Public Participation in EIA, China

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Thesis presented in part-fulfilment of the degree of Master of Science in accordance with the regulations of the University of East Anglia

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August 2012

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Abstract

Public participation in EIA in China was never officially mentioned until 1991 when the new EIA law was come into force. Though it has been more than 20 years since it required the public participation in EIA, the effectiveness of public participation is still unclear. This artical is designed to find out how effective the public participation is in Chinese EIA system and make some suggestions to improve the current public participation in China. Firstly it introduces the background and theoretical basis, which includes the rationale and history of public participation. Then compare the regulation of public participation in EIA law among China, Japan and U.S and concludes the difference between these countries. Thirdly, researcher will use two cases to assess the effectiveness of public participation in practice based on Webler’s criteria and some recommendation will be made by experts, environmental agencies and local people by interviewing them.

The findings show that the public participation in Chinese EIA system has not been effectively carried out. The mechanism for public participation is not complete in EIA law and the environmental agencies do not attach importance to public participation. Researcher strongly recommends to improve public participation in EIA both in legislative level and practice level. The particular criteria also should be established to evaluate the public participation. More studies should be conducted from the view of public.
Acknowledgement

I would like to express my gratitude to all those who helped me during the researching and writing of this thesis, in particular all of those interviewed who contributed their precious time to me. My deep appreciation goes to Dr. Jason Chilvers for providing me plenty of help. You understood the difficulties of our international students and always patiently talked to me. Thank you to give me useful advice everytime when I was stuck. I can not complete my dissertation without your inspiring advice, patient instruction, insightful criticism and expert guidance. You made me feel better when study abroad alone.

I also own a special debt of gratitude to all the lecturers who taught us during the whole year, from whose devoted teaching and enlightening lectures I have benefited a lot.

I also thank my beloved parents who have always been standing behind and helping me out of the difficulties without a word of complaint. Finally I want to thank my friends and classmates who helped me search for the documents during the dissertation.
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Chapter 1. Introduction

1.1 Background of the research

The world population has been booming since the early 20th century. Human activities have caused serious impact on the environment, natural resources are over-exploited, massive amounts of pollutants are released into the air and water in different ways. Some of the more notorious environmental problems happened during the developing stages of western countries such as Belgium’s “Meuse River Valley smog”, Japan’s “Minamata Disease Event” and Los Angeles’ “Photochemical smog event” have caused significant personal injury and property loss since the 30’s. Some academics have proposed that environmental rights is a basic human rights, because the extent of the damage is reflected through the pollution of the environment and civic life, health and property loss. They believe that every citizen has the right to live in a good environment and that the environmental right is one of the most basic rights of citizens, and should be legally recognized and protected by the law. Acting on this view, some countries and NGOs included environmental rights in their laws; public participation in environmental issues around the world has also been widely recommended.

1.2 Significance of the research

China has witnessed 30 years of rapid development in its economy and technology, and, unsurprisingly, some environmental problems arose at the same time. When the EIA was first introduced into China in 1979, the provisional Environmental Protection Law did not require public participation (Mao and Hills, 2001; Wang et al., 2003). Public participation was first mentioned in the EIA system in 1991, and it has been developed since 1996. So public participation in the EIA is new to the Chinese EIA system, but it is essential in EIA, and cannot be omitted. Since public participation has been taking place for the last 20 years in China, a lot of literatures have studied on it. Most of them did researcher from the view of legislation such as Yang SS(2008) stated” Chinese EIA system should put more focus on public participation and make some provisions clearer”. Very few research was conducted from the view of environmental agencies and public. As legislation, environmental agencies and local people are the key elements in public participation, this research is designed to see what do the people from these three aspects think about the public participation, how effective public participation is in the Chinese EIA system by comparison with other countries and by obtaining recommendations from experts.
(1) Importance of public participation
Environmental impact assessment can protect our environment and keep both economy and society in harmony. Meanwhile, in order to keep the benefits balance, the concept of Public participation was introduced. According to Arnstein (1969: 216), “citizen participation is a categorical term for citizen power, it is the redistribution of power that enables the have-not citizens, presently excluded from the political and economic processes, to be deliberately included in the future”. Anne and Christi (1997: 725) pointed out four reasons why public participation is necessary. First, in decision-making activities, public participation is regarded as the suitable and fair way in terms of a democratic government (Gelhorn, 1971; Fox, 1979). Second, public participation is used as a way to ensure that projects meet citizens’ needs and are suitable for the public affected (Pearce et al., 1979; Forester 1989; Tauxe, 1995). Third, if potentially affected parties can influence the decision-making process then the project carries more legitimacy, and less hostility (Chapin & Deneau, 1978; Susskind & Cruikshank 1987). Lastly, when local knowledge and values are included and when expert knowledge is publicly examined then the final decision will be regarded "better" (Parenteau, 1988; Webler et al., 1995).

(2) Public participation is irreplaceable in the EIA
Public participation is irreplaceable because the advantages outweigh the disadvantages. Glasson concluded that the advantages of public participation are: public participation can be used positively to convey information about a development, clear up misunderstanding; allow a better understanding of relevant issues and how they will be dealt with; and identify and deal with areas of controversy while a project is still in its early planning phases; the measures from the public are more innovative, viable and publicly acceptable than those proposed solely by the developer, and the implementation of a project would be cheaper if the local people agreed with the proposal (Glasson J, 2005). Morrison-Saunders et al. (2001) also pointed that “public pressure is a key incentive to developers to prepare good EISs”. On the other hand disadvantages are also identified. Many different opinions will arise during public participation, which makes the project more complex; secondly the results of public participation are always uncertain, and it costs more to make the decision consistent.

1.3 Objective of this research
The overall objective is to analyse how effective public participation is in the EIA and obtain recommendations how to improve public participation in China. The specific aims are displayed below:
1 Defining what the effectiveness of public participation in EIA is, by reviewing the effectiveness of different countries such as Japan and America.

2 Reviewing the literature about public participation in China and drawing conclusions about its problems, subsequently choosing two cases and interviewing people involved in the case such as environmental agents and local people.

3 Interviewing experts, environmental agents and local people to learn their views on public participation in the EIA. Gather recommendations for improving public participation in the EIA from the people interviewed.

All these specific aims are based on the policies, regulations and legislation that the Chinese government has adopted for Public Participation since 2006. Having selected the US and Japan for comparative study, the researcher will use these two typical cases and design research methods to interview people involved in the case, and ask them about their views on public participation in the project, to find any lack of effectiveness in public participation between China and those countries. Lastly, all the data and recommendations for improving public participation in EIA in China will be assimilated.
Chapter 2. Theoretical Background

2.1 Concept of public participation in EIA

There has been increasing interest in involving the public in environmental impact assessment. Legislation has provided mandates for public participation including the National Environmental Policy Act (Webler T, 2006) and EU directive. It has also become a standard component in the environmental decision-making process (Konisky D & Beierle T, 2001). The EIA is defined by Munn (1979,p.1) as “an activity designed to identify and predict the impact on the biophysical environment and on man’s health and well-being, of legislative proposals, policies, programmes, projects and operational procedures”. One of the key aims of the EIA process is to provide information about a proposal’s likely environmental impact to the developer, public and decision-makers, so that a better decision may be made(Glasson J, 2005). Therein comes the public participation. The definition of public participant in EIA was defined by Canter(1996) as follows: “a continuous, two-way communication process which involves promoting full public understanding of the processes and mechanisms through which environmental problems and needs are investigated and solved by the responsible agency, keeping the public fully informed about the status and progress of studies and implications of project, plan, programme, or policy formulation and evaluation; and actively soliciting from all concerned citizens their opinions and perceptions of objectives and needs and their preferences regarding resource use and alternative development or management strategies and any other information and assistance relative to the decision.” (Canter, 1996, p. 587)

2.2 Identification of public participation in EIA

In a classic paper, Arnstein (1969) defined a ladder of participation with eight “steps” that ranged from manipulation of the public through consultation, placation, and partnership to citizen control. All these steps are involved in five dimensions of participation: who is involved; when - at what points – they are involved; the intensity of involvement; the extent of power or influence the participants have; the goals for the process (Fung 2006).

Who is involved?
The National Research Council (1996) set out: “The Public” refers to individuals acting both in their roles as citizens and as formal representatives of a collective of interested and affected parties – people, groups, or organizations that may experience benefit or harm or that otherwise choose to become informed or involved in an environmental decision. It is similar to Glasson’s definition concerning the identification of public participation in the EIA. He included the
developers, the regulators, the facilitators and the public in the EIA. In the context of environmental decision-making it is useful to make distinctions among these types of the public (U.S Environmental protection Agency Science Advisory Board, 2001; Renn and Walker, 2008). They categorized the public into four groups:

Stakeholders: organized groups that are or will be affected by, or that have a strong interest in, the outcome of a decision:

Directly affected public: individuals and non-organized groups that will experience positive or negative effects from the outcome;

Observing public: the media, cultural elites, and opinion leaders who may comment on the issue or influence public opinion

General public: all individuals who are not directly affected by the issue but may be part of public opinion on it.

It is important to identify the participants at different stages of an EIA process, because the information is different for different parts of the public and some public participation techniques are more effective for certain groups (Canter, 1996; Glasson et al., 2005; Vantanen and Martunen, 2005). Canter (1996) points out that the participants will change during the EIA process; some will be identified from the start, some will drop out and some will be identified throughout the process.

2.3 The effectiveness of public participation

When talking about the effectiveness of public participation, firstly we need to make sure of the goal of public participation. Generally speaking the goal of public participation is to ensure that all relevant information is included, that it is synthesized in a way that addresses parties’ concerns, and that those who may be affected by a risk decision are sufficiently well informed and involved to participate meaningfully in the decision. Thomas (1999) outlined six social goals of public participation:

1 Educating and informing the public
2 Incorporating public values into decision-making
3 Improving the substantive quality of decisions
4 Increasing trust in institutions
5 Reducing conflict
6 Making the decision cost-effective

These goals can be used to measure the outcomes of the participatory process, because how well they are achieved often depends as much upon how participants feel about the decision-making process as upon the substantive decisions made (Beierle T.C., 1999). He also pointed out that these goals may apply to number of areas of policy, however, they are critically important in the arena of
environmental policy. According to a review of the relevant literature, there is no consensus on what exactly effectiveness of public participation is (Rosener, 1978; Rowe and Frewer, 2004; Hartley and Wood, 2005; Manowong and Ogunlana, 2006). However, some authors still try to establish factors contributing to successful public participation, such as Furia and Wallace-Jones’s (2000, p.459) four factors which are:

1. The nature of the public involved
2. The amount of power attributed to the public in the EIA and related decision-making process by the inherent nature of the techniques and methods used,
3. The timing of public involvement in procedure
4. The ability to manage conflict

Many authors (Bond et al, 2004; Ahmad & Wood, 2002; Wood, 2003) have suggested various criteria for analysing the effectiveness of public participation in the EIA process. The relevant literature points to International Best Practice Principles and several criteria for evaluating public participation in the EIA in order to measure the achievement of the objectives and overall effectiveness of public participation. The international best practice principle of public participation in EIA shown below has been divided into three tiers; Basic Principles, Operating Principles and Developing Guidelines (Andre et al., 2006):

Table 2.1 International Best Practice Principles of Public Participation,

<table>
<thead>
<tr>
<th>Basic principles</th>
<th>Operating Principles</th>
<th>Developing guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Adapted to the context</td>
<td>· Initiated early and sustained</td>
<td>· Access to useful and relevant information</td>
</tr>
<tr>
<td>· Informative and proactive</td>
<td>· Well planned and focused on negotiable issues</td>
<td>· High level involvement and participation in decision making</td>
</tr>
<tr>
<td>· Adaptive and communicative</td>
<td>· Supportive to participants</td>
<td>· Creative ways to involve people</td>
</tr>
<tr>
<td>· Inclusive and equitable</td>
<td>· Tiered and optimized</td>
<td>· Access to justice and equity</td>
</tr>
<tr>
<td>· Educatve</td>
<td>· Open and transparent</td>
<td></td>
</tr>
<tr>
<td>· Cooperative</td>
<td>· Context-oriented</td>
<td></td>
</tr>
<tr>
<td>· Imutable</td>
<td>· Credible and rigorous</td>
<td></td>
</tr>
</tbody>
</table>

Source: Andre et al. (2006, pp.2-3)

The basic principles have involved the main stages of the EIA process from screening and scoping to decision-making. The operating principles are applied to the basic principles to enable their operation in different stages (Andre et al. 2006). In the following chapter, the researcher will
evaluate the effectiveness of public participation based on this principle in combination with Webler’s criteria.

2.4 The methods used in public participation in the EIA

Public participation methods

Smith (1983) mentioned that “public participation encompasses a group of procedures designed to consult, involve, and inform the public to allow those affected by a decision to have an input into that decision”. A consideration of the literature reveals the existence of a variety of methods and guidelines that might come under the public participation categorization, ranging from those that elicit input in the form of opinion to those that elicit judgments and decision from which actual policy might be derived (Rowe G&Frewer L, 2000). Of the large variety of methods used in public participation, there are eight main methods See table 2.2:

Table 2.2. A Number of the Most Formalized Public Participation Methods (Rowe G&Frewer L, 2000)

<table>
<thead>
<tr>
<th>Participation methods</th>
<th>Natural of participants</th>
<th>Time Scale/Duration</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referenda</td>
<td>potential all members of national or local population; realistically, a significant proportion of these</td>
<td>Vote cast at single point in time</td>
<td>vote is usually choice of one of two opinions. All participants have equal influence. Final outcome is binding</td>
</tr>
<tr>
<td>Public hearing/inquiries</td>
<td>interested citizen, limited in number by size of venue. True participants are experts and politicians making presentations</td>
<td>May last many weeks/months. Even years. Usually held during weekdays</td>
<td>Entails presentation by agencies regarding plans in open forum. Public may voice opinions but have no direct impact on recommendation</td>
</tr>
<tr>
<td>Public opinion survey</td>
<td>Large sample, usually representative of population segments on interest</td>
<td>single event, usually lasting no more than several minutes</td>
<td>often enacted through written questionnaire or telephone survey. May involve variety of questions. used for information gathering</td>
</tr>
<tr>
<td>Negotiated rule making</td>
<td>small number of representatives of stakeholder groups</td>
<td>Uncertain: strict deadline usually set:days/weeks/months</td>
<td>working committee of stakeholder representatives. Consensus require on specific question(usually a regulation)</td>
</tr>
<tr>
<td>Participation methods</td>
<td>Natural of participants</td>
<td>Time Scale/Duration</td>
<td>Characteristics</td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Consensus conference</td>
<td>Generally, ten to six members of public (with no knowledge on topic) selected by steering committee as “representative” of the general public</td>
<td>Preparatory demonstrations and lectures to inform panelists about topic, then a three-day conference</td>
<td>Lay panel with independent facilitator questions expert witnesses chosen by stakeholder panel. Meetings open to wider public. Conclusions on key questions make via report or press conference</td>
</tr>
<tr>
<td>Citizen’s jury</td>
<td>Generally, twelve to twenty members of public selected by stakeholder panel to be roughly representative of the local population</td>
<td>Not precise but generally involve meetings over a few days</td>
<td>Lay panel with independent facilitator questions expert witnesses chosen by stakeholder panel. Meetings not generally open. Conclusions on key questions make via report or press conference</td>
</tr>
<tr>
<td>Citizen advisory committee</td>
<td>Small group selected by sponsor to represent views of various groups or communities</td>
<td>Takes place over and extended period of time</td>
<td>Group convened by sponsor to examine some significant issue interaction with industry representatives</td>
</tr>
<tr>
<td>Focus group</td>
<td>Small group of five to twelve selected to be representative of public; several groups may be used for one project</td>
<td>Single meeting, usually up to two hours</td>
<td>Free discussion on general topic with video/tape recording and little input/direction from facilitator. Used to assess opinion/attitudes</td>
</tr>
</tbody>
</table>
Chapter 3. Public participation in EIA around the world

3.1. Public participation in environmental impact assessment in the USA

In 1969, the National Environmental Policy Act was developed in the USA, establishing the first worldwide environmental impact assessment (EIA) system (Gilpin, 1995; Jain et al., 2001; Glasson et al., 2005; Riffat and Khan, 2006). The USA was the first country to introduce regulations for public participation in environmental impact assessment (Weston, 2004; p. 313). In the U.S., there is public participation throughout almost all the stages of environmental impact assessment procedure. In the NEPA, it clearly stipulates that the object of the environmental impact assessment is the legislation of major federal actions that have a significant impact on the Human Environment. "Federal action" includes the following four types: official policy; formal plans; planning, and specific projects. The object of public participation is not clearly defined in the NEPA, however, as an environmental impact assessment procedure, public participation can be considered as legislation of major federal actions (Feller J, 1999). He also mentioned that in addition to the provisions of the National Environmental Policy Act, the U.S. Council on Environmental Quality (CEQ) has developed the National Environmental Policy Implementation Procedures Ordinance on public participation in environmental impact assessment done more for detailed requirements in 1978 (Feller J, 1999). In accordance with the Environmental Policy Act and the CEQ regulations, environmental impact assessment procedures are divided into the following five stages which engage with public participation:

1. Screening

This is the first stage of environmental impact assessment (Glasson et al., 2005). At this stage, the federal authorities need to determine whether their proposed action will have a significant environmental impact or not (Moorman J.L and Z. Ge, 2006). Once the authority has made this decision, they need to prepare an environmental impact report for the proposed action. The environmental agency’s next step is to publish a notice of intent in the Federal Register. The announcement of the intention briefly describes “the proposal, its alternatives, and the planned scoping process” (Moorman J.L and Z. Ge, 2006). In this stage, the announcement of the intention does not positively request public comment, but means the authority provides appropriate contact information for future contacting, and allows the interested public to express their views on the institution (Heather N and Stevenson, 1999).
(2) Scoping

After preparing an environmental impact report and issuing the intention notice, the authority in charge of implementation of the "scoping" has to identify the scope of action, alternatives and impact in the EIS. This stage includes the following steps: the authority needs to invite the public and get affected agencies involved in; deciding the scope of the EIA; deciding the important issues and highlighted in the EIA; the issues that don’t need detailed discussion; deciding whether the lead agency for preparation should be all EIA or allocated to partner agencies; coordinating the relationship between NEPA procedures and other necessary procedures; describing the relationship between the preparation of an environmental assessment with the decision-making agency, and estimating the time and duration of the EIA involvement. When necessary, they will hold a scoping meeting to confirm the above matters (Gayle W.D, 1999).

(3) Preparing the draft report of environmental impact

In accordance to the scoping process, the authority established the content of the preparation of the draft report. In the preparation process, it must be transparent and it should include all the alternatives. Moorman(2006) also mentioned that "A draft EIS, once prepared, is to be furnished to any person, organization, or agency that is involved with the proposed action, or upon specific request."

(4) EIS review and public comments

This is the most important stage of the environmental impact assessment procedures. The core elements of reviewing the draft EIA report are commenting, modifying and replying (Wang J, 2004).

After finishing the first draft of the EIA report, the authorities pass it round among the relevant groups, including citizens, non-governmental organizations as well as federal, state and local government, for perusal and appraisal. The C.F.R ruled that the Draft Report should be published on the federal register for public comment for about 90 days; meanwhile it is available to permitted departments or individuals to review for at least 45 days (§ 1506.10(c)). During this time, the authorities should allow any interested individuals and institutions to express their views about the institution's compliance with the "National Environmental Policy Act". All public comments should be sent to the EPA after submitting the draft to authorities. If the authorities in charge of their own environmental impact report requirements or other specific circumstances, they should hold a public hearing; any citizen may express their views on the draft (Powell K et al. 2000).

After this, the authorities prepare and publish a final environmental impact report. The final report must be provided to related departments, all the citizens and NGO’s who have submitted
substantive comments on the first draft of the environmental impact report, or to anyone who requires a copy of the final environmental impact report. There are 30 days for the public to review the final report. During this period, the authorities should gather public comments on the report again. National Environmental Policy Implementation Ordinance of the program requires that the comment period is 30 days (§ 1506.10). After 30 days, if the public objects to the project, the authorities can be sued according to National Environmental Policy Act in the mean of insufficient grounds, guaranteeing public participation in environmental impact assessment activities in the judicial. If there are no public comments, the authorities can implement the proposed action (Wang J, 2004 and NEPA, 1970).

(5) Public comment on EIA
Public comment procedures prescribed by the National Environmental Policy Act are the core of the National Environmental Policy Act review process. There are no specific requirements in the NEPA concerning public participation, but most of the principles established by case law were incorporated in the CEQ regulation which details public participation (Moorman J.L and Z. Ge, 2006).
U.S. regulations on public participation in environmental impact assessment systems are not merely superficial, but really respect the views of the public. Support from the judicial review system ensures the U.S. public participation in environmental impact assessment systems have a practical effect.

3.2 Public participation in EIA in Japan
After World War II, Japan carried out overdevelopment and plant construction to develop its economy. Consequently this brought many serious environmental problems such as bone pain disease and asthma, bringing disaster to the public. Therefore, in order to reduce the environmental pollution caused by uncoordinated development to a minimum level and maintain a good environment, the Japanese government introduced the idea of the EIA in 1972 (Hedeshi K, 1996). After years of efforts, on 13 Jun 1997, Japan passed the Environmental Impact Assessment Act, which introduced a public participation program involved in large-scale development projects. It required developers to hold specialized seminars or hearings with public authorities and local residents in the project area. Environmental decisions would be made based on the results of public participation (Li YF, 2004). The “Environmental Impact Assessment Law” made clear and specific provisions for public participation during EIA procedures (see figure 3.1).
Figure 3-1: People involve in EIA procedure in Japan(Ministry of the Environment et al(2006) )
Article 7 in the Impact Assessment Law defined the scoping of documents to the public “For the purpose of inviting comments, from the standpoint of protecting the environment, regarding both the items to be considered in an environmental impact assessment and the survey, prediction, and assessment methods to be utilized, the proponent, upon preparing the scoping document, shall make public, pursuant to a regulation to be adopted by the Prime Minister's Office, the fact that a scoping document has been prepared, and shall make the scoping document available for public review in the area referred to in Paragraph 1 of the preceding Article 7 for one month from the date on which the scoping document is made known to the public” (Environmental impact assessment law, 1997). Article 16 defined that after the developer has submitted the materials, it shall make the draft EIS and the summary available for public review in the related area for one month from the date of the aforementioned public announcement (Environmental impact assessment law, 1997).

Japanese environmental law had a specific public participation section from the scoping stage to after submission of the draft. This encouraged the public to participate in the project from early on (Wang J, 2004). But Asano (2000) points out that though the environmental law increased
opportunities for public participation, it was still limited. Because this law defined the public at the level of gathering information, it has no influence upon the decision-making. In fact, the function of including the public is not just for gathering information, but also an important way of keeping the decision transparent and fair (Asano N, 2000).

3.3 The public participation in China

In 1973, the concept of environmental impact assessment was first introduced into China, but public participation in environmental impact assessment was not formally stipulated at that time (Li and Li, 1998). The content of the EIA was changed gradually “from being physically-oriented to being more socially-focused” (Chen, 1995). This shift was principally driven by international funding agents (Chen, 1995; Dong and Zhao, 1998; Li and Li, 1998). In the early 1990s, China began to regard public participation as an important part of the environmental impact assessment of international financial projects (Wang, Chu and Qi, 1998). In 1993, the State Planning Commission, the State Environmental Protection Administration, Ministry of Finance and the People's Bank jointly issued 《Notice on Strengthening the Management of EIA for Construction Projects Funded by International Financial Organizations》，explicitly requesting public participation for the first time. “Public participation is an important part of environmental impact assessment; the EIA report should contain a special section to express this so that the interests of the potentially affected public or social groups can be taken into account and compensation to them made. At the same time, public participation can take place from the preparation stage right through to the end.” (Zhou and Chai, 1999). The NPC Standing Committee passed a decision on the amendments to the Water Pollution Control Act in 1996 involving public participation in environmental impact assessment. Since then, the "Environmental Noise Pollution Prevention Law" and "Construction Project Environmental Protection Management Regulations” have made similar provisions to the Water Pollution Control Act, but these provisions are too general, the methods, stage, and restrictions of public participation were not subjected to the regulations(Wang Y, 2002).

The new Environmental Impact Assessment law in the People's Republic of China was approved by the Ninth National People's Congress of the People's Republic of China on 28 October 2002, and came into force on 1 September, 2003 (Wang Y, Morgan RK and Cashmore M, 2003). The General principles of Environmental Impact Assessment Law clearly state: The State encourages relevant organizations, experts and the public to participate in environmental impact assessment in an appropriate way (Wang Y et al,2003). At the same time, Act 11 in Chapter II and Article 21 Chapter III respectively stipulates the forms of participation, the scope of participation, participants, and restrictions in the involvement stage. At this point, Chinese public participation in environmental impact assessment has entered a legal track. Meanwhile, the new environmental law enhances the
operability of public participation in environmental impact assessment. It takes a key step in the democratization of Chinese public participation in environmental impact assessment (Hao RS and Zheng XM, 2002). But still many limitations in EIA public participation have been noticed by experts. Firstly, the time for soliciting public view is not clearly defined (Yang SS, 2008). She also believed that public participation came too late in EIA’s especially for the EIA’s planning stage. Although the plan EIA has been required that public participation should be carried out since scoping by Guideline, neither new EIA law nor Provisional regulation has requirement about time of plan EIA (Chai et al., 2005; Chen and Hua, 2006; Tang et al., 2005; Tian, 2006). Hong and Luan (1995) believed that legislative provisions for public participation were still too general, and should be more detailed. They highlighted that new details should include when to initiate and how to conduct public participation.
Chapter 4. Research Methods

4.1 Methodology

4.1.1 Research design

Research design is a systematic plan of research, usually involving the formulation of strategy to resolve problems, involving data collection methodology, analysis of data and their interpretation, and the publication of results (Robson, 2002; Maxwell, 2005). Lewis (2003) pointed out that “good research design should be clearly defined with coherence between research questions and methods which could lead to generate valid and reliable data”. The framework below shows the whole process of this research. This framework facilitates a systematic analysis of the research.

Figur 4.1: outline of methodology

4.2 Comparative study

The first method used in this research is comparative study. The purpose of this comparison is to find the differences between public participation in different countries. America and Japan have been chosen as target for research. The researcher will use a framework to compare these three
countries: China, Japan and America. According to the literature, firstly the researcher compares the public participation system in these countries. The framework developed is based on (a) review of the relevant literature, (b) legal provisions and guidelines. The EIA public participation practice evaluation framework includes the following main components:
(1) The legal documenting of EIA public participation;
(2) The methods and process of public participation;
(3) The stages involved in public participation.

Table 4.1: Framework to compare public participation

<table>
<thead>
<tr>
<th></th>
<th>China</th>
<th>Japan</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>The legal document of EIA public participation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time to introduce public participation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The methods used in PP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The stages involve PP</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The effectiveness of the public participation part of the comparison framework is based on Webler’s (1995) Public participation criteria, and includes acceptance criteria and process criteria. Webler’s criteria almost completely cover the main points which shown in table 2.1 International Best Practice Principles of Public Participation. These evaluation criteria are used to evaluate the effectiveness of Public participation in the two cases, but the last two criteria structured decision making and cost-effectiveness are excluded.

Table 4.2: Criteria of public participation (Webler,1995)

<table>
<thead>
<tr>
<th>Acceptance Criteria</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criteria</td>
<td>Definition</td>
</tr>
<tr>
<td>Representative</td>
<td>The public participants should comprise a broadly representative sample of the population of the affected public</td>
</tr>
</tbody>
</table>
### Acceptance Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independence</td>
<td>The participation process should be conducted in an independent, unbiased way</td>
</tr>
<tr>
<td>Early involvement</td>
<td>The public should be involved as early as possible in the process as soon as value judgments become salient</td>
</tr>
<tr>
<td>Influence</td>
<td>The output of the procedure should have a genuine impact on policy</td>
</tr>
<tr>
<td>Transparent</td>
<td>The process should be transparent so that the public can see what is going on and how decisions are being made.</td>
</tr>
</tbody>
</table>

### Process Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource accessibility</td>
<td>Public participation should have access to the appropriate resources to enable them to successfully fulfill their brief</td>
</tr>
<tr>
<td>Task definition</td>
<td>The nature and scope of the participation task should be clearly defined</td>
</tr>
<tr>
<td>Structured decision making</td>
<td>The participation exercise should use/provide appropriate mechanisms for structuring and displaying the decision-making process</td>
</tr>
<tr>
<td>Cost-effectiveness</td>
<td>The procedure should in some sense be cost-effective</td>
</tr>
</tbody>
</table>

Table 4.3: Criteria to evaluate the cases

<table>
<thead>
<tr>
<th></th>
<th>wast landfill project in TZ city</th>
<th>Panyu waste incineration power generation project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Representative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early involvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transparent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.3 Case study

4.3.1 Introduction and justification
A case study methodology is a common approach, frequently used when engaging qualitative methods to learn perspective and gain knowledge from personal experience (Stake, 2005). Case study is defined by Yin (1994) as: “an empirical enquiry that investigates a phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident”. To be more specific, case study allows a researcher to examine key social processes and provides the suitable context for certain research questions (Bryman, 2001, De Vaus, 2001).

In this research, case study is the main research method, used to explain how effective public participation is in China. The cases are from multiple sources of evidence. The multiple sources of evidence in general are literature review, archival records, interviews, direct observation, participant-observation and physical artefacts (Yin, 1984). For this research the cases used were from literature review and interviews. The reason for choosing these two cases is that they are both waste disposal projects, but the effectiveness of public participation is quite different. The one in Taizhou is a waste landfill project which involves hardly any of the public and this case is believed to have failed in public participation. But the other waste incineration power generation project happened in Panyu and involved massive public participation which also had an impact on decision making. So the Panyu case was regarded as a model public participation case in China.

Case 1: Waste landfill project in TZ city
The government of TZ city had decided to invest 6 million pounds to build a waste landfill in order to solve the daily waste problem. The waste landfill site occupied 367 hectares, and was designed to deal with 2600 tons of waste daily. The waste landfill plant would have a 26-year life span. After completing the environmental impact statement, public participation was carried out according to EIA law and Provisional Regulations. The environmental agent firstly started public participation through a questionnaire investigation (the questionnaire shown in figure 5.5). Then a public hearing was held on 19 January 2006. The aim of this hearing was to inform citizens and collect suggestions from them.
Case 2: Panyu waste incineration power generation project

This case was recommended by Professor Wang in order to compare the effectiveness of public participation in TZ city. Panyu District is located in the south-east of Guangzhou. With the southern extension strategy of Guangzhou government, the city size of Panyu District was increasing, and the economy growing rapidly. It lead to yearly population growth by year, so the garbage volume was increasing rapidly. By the year 2008, the region’s resident population was over 250 million, and annual waste at nearly 600,000 tons. There has been about 12% annual growth rate in recent years. Experts predict that there would be 70 million tons of waste by 2010 (about 2000 tons/ day). At present there are only five small waste landfill sites in Panyu District, but it will not be able to dispose of more than 2000 tons of garbage per day, according to the current capacity of the solid waste disposal facilities. Guangzhou government decided to build a waste incineration power generation project instead of using waste landfill sites. It would cover a total area of 338 hectares and process 2000 tons of waste daily. The total investment in construction was 9.3 million pounds. The government engaged the South China Institute of Environmental Science to conduct the environmental impact assessment. As we all know, one of the most important parts of EIA is public participation. When the environmental agency conducted public investigation, 97.1% of the public was against the project. Guangzhou city council had to pause the project and consult with the public in order to obtain public permission.

Table 4.4: Public participation in wast landfill in TZ

<table>
<thead>
<tr>
<th>Time</th>
<th>Wast landfill in TZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>october 2005</td>
<td>conducted questionnaire amongst the affected public</td>
</tr>
<tr>
<td>19 January 2006</td>
<td>public hearing in the village where the site was chosen</td>
</tr>
</tbody>
</table>

Table 4.5: Public participation in Panyu waste incineration power generation project

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2009</td>
<td>citizens in Panyu protest the project and complaints to the authorities</td>
</tr>
<tr>
<td>November 2009</td>
<td>Guangzhou government engaged environmental agency to conducted EIA 97.1% public against the project according to questionnaire.</td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>22nd November 2009</td>
<td>The Guangzhou municipal government held a press briefing on the Panyu life waste incineration power plant project construction</td>
</tr>
<tr>
<td>December 2009</td>
<td>South China institute environmental Science research center set up a now hot line for the public to complain and make suggestions</td>
</tr>
<tr>
<td>April 13 2011</td>
<td>Guangzhou government selected five alternative sites for setting up the waste incineration power plant, to encouraged public participant in the public investigation.</td>
</tr>
<tr>
<td>April 2011</td>
<td>A local website launches internet voting for the five incineration plant alternative addresses</td>
</tr>
<tr>
<td>April 2012</td>
<td>One of the alternative sites is selected and obtains permission from public</td>
</tr>
</tbody>
</table>

4.4 Interviewing people

(1) Interview method

The semi-structured interview method is used in this research. Interviews are unlike questionnaires, they take a conversational, fluid form, each interview varying according to the interests, experiences and views of the interviewees (Flowerdew R & Martin D, 2005). The advantage of using interviews in research is also concluded by Flowerdew (2005): it is sensitive and people-oriented, allowing interviewees to construct their own accounts of their experiences by describing and explaining their lives in their own words. Further more, this sort of conversation offers the chance for the researcher and interviewee to have a far more wide-ranging discussion.

Interviews in this research were undertaken with experts, environmental agencies and local people. During the interviews, the researcher asked them questions as set out below. Questions are designed according to who is being interviewed; categorised into experts, environmental agencies and local people.

With experts:
- What stages have involved public participation in the EIA?
- How is public participation in China?
- How effective is public participation in EIA in your view?
- Which part of public participation is done better compared to before?
- Which parts need to be improved?
- Why is public participation not so effective? how to improve?

With environmental agencies:
- Which stage of the EIA has involved public participation in practice?
- What is the procedure for public participation?
- What is the most effective public participation method in your view?
- What methods do you usually use to conduct PP in your work?
- What is the extent of public participation? (age range? local people? interest groups?)
- Do you explain the project to the public if they have any questions?
- If some of the public strongly oppose the project, how do you deal with it?
- What benefit do you get from public participation when you are conducting EIA?
- What is the good to the project?
- How can environmental agencies improve the effectiveness of public participation?

Local people
- Do you ever participate in any PP on EIA?
- How do you get involved?
- How much do you know about the project?
- If you disagree with the project, what will the authorities will do?
- Do you think you have an impact on the PP or no impact?
- What improvements do you think the government can make?

(2) Schedule
Interviews were conducted as the schedule which shows as below:
Table 4.6 Interview schedule

<table>
<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Time</th>
<th>Name</th>
<th>Position in organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12 Jun</td>
<td>13:30-13:50</td>
<td>Lin hongmei</td>
<td>Environmental agency</td>
</tr>
<tr>
<td>2</td>
<td>15 Jun</td>
<td>12:10-12:40</td>
<td>Yang yong</td>
<td>Environmental agency</td>
</tr>
<tr>
<td>3</td>
<td>12 Jun</td>
<td>14:06-14:22</td>
<td>Liang xiaolin</td>
<td>Environmental agency</td>
</tr>
<tr>
<td>Number</td>
<td>Date</td>
<td>Time</td>
<td>Name</td>
<td>Position in organization</td>
</tr>
<tr>
<td>--------</td>
<td>---------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>4</td>
<td>15 Jun</td>
<td>10:35-11:00</td>
<td>Lin guohui</td>
<td>Experts</td>
</tr>
<tr>
<td>5</td>
<td>18 Jun</td>
<td>9:15-10:00</td>
<td>Wang xiaohua</td>
<td>Local people in Taizhou</td>
</tr>
<tr>
<td>6</td>
<td>21 Jun</td>
<td>9:14-9:40</td>
<td>wang zhongquan</td>
<td>Professor of Zhong Shan college</td>
</tr>
<tr>
<td>7</td>
<td>21 Jun</td>
<td>2:00pm-3:00pm</td>
<td>Li ping</td>
<td>Experts in Tai zhou environmental research center</td>
</tr>
<tr>
<td>8</td>
<td>22 Jun</td>
<td>9:00-9:30</td>
<td>Pan xiao</td>
<td>Environmental agency</td>
</tr>
<tr>
<td>9</td>
<td>22 Jun</td>
<td>12:02-12:10</td>
<td>Chen jian</td>
<td>Local people in TZ project</td>
</tr>
<tr>
<td>10</td>
<td>23 JUN</td>
<td>14:00-14:40</td>
<td>Xu Yixin</td>
<td>Local people in TZ project</td>
</tr>
<tr>
<td>11</td>
<td>25 Jun</td>
<td>9:00-9:30</td>
<td>Yang danqi</td>
<td>Environmental agency</td>
</tr>
<tr>
<td>12</td>
<td>25 Jun</td>
<td>14:00-16:00</td>
<td>A XI</td>
<td>Local people in PanYu</td>
</tr>
<tr>
<td>13</td>
<td>27 Jun</td>
<td>11:00-13:00</td>
<td>zhang chunyan</td>
<td>Local people in PanYu</td>
</tr>
<tr>
<td>14</td>
<td>28 Jun</td>
<td>10:35-11:20</td>
<td>Luo linhua</td>
<td>Environmental agency</td>
</tr>
<tr>
<td>15</td>
<td>28 Jun</td>
<td>13:20-14:10</td>
<td>Li tie</td>
<td>officer in Guangzhou environment protection authority</td>
</tr>
<tr>
<td>16</td>
<td>1 July</td>
<td>Email</td>
<td>Wang wanhua</td>
<td>Experts in Environmental law</td>
</tr>
<tr>
<td>17</td>
<td>2 July</td>
<td>Email</td>
<td>Qi huahua</td>
<td>environmental agency</td>
</tr>
<tr>
<td>18</td>
<td>2 July</td>
<td>8:30-9:10</td>
<td>Zhu baonan</td>
<td>Environmental agency</td>
</tr>
<tr>
<td>19</td>
<td>3 July</td>
<td>Email</td>
<td>Wan ke</td>
<td>Experts</td>
</tr>
<tr>
<td>20</td>
<td>4 July</td>
<td>Email</td>
<td>Xu qiang</td>
<td>Experts</td>
</tr>
<tr>
<td>21</td>
<td>7 July</td>
<td>2:00pm-3:00pm</td>
<td>Ren hui</td>
<td>Experts</td>
</tr>
</tbody>
</table>
4.5 Data analysis

Interview data
The interview data is recorded by phone and note making. Some were collected through Email and QQ. The researcher has already categorized the interviewees into three groups: experts, environmental agencies and local people. Experts and environmental agencies have common questions to answer so that researcher could analyse and compare the answers from different aspects. The answers will be coded by related criterion. So we can link one person’s view to another one.

Case study
The two cases will be compared according to Webler’s (1995) criteria of public participation which is shown in figure 5.1. After comparing the cases the results will be analysed. The study aims to find out any problems in public participation in China and interview different groups according to the results.

Comparison
There are two comparison results. The first outcomes for the comparison between US, Japan and China are based on the literature review:
- Identify the differences between the methods of public participation and the time of participation.
- Identify the gap between China and other countries

The second comparison results are the two case studies. This result aims to show the different outcomes of the two cases. Webler’s framework is used as the criteria.
Chapter 5. Results and discussion

5.1 The results of comparative study

The results of comparison of Public participation between China, Japan and the US are shown in the literature review (see figure 5.1). The following content is the analysis of the comparison result.

Table 5.1: Comparison results between China, Japan and US

<table>
<thead>
<tr>
<th></th>
<th>China</th>
<th>Japan</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>The legal document of EIA public participation</td>
<td>1 New Environmental assessment Law 2 Technical Guideline for Environmental Impact Assessment Public Consultation</td>
<td>1 Basic Environmental law 2 Council on Environmental Quality(CEQ)</td>
<td>1National Environmental Policy Act (NEPA) 2 Council on Environmental Quality(CEQ)</td>
</tr>
<tr>
<td>Time to involve public participation</td>
<td>1991-1995: The concept of public participation introduce to China by the Asia Development Bank</td>
<td>public participation was introduced in Japanese basic environmental law in 1993</td>
<td>1978 Council on Environmental quality require public participation in EIA</td>
</tr>
<tr>
<td>The methods used in PP</td>
<td>1 Questionnaire 2 Public forum 3 Information Publicity 4 public hearing</td>
<td>1 public hearing 2 Public consultation 3 public display 4 public inquiry 5 public meeting</td>
<td>1 presentation 2 public display 3 public inquiry 4 public hearing 5 public meeting</td>
</tr>
<tr>
<td>The stages involve PP</td>
<td>1 Scoping 2 Assessment 3 EIA review</td>
<td>1 Scoping 2 Assessment 3 EIA review</td>
<td>Screening Scoping Assessment EIA review Decision Monitoring</td>
</tr>
</tbody>
</table>

5.1.1 China VS Japan

There are many differences in public participation in EIA between China and Japan. Firstly, the public participation section in Chinese environmental impact assessment law just stays at the principled provisions level. The content is too general, with no specific regulations concerning public participation. The scope of the public is defined vaguely. In EIA law, there is no definition of
‘public’ or who should be involved. The only concept of public is the local people who will be directly affected. But with the coming of the construction period and the operation period, more and more public will be affected, but these potentially affected public aren’t mentioned in EIA law. So the scope of ‘public’ in Chinese public participation is too narrow. Japan, however, has a clear definition of public; they include local directly affected people, indirectly affected people, developers, and experts in Basic Environmental Law. Japanese environmental law increases the opportunity for the public to participate (Asano, 2000). In terms of the process of an EIA, the two countries are also different in public participation. In Japan, public participation has been involved from the stage of scoping to the implementation period; each stage has a specific goal and participation methods (See figure 3.1). In China, there are three regulations they need to follow, namely the New Environmental Impact Law, Provisional Regulation, and Technical Guidelines for Plan Environmental Impact assessment (on trial), but those three regulations are not consistent in the time of public participation. Theoretically speaking, Chinese public participation should also start from the scoping stage and continue throughout the whole procedure of the EIA (Yang SS, 2008). This requirement is only mentioned in the guidelines, but the New EIA law and Provisional Regulation require it even before the draft plans are submitted for approval (Yang SS, 2008).

5.1.2 China Vs America

The different procedures for public participation in EIA lead to different levels of public participation found in China and the U.S.

In China there are three stages during the whole environmental impact assessment. Developers:

1) entrust the task of EIA to environmental agencies.

2) conduct the EIA report;

3) Submit the EIA report to the authority. Public participation occurs during these three stages.

In U.S there are 4 stages in the EIA process: 1) Screening 2) Scoping 3) Preparation of the EIA, 4) EIA final report. Each stage involves public participation and this is mandatory by law.

The largest difference is in the third stage, which corresponds to stage 4 in America’s EIA process. In China, once the developer submits the EIA report to the authority, there is no further public participation required. If there are too many comments from the public, then the authority will hold a public hearing or forum to answer questions from public. But in the U.S, they leave 30 days for the public to comment. If there are any problems raised by the public, the project will not get approved until they address all the public concerns. This mandatory rule ensures the public’s rights in an EIA.
5.2 Results of interview

After reviewing the literature comes questions which were listed in the methodology part; the answers from the interviewing of three groups (namely experts, environmental agencies and local people). The researcher obtained 21 samples altogether; 8 experts, 9 environmental agencies and 5 local people. In this section, the researcher will analyse the answers from experts and environmental agencies, because the questions for those people are more general. Some questions are the same to both experts and environmental agencies in order to gather views from different aspects. The questions to local people are more specific, because they are based on two cases provided by experts. Appendix B shows the raw data of interviewing.

5.2.1 Common questions to experts and environmental agencies

1 What stages have involved public participation in the EIA?

Experts:

The answers to this question from experts are almost the same; as Mr Wang said, “Screening, scoping, identification of impact, assessment and EIA review, all those stages should conduct public participation according to the new Technical Guidelines for Environmental Impact Assessment. But in fact public participation is only conducted before they hand in the EIS to get approved. Sometimes they had the public participation before starting EIA”. But Mr Lin Guohui has different idea, he said, “the requirement of involving public participation is not clearly stipulated in our laws and regulations. This confused people, because in the New EIA law, Provisional Regulations require it before the draft is submitted to authority, but the EIA guidelines require public participation throughout the whole EIA. So most of them only get the public involved before submitting the draft. In my view, public participation should be carried out as early as possible”.

Environmental agencies:

All the answers from the environmental agencies are quite different. Some have the same answer as the experts. Lin Hongmei said “public participation is carried out during the compilation of EIA reports, before the EIA reports are submitted to authority”. Mr Young’s answer is quite similar” Public participation should start from scoping stage according to the new guideline. But actually, none environmental agencies followed that rule. We only involve public before we submit EIA report to authority.” But Liang Xiaolin had a very different answer; she told the researcher that, “If there are residents within 100 meters around the project, we will carry out public participation”. Mr Luo agreed to carry out public participation through the whole process. He said, “I usually get the public involved twice in a project, the first time is before we start the EIA; we usually send leaflets to any affected residents to inform them that there will be a new project near their living place. The
second one is before we submit the EIA to the authority. I think this second one is the most common public participation in the Chinese EIA system”.

2 How is public participation in China?
Experts:
Most of the experts said public participation in EIA’s should be improved; they are not satisfied with it though there is little progress since 2003. Mr Lin said:” I think there is still long way to go in terms of public participation. Public participation in China is just like a new born baby”. Professor Wang believed that public participation is not going well in China. “Public participation was introduced much later compared to EIA. These years we have made great progress in environmental impact assessment, but the public participation still stays at a low level. I am worried about the future of public participation.” On the other hand, the officer from Guangzhou Environmental protection authority Mr Li said, “It is growing in China. Firstly the Provisional Regulation made public participation Institutionalized in 2006. Then in 2009, environmental agencies were required to provide a telephone number in public surveys for people to contact. These are the evidence that public participation is getting more and more attention. Besides, I receive more calls from the public than 3 years ago which means the public are willing to get into public participation”

Environmental agencies
Some environmental agencies have no idea about the current level of public participation in EIA's in China.” We are not the ones who carry out public participation that is the developer’s job. We only need the stamp from the village so that we can get our EIA report approved by the authority.” (Interviewee #17 interviewed 02.07.2012.). Few think the public’s view is not important in decision-making” Rarely, projects are rejected due to public participation. In our real practice, public participation is just superficial work, if the government wants the project to get approved, they will ignore the public participation though there might be many people fighting against the project. On the other hand, public participation is just an excuse for an authority to reject the project.” (Interviewee #11 interviewed 25.06.2012). Many agencies are not satisfied with the current situation. Miss Lin said, “In our country, the public surveys of most projects are not true. Some projects that are heavily polluted may carry out the public participation relatively seriously. In others, especially small projects, the public surveys are done by themselves.” Mr Li showed the researcher a specific example to present the progress in public participation. “At the beginning, EIA only required the developer to get a stamp from the village to prove that the public in the village agreed the project. But later on, the new guideline required us to involve the public in the EIA, which means public participation is coming into practice. That’s how the questionnaire became
3 what is the effectiveness of public participation in EIA in your view?

The answers are varied from each one. In general, experts all mentioned some key elements of effective public participation such as: the number of members of public, the way of involving the public and their range.

Mr Wan, the director of Taizhou environmental impact assessment researcher center believed different public groups should be identified in different stages. He said: "The identification of the affected group is the most important. Those people are the ones who will be directly affected by the new project. If we can’t identify them precisely, then public participation is meaningless. But in reality, some environmental agencies skip this step, only requiring the developer to get permission from the head of the particular village. Furthermore, different stages involve different affected public, we can not only get the ones who are directly affected and leave the one who will be indirectly affected”

While Mr Li Ping mentioned the time to involved the public is very important to an effective public participation” Usually we are too late to involve public, that is how the PanYu event happened. But there is consensus on the time of public participation, the earlier the better. The earlier it comes, the less loss there will be. For example, the Panyu project lost 3000 Pounds because of the late public participation”. (Interviewee #7 interviewed 21.06.2012)

Professor Wang mentioned the way of involving the public is significant for identifying if the public participation is effective or not, and believed different methods should be used to get the public involved. “Normally, environmental agencies like to use questionnaires to conduct public surveys; that is the easiest and cheapest way to compare other methods. But questionnaires are not suitable for any kinds of public participation. I think effective public participation should employ particular methods to particular public. For example a lot of old people they are illiterate, they do not understand what the questionnaire is. In this case, a public hearing is better for them.” (Interviewee #6, interviewed 21.06.2012)

Environmental agencies

When asked about the effectiveness of public participation, environmental agencies’ answers are more practical in aspect. Some mentioned representativeness, transparency, and influence on decision and so on. The understanding of effective public participation varies from each environmental agency. Agencies regard the way of involving the public, and the trust between local people and government, as the elements of effective public participation. Miss Lin showed the researcher that, “In my understanding, effective public participation should be transparent. For
example, we usually use questionnaires to conduct public participation. But sometimes developers filled in the questionnaires by themselves. If we want public participation to be effective, we must involve the affected public to take part in the questionnaire. At least we will learn what do the public think about the project.”

Miss Liang gave the researcher a different explanation on effective PP, she said, “According to my experience, trust is quite important in public participation. Most of the work I have done in public participation is not effective. Every time more than half of the questionnaires I conduct are invalid, because villagers did not want to give real information about the project in order to avoid getting into trouble.”

4 Why is public participation not so effective? How to improve?

Experts

There are many reasons that have been concluded by experts why public participation on EIA in China is not as effective as in other countries. The reasons for ineffective participation are late public participation, limited coverage, incomplete legal system, lack of environmental awareness, lack of transparency information and low influence on decision-making.

Mr Lin believes that limited coverage makes public participation ineffective. He said, “Current legislation doesn’t have a specific requirement for how many people should be covered in public participation. This causes serious problems in that the developers only need to get the supporters to sign their names on the paper to fulfil the requirements of environmental agencies and authorities.” (Interviewee #4, interviewed 15.06.2012)

Mr Wang Wanhua points out that lack of specific laws about public participation is the main reason. He mentioned, “In some developed countries, they had particular laws for public participation. In China, we also need that kind of law to mandate public participation. Because awareness about participating in EIA is quite low, some developers make use of this disadvantage and benefit from it.” (Interviewee #16, interviewed 01.07.2012)

Every expert gave ideas how to improve the current public participation from legislation level to practical level. Many experts considered about the public section in the new EIA law. Just as the literature showed in chapter three, public participation is ineffective because it is deficient in law. Mr Wang Wanhua said “Firstly we need to ascertain how many times public participation should be carried out during the whole process,” in the U.S there are four stages required mandatorily in U.S environmental law, which is the same in Japan. “But in Chinese regulation, we only recommended environmental agencies to carry out public participation from the scoping stage and that is not mandatory except in the last stage. So I think we need to strictly require public participation from
the scoping stage in EIA law, otherwise, they should get punishment.” He also thought that to make the regulation more detailed is necessary and Mr Xu had the same idea. Mr Xu said: “We need specific regulations for public participation in EIA. Firstly the information should be open to the public. The public cannot participate unless they have detailed information about the project, so they can form their own ideas about participation in the project. Secondly, the regulations also need to be clear on how to involve the public. In China, the most common way of involving the public is by questionnaire. But in fact, the questionnaire cannot really represent public views. Because some developers want to get their project approved, they may bribe the group of people and get positive answers. I suggest that once there is fake information made by developer, should they be punished by law. Public hearings are also a popular method used in Public participation, while a public hearing is just a way to present information to the public. In reality the public are always limited in their chance to question experts. There is not enough time for people to question experts and environmental agencies. So the feedback mechanism after the public hearing should be improved. The public can call or email them to ask their questions. If it is possible, they could set up a special office to deal with the questions from public.” (Interviewee #20, interviewed 04.07.2012)

Li Tie, the environmental officer gave another interesting idea. He believes that the public not only refers local people, but also environmental groups. He said, “Environmental protection is a public good, the fundamental driving force comes from the public. In my opinion, we should develop different environmental groups, organizations. I know in western countries, they have many kinds of environment organization, individuals could attend those groups to present their own views. The more people the stronger their power is. But in china, we can rarely find this kind of organization. Even though we have them, they are organized by government. So the public cannot really speak out. In fact that is a way to get public involved. So I recommend that the environment experts should take the responsibility for organized environment groups for the public, and they could act as communicator between government and public. I believe that is the way to improve public participation in China” (Interviewee#15, interviewed 28.06.2012).

Environmental agencies:

Environmental agencies’ recommendations are more practical in some aspects, but only one agency wants the regulations to ensure that environmental agencies take charge in public participation.” Technically speaking, environmental agencies should carry out public participation, but it is not a mandatory rule that environmental agencies should be responsible for public participation, so we usually design the questionnaire and ask the developer to complete. In fact, if we make contact directly with the public, I believe this is more effective. At least, we are neutral but developers. So I think in terms of effective public participation, the regulations should rule that environmental
agencies should take responsibility for conducting public participation.” (Interviewee #8, interviewed 22.06.2012)

The others gave useful recommendations according to their working experience. Since they like to use questionnaires in public participation, Mr Yang recommended that “So far the public is not very willing to do the questionnaire, why not give presents to the public once they complete their questionnaire.” (Interviewee #11, interviewed 25.06.2012). Luo had a similar view to Yang in terms of the questionnaire, but his suggestion is for the way of designing a questionnaire. From his point of view, he thought some questionnaires were designed too professionally, there were too many technical words, “I do not believe that all people could understand the meaning of that. I think the questionnaire should be designed simply and be easy to understand.” (Interviewee #14, interviewed 28.06.2012)

There are some other significant recommendations have been mentioned such as increasing the means of public participation. They also suggested that the local media should be a good way to introduce the proposed project to public” Some traditional methods are not effective enough to get the public involved. I think the media should be engaged in public participation. Using the media to inform the public about the new project, they also can supervise the procedure of public participation. Transparency could also be achieved at same time.” (Interviewee #17, interviewed 02.07.2012).

5.2.2 Environmental agencies

There are also other questions for environmental agencies, besides the same ones as the experts. Those questions are more related to their actual work.

1 What is the extent of public participation? (age range? local people? interest group?)

Environmental agencies are satisfied with the extent of public participation. They believe they had identified the different groups of people including age, occupation and gender ratio in every project. Generally speaking the ages are usually between 20 to 60. But very few interested groups like to participate unless the project has huge influence such as PanYu project. This is very different from the other countries. But Miss Guo told the researcher ”Theoretically we had identified the groups of public who would be affected by the project, but we are not the ones who conduct the public participation directly in some projects. So we can not make sure the developers will follow our instructions. As I know, some developers used fake information to conduct their questionnaires.”

2 Do you explain the project to the public if they have any questions?

This question was designed to examine if the public really proposed their own views to environmental agencies in EIA. According to the environmental agencies’ answer, the public would like to contact with them, but most of them asked about the details of the project such as why did
the company choose this site? How much money do they give our village? only a few members of the public contacted them and provided useful information for them or asked about environmental related questions.

Mr Pan said” I have been working as an environmental officer about 6 years, but I remember there were only 3 local people who provided me with real valuable information which I had not taken into consideration when I conducted the EIA. However all of the officers would like to answer their questions even though most of the answers were already presented to them during the public hearing or in the publicity.”

3 What benefit do you get from public participation when you are conducting an EIA? what is the good to the project?

The environmental officers’ views are very pertinent to this question. There are many benefits they can get from the public if public participation is effective. The direct advantage is “we could receive less complaints both in the construction period and the operation period.” Miss Guo said. But there are still other benefits, Mr Lin mentioned, “If public participation is done well, it can help us to understand more about the baseline of the local environment, and we can assess the impact more precisely. But unluckily the effect of public participation seems not to be significant in our real work, because of the low effectiveness of the public participation.”

5.3 Results of Case study

There are two cases which are mentioned by Professor Wang and some other experts. One of the cases, the Panyu waste incineration power generation project, is regarded as the No.1 public participation case in China. The other one (waste landfill project in TZ city) is a general case. The evaluation of the two cases are based on Webler’s criteria. The researcher used three levels to evaluate them, namely L-low, M-medium, H-high according to the views of local people.

Table 5.2: Evaluation of case study

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<th>waste landfill project in TZ city</th>
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<td>Representative</td>
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Looking at the participatory process as a whole, the PanYu Project had a high level in representativeness. According to the definition of representative (Webler, 1995): It should comprise a broadly representative sample of the population of the affected public. Both projects have almost the same size. Yet 300,000 people participated in the PanYu project, while the number of participants in the Waste Landfill Project was only 80. In the Panyu Project, the age of participants varied from 14-78, which related to the various occupations such as engineers, experts, students, villagers and so on. The age rage of the waste landfill project is from 20 to 50, but 52% of people were above 40, 80% of them were villagers in the affected area, 72% from the 80% of villagers were the officers working for the village committees (EIA report of TZ waste landfill). It is clear that the Panyu Project sample is more representative than in the Waste Landfill Project.

Panyu: A xi, “As I know the people who participated in the PanYu project were employed in different kinds of occupations and altogether were 300,000 people. Besides, some environmental groups also joined us.” (Interviewee #12, interviewed 25.06.2012)

Another organiser of this public participation Zhang Chunyan said: “In my flat, all residents participated in this activity including officers, professors, even some teenagers took part. A lot of farmers also joined us, they are the ones who will be most seriously affected if the project gets approved. The ages vary from maybe 16 to 70 or more, we were really serious about that.” (Interviewee #13, interviewed 27.06.2012)

TZ waste landfill project: Wang Xiaohua, a local in that village was angry about the public participation, “I do not know anything about the project but I know our village leader had gathered all the village officers to complete the questionnaire. I heard it from my son, because he was the one who got involved.” (Interviewee#5, interviewed 18.06.2012)
Independence

From the point of view of independence criteria, the Panyu project also got a High level of independence compared to Medium level on the Waste Landfill Project. Though both of the projects were conducted by an independent, another element of independence- “unbiased way” can not be achieved. The researcher interviewed some local people in both projects.

TZ project:

Wang xiaohua, a local in the Waste Landfill Project told the researcher that: “Most of the people who did the questionnaire worked in our village committee. They could get money from the developer if they gave a positive answer” (Interviewee#5, interviewed 18.06.2012)

It is similar to Xu yixin’s answer: my leader told me to give them positive answer, actually I do not like the project and i want to disagree with them, but we have to do that.

Panyu project

Chen Jian who is from panyu also attend the public participat. He believed that the public participation in Panyu is absolutely independent” We are not organized by government, we organize this activity by ourself. So we fought the benefit for ourselves. Our willing is not led by anyone.” (Interviewee#9, interviewed 22.06.2012)

Early involvement

Both projects got a low level in early involvement. According to Chinese Technical Guidelines for Environmental Impact Assessment Public Consultation, public participation should start from the scoping stage. But TZ Waste Landfill Project only involved the public before the EIS were submitted for approval and the Panyu project was even worse. They did not involve public participation in EIA at all. Neither the Panyu nor the TZ project followed the regulation guidelines.

Panyu: A XI told the researcher that they only knew about the information about the project after they had finished land acquisition, “None of us was asked to participate in the EIA, in fact the public participation part was totally missed when they conducted EIA”. (Interviewee #12, interviewed 25.06.2012) Chen Jian complained that, “The public participation was organized by ourself, there was no official public participatory which should have been conducted by the government.”

TZ: Xiaohua Wang said:” I only knew there would be a waste landfill plant a few days before they started construction.” A participant in the public hearing Xu Yixin said, “I was asked to attend a public hearing one month before the developer started constructing.” (Interviewee#10, interviewed 23.06.2012)
Influence

The influence of the two projects was very different. The Panyu Project was regarded as the first public participation case in China. The final decision had been changed because of the massive public protest. The chief of Panyu Environmental Protection Authority promised the public that they would not start construction unless the EIA was approved. While the waste landfill project EIA in TZ city was more like a formality. Most of the public who participated in the questionnaire were controlled by developers. So they had no influence on the final decision. Just like YiXin Xu said it was useless even though we were strongly against the project. The worst thing is we cannot get any compensation from the developers if we do not agree with them. But the citizen who involved in Panyu project A XI, he is satisfied with the influence on decision-making. He said” The government changed their mind because of this activity, if we do not show them our feeling, they will not change it. But maybe this is the only best thing that we got.”

Transparent

The transparency issue has the same influence as above. The Waste Landfill Project is low, and the Panyu Project is high. The reason for the low level of transparency on the waste landfill project is that though there was a public hearing held in the village, there was no media to broadcast what was going on during the hearing - the people who did not attend the hearing never know the results of the decision. Most of the people who attended the public hearing were those who did the questionnaire and only 10 were new. On the other hand, the Panyu project was widely reported in the media. The transparency it quite high; the government held a public hearing and invited thousands of participants to the hearing. After the hearing, any decision made by government about the project, was posted online or on the information board in the residential area. Zhang Chunyan told the researcher that “the officers even set up a special website to report the progress of the Panyu Project, including the process of EIA and any decision from the government.”

Resource accessibility

The result of this criteria is also PanYu project high and Waste Landfill Project low. As the definition of resource accessibility: Public participation should have access to the appropriate resources to enable them to successfully fulfill their brief. The resource of waste landfill was difficult to access. Xiaohua Wang said: “We do not know anything about the waste landfill, the only information we knew was the information paper on the board. But there was no detail about the project, only when to start construction, and which company will take responsibility for the project. The researcher also tried to search for the information about the waste landfill project online, but there were few results. The details of the project were scarce. But the information about
the Panyu project could easily be found both online and in the newspapers. One resident called Yanchun Zhang told the researcher that she got some leaflets from their residential committee. The information included the description of the project and public hearing. Besides this, a large amount of information could be found online.

**Task definition**

Task definition was not well done in both projects. The waste landfill project was even worse than the Panyu project. Yixin Xu mentioned about its poor task definition in the Waste Landfill Project: “I don’t know what exactly they want from us in the public hearing. They spent all the time introducing the project such as how important the waste landfill project is, the size of the project. I do not know the meaning of this public hearing.” The researcher also interviewed some local people in the Panyu project. Yanchun Zhang said, “the first public hearing was clear. They held the public hearing to promise that the project would not start construction until the EIA got approved. But in the following public hearings, they tried to convince our public to believe that the waste incineration is harmless to health because of their trusted technology. In fact they were supposed to discuss where to build the waste incineration plant”. From the answers of the local people, they all seem dissatisfied with it in terms of task definition.

**5.4 Discussion**

From the view of experts, environmental agencies and local people, the problems of public participation in EIA can be classified into two aspects; one is at the legal level and the other one is in practice. Many recommendations have been provided through this research.

**Legislative aspect**

In terms of law, Chinese EIA laws and regulations did not clearly define public participation. Firstly, no matter if it is a new EIA law, provisional regulation or guideline, they should set a specific timeframe for involving the public as in U.S EIA laws, which have clearly ruled that public participation should start from screening. Academics also have consensus on the time to involve public, that being the earlier the better. The earlier the public get involved the less loss there will be to a project. But in China, by the time they involve public it is always too late. For example, in the Panyu project, they lost a million pounds by buying land before obtaining permission from the public.

Secondly, the identification of ‘the public’ should be more specific. Though the *New Environmental Impact law* mentions the identification of public, it is still too general. *Article 21: Except in conditions where secrecy is required by State stipulations, for construction projects that may have a*
major impact on the environment and for construction projects for which an environmental impact report is required, the construction work unit shall, prior to the submission for approval of the construction project, submit an environmental impact report, hold evidentiary meetings or testimony hearings or adopt other forms of soliciting the opinions of relevant work units, experts and the public. In addition to the circumstance mentioned in the EIA law, more public should be included such as: 1) directly affected public, 2) indirectly affected public, 3) interested groups, 4) local authority, 5) private sector representative and 6) academic groups.

Implementation process

From the view of the process of public participation, there are also many aspects which need to be improved. 1. The number of public should also be considered. The more members of public are involved, the more effective the public participation will be, although it is impossible to involve all the public in the implementation process. A certain number of the public from within the different regions of the group should be selected to have different weight to ensure that the public participation is objective and impartial. People in sensitive areas should be given more weight compared to others.

Then people’s awareness of public participation should be improved, because a lot of answers from environmental agencies points out that the public sometimes does not want to participate. But the citizens’ environmental awareness is the determinant of the effectiveness of public participation. Environmental publicity and education should not be only limited to the media, but also should be introduced in school education, especially in the formal education of primary and secondary schools, which is an important process to improve environmental awareness. Education sectors at all levels should make use of the existing environmental education system, combined with the circumstances and characteristics of the region, and explore the various forms of environmental education to raise the public environmental awareness. At same time it could also enhance the effectiveness of public participation.

Thirdly public participation be should carried out by environmental agencies instead of developers, so that it can be more transparent and fair. Taking the TZ Waste Landfill Project as an example, the transparency of public participation in this EIA was low, because the developer only conducted the questionnaire among the village officers who could easily be influenced by bribe. Lastly the means of involving the public also should be developed. As the environmental agencies mentioned, the questionnaire is the most common method they use, but not everyone is educated. A lot of villagers in China are illiterate, so mixed methods should be used during public participation. Voting on the internet could get more public involved especially young people. Broadcast the information through video and TV could make public participation more transparent and easier to access resources.
There is also another recommendation: to develop environmental groups in China. Non-government organizations have many advantages such as 1) they are more trusted by the public than the government is, they are closer to the local people. 2) They are not biased toward any side, and when considering an environmental problem, they can take the views of both sides into account. They could act as a communicator between public and government. Finally, the criteria to evaluate the effectiveness of public participation in EIA’s should be established. There is very scarce literature about what effective public participation in EIA is, and no criteria for public participation could be found. So experts should do more research on the effectiveness of public participation in EIAs.
Chapter 6. Conclusion

Currently China is in a period of rapid economic development, whether it is historical experience or realistic environmental conditions, China can not expense the environment as the cost of economic development. China has to continue developing the EIA system and do more research on public participation.

This paper assessed how effective the current public participation is in EIA in China by reviewing literature and interviewing people and then came up with many significant recommendations. Firstly the legal regulation and requirement on public participation in EIA is not complete in Chinese EIA system. Many deficiency has been found compared to other countries’ EIA law on public participation. The problems of current public participation in EIA are identified as: 1) No complete legal system of public participation in EIA system 2) No consistent time of involving public (Usually, it is too late to take participate). Then after assessing the two cases and interviewing people, there are some other problems were found during practice such as 1) lack of information accessibility and transparency; 2) low impacts on decision-making 3) limited coverage of public 4) unrepresentative and unequal participation 4) lack of trust between government and public. Experts that had been interviewed came up with many recommendations in order to solve the problems. Firstly, China needs specific law on public participation which includes the time of involving public, the methods use in particular participation and the punishment of violation of the provisions. Then in practice aspect, different environmental groups are needed to be developed in China and the scope of public should be identified clearly, for example the affected public not only mean the directly affected part, but also the one who would be affected indirectly. Thirdly the trust between government and public should be built. Because low trust was identified according to the case study. Experts also mentioned that increase the awareness of public participation is very important, many ineffective public participation was caused by low awareness of participating. Public participation not only has a profound meaning and theoretical basis, but also the more the necessity of its existence and development. China needs to learn from foreign advanced public participation both in legislative and practice, to enrich our public participation in EIA.

The findings in legislation aspect are almost similar to the previous literature, as there are massive literature about the problems of public participation in EIA law. But there is still no specific solution to solve these problems. This report provided some suggestions to fill this gap. For example the legislation need to state the time of involving public should move up to screening stage as Japanese EIA law and U.S’s. In technical guideline of public participation, the certain proportion of participating also should be clearly given. From the view of practice process, few research has
studied on it, but more studies are needed in order to solve the problems in practical aspect. This article has some recommendations in this aspect such as delivering presents to public to encourage them to participate. The finding also shows that the public do not have strong willing to participate in EIA unless they will obviously suffer from the new project, which means the awareness of public participation should be improved. But few literatures could be found in how to increase the awareness of public participation. This is also the limitation of this research. So further researches are needed. The most valuable contribution of this research is recommending experts to establish the criteria to evaluate public participation. In China no particular criteria could be found to use in participation in EIA and very few academic mentioned about the criteria. Researcher believes that lack of criterion is one of the reasons why the public participation in EIA is not effective in China.
Reference


Asano N (2000). Environmental impact assessment system and law. 4th Editor Shintansha Publisher: 221-222


Hao RS and Zheng XM (2002). Public participation and environmental decision-making, Chongqing Environmental science. 7: 24-27


Heather N, Stevenson (1999). Environmental impact assessment laws in the nineties: Can the united states and Mexico learn from each other? *University of Richmond law review*. 32: 1675


Li YF (2004). *Study on public participation in EIA*. China Renmin university press: BeiJing


NEPA (National Environmental Policy Act) 1970.


Wang J (2004). Discuss on public participation in EIA. Law review: 12(1) 34-35


Methods and practice, 24-25th November 2003, EIA Centre, School of Planning and Landscape University of Manchester. Available at: http://www.enterpriseimpact.org.uk/pdf/Wood.pdf


Zhou ZM and Chai QY (1999). Practical significance of public participation in construction
projects. *Environmental pollution and control*; 21, page 12-13
Appendix A

Environmental Impact Assessment Law of the People’s Republic of China

Adopted on 28 October 2002 at the 30th Session of the
Standing Committee of the 9th National People's Congress
Presidential Decree No. 77 of the People's Republic of China .Effective September 1, 2003

Chapter I.

General Principles.

Article 1.

This Law is enacted in order to carry out a sustainable development strategy, to prevent adverse impact on the environment after the implementation of plans and construction projects, and to promote harmonious development of the economy, society and environment.

Article 2.

The environmental impact assessment referred to in this Law means a method and system for analyzing, forecasting and assessing the potential impact on the environment after implementation of plans and construction projects, for putting forward strategies and measures to prevent or alleviate adverse impacts on the environment, and for carrying out follow-up and monitoring.

Article 3.

Plans drawn up within the scope specified in Article 9 hereof, and construction projects impacting the environment in the territory of the People's Republic of China or other maritime areas under the jurisdiction of the People's Republic of China, shall have an environmental impact assessment carried out in accordance with this Law.

Article 4.

Environmental impact assessment must be objective, open and fair, and comprehensively consider the potential impact after implementation of plans or construction projects on all types of environmental factors and the ecosystem constituted by such factors, in order to provide a scientific basis for decision-making.

Article 5.

The State encourages relevant work units, experts and the public to participate in environmental impact assessments in appropriate ways.
Article 6.

The State strengthens the establishment of a fundamental database and assessment index system for environmental impact assessment, encourages and supports scientific research into the methods and technical standards of environmental impact assessment, establishes necessary environmental impact assessment information-sharing systems, and raises the scientific nature of environmental impact assessments.

The State Council administrative department in charge of environmental protection, together with relevant State Council departments, shall organize the establishment and improvement of an environmental impact assessment fundamental database and assessment indication system.

Chapter II.

Environmental Impact Assessment for Planning.

Article 7.

Relevant departments of the State Council, people's governments at or above the level of municipalities (with districts) and their relevant departments, for plans of which they have organized the drafting, on land use, plans of exploration, utilization and development in the areas, river basins and sea areas, shall in the course of drafting organize and conduct environmental impact assessments and shall provide writings or explanations on the environmental impact of these plans.

The environmental impact writings or explanations of the plans shall provide analysis, forecasts and assessment on potential environmental impact after plan implementation, and set forth countermeasures and steps that prevent or alleviate adverse environmental impacts. Then these writings or explanations shall be part of the draft plans and be submitted to the plan examination and approval authority.

The examination and approval authority will not examine and approve any draft plans without environmental impact writings or explanations.

Article 8.

The relevant departments of the State Council, people's governments at or above level of municipalities (with districts), and their relevant departments shall organize and conduct environmental impact assessments on relevant Special Plans concerning industry, agriculture, pasturage, forestry, energy, water conservancy, communication, urban construction, tourism and exploration of natural resources (hereinafter called the "Special Plans") prepared by them before the drafts of such Special Plans are submitted for examination and approval, and shall submit environmental impact reports to the authority responsible for examining and approving such Special Plans.
Guidance plans among the Special Plans listed in the preceding paragraph shall go through environmental impact assessment in accordance with the provisions of Article 7 hereof.

Article 9.

The specific scope of plans for which environmental impact assessment is specified to be conducted in accordance with the provisions of Articles 7 and 8 hereof shall be specified by the State Council administrative department in charge of environmental protection jointly with the relevant departments of the State Council, and shall be reported to the State Council for approval.

Article 10.

Environmental impact reports for Special Plans shall include the following contents:

(i) analysis, forecast and assessment on the potential environmental impact after implementation of the plans;

(ii) measures and countermeasures to prevent or alleviate adverse environmental impacts; and

(iii) an environmental impact assessment conclusion.

Article 11.

Towards Special Plans that may possibly cause adverse environmental impact and involve environmental rights and interests of the public, the Special Plan drafting organ shall, before the drafts of such plans are submitted for examination and approval, hold evidentiary meetings or testimony hearings or adopt other forms of soliciting opinions on the environmental impact report from relevant work units, experts and the public. But cases in which secrecy is required by State regulations are excepted.

The Special Plan drafting organ shall conscientiously consider the opinions of relevant work units, experts and the public on the drafts of the environmental impact report, and shall attach the explanations of its acceptance or non-acceptance of such opinions to the environmental impact report submitted for examination.

Article 12.

The Special Plan drafting organ shall, when submitting the draft of the plan for approval, attach the environmental impact report and send it to the examination and approval authority for examination. The examination and approval authority shall not examine and approve a draft plan without an attached environmental impact report.

Article 13.

Before the people's government at or above the level of municipalities (with districts) examines and approves the draft of a Special Plan and makes a decision, it shall first designate the administrative department in charge of environmental protection administration designated by the people's government, or other department, to assemble representatives of relevant departments and experts
to form an examination group to conduct examination of the environmental impact report. The examination group shall provide written opinions.

The experts participating in the examination group as specified in the preceding paragraph shall be determined by random selection from the expert list of the corresponding profession in the expert database established according to the stipulations of the State Council administrative department in charge of environmental protection.

For environmental impact reports of draft Special Plans of which the relevant departments of the people's governments at provincial level and above are in charge of examination and approval, examination methods shall be formulated by the State Council administrative department in charge of environmental protection, together with relevant State Council departments.

Article 14.

When examining and approving the draft Special Plans, the relevant department of the people's governments at or above the level of municipalities (with districts) or the people's governments at provincial level and above, shall make the conclusion of the environmental impact report and the examination opinion thereon an important basis for decision-making.

In the event that the relevant authority does not adopt the conclusion and examination opinions of the environmental impact report in examining and approving the draft plans, it shall make an explanation and record it for future reference.

Article 15.

After the implementation of a plan having major impact on the environment, the drafting authority shall promptly organize a follow-up assessment of the environmental impact and report the assessment result to the examination and approval authority. If it is discovered that there is an obvious adverse impact on the environment, measures for improvement shall be put forward in good time.

Chapter III.

Environmental Impact Assessment for Construction Projects.

Article 16.

The State carries out construction project environmental impact assessment classification administration based on the extent of environmental impact of the construction projects.

The construction work unit shall organize the preparation of an environmental impact report, environmental impact report form or fill in and submit an environmental impact registration form (hereinafter collectively referred to as "Environmental Impact Assessment Documents") according to the following stipulations:

(i) in case of a major potential environmental impact, an environmental impact report shall be
drawn up and a comprehensive assessment of any resulting environmental impact shall be carried out;
(ii) in case of light potential environmental impact, an environmental impact report form shall be drawn up and an analysis or special assessment of the resulting environmental impact shall be carried out;
(iii) in case of very small environmental impact, it is not necessary to carry out an environmental impact assessment, but an environmental impact registration form shall be filled in and submitted;
A construction project environmental impact assessment classification administration catalogue will be drawn up and announced by the State Council administrative department in charge of environmental protection.

**Article 17.**

An environmental impact report for construction projects shall include the following contents:
(i) overview of the construction project;
(ii) status quo of the surrounding environment of the construction project;
(iii) analysis, forecast and assessment of the potential environmental impact of the construction project;
(iv) measures taken by the construction project for environmental protection as well as technical and economic demonstrations;
(v) analysis of economic gains and loss of the construction project's environmental impact;
(vi) recommendations for implementing environmental monitoring of the construction projects; and
(vii) conclusion of the environmental impact assessment.
For construction projects relating to water and soil preservation, there also must be a water and soil preservation proposal approved by the administrative department in charge of water supply.
The content and format of environmental impact report forms and environmental impact registration forms will be determined by the State Council administrative department in charge of environmental protection.

**Article 18.**

Construction project environmental impact assessments shall avoid duplicating plan environmental impact assessments.
A plan that is made into a single complete construction project will have an environmental impact assessment carried out as a construction project, and will not have a plan environmental impact assessment carried out.
A construction work unit may simplify the environmental impact assessment contents for specific construction projects that have been included in plans that have already gone through environmental
Article 19.

Organizations accepting entrustment to provide technical services to construction project environmental impact assessments, after going through verification of qualifications by the State Council administrative department in charge of environmental protection, will be issued with a qualification certificate and will provide services to environmental impact assessments according to their grading and assessment scopes as set forth in the qualification certificate and will be accountable for the assessment conclusions. The qualification terms and administrative rules for an organization providing technical services to a construction project environmental impact assessment will be formulated by the State Council administrative department in charge of environmental protection.

The State Council administrative department in charge of environmental protection shall announce the list of organizations that have obtained qualification certificates to provide technical services to construction project environmental impact assessments.

Organizations providing technical services to construction project environmental impact assessments shall not have any related interests with the administrative department in charge of environmental protection responsible for examination and approval of construction project Environmental Impact Assessment Documents or with other relevant examination and approval authorities.

Article 20.

The environmental impact report or environmental impact report form in Environmental Impact Assessment Documents shall be prepared by an organization with corresponding environmental impact assessment qualifications.

No work unit or individual shall designate, for any construction work unit, the organization responsible for preparing the environmental impact assessment for its construction projects.

Article 21.

Except in conditions where secrecy is required by State stipulations, for construction projects that may have a major impact on the environment and for construction projects for which an environmental impact report is required, the construction work unit shall, prior to the submission for approval of the construction project environmental impact report, hold evidentiary meetings or testimony hearings or adopt other forms of soliciting the opinions of relevant work units, experts and the public.

Explanations of adoption or rejection of the opinions of relevant work units, experts and the public shall be attached to the environmental impact report submitted by the construction work unit for
Article 22.

Construction project Environmental Impact Assessment Documents shall be submitted by the construction work unit to the administrative department in charge of environmental protection having examination and approval authority in accordance with stipulations of the State Council; if the construction project has an industry department in charge, the environmental impact report or environmental impact report form shall, after going through preliminary examination by the industry department in charge, be submitted to the administrative department in charge of environmental protection having examination and approval authority, to be examined and approved. Examination and approval of marine environmental impact reports for oceanic construction projects shall be handled in accordance with the *PRC Marine Environment Protection Law*.

The examination and approval authority shall make an examination and approval decision and give written notice to the construction work unit within 60 days after receipt of an environmental impact report, within 30 days after receipt of an environmental impact report form, or within 15 days after receipt of an environmental impact registration form, respectively.

No fees shall be received or collected for the preliminary examination, or examination and approval, of construction project Environmental Impact Assessment Documents.

Article 23.

The State Council administrative department in charge of environmental protection shall be responsible for examination and approval of Environmental Impact Assessment Documents for the following construction projects:

(i) construction projects of nuclear facilities and top-secret projects and with other special characteristics;

(ii) construction projects that straddle the borders of administrative regions of provinces, autonomous regions or municipalities directly under the central government;

(iii) construction projects approved by the State Council or the relevant department authorized by the State Council.

Limits on examination and approval authority over construction project Environmental Impact Assessment Documents other than those set forth in the above paragraph will be determined by the people's government of provinces, autonomous regions and municipalities directly under the central government.

In the event that a construction project may cause an adverse impact on the environment straddling administrative regions, and the relevant administrative departments in charge of environmental protection come to different conclusions in their environmental impact assessments of such a
Article 24.

After construction project Environmental Impact Assessment Documents go through examination and approval, if any major changes occur in the nature, scale, location or adopted manufacturing technique or measures for preventing pollution and ecological damage, the construction work unit shall re-submit for approval the construction project Environmental Impact Assessment Documents. In the event that work begins on a construction project more than five years from the date of approval of the Environmental Impact Assessment Documents for such a project, the Environmental Impact Assessment Documents shall be re-submitted for renewed examination and verification of Environmental Impact Assessment Documents. The original approval authority shall, within 10 days after receipt of the Environmental Impact Assessment Documents for the construction project from the construction work unit, give written notice of its opinion to the construction work unit.

Article 25.

Where construction project Environmental Impact Assessment Documents are not examined by the examination and approval authority stipulated by law or are not approved after examination, such examination and approval authority shall not approve its construction and the construction work unit shall not begin work on construction.

Article 26.

In the course of a construction project, the construction work unit shall simultaneously implement the countermeasures and steps for environmental protection raised in the environmental impact report, the environmental impact report form and the examination and approval opinions of the examination and approval authority of the Environmental Impact Assessment Documents.

Article 27.

In the course of the construction and operation of a project, if conditions arise that are inconsistent with Environmental Impact Assessment Documents that have gone through examination and approval, the construction work unit shall organize a post-assessment of the environmental impact, adopt corrective measures, and report for the record to the original examination and approval authority of the Environmental Impact Assessment Documents and construction project approval authority. The original examination and approval authority of the Environmental Impact Assessment Documents may also instruct the construction work unit to prepare a post-assessment of environmental impact and take corrective measures.
The administrative department in charge of environmental protection shall conduct follow-up inspections on the environmental impact after the construction projects have gone into operation or utilization, and shall make a thorough investigation into the reasons and responsibility for the creation of serious environmental pollution or ecological damage. If it is due to the reason that the construction project Environmental Impact Assessment Documents prepared by the organization providing environmental impact assessment technical services are untrue, such organization shall be investigated for legal responsibility in accordance with Article 33 hereof; if it is due to the reason that the staff of the approval authority neglected or breached their duties, or approved construction project Environmental Impact Assessment Documents that should not be approved according to law, they shall be investigated for legal responsibility in accordance with Article 35 of herein.

Chapter IV.

Legal Liability.

Article 29.

In the event that a plan drafting organ violates the provisions hereof, commits fraud or neglects its duty when organizing the environmental impact assessment, causing the environmental impact assessment to be seriously untrue, the person in charge who is directly responsible and other directly responsible persons shall receive administrative penalties according to law from higher level authorities or supervisory authorities.

Article 30.

In the event that a plan approval authority, in violation of the provisions hereof, approves a draft plan in which the writings or explanations on environmental impact required by the law to be written are not written, or approves a draft Special Plan in which the environmental impact report required by law to be attached is not attached, the person in charge who is directly responsible and other directly responsible persons shall receive administrative penalties according to law from higher level authorities or supervisory authorities.

Article 31.

In the event that a construction work unit fails to submit the construction project Environmental Impact Assessment Documents for approval in accordance with the law or fails to re-submit for approval of the construction project Environmental Impact Assessment Documents or to apply for renewed examination and verification of Environmental Impact Assessment Documents in accordance with Article 24 hereof and begins work on construction without authorization, the administrative department in charge of environmental protection that has the examination and approval authority over the construction project Environmental Impact Assessment Documents shall instruct the work unit to stop construction and to carry out the supplemental formalities within
a time limit and, if the time limit is exceeded without subsequently handling the formalities, may impose a fine of Rmb50,000 to Rmb200,000, and administrative penalties according to law, on the person in charge who is directly responsible and other directly responsible persons in the construction work unit.

In the event that the construction project Environmental Impact Assessment Documents do not go through examination and approval, or do not gain the consent of the original examination and approval authority upon renewed examination and verification, and the construction work unit begins work on construction without authorization, the administrative department in charge of environmental protection with examination and approval authority over such construction project Environmental Impact Assessment Documents shall instruct the work unit to stop construction, and may impose a fine of Rmb50,000 to Rmb200,000, and administrative penalties according to law, on the person in charge who is directly responsible and other directly responsible persons in the construction work unit.

If the construction work unit of an oceanic construction project commits illegal acts set forth in the above two paragraphs, it will be punished in accordance with the *PRC Marine Environment Protection Law*.

*Article 32.*

If a construction project fails to carry out an environmental impact assessment as required by the law, or the Environmental Impact Assessment Documents have not gone through examination and approval according to law, and the examination and approval authority, without authorization, approves the construction project, the person in charge who is directly responsible and other directly responsible persons shall receive administrative penalties according to law from higher level authorities or supervisory authorities; if a crime is constituted, criminal responsibility shall be investigated according to law.

*Article 33.*

If an organization entrusted to provide construction project environmental impact assessment technical services neglects its duty or commits fraud in the course of the environmental impact assessment, causing Environmental Impact Assessment Documents to be untrue, the administrative department in charge of environmental protection that grants qualification for environmental impact assessments may reduce the organ's grade of qualification or suspend its qualification certificate, as well as penalize it with a fine of one to three times the charges received; if a crime is constituted, criminal responsibility shall be investigated according to law.

*Article 34.*

If the authority in charge of preliminary examination, examination and verification, or examination
and approval of construction project Environmental Impact Assessment Documents receives or collects expenditures in the course of examination and approval, its higher authorities or supervisory authorities will order refunds; and, if circumstances are serious, will impose administrative penalties according to law on the person in charge who is directly responsible and other directly responsible persons.

Article 35.

If the staff of the administrative department in charge of environmental protection or other departments practice favoritism, abuse their powers, neglect their duty, or illegally approve construction project Environmental Impact Assessment Documents, they will receive administrative penalties in accordance with the law; if a crime is constituted, criminal responsibility will be investigated according to law.

Chapter V.

Supplementary Provisions.

Article 36.

The people's governments of provinces, autonomous regions and municipalities directly under the central government may, in accordance with the actual circumstances in each area, require an environmental impact assessment to be carried out for the plans prepared by the people's governments at the county level under their jurisdiction. Specific procedures will be established by provinces, autonomous regions and municipalities directly under the central government with reference to Part Two hereof.

Article 37.

Procedures for construction project environmental impact assessments for military facilities will be established by the Central Military Commission in accordance with the principles hereof.

Article 38.

This Law shall come into force as of September 1 2003.
Appendix B:

Transcripts for the interview

Wang zhongquan

Q1: During EIA, which stages should been involved public participation? And what is the actual situation?
A1: The stages include the screen of evaluation factors and environmental issues, impact identification and impact evaluation.
The actual situation is that the public participation will be involved in the stages of formal session and approval of the EIA.

Q2: How do you think the execution of public participation in environmental impact assessment in China?
A2: Not very well.

Q3: Is there any improvement of public participation in EIA than before? If so, Which improves?
A3: Yes, the phone number is required since 2009, and the trial Implementation Act issued in 2006 makes the public participation institutionalized.

Q4: How is the effectiveness of public participation?
A4: General.

Q5: what kind of public participation is effective in your opinion? Would you like to give some guides of effective factors?
A5: the effective factors include: Number of people, representative, range and the time span.

Q6: what are the causes of the low effectiveness of public participation as you know?
A6: the Informing effectiveness is too low.

Q7: How to improve the low effectiveness of public participation?
A7: Standardize public participation, improve the informing effectiveness, and widely choose the representative.
Li Ping

A1: In practical, public participation is just a formal, as if it is just an excuse for the EPA to deny a project, and rare projects are rejected due to public participation.

A2: If the project did not pass due to the questionnaire and they want to approve, they may organize hearings or other forms to pass the project, if not, they will make use of the objections of the nearby people.

A3: If the public participation is required and noticed, the enterprise will affix a seal from village. At the beginning, the villagers do not understand well and it can be done if the enterprise establish a good relationship with village leaders, but after some time, if the villager knows that the project cannot be approved if the enterprise cannot affix the seal, and deteriorate to make a deal with money, if the people opposed seriously, they even can not get the seal from village.

A4: The questionnaire design may also have a tricky, but in general, public participation is a channel associated with the people affected by the project to express their own will and voice, and there is some progress already. With the wide spreading of network, and the upgrading of the education level, the Obscurantist become invalid progressively and the situation will get better step by step.

Yang yong

A1: According to the guidelines, the public participation is involved before the project construction, that is the report preparation stage, and are not involved in other stages.

A2: After receiving a new project, the EIA agency should prepare the tabular form of public participation before site investigation, and then query with different age, occupations, and educated people, conduct a brief introduction of the project.

A3: Effective public participation should be announced through television, radio, the media on public transport, and the residents can understand the project, including the environmental policy, environmental protection method, economic of the project, through different channels.

A4: Questionnaire.

A5: Generally, the questionnaire should be prepared 50 copies (adjust with impact of the project),
the masses questioned, mainly in the age range from 20 to 60.

A6: The questionnaire of the status quo is that the mass do not understand or do not care about the project, make reference from local environmental quality. EIA staff should mainly inform the project and the corresponding pollution problems when explaining the doubts, thus has some educational effect, and can foster environmental awareness of the masses.

A7: If it is a large state-owned enterprises projects, we will find a handful of consent as the conclusion; if it is the municipal transport planning, we will look for public objections through public participation, and a hearing will be hold to explain the problems; the final result is the same, and approved. At the same time, the department of environmental protection would consider the project according to the degree of opposition.

A8: If the public participation is well done, it can help EIA staff to understand the opinions and suggestions of local people on environmental quality, and recommend specific environmental protection method for the proposed project; it has some impact on the construction of the project, and may be helpful for the operation of the project to reduce the environmental impact, reduce the masses complaints through reducing pollution of gas, waste water, noise and so on.

A9: Increase the announcements on public media to introduce the proposed project, expand the channels to increase the means of public participation; carefully prepare the questionnaire and control survey time when conducting the survey; present small gifts to respondents as a gratitude.

Experts Li tie: officer in Guangzhou environment protection authority
What do you think about the public participation status quo in china
PanYu public event is a great progress in Public participation in EIA. The tradition view in most chinese officers is that the less argument from public the better. They thought if there was no voice from public, it means all of people agree. But with the development of public participation, we changed our views. In fact if we involve public more, the clear the fact is. For example, public is like witness in the court, they more the witness presented, the clear the case is. So the judge could make the fair decision. The Panyu event is also a good example, public strongly against the project, so there must be something wrong with that. The EIA was reconducted because of the against of the public. I think our government also want to hear the voice from public. On the other hand, Though we have great progress in public participation in EIA, it still stay in low effective level.
Do you we get from public participation
the active participation of the public urged the government to work in a more professional level. It is conducive to building a positive interaction between civil society. This is a sign of becoming more civilized in a social decision-making, but also the beginning of forming a positive interaction between civil society.

How to improve?
Environmental protection is a public good, the fundamental driving force comes from the public. In my opinion, we should develop different environmental groups, organizations. I know in western countries, they have many kinds of environment organization, individual could attend those groups to present their own views. The more people the stronger of the power is. But in china, we rare can find this kind of organization. Even though we have, they are organized by government. So public can not really say out. In fact that is a way to get public involved. So I recommend that the environment experts they should take responsibility to organized environment group from public, and they could act as communicator between government and public. I believe that is the way to improve the public participation in China.

Experts Wang wanhua: How to improve?
We need specific regulation for public participation in EIA. Firstly the information should be open to public. Public can not participate unless they have detail of the information, so they will have their own idea about participation in the project. He said public can not be limited to assess the information. Secondly, the regulation also need clear how to involve public. In China, the most common way of involving public is questionnaire. But in fact, questionnaire can not really present public willing. Because some developer want to get the project approved, they may bribe the group of people and get positive answer. I suggest that once there is fake information made by developer, should they be punished by law. Public hearing is also the popular method used in Public participation. while public hearing is just the way to present the information to public, in reality public are always limited to question experts. There is no enough time for people to question experts and environmental agencies. So the feedback mechanism should be improved after the public hearing. Public can call or email them to complet their questions. If it is possible, they could set a special office to deal with the questions from public.