173	1							
X6	0.125	-0.109	0.242	1						
X7	-0.001	0.076	0.473	0.325	1					
X8	0.301	0.366	0.319	0.117	0.118	1				
X10	0.212	0.128	0.401	0.109	0.355	0.376	1			
X11	0.306	0.276	0.255	-0.080	0.186	0.345	0.445	1		
X12	-0.347	-0.230	-0.247	0.088	-0.131	-0.274	-0.336	-0.323	1	
X13	0.238	0.216	0.351	-0.034	0.111	0.309	0.388	0.280	-0.407	1

Fig. 2: The standardized result and the index for measures



Basic Model 1 and Modified Model 1



Basic Model 2 and Modified Model 2

## LEGEND:

Unobserved variable

Observed variable

Error variable

## Attention

The dotted line showed the path rejected at the Wald test.

\* \* \*: The path rejected at the Wald test.

**Table 7: Index of the measures on the hypothetical models**

Chi-Square Test:	Basic Model 1	Modified Model 1	Basic Model 2	Modified Model 2
Chi-Square Value	67.682	38.359	72.573	38.862
Degree of Freedom	32	30	34	31
Probability	0.000	0.141	0.000	0.157
GFI:	0.899	0.937	0.893	0.938
AGFI:	0.826	0.884	0.827	0.890
AIC:	113.682	88.359	114.573	86.862
RMSEA:	0.101	0.051	0.102	0.048

### Consideration of the results of the analysis

#### *Path value from an unobserved variable to each observed variable*

The path value that goes from the unobserved variables to observed variables is 0.50 or more in general. It is thought that both correspondences are appropriate to it. However, the value from "Suitability of Procedural Participation" shows value as low as 0.24, while the value from "Trust for media" of X8 (Equality of information offered by proponent) is 0.54. Thus, the direction of the path added for modification shows a high value. X8 is what to be interpreted if it is an observed variable of the trust for media. This suggests that the media carried the information offered.

#### *Path value among unobserved variables*

The path value from "Suitability of Procedural Participation" to "People's attitude to the project" is 0.45. The impact of the procedural participation can be observed. "Trust for media" reached as high as 0.72. It suggests that the people's attitude to the project has been influenced strongly by the information from the media.

#### *Consideration of the whole model*

The model is for the suitability of procedural participation which analyzes its impact on the people's attitude to the project. Both the positive and negative impacts can be considered. The average value of the observed variables (Table 5) which constitute the attitude to the project are 3.5 or more for X10, X11 and X13 and two or less for X12.

Those values show that the people have quite a negative perception of the project. This is reflected in the fact that opposition movements in the upstream were active. The average value of the observed variables which constitutes the suitability of procedural participation is 3.5 or more for X5 and X8 which turns to be low. This is because the important procedures of Scoping or ADR were not carried out in the start of the procedure itself. It is an example of an implementation of an unsuitable procedural participation having a negative impact on the people's attitude to the project.

On one hand, the average value of the observed variables of the "Trust in media" shows around 3.0 point in general. The result is neither a sign of trust nor distrust in media but a neutral perception among the people. The path value of media is higher because the people have first learned of the procedural participation through a newspaper report in 1995 and not through the proponent's notice. The mass media has been the main source of information of the people such that it had an impact upon their attitude to the project. The people's negative perception on the project was amplified by the negative reports about the project's EIA process. The unsuitable procedural participation caused the intensification and protraction of conflict.

Regarding the impact of the public interest on the project, "Public interest" and "People's attitude to the project" were separated from the start. However, a good result was obtained by unifying the two. Public interest on the project shows perception as a fundamental factor which constitutes the attitude to the project.

### **Conclusion and Future Subject**

It can be said that the Philippine EIA system has the participatory procedure which has certain grades that meet the conditions of the due process. However, the actual procedure implementation has been unsuitable and, therefore, has a clear negative impact on the people's attitude. Moreover, it became clear that the trust in media has a great impact on the people's attitude. The inadequate information being offered by the procedure has made people depend on the information coming from the mass media. It is possible that the enforcement of such unsuitable procedure can lead to the intensification and protraction of conflict. 'Public interest on project' is the fundamental matter that has

a large impact upon the attitude of people. In conflict resolution, the contents of project should be sufficiently considered whether it is required for the society.

The impact on the people's attitude of the power structure of this study area can be a future subject of the study. Furthermore, in realizing a better system, it is required to include in the analysis the cultural background of and how the due process produces justice in the Philippines. ❁

### Endnotes

- 1 Abracosa and Ortolano, 1987.
- 2 Tolentino, 1995.
- 3 Lourdes and Jennifer, 2000.
- 4 Rakumoto, 1983.
- 5 Taniguchi, 1983.
- 6 Amado, 1995, 1994.
- 7 Abracosa and Ortolano, 1987.
- 8 Lim, 1985.
- 9 Ross, 1994.
- 10 Cooper and Elliott, 2000.
- 11 Toyota, 1998.
- 12 Yamamoto and Onodera, 1999.

### References

#### Reports

- Environmental Management Bureau: DAO 96-37., Quezon City, Philippines, 1998.
- Hideyuki Kurita: Report on the San Roque Dam, Society for consideration on the San Roque Dam in Sendai., 1998. (Japanese)
- Cordillera Peoples Alliance, Defend the Land Save the People, 1999.
- National Power Corporation, Itogon Socio-Cultural Study, 1996.
- National Power Corporation, San-Roque Multipurpose Project EIS, 1997.
- National Power Corporation, SRMP Resettlement Action Plan, 1999.
- Woman Workers Program, The San Roque Dam, 1997.

#### Academic Papers

- Abracosa, Ramon and Leonard Ortolano: Environmental Impact Assessment in the Philippines: 1977-1985., *Environmental Impact Assessment Review*, 7, pp.293-310, 1987.
- Cooper, Lourdes M. and Jennifer A. Elliott: Public Participation and Social Acceptability in the Philippines EIA Process., *Journal of Environmental Assessment Policy and Management*, 2(3), pp.339-367, 2000.
- Amado S. Tolentino: Enforcement of Environmental Law in the Philippines., *Institute of Developing Economies*, pp.13-72, 1995.

- Lim, Gill-Chin. Theory and Practice of EIA Implementation: A Comparative Study of Three Developing Countries., *Environmental Impact Assessment Review*, 5, 1985, pp.133-153.
- Rokumoto, Kahei. "Conflict and law": Basic Law Studies No. 8 "Conflict". Iwanami Syoten, 1983, pp.3-34. (Japanese)
- Taniguchi, Yasuhiro, "Procedural Justice" Basic Law Studies No. 8 "Conflict". Iwanami Syoten, 1983, pp.35-59. (Japanese)
- Tolerano, Amado S. Environmental Law and Administration in the Philippines, Institute of Developing Economies, 1994, pp.43-47.
- Ross, W. A. Environmental Impact Assessment in the Philippines: Progress, Problems, and Directions for the Future, *Environmental Impact Assessment Review*, 14, 1994, pp.217-232.
- Toyota, Hideyuki. Covariance Structure Analysis: Compiled Cases-Structural Equation Model, Kita Oji Syobo, 1998, pp.209. (Japanese)
- Yamamoto, Kaichiro and Takayoshi Onodera: Covariance Structure Analysis by AMOS and Cases., Nakanishiya Syuppan, 1999, pp.226. (Japanese)