

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Environmental Sciences



Exploring the Role of Public Participation Within the EIA
Process on Waste Incineration Facilities: Case Studies
from the UK and China

Bachelor Thesis

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Environmental Sciences

BACHELOR THESIS ASSIGNMENT

Malak Osama Al-Shami

Environmental Engineering

Thesis title

Exploring the role of the Public Participation within EIA process on Waste Incineration Facility: case study from UK and China

Objectives of thesis

The thesis aims to examine how the UK and China's public participation procedures for environmental impact assessment (EIA) differ from one another. Through looking into their EIA legal frameworks, the legality extent of public participation, in decision-making that influence the effectiveness of public participation in the EIA process. In order to assess the actual effectiveness of the public involvement process, waste incineration facilities, which are among the most controversial developments, are used as examples, to assist in figuring out to what degree is the public influencing such matters.

Methodology

The thesis typology involves the processing of pre-existing data, and the research approach can further be characterized as explorative in character. Beginning from the first section of the literature review which intends to serve as a base for the thesis, through identifying and gathering the essential components and views of previous scientific publications, to deliver a robust knowledge on the topic overall. The second part contains an evaluation of the EIA Legislative Frameworks, their origins and development of the chosen countries in relation to public participation. Additionally, the chosen waste incineration facilities are introduced, and their summary of participation is described.

Existing data was analysed through governmental portals, along with previous authors who had done similar research in the topic and conducted interviews or carried out surveys to enhance their findings from a direct source, that are the residents of the affected areas of the waste incineration facilities. The reason of choice on these particular facilities is due to their recentness, which makes it easier to examine if the whole participation process had aligned with the latest legislative updates and reforms, which is then explained in the results section. Finally, the discussions section will point out the effectiveness of these public participation processes and their correlation to the political and cultural backgrounds.

The proposed extent of the thesis

Approximately 45 pages.

Keywords

EIA, public participation, legislative framework, decision-making, UK, China, waste incineration facility

Recommended information sources

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Expected date of thesis defence

2022/23 SS – FES

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Electronic approval: 7. 3. 2023

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Prague on 26. 03. 2023

Acknowledgment:

Firstly, Thank God for granting me the strength and patience to endure this ride.

I extend my eternal gratitude to my wonderful parents for supporting me both financially and emotionally throughout my studies, and for constantly encouraging and believing in me.

I would like to express my appreciation to my supervisor, Zdeněk Keken, for his mentorship.

I would like to thank Ms. Klara Ten Donkelaar for her constant support.

My Guardian Angel, Sarah - Words cannot describe how much smoother this journey has been with your existence in my life!

To the pieces of my soul; Sara, Bonyan, Najwa, Lara. You have always been my greatest inspiration and I'm very grateful for you.

Declaration:

I hereby declare that I have independently elaborated the bachelor/final thesis with the topic of: *Exploring the Role of Public Participation Within the EIA Process on Waste Incineration Facilities: Case Studies from the UK and China* and that I have cited all of the information sources that I used in the thesis as listed at the end of the thesis in the list of used information sources.

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In Prague, 23/03/2023

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Abstract:

Environmental impact assessment (EIA) is a procedure to pre-determine how development activities will affect the environment. With one key factor to the success of EIA being the involvement of the public, this thesis explores the role of public participation within the EIA process on waste incineration facilities, by comparing the public involvement on the establishment of two waste incineration facilities in the UK and China. The two cases were chosen as the effectiveness and results of EIA vary significantly depending on a country's socio-economical and political status. Waste incineration facilities are often controversial projects that tend to induce strong public opinions, which makes them a good example to compare public participation procedures and the extent to which public opinions and concerns are considered during decision-making processes.

Keywords: EIA, public participation, legislative framework, decision-making, UK, China, Asuwei, Edmonton, waste incineration facility

Abstrakt:

Hodnocení vlivů na životní prostředí (EIA) je postup, kterým se předem stanoví, jak budou rozvojové aktivity ovlivňovat životní prostředí. Jeden z klíčových faktorů úspěchu EIA spočívá v zapojení veřejnosti. Tato bakalářská práce zkoumá roli zapojení veřejnosti v procesu EIA pro zařízení na spalování odpadu, porovnáním úrovně participace při povolování dvou zařízení na spalování odpadu ve Spojeném království a v Číně. Tyto dva případy byly vybrány, protože účinnost a výsledky EIA se výrazně liší v závislosti na sociálně-ekonomickém a politickém statusu vybraných zemí. Zařízení na spalování odpadu jsou často kontroverzní projekty, které obvykle vyvolávají silné veřejné reakce a postoje, což z nich činí dobrý příklad pro porovnání postupů participace veřejnosti a míry, do jaké jsou veřejné názory a obavy zohledněny při rozhodovacích procesech.

Klíčová slova: EIA, veřejné zapojení, legislativní rámec, rozhodování, Spojené království, Čína, Asuwei, Edmonton, zařízení na spalování odpadu

Abbreviations:

CA	Consenting Authority
EA	Environmental Assessment
EC	European Commission
EIA	Environmental Impact Assessment
EIF	Environmental Impact Form
EIR	Environmental Impact Report
EIRF	Environmental Impact Registration Form
EPB	Environmental Protection Bureau
ES	Environmental Statement
EU	European Union
GB	Great Britain
LPA	Local Planning Authority
MEP	Ministry of Environmental Protection
NEPA	National Environmental Policy Act
NGO	Non-Governmental Organization
NLWA	North London Waste Authority
T&CP	Town And Country Planning
TG	Technical Guidelines
UK	United Kingdom
WIF	Waste Incineration Facility

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1 Introduction

Environmental impact assessment (EIA) is a procedure to determine in advance how development activities will affect the environment. It is an illustration of the expression "prevention is better than cure." EIA is a process that aims at a number of interconnected goals, including improving decision-making processes, and attaining sustainable development. However, it does have limitations, and is not a guaranteed solution to solve any and all arising planning issues. Rather, it should be seen, and implemented as an additional instrument that helps different stakeholders form informed, structured, and logical decisions about the effects of the proposed projects (Glasson, 1994).

Early involvement of the public is one of the EIA's principles since this is the most important time to voice concerns and opinions. This stage focuses especially on different forms of communication, so the public has enough time to get acquainted with the situations. This includes creating means of collecting and distributing information, conveying relevant details in order to improve the quality of feedback, and overall preparing to make consultations as efficient as possible (Scott & Ngoran, 2003). The extent of public involvement is a key factor in determining the level of success of an EIA (Glucker et al. 2013; O'Faircheallaigh, 2010).

There are some universal requirements and steps that are necessary for any successful public participation program in EIA, even though the design and implementation may vary depending on the specific project (Barton, 2002; Hartley and Wood, 2005). These include giving stakeholders the chance to have a positive impact on project development choices, giving them chances to hone their civic engagement abilities, utilizing their knowledge to fill in knowledge gaps regarding environmental and social impacts, validating secondary sources of information, and promoting reliability while resolving disputes (Devlin and Yap, 2008; Lawrence, 2003). These components can help ensure that the project is implemented successfully, stakeholders benefit to the fullest extent possible, and the project's credibility is increased (Hasan et al. 2018). Major barriers to the development of EIA vary geographically, but could be the lack of a strong legal framework, or adequate public participation measures. The pace and effectiveness with which environmental management institutions and regulations are developed and implemented in countries are significantly influenced by their socio-economic and political backgrounds (Marara et al. 2011).

The Republic of China and the United Kingdom have different political structures and values. On one hand, the UK has a history of democratic governance, including regular elections, an independent media, and a robust civil society. On the other hand, China, although currently operating with a centralized government and a one-party system, it has emerged into a robust civil society over the previous decade, where the political system has displayed multiple connections between the state and civilians (Wacker, 2012).

The thesis explored the role of public participation within the EIA process on waste incineration facilities, by conducting case studies from the UK and China.

Public participation is a vital part of the decision-making process connected to the establishment of waste incineration facilities. It enables community members to offer suggestions and feedback on the proposed facility, which can help to ensure that the design of the facility incorporates social and health, and environmental responsibility. Residents are able to voice concerns about factors such as a possible impact on the quality of the air and water, as well as its effects on nearby wildlife, and natural habitats.

There are consistently public concerns arising regarding lurking health risks, in addition to dominant foul odours, from municipal waste incineration emissions (Client Earth, 2021). Waste incineration facilities, a controversial issue that almost always induces strong public opinions, are governed differently in the two countries, and the impact of how the different legal frameworks serve public participation in decision-making. Overall, waste incineration facilities offer a supportive example to compare public participation procedures and to comprehend the extent at which public's opinions and concerns are considered during decision-making processes.

The literature review provides a comprehensive overview of the state of the art about EIA and public participation, including its objectives, benefits, constraints, methods, stakeholders, and effectiveness. The methodology section presents the data collected about the EIA legislations in both countries, and the public participation dynamic measured by waste incineration facility examples from each country: Asuwei in Beijing and Edmonton's EcoPark in North London.

2 Thesis Objectives

The thesis aims to examine how public participation processes for environmental impact assessment differ in the UK and China by looking into their EIA legal frameworks, and the legality extent of public participation. Furthermore, the thesis will later examine cultural and political perspectives on public participation in decision-making processes, which influence the effectiveness of EIA processes. To assess the actual effectiveness of the public involvement process, waste incineration facilities, are used as examples, to research to what degree the public is capable of influencing such matters.

3 Literature review

3.1 Environmental Impact Assessment

3.1.1 General Description

EIA first emerged in the USA in the early 1970s, as a result of Rachel Carson's 1962 *Silent Spring* book which shed light on local environmental concerns. This publication triggered a number of social movements, eventually leading to the prioritizing of environmental concerns in many legislations around the globe. Furthermore, it led to the official integration of EIA's in many policies, such as the National Environmental Policy Act (NEPA) in 1969 (MoEJ, 2021). In the past 15 – 20 years, EIA has managed to infiltrate international, and political grounds while allowing recognition of problems in relation to global environmental changes as a whole. Officially recognised in several international conventions, agreements, and protocols, such as the United Nations Framework Convention on Climate Change (Morgan, 2012) it then proceeded as one of the main drivers into tackling environmental challenges. Through EIA there is an increased focus on monitoring human practices on their impact on the environment, as well as the topic of nature conservation.

While EIA share the same set of principles worldwide, the application differs significantly across countries (Li, 2008). Prior to a project's execution, the EIA primary stages include project planning, screening, scoping, impact prediction and mitigation design, extending through to the decision itself (Arts et al. 2001). A fundamental EIA practice is informing of the impacts their project may cause on environmental and social levels, along with presenting proposals of mitigation measures as a support for the decision-making process (Weston, 2000). The practice largely includes a number of steps, involving project screening, scoping, and an EIA report (Li, 2008). EIA is considered a continuous practice and requires constant monitoring, evaluation, and improvement. Reflection on the EIA process and integrating lessons learned from the current practices and management approaches play a crucial part in countries regardless of their development status (Aryal et al. 2020).

3.1.2 EIA Predictiveness

In a relatively stagnant world, Environmental Assessment (EA) is based on the idea that future developments may be simply predicted and accordingly planned for. Though, the era in which EA was first introduced in the 70's was considerably different from today's world, and it is now anticipated that mankind is approaching a time of a

possibly unparalleled and much more intense global change induced by human behaviors (Caldwell, 1989).

Since the introduction of the sustainable development paradigm in global policy during the 1992 Rio Earth Summit, EA has typically been viewed as a bridge for attaining the Sustainable Development Goals. It has encouraged adaptability in the scope of assessments and engagement with people (Bond et al. 2015). Since the future is becoming less like the past, EA practitioners can no longer utilize the past to forecast the future as effectively, due to climate change extremes. Having to deal with a larger frequency of unexpected events will also have a substantial impact on our capacity to forecast (Duinker & Greig, 2007). Using the past to forecast the future will become increasingly difficult, particularly within the technical and linear reasoning approach that has traditionally been represented in EA practice (Owens et al. 2004). It is clear that adaptation will become increasingly crucial, and that practical methods for accomplishing and providing chances for modifications, learning, and revision throughout the proposal's life cycle, will need to be improved (Retief et al. 2016).

Less emphasis should be placed on our capacity to forecast and prevent all unwanted outcomes. Instead of believing that environmental planning will eliminate or diminish the need for EIA, there should be better recognition and investigation of the degree and manner in which EIA can create benefits for the environment that last beyond the decision point. EIA should be improved in some way to support latter environmental management (Bailey, 1997).

3.1.3 EIA in the Decision – Making Process

'Decision-making' can be defined very broadly as, the process of choice, which leads to action (Kitajima & Toyota, 2013). Here, the phrase is primarily used in this context to refer to the permission decision made by EIA authorities. Decision-making is the most inclusive step in EIA. Is the combination of an analysis report approval, clearance, and permission to continue the project. Upon approval from the relevant authorities, followed by stakeholders, with knowledge of the impacts accompanied by the project and a socioeconomic management plan, it then proceeds for implementation (NCEA, 2021). To create a level of trust and transparency with the communities, NEPA focused on public involvement as another essential principle of EIA. Established by requiring the agencies to release a statement in detail explaining the current environmental status and how the upcoming project is likely to affect it, along with their mitigation plan. Keeping the public informed, paves the way for a fair

decision-making process, which leads to robust choices being made and better outcomes for both people and the environment (IAIA, 2006).

Since EIA is considered a bridging process between practice and decision-making, it defines the integration points among EIA's technical and bureaucratic activities with decision-making processes. Where decision-makers may discard an analysis report proposed if the linkages were deemed insufficient or handled incorrectly (Lawrence, 2004). To ensure quality, a comprehensive investigation of previous developments is crucial, for structuring proper knowledge of the relationship between cause and effect, which must be applied in future assessments (Duinker & Greig, 2007).

3.1.4 Future Directions

Since EIA currently operates in very complex situations with more intertwined geopolitical uncertainties and tensions, the prospect for EIA is dependent on our understanding and engagement with a wide variety of topics and trends (Retief et al. 2016). The goal is for EIA to contribute into defining the future rather than being defined out of it (Banhalimi-Zakar et al. 2018). Whilst the Paris Agreement objectives of 1.5°C and 2°C are alarmingly unlikely to be fulfilled (UNEP, 2019). For this scenario, all forms of impact assessments will be essential in providing the data required to support climate change action, enhance environmental integrity, and build a sustainable future (Bice & Fischer, 2020). Bailey (1997) pointed out that despite the abundance of practice and publications, there was a shortage in the exploration of the relationship between environmental management and EIA and that it needs further investigation. The role of EIA beyond the decision to proceed appears to be underexplored within theory. Which covers two parts: Firstly, how an EIA may identify environmental design and management standards as a framework for the proposal's thorough planning and execution. Secondly, requiring an adaptive monitoring program to regulate the proposal's implementation. Smith (2014) proposed that, in order to improve the science of impact assessment, greater emphasis should be directed to environmental management or project results rather than their estimation. Montano & De Souza (2015) imply the essentiality of systematic assessment of EIA efficiency and the classification of development of techniques and approaches to cover gaps in knowledge, that are identified in relation to, baseline information, alternatives evaluation, cumulative impacts, follow-up, and public involvement. Finally, there are several countries where EIA is currently underdeveloped, or largely unexplored (Fischer & Onyango, 2012). A major constraint in this context is that, even

in systems with formalized EIA, the instrument is hardly applied, creating various gaps (Khosravi et al. 2018).

3.2 Public Participation

3.2.1 General Description

Public participation, defined as “any action taken by an interested public (individual or group) to influence a decision, plan or policy beyond that of voting in elections” (Smith, 1984). In another context, it is the engagement of people and organizations in decision-making processes, of projects, plans or policies that either have a direct impact on them (positive or negative) or merely out of interest. It recognizes the public's right to early information and active participation in decisions that could have an impact on their lives (Andre et al. 2006). The U.S. EPA (2001) emphasize that everyone should be able to participate meaningfully in society, regardless of their race, color, nationality, sexual orientation, or level of income, and (Dietz & Stern, 2008) categorized the types of participating public into the following:

- Stakeholders: individuals, interest groups, and communities that are involved with or affected by an issue and a decision's outcome.
- The Directly Impacted Public: persons and NGO groups who will be impacted by the result.
- The Observing Public: social elites, the media and influencing leaderships.
- The Common Public: those who have no direct impact by the issue but have an interest or opinion on it.

Arnstein (1969) defines public participation as, “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”. A perspective of which empowering formerly marginalized people can be accomplished through public participation. (National Research Council, 2008; Fung, 2006) mention the following contexts that affect public involvement:

- Intensity and Influence of Involvement: When it comes to levels of involvement, public participation practices can vary considerably, with a wide spectrum ranging from short-term minimal opportunities for written or verbal expression of opinion in public gatherings, or surveys that serve as inputs to a fulfill a legal formality without a follow-up. To comprehensive interactions of serious information inputs, regular

dialogs and professional analyses through advisory committees which could last until the project implementation phase.

- **Goals of Participation:** processes usually vary in their goals. Some people seek general agreements on a policy decision, such as in a regulatory negotiation process. have modest objectives, such as identifying values, interests, and concerns, collecting information for evaluating environmental conditions, or conducting environmental analyses to inform an administrative decision that is unlikely to satisfy all interested or affected persons.

Overall Participation processes may be held to educate or empower the public, or simply to gather information and concerns. Therefore, there ought to be a uniformed direction towards sculpting the public's knowledge on the EIA procedures, in order for it to be more effective. Then for societal sustainability achievements to be attained factually, it requires adequate public inclusion, and not only to exist as a formality in policies and plans (Sadler, 1996).

3.2.2 Objectives of Public Participation

The addition of public participation into the EIA process is primarily influenced by two aspects: it is viewed as an instrument for ensuring the quality of an Impact Assessment decision, and additionally, is intended to establish democratic credibility (Dietz & Stern, 2008). The practice should include opportunities to inform and enable the impacted communities, and allow them to voice concerns, and ideas in the documentation and decision-making (IAIA, 2004). "There are many objectives which can be achieved by public participation and there is no single procedure such as public hearings, which is effective in achieving all of them. Rather, there are a wide variety of public involvement techniques which the responsible institution or consultants (planner) can choose, and decisions must be made initially and throughout the planning process as to which techniques to use, when to use them, and how to apply them" (Hanchey, 1999). Hanchey (1999) suggests three broad objectives shown in **Figure1** that are proposed for planners to consider when developing a public participation program for a specific planning situation, the explanation below the diagram is based mostly from (Hanchey 1999; Scott & Ngoran, 2003) unless a different author is mentioned.

The Objectives of Public Participation

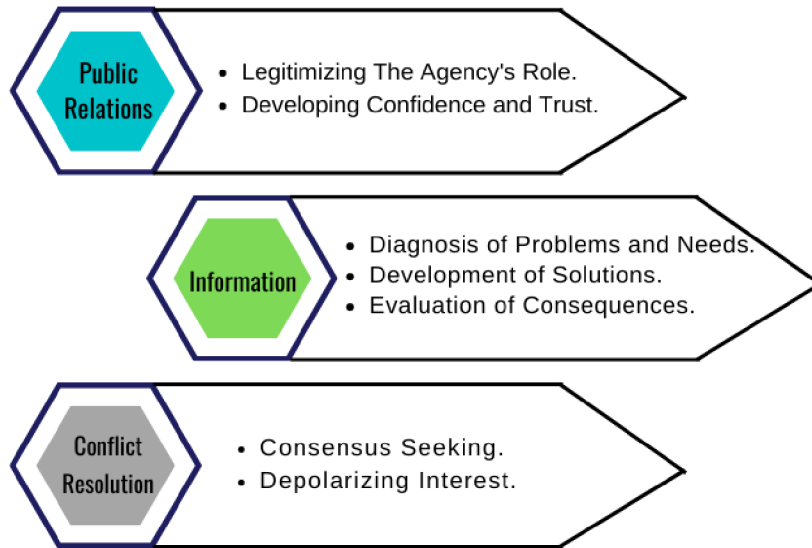


Figure 1 - Objectives of Public Participation, from (Hanchey, 1999)

1. Public Relations Objective: The public relations goal is built on the notion of, in order for the planning agency to develop plans that have broad public support and approval, the public must consider the agency's role in the planning process as credible, and they must have confidence and trust in the agency and its planning procedure.

- Legitimizing the agency role: there usually is lack of information to the public on the responsibilities that the planning agency and its authorities have. A notable portion of public dissatisfaction arises from the public's failure to understand that the agency operates within limitations imposed on them by higher authorities, which inhibits them from pursuing alternatives preferred by the public. This can create a dispute, as these authorities lag to meet the people's expectations due to the "compartmentalized structure" of public programs therefore creating a loss of credibility. Hence, it must be clarified to which extent participant's feedback is going to influence a decision, and on which basis and criteria do decision-makers build their choices (Hanchey 1999; Glucker et al., 2013).

- Developing confidence and trust: Hovland, et al. (1953, as cited in Hanchey), stated that a participant's willingness to believe what a communicator suggests, depends on the degree to which a communicator is perceived to be an experienced, reliable source of information. Additionally, a communicator's display of trustworthiness

through their level of confidence and legitimate intention, to present the most valid assertions. Communication between the agency and the public is likely to break down in the absence of this confidence and trust, increasing the risk of error and misinformation, therefore, authorities should present to the people as the most reliable source of information. Barton (2002) adds that people who will be impacted by a proposed project must consent to it. While this may be desirable on a democratic point of view. Nowadays, decision-makers can no longer control society in a hierarchical manner, so stakeholder involvement is crucial, as they depend on the public's assistance since they control essential resources, for example: lands, property, or the power of protesting (Runhaar, 2009).

2. Information Objective: The information part focuses on the planning phase, where the planner selects the issues that need to be resolved during the planning process and seeks for solutions that will be supported by the general public.

- **Diagnosis of problems and needs**: usually when viewing the same situation, people have different perceptions and values, as a result, see different problems (Glucker, 2013). On one aspect, planners often tend to undervalue how the general public sees a problem due to certain perceptions of having superior qualifications and knowledge. The public, however, is likely to perceive the specialists as having very technical-specialist views and are no real consideration to the community's social principles. Webler et al. (1995) emphasizes the significance of dialogue among a group of people, in order to better understand their various points of view and create mechanisms for collective action.
- **Development of alternative solutions**: At this point the planner should be given the opportunity to start early in the study to narrow-down the range of social and political viability. Not only does the community have concerns that it would like the planner to address and assist in resolving, but it also can have an overall awareness of potential solutions (Scott & Ngoran, 2003). Public participation will improve the quality of the decision output and the generation of suitable alternatives by providing decision-makers with environmentally and/or socially relevant information and knowledge (Glucker, 2013; Uittenbroek et al. 2019).
- **Evaluation of consequences of alternatives**: The public must be provided with not only the alternatives but also the future effects of each alternative's selection as detailed as possible in order for them to make rational value judgments. The public

may assist in predicting the effects of choosing particular alternatives because of their familiarity with the area (Scott & Ngoran, 2003).

3. Conflict Resolution Objective: Conflicting interests and opinions are unavoidable in environmental assessment due to the complex nature of the challenges it holds. Nevertheless, the process of resolving conflicts "can be productive rather than destructive", and through it, it can be discovered that the will to collaborate and common interests do exist (Delli Priscoli, 1988). Conflicts between the participants may result from variances in views, ideologies, interests, desires, or values, or they may be brought on by the lack of certain resources. A competitive environment can lead to conflict. There are two ideas that can be used to describe a constructive method of handling conflicts, seeking consensus, and avoiding taking extreme positions. As summarized in Scott & Ngoran (2003):

- Consensus seeking: In this method of cooperative conflict resolution, the groups who are at conflict work together to find a solution. there are several reasons, as mentioned by Deutsch (1969), on why a collaborative process is likely to result in an effective conflict resolution:

- I. Fosters a friendly, trusting attitude that heightens the awareness of similarities and shared interests and experiences.

- II. Encourages the participants to communicate important information in an open and honest manner.

- III. Promotes acceptance of the legitimacy of the other party's interests and the need for seeking a solution that meets the needs of both parties.

- Avoidance of extreme positions: Participants are prone to often perceive conflicts as situations in which a party involved in a conflict can only take one of two positions - with or against. This is an adversarial process. Some of its consequences include:

- I. Promotes the belief that the only possible solution to the conflict is one that is imposed.

- II. Communication between the opposing parties is untrustworthy and inadequate.

- III. Fosters a questionable, negative stance, making people more susceptible to differences and threats.

Public participation may be used to make EIA more effective by assisting in the achievement of its objectives and increasing the legitimacy of the decision-making

process. The preceding overview also demonstrated that some of the objectives of public participation in EIA necessitate different practical approaches than others (Glucker et al. 2013). The problem is that some of the individual objectives identified in the literature are complex and necessitate careful definition and evaluation. An example of one frequently mentioned objective, is to meet the growing demands or priorities of the people, to be considered when deciding. Nonetheless, such a requirement could comprise a variety of approaches, starting from treating the community opinions as one of multiple variables being reflected in decision making, to directly dismissing those options and failing to obtain people's support (Devlin & Yap, 2008; O'Faircheallaigh, 2010).

3.2.3 Reasons and Methods of Public Participation

1. Reasons

Several assessment methods have lost their legitimacy since they were only expert-driven, and the public could only respond to decisions that had already been made (Saarikoski, 2000). The implementation of unpopular policies or the conduct of unpopular actions may result in protests, and public participation will lessen these protests and stop the decline of public confidence in the governmental authorities (Rowe & Frewer, 2000). More reasons indicated by (Webler et al. 1995):

- Enhancement of the democratic scenario, through public decision-making processes, where people get to exercise their rights and freedom of opinion expression.
- Affected parties are able to present and defend their point of view, which increases the legitimacy of the outcome and gives everyone an equal opportunity to have an influence.
- Sustainable development and environmental preservation are an additional reason for involving the public in the EIA process.

Environmental activists, interest groups, or the local population who are concerned about a more environmentally friendly outcome frequently spark the participatory EIA, leading to more environmentally conscious decisions (Graf 2011; Kapoor 2001).

2. Methods

“The way a public participation process is conducted can have more influence on overall success than the type of issue, the level of government involved, or even the quality of pre-existing relationships among the parties.” (Dietz & Stern, 2008).

There is no specific approach that can be used for all public participation processes. The following methods are currently thought to be the most efficient as summarized in the following **Table 1** by (Rowe & Frewer, 2000; Prem et al. 2017).

Table 1 - Explaining the Methods of Participation

Participation Methods	Type of Participation
Public Meetings/Hearings	Open meetings for all interested citizens, where they can give their comments. Main participants hosting are experts and politicians holding introductory presentations.
Advisory Panel	a collection of individuals chosen to represent different stakeholder groups that meets on a regular basis to review work completed, provide feedback on results, and guidance on future work.
Open Houses	an equipped facility in a suitable location to the local community, with an information display about project related matters. Participants can come in to get information and express their concerns/opinions.
Interviews	A constructed sequence of open-ended interviews with selected members of the community to collect information/concerns/opinions.
Surveys and/or Referenda	A structured written set of questions, to better identify the local's concerns, perspectives, and opinions. This has a considerable number of concerned citizens to cast their votes on the matter.

Participatory-appraisal techniques	A methodical approach to evaluation based on group research and analysis, therefore, obtaining numerous and diverse inputs. External specialists may assist, but not control or direct it.
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Workshops	Although it requires a high level of preparation, which may include various kinds of leaflets, organizing visits, press coverage, and close communication with affected parties. It can deliver a good combination of the benefits of some of the methods above, and constantly seeking/encouraging to reach a convenient solution or consensus for all affected parties (Graf, 2011).
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3.2.4 Benefits and Constraints of Public Participation

1. Benefits

Every evaluation process involves conflicting demands and strategic interactions between project developers and opponents, or between a number of stakeholders, all of whom are attempting to persuade the decision-making of the relevant authority (Devlin & Yap, 2008). When public participation is carried-out as a two-way communication procedure, it can resolve misunderstandings. Furthermore, it allows for the identification and resolution of issues while the project is still in its preliminary stages (Graf, 2011; Kuvarega, n.d.). Many people view public participation as a fundamental civil or human right, it is also thought to have a number of real, concrete advantages (Burton, 2009). Burton (2009); Mostert (2003) point out the core benefits of public participation:

1. Creative and well-informed decision making: As participants are obligated to think thoroughly about their preferences and needs and are more familiar about their overall community when expressing their demands, this leads the relevant authority to develop the most suitable decision stemming from the multi-perspective negotiations.
2. Holds an educative role: As people become more engaged, they discover the potential of offering valuable contributions in different areas, therefore, they develop into more well-rounded, knowledgeable community members. Additionally, they gain

knowledge of the difficulties faced by those who make public decisions as well as the complications and difficulty of those decisions.

3. Identity and Expression: By empowering individuals to participate in decisions that affect their own lives, the relevant authority confirms that individuals are valued in the society, with something worthwhile to contribute.

4. Social knowledge: citizen engagement promotes community growth and forming stronger bonds this naturally relies on the social forms participation, such as, public meetings and focus groups. Assuming that all parties, the various publics, the government, and the experts, engage in a constructive discussion.

2. Constraints

Effective stakeholder participation in the EIA process necessitates addressing the following difficulties and constraints (Lee et al. 2013):

- Varying education and knowledge levels, inhibiting mutual agreements and communication.
- Absence of proper understanding of the likelihood of impacts from the locals.
- Non-inclusive participation (i.e., certain groups or genders).
- Cost or time barriers to handle the process efficiently.
- Lack of understanding of the legal practices.
- Insufficient regulations and consultation training.

Furthermore, the introduction of public participation in decision-making on a governmental level can prove difficult as some authorities may not see the value in it and fear that overly engaged citizens will cause social dispute (Shan & Yai, 2011).

One common mistake of project planners is deploying NGO's to act as representatives for local communities, in an attempt to conserve resources, which can result in disputes. Firstly, they are not able to fully represent the locals in the correct manner with their actual concerns, due to potential biases, and/or different knowledge and local backgrounds than those anticipated area residents.

Furthermore, community members should be treated as crucial stakeholders, practicing their own rights of expressing knowledge and interests (Lee et al. 2013). If any of the identified components make the transition to the EIA process more difficult, a more cautious tactical planning should be developed on how the stakeholders can be involved.

3.2.5 Effectiveness of Public Participation

The role of public participation in the development and implementation of new policies has increased in the last few years. Governmental organizations frequently try to legitimize their policy choices through public participation processes, including the public before application. However, research suggests that these efforts to engage the public are not always successful, and there are difficulties to measure the effectiveness, as it is not possible to easily transfer the results into quantitative data. To gain a better understanding of the overall effectiveness of EIA, it is essential to evaluate the adequacy of public participation in decisions related to EIA (Nadeem & Fischer, 2011; Fiorino, 1990; Rowe & Frewer, 2000; Webler et al. 2001). An effective participation exercise, for instance, might be one that is in some way "reasonable", and various related criteria might be established. Effective participation may be indicated by an "improved" output from a decision-making perspective, and alternative criteria related to decision quality may be specified. The question of "effective according to who" was raised by Rowe & Frewer (2004; 2005), the process could be defined as complicated as it involves a number of constituencies, including the participants, sponsors, and the general public. As a result, what is deemed as effective depends on the perspective of the person asked. Participants, for instance, may be pleased with a consultative process, and consider it effective, whereas sponsors may be unsatisfied with the generated suggestions and consider it ineffective.

Brown & Chin (2013) tried to provide possible evaluation variations. They point out that there are a few ways to assess the effectiveness of a participation process, with a number of the evaluation variations being mentioned in previous chapters in the literature, and further below, from (Brown & Chin, 2013; Rowe & Frewer, 2000; Scott & Ngoran, 2003):

1. Early involvement: As soon as conclusions and values become apparent in the process, the public should be involved.
2. Transparency: The practice should be open to the public to see what is progressing and how decisions are reached.
3. Adequate resource accessibility: There are no flawless public participation strategies, and success relies mainly on the developer's interactions with the public. The demographic of the public that will be encouraged to participate by each technique is an important metric to consider when evaluating involvement techniques.

4. Identifying appropriate stakeholders: Upon filtering the relevant stakeholders and determining how they relate to the proposed development; it will be simple to determine the adequacy of the used techniques.
5. Non-technical Information: The data presented should contain details in an easy, comprehensible language, and simplified technical terminology.
6. Sought consensus: Consensus and understanding are the foundations upon which decisions resulting from public participation were made.
7. Summary of influence: The whole process outcome ought to have a real influence on the policy.

All stakeholders must be motivated and work together to ensure effective public participation in environmental issues. It requires expertise from authorities as well as community trust. This, however, may require more time to build. The process could easily lead to a result that is agreeable and desirable to all parties if public participation is transparent, and reliable. A credible public participation process is a prospective approach for effectively and peacefully resolving conflict over important projects in any situation (Chompunth, 2012).

3.2.6 Stakeholder Involvement in EIA

Involving the public should be frequently done during the scoping stage. This is vital to accomplishing the project's goals, as it will help detect all critical challenges, gather local knowledge about the project's area, and explore different approaches. There should be specified any particular guidelines for public participation in the preparation, review, and follow-up phases of EIA (McCabe & Sadler, 2002). Lee et al. (2013) suggest that before EA construction starts, it is crucial to create a plan for stakeholder engagement; ideally, this plan will be included in the guidelines. If this is not possible, a different plan could be introduced later, most likely by the EA supervisor with input from a sociologist who is acquainted with the culture and the various strategies, for incorporating stakeholder involvement.

Mwalyosi & Hughes (1998) analyzed that the most influential EIA's were those engaging a wide variety of stakeholders, shown in **Figure 2**. Hence, the developments had more benefits on both the social and environmental levels. EIA's that were not inclusive, on the other hand, frequently had less of an impact on planning and execution, leading to higher social and environmental costs.

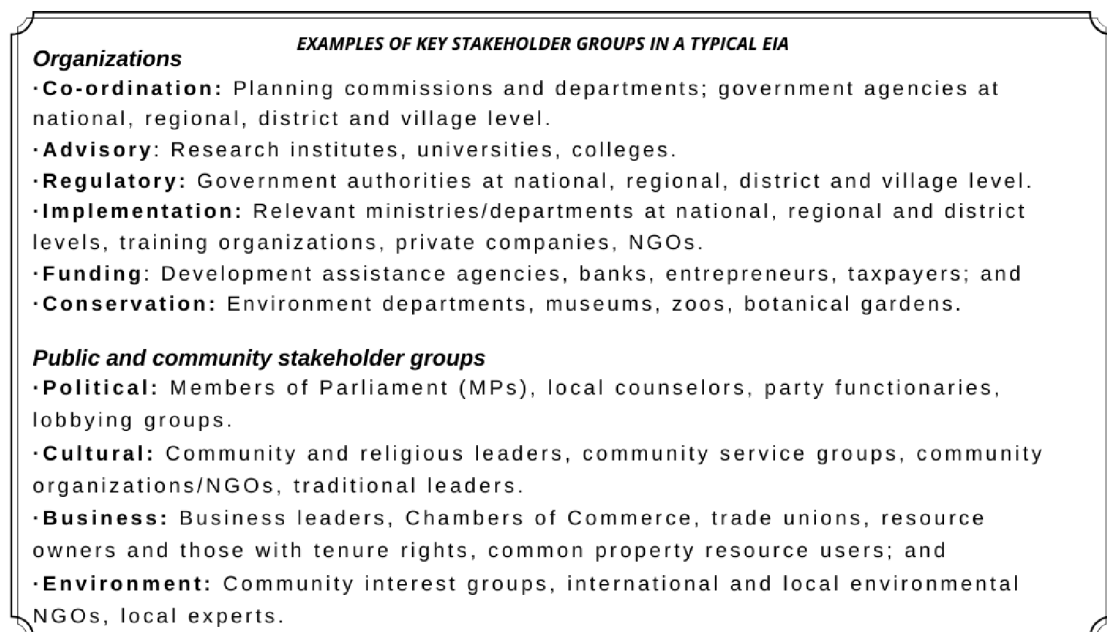


Figure 2 - Examples of Key Stakeholders in EIA, from (Hughes, 1998 as cited from ODA, 1996)

Adnan et al. (1992) & Hughes (1998) distinguished the manner between participation and consultation, where the former indicates a method for influencing decisions that have an impact on the stakeholders. And the latter implies that consultees have little say or control over the process. Terminological ambiguity often, and occasionally on purpose, obscures crucial issues and presents environmental assessment activities incorrectly to influential decision-makers.

The expression "participation" has been used more regularly in recent EIA literature to refer to information gathering or public relations activities than to collaborative, empowering practices (Hughes, 1998). However, the term stakeholder involvement, incorporates both consultation and participation, since it includes the whole spectrum of parties, as seen in **Figure 2**. Aloni et al. (2015) conclude that, a robust legislation is required, and people must constantly be made aware of the value of EIA. Stakeholder involvement is necessary for sustainable development to succeed, with their opinions considered rather than dismissed. Before the project's implementation, areas where it is obvious that a project will have an adverse impact on the environment, must be provided with the necessary services.

4 Methodology

The level and impact of public participation in issues involving waste incineration facilities differ between the UK and China, due to differences in the apparent socio-political contexts, with public participation significantly influencing the decision-making and outcomes of such cases.

The thesis involves the processing of pre-existing data. Beginning from the first section of the literature review which intends to serve as a base for the thesis, through identifying and gathering the essential components and views of previous scientific publications, to deliver a robust knowledge on the topic overall.

Existing data was gathered through governmental portals, along with the analysis of previous research in the form of interviews and conducted surveys. The reason of choice on these particular facilities is due to their recentness, which makes it easier to examine if the whole participation process had aligned with the latest legislative updates and reforms, which is then explained in the results section.

4.1 The Republic of China

4.1.1 Legislative Framework

In 1973, the Environmental Quality Assessment program and the Environmental Impact Assessment were both tested at a national conference on environmental protection. It was established that a proposed project must be planned and carried out alongside pollution prevention and control measures, which is known as the "Three Simultaneities" concept. In China, the 3Ss were made a requirement for the majority of development projects in 1972, and the Environmental Protection Law's trial implementation in 1979 signaled the official beginning of EIA in the nation. Then, in order to provide guidelines for conducting EIA, the Management for Environmental Protection of Capital Construction Projects was published. (Ning 1988; Wang et al. 2003; Zhang et al. 2012). An amended law was passed in 1989 where the Environmental Protection Law was officially authorized, followed by a new legislation in 1994 concerning environmental protection (solid waste products, water, air, noise pollution). Although it was not confirmed at the time, it was believed that new EIA directives were set to be released in 1997. This modification included new guidelines regarding screening, which could only happen after an initial submitted examination, and the EIS, which should contain clear content with structured guidelines. Furthermore, it was decided that only officially approved experts could prepare EIS.

It is important to note that there were no requirements stated to include a public participation process. The NEPA oversees projects that are strategically or financially significant on a national level. At the regional level, the Environmental Protection Bureau (EPB) manage EIA. The city or province EPB's are in charge of projects that are less important but still require an EIA (Donnelly et al. 1998; EPC, 1996; Jahiel, 1998). The environmental protection guide must be designed, built, and operated in parallel with projects, according to the Regulations of Environmental Protection Management of the Construction of Projects, which was released in 1998. Though, EIA is in charge of authorizing project developments (Ning, 1988; Yang, 2020). An updated EIA law was offered in 2002. However, Wang et al. (2003) pointed out that many of the shortcomings of the previous version were left unrevised. The Chinese government has implemented several EIA restructurings in the past few years. The EIA for Planning and the initial refinement of the EIA Law were both put into effect in 2003, and 2009 saw the issuance of the designated law for planning EIA. The series of modifications were applied to strengthen the administrative modernization, in response to the social advancement and economical expansion (Yang, 2020). Nevertheless, prior studies have not adequately covered the evolution of EIA in China since the improvement of 2015 began, and the assessment between before and after improvements (Ren. 2013; Jia et al. 2011). In 2016 and 2018, the EIA Law underwent revisions. Additionally, the law governing construction projects was adjusted in 2017.

4.1.2 Projects Subjected to EIA

Three project categories are recognized given that not every construction project necessitates an extensive environmental impact report (EIR). Below are the categories listed from major to minimal impact. A screening summary with thresholds for the project's characteristics, size, output, and environmental parameters, is used to decide which projects to place in which categories. (Wang et al. 2003; ESIA China, 2017).

- Category A: Environmental Impact Reports (EIR) are required for projects that possess the potential to have a number of major negative environmental effects.
- Category B: Environmental Impact Forms (EIF) must be completed for projects that could result in a small number of negative environmental impacts.
- Category C: EIA is not necessary for projects that are not anticipated to have substantial negative environmental impacts, but environmental impact registration forms (EIRF) must be completed instead.

The feasibility analysis would be the first step in the EIA process, which consists of several steps as shown in **Figure 3**. Three parts of EPB's have the authority to approve an EIR: Three parts of EPB's have the authority to approve an EIR: county or municipal EPB's, provincial, independent region. The State Environmental Protection Agency approves the EIR's for the following four types of construction projects (Yuan, 2017):

1. Nuclear-related projects or projects requiring strict secrecy.
2. Trans-boundary projects that extend to over one province, region, or municipality.
3. Projects with a value of more than 20 million Chinese Yuan that have been approved by the State Council or by departments which the State Council has permitted (Yang, 2020).
4. If the relevant EPB's could not agree on the EIR of projects with the potential to have trans-boundary effects.

4.1.3 EIA Stages

1. Screening

Technological advancements have made it possible to move some projects from higher to lower categories because they have less of an impact on the environment than they did in the past. Screening was recognized as a formal step in the EIA process in the revised technic guidelines for the general program in 2011, HJ 2.1-2011, as amended (TG-EIA, 2011). Depending on the project, either the EPB or MEP may conduct the screening. Construction projects are screened to determine whether they need a comprehensive EIR, a less thorough EIF, or a straightforward EIRF (Suwanteep et al. 2016) The following information must be included in the initial document (ESIA China, 2017):

- The EIA registration review and screening decision-making process have a 15-day timeframe.
- Providing information on the proposed projects, such as their location, funding needs, and characteristics.
- Standard environmental conditions for the project's site and the area around, with an outline on potential environmental effects of the project under consideration.
- Possible environmental effects of the project under consideration, along prevention and mitigation strategies for the negative effects arising.

- Pollution control facilities and investments are part of the environmental management strategy.

2. Scoping

The creation of a scoping document was necessary prior to the adoption of EIA law. The process of creating a scoping document is currently optional. Though, the assessment's scientific thoroughness improved in the reformation between 2015-2019 (Yang, 2020). Scoping is based on considering the potential environmental effects, in accordance with the categories listed previously. A scoping report usually involves information on the pollution and emissions of the project, methods of assessing and mitigating impacts, technical details on impact prediction and assessing the magnitude, along with a work schedule and an estimate budget. There is no set timeframe for the scoping stage (ESIA China, 2017).

3. Impact Assessment

The evaluation takes into consideration social, environmental, and economic impacts. The criteria for social impact assessment are strengthened by the 2011 revision of the General Technical Guidelines (TGE, 2011):

- Public health, history and culture, community facilities, land obtainment and relocation are all considered.
- Creating a socioeconomic guideline and predicting effects through quantitative and qualitative explanation of shifts, with an emphasis on the former and the use of precise technologies.
- Identifying mitigation and management strategies, and assessing social impacts, both negative and positive.

A survey is performed to evaluate the environmental condition of the impacted area is part of the fundamental assessment process. The project is also subjected to an engineering analysis to determine all of its potential effects on the environment, during both construction and post-completion. A matrix, chart overlay by Geographic Information Systems (GIS) are among the suggested methods to detect possible impacts. Following that, identified effects are contrasted with local and regional environmental standards. The EIA report will then be completed after environmental measures are recommended based on these findings. The EIA study's consultants must be evaluated and approved by (MEP) Ministry of Environmental Protection (ESIA China, 2017).

4. Review

Based on the project, either the EPB or MEP conducts the review. Regulations did not contain a review clause prior to 2017. As a result, there were differences in principle, and financial structure among the review institutions, where some charged developers a service charge carrying out an EIA review. The regulations were revised in 2017, to make them more coherent and to standardize the EIA review process (Yuan, 2017). For the suggested mitigating measures on category A, and the validity of the overall conclusion of the EIA report, EPB consults experts for full reports assembly, through workshops, and public consultations for input collection, which lasts for a month. As for Categories B&C are examined by the EPB or MEP. There is no legal mandate to get the expert's or public's opinions when creating their reports. Yang (2020) mentioned that the performance of the review process has significantly increased since the decentralization policy was put in place. Around 90 thousand construction projects carried out with EIA in 2018, yet only 22 received the approval of Ministry of Ecology and Environment. Local authorities had loosely granted EIA approvals to polluting industries, as a result of their desire for economic progress. Furthermore, due to the cancellation of EIRF evaluation, about 80% of development projects need to merely complete an online registration (MEE, 2018). The review and similarly the decision-making processes takes between 30-60 days depending on the project category.

5. Decision – Making

The regional authorities are typically in charge of making the EIA approval decision. Though, the following building projects must have their EIA documents approved by the State Council's competent department of environmental protection, nuclear facilities, sensitive trans-provincial, regional, or municipal construction projects. Additionally, construction operations with unique characteristics that could have a significant environmental impact. After environmental authorities have issued their EIA review opinions, the National Development and Reform Commission at the central and local levels typically decides on approving the project. The environmental departments responsible for reviewing and approving the EIA reports have websites where the decisions are posted in an abridged format. In regard to appealing, a legal argument will be submitted to the courts if the outcome is unsatisfactory. By filing public interest lawsuits, the public may claim compensation and receive assistance from public interest attorneys or NGO's such as the Fund for China Environmental Protection. One may appeal either the final approval or the EIA report decision. It is

legal for members of the public who might be impacted by the proposed project or their representatives, to file an appeal (ESIA China 2017; Yuan, 2017).

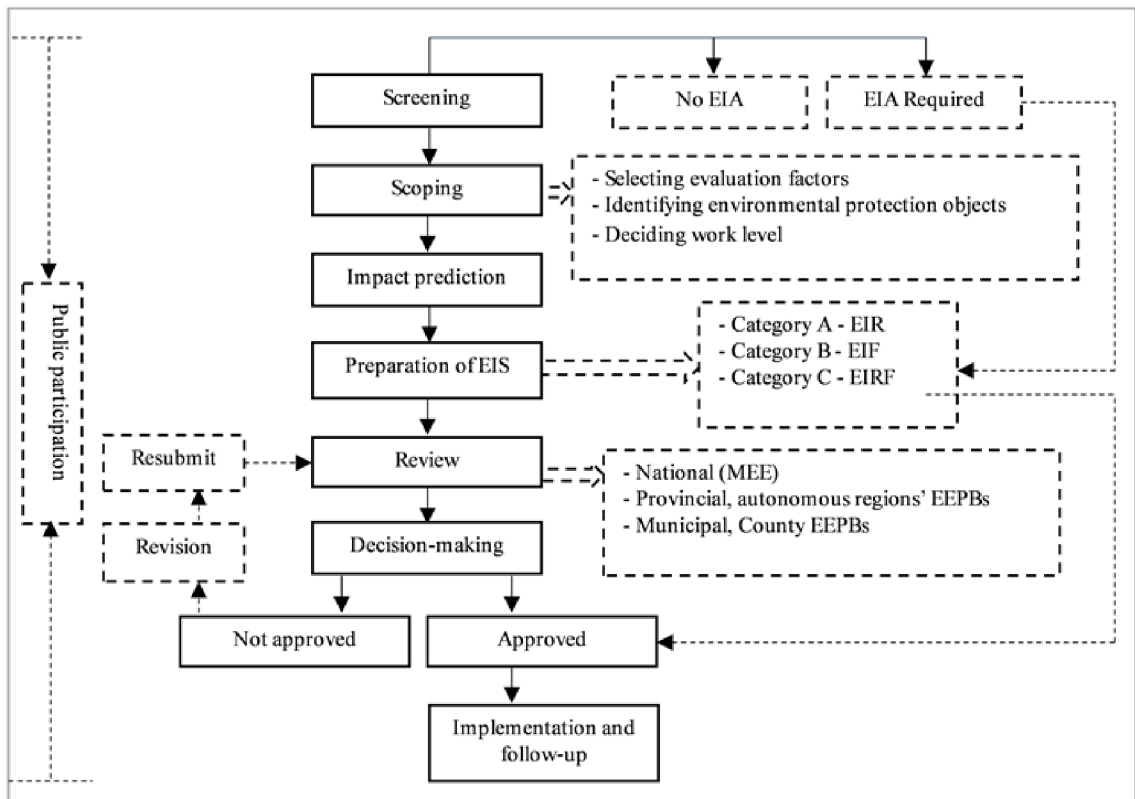


Figure 3 - China's EIA Process, from (Yang, 2020 originally from Technical Guidelines of EIA China)

4.1.4 Public Participation – Legal Setting

The Public Participation in EIA Measures were released in 2006. They are the country's first law governing public participation in environmental protection. From then, regulations for public participation were newly mandated, during the evaluation phase of the EIA report draft; this is particularly true for category A developments, where the consultant is responsible to get feedback from the affected members of the public, which lasts 45 days. According to the 2011 Revision of the Technical Guidelines (TG), the project's potential immediate or non-immediate effects on locals, NGO's, businesses, and extended community members, must be discussed with stakeholders who represent these groups. With surveys, interviews, committee discussions, forums, public hearings, or other techniques may be considered as consultation methods (ESIA China, 2017; Order No. 4 of MEE, 2019; Order No. 35 of the MEP, 2015).

1. The Preliminary Phase (1991-1997)

This phase is where public participation is merely a suggested option rather than a necessity (Chen, 2013). With the support and in compliance with the mandatory requirements of the international organizations that finance infrastructure projects, an EIA training program funded by the Asia Development Bank in 1991 took place in China and was the first to introduce the principle of public participation. The concept was then emphasized in the joint cooperation by international organizations in the financial field, attempting to consolidate the EIA management of projects in development in 1993. Which required that funded projects must adhere to both Chinese law and the standards of international donor organizations, the mandate for public participation (Yang, 2008; Zhang et al. 2012; Zhao, 2010). 1994 saw the release of Agenda 21 in China, it highlighted the critical role that the public could play in achieving sustainable development and support the action on the environmental protection plan. Therefore, the State's Council promoted the creation of a participation process in 1996 to motivate people to get involved in the path towards ecological sustainability (Chen, 2013, Zhang et al. 2012).

2. The Steppingstone Phase (1998- 2005)

In 1998 the Environmental Management of Project Constructions issued a regulation which was made public participation an official component of EIA, through requiring developers of projects to seek surrounding communities' feedback on upcoming developments, when compiling the EIR (Li et al. 2012; Zhao, 2010). The 1998 EIA Executive order mandates that consultation is conducted in accordance with applicable legal requirements in other regulations, however, Gu & Sheate (2005) mention that there is no such requirement in other regulations. The released 2002 EIA Law, effective from 2003 in China aimed to improve the legal standing of public involvement in EIA by inviting relevant professionals, and the general public to participate through appropriate outlets. (Zhang et al. 2012). The law, however, lacks specific operational provisions on how to carry out public participation in the EIA process. Moreover, it still appeared to lack the crucial "how's" in regard to participation methods, communication, submission timeframes and appeals. (Chen, 2013; Li et al. 2012). The other public participation provisions in EIA legislation still requires improvements , even though the Interim Measures for Hearing the Administrative License in Regard to Environmental Protection, had been released in 2004 to guide appropriate practices for the public consultations and hearings (Chen, 2013; Gu & Sheate, 2005).

3. The Complete – Acknowledgment Phase (2006-2019)

According to Chinese academics and practitioners, the 2006 Ministry of Environmental Protection EIA regulation represents a significant improvement over the 2002 EIA Law, as it clarifies more specific guidelines for "how" the public can participate and "who" will be included in the consultation phase. It also elaborates on the rights and roles of participants, project developers and environmental sectors (Zhang et al. 2012). The Regulation on the Disclosure of Government Information and the Disclosure of Environmental Information, published in 2007, ensures further improvement of adequate participation rights throughout the EIA process (Li, et al. 2012). Although public participation has already been required by law in 2009, it was only occasionally being carried out, and it was unclear whether individuals could actually express their opinions. However, the EIA Law did not mandate that authorities consider public feedback when determining if a project should be approved (China ELAW, 2009). The TG for public participation in EIA 2011 aims to improve the 2006 provisional measures by providing more instructions on the "how" aspect of public participation. Such as, details provided specifically calls for giving priority to women, people of color, disabilities, and low-income citizens when selecting the audience of the people in order to ensure fair representation. It is as well important to note that, in order to guarantee the implementation of public participation, it is advised for project proponents that a plan shall be created (Chen, 2013). From 2018, public participation received more reforms with firmer mandate and emphasis on the methods of the hearing announcements being thorough and reaching a wide range, including newspapers, public notices, or the internet platforms. The disclosure of information has to be comprehensive and in an understandable phrasing to accommodate the understanding of different societal demographs. It further requires transparency about the process from project constructors, official representatives, and a release of the project details with a non-technical summary. If the public's opinions are not thoroughly sought out, , the EIA report will have to be revised. Also, there are stricter penalties for any misrepresentation of released project information, or the representation of public opinion. By this stage, the EIA process almost-entirely involves public participation (SGS, 2018; Yang, 2020).

4.1.5 Waste Regulations

China's 2020 Amended policies for the disposing of waste give priority to:

1. Encouraging involvement of the public in waste management: The findings are documented in an EIA report, of which a condensed version has been required to be

published since the reforms, September 2012. The EIA procedures include measures for involving the public in the decision-making process, such as a two-part public notice period for the project and the distribution of questionnaires to residents and other impacted entities within 2km of the project location (Bondes, 2019).

2. Increasing penalties for illegal dumping and advancing law enforcement: A new system of consultation for solid waste and ecological environment impact compensation. Article 122 (as amended) shows the penalties have been generally increased, in addition to the corresponding penalties for the new content, and law enforcement actions such as continuous penalties on a daily basis, administrative detention, and confiscation have been strengthened (Amended Solid Waste Law, 2020).

3. The "Solid Waste Pollution Environment Prevention Law" was revised and formally adopted by the National People's Congress of China in April 2020. The revised law made it clear that, in contrast to its previous version, we would forbid and restrict the sale and use of single-use plastic products like plastic bags that cannot decompose and encourage the spread of recyclable, recoverable, and biodegradable alternatives (Waste Management in China | Envilience ASIA, 2020).

4.1.6 Waste Incineration Facility – Asuwei

1. Introduction to the Facility

The largest landfill in the city is located in Asuwei, in the Changping District of northern Beijing, and was built in 1994. It was later selected as part of the Beijing Domestic Waste Plan, as a waste incineration site (Johnson, 2013). During the 1980's, Beijing's organic waste was primarily sent to the countryside. However, as a result of rapid development, and changes in consumption behaviour the waste composition shifted, and the amount produced saw a sharp increase. Therefore, landfills were being constructed and waste dumps started to emerge all over the city. By the early 2000's, 90% of Beijing's waste was deposited in landfills, which quickly turned into a waste crisis, as it was designed to receive a capacity of 1,800 tonnes, but ended up flowing with 3,800 tonnes instead. Since incineration reduces waste volume by up to 80%, it was then suggested as an alternative solution to address this waste crisis. The government was set to increase the percentage of incineration of waste from 1% in 2002 to 30% in 2030. By 2004, landfills accounted for 89.6% of waste treatment, followed by composting 5.8% and incineration 4.6%. In 2005, Beijing launched a plan to dispose 40% of waste through landfills, and 30% each through composting and

incineration by 2010 (Sorting the Rubbish in Beijing, 2009; Asuwei Waste Incinerator in Beijing, 2017).

2. Summary of Participation

A resident coincidentally discovered a call for public participation on the proposal for a planned waste incineration facility (WIF) in July 2009. The announcement, however, was only found in three locations in the city, and had a disclaimer that it was prohibited to distribute further copies. After the news spread quickly through local communities, residents started to voice disagreement about the planned project, surprising the local government. Campaigners complained that there had been no public involvement into the initial siting decision and argued that Asuwei was not a matching location, due to it being upstream and upwind of densely populated areas. They submitted a complaint over the EIA's legality. As a result, government representatives gathered citizen feedback, and a new EIA was authorised. Regardless of that, 60 homeowners organized a car parade protest in response. The government then invited homeowners' representatives the following day, but instead of listening to their concerns, they used the occasion to impose their own plans. After that, the authorities took the matter seriously and published a notice in the Beijing Daily asking for comments within ten days. Locals called, faxed, and emailed their opinions to the government, but did not receive a response. A nonviolent protest with around 100 participants took place at the agricultural exhibition center in September. After the arrest of 20 people, the government opened a temporary office to gather concerns. A few months later, citizens had released a report in which they demanded transparency and collaboration between the citizens and the government. After inviting the main citizen representative to join a 10-day study tour on waste incineration facilities in Japan and Macau to see how they operate, the government decided to put the project on hold for years after realizing that there were still unresolved technical issues. The project was later resurrected in 2014 with better plans, including the use of cutting-edge technology, stricter emission standards, and funding for the relocation of four nearby villages. The government also improved its transparency and engagement with the general public. However, a prolonged public hearing in 2015 ended without a resolution, but the assurance of the government that the incinerator would adhere to strict emission standards and be subject to supervision. The project was then approved by the EPB, In April 2015, five days after the hearing, and was finally commissioned. Throughout this process, the government improved disclosure of information and permitted public participation (Hensengerth & Lu, 2018; Johnson, 2013).

4.2 The United Kingdom

4.2.1 Legislative Framework

The EIA was firstly formally adopted into the UK in 1988 through the Town and Country Planning (T&CP) in England, Scotland and Wales for projects that require a planning permission (Glasson et al. 1994). These guidelines are applicable to developments permitted by Part III of the T&CP Act of 1990 of “granting of planning permission:

(1) Planning permission may be granted —

(a) by a development order.

(b) by the local planning authority (or, in the cases provided in this part, by the Secretary of State) on application to the authority in accordance with a development order”.

These regulations derive from and implement the 85/337/EEC and its EU revised directives “on the assessment of the environmental effects of certain public and private projects. Local governments and developers should closely examine whether a project requires an EIA, and should, if necessary, restrict the scope of the assessment to those aspects of the environment that are likely to be significantly impacted (Legislation Covering EIA, 2020). “Pre-application engagement” can also aid in determining when a proposed plan should be subjected to an EIA through the following steps:

- Delivering knowledge on a proposed project’s planning policies and other relevant considerations.
- Engaging interested parties at early stages to understand and assist in addressing issues relating to proposed development and possibly delivering improvements to the infrastructure.
- Identifying the data that should serve as supporting documents to the formal planning application, thus lowering the risk of delay during the validation stage.
- Putting in place a Planning Performance Agreement where this would help with managing the process and agreeing any dedicated resources for progressing the application.

The approach must be adapted to the proposed development's nature and the issues to be resolved. It involves Local Planning Authorities , statutory and non-statutory members, and local citizens. (Pre-application Discussions, 2019). It is worth

mentioning that the EIA regulations in the UK remain valid after Brexit and function the same under T&CP 2017 (Environmental Legislation in a Post-Brexit UK | Infrastructures, 2020).

4.2.2 Projects Subjected to EIA

An EIA is always required for developments that fit a description in Schedule 1. A Schedule 2 development, however, must undergo an EIA if its size, nature, or location make it likely that it will have a substantial impact on the environment (EIA Scotland, 2017). A depiction of the process in **Figure 4**.

- Schedule 1: this includes integrated chemical conversion processes, construction of motorways and airports (2,100m in length or more), thermal and nuclear power plant stations, waste disposal incineration installations, dams, pipelines, wastewater treatment plants, etc. (T&CP EIA Regulations 2017 - Schedule I, 2020).
- Schedule 2: The Schedule includes production and processing of metals, food and textile industries, urban development projects, energy, and agriculture. If crucial thresholds and requirements are reached or surpassed, the consenting authority is obliged to assess/screen the project to determine if it is likely to have serious environmental effects (T&CP EIA Regulations 2017 - Schedule II, 2020).

Less than 0.1% of planning applications in England each year are subject to the EIA procedure. Nevertheless, screening to see if an EIA is necessary happens more commonly in all consenting authorities. And thus, it is crucial to make sure that at the screening stage, critical impacts on the population and human health are measured (Cave et al. 2022).



Figure 4 – (T&CP Establishing Whether A Proposed Development Requires an EIA, 2020)

4.2.3 EIA Stages and The T&CP 2017 Changes

1. Screening

It is a method for determining if a proposed project will require an EIA, depending on whether it falls under Schedule 1 or 2 category, examined by the local planning authority (or, in some cases, the Secretary of State) as stated in the 2017 regulations. It should occur early in the project's design process, but is not mandatory. It can also take place after the submission of an application, or an appeal was filled. Before submitting a screening request, some project proponents will unofficially consult with

the most relevant statutory and non-statutory people. Upon receiving a screening request, relevant authorities may also consult certain statutory and non-statutory people informally to notify their opinion.

- When a developer submits a screening request, they must provide supporting information about the proposed project, and its location. This includes a preliminary description of any expected environmental consequences caused by the residues and emissions, as well as waste production when applicable, and the use of natural resources, specifically soil, land, water, and biodiversity. Additionally, providing a description of any project features or anticipated mitigation measures to prevent adverse environmental impacts (Environmental Impact Assessment, 2020; Cave et al. 2022).

2. Scoping

A process for identifying the scope of issues that are to be evaluated and reported in the Environmental Statement. The applicant may request a 'scoping opinion' from the local planning authority on what information must be included. The report will be posted on public register and involves consulting the EIA's statutory peoples (e.g., Environment Agency, Oil and Gas authority, Health and Safety England, Nature England, etc.). The (CA) consenting authority then advises the developer on what information should be included in the EIA. Many developers, will hold a consultation with most relevant parties (statutory and non) before submitting a scoping report. Subsequently the CA will consult the non-statutory people in response to the scoping request.

- The population and human health must be considered in the scoping phase of every EIA, however mainly in the developments where their operations will generate great risks to human health.
- The information provided during the scoping opinion has to be included in the assessment's further approaches and is considered binding. The results serve as basis to the produced environmental statement (Environmental Impact Assessment, 2020; Cave et al. 2022).

3. Environmental Statement

An ES, which must be prepared by experts, contains the summary of the impact assessment scope of the potential environmental impacts caused by the planned project. It must contain the following information as outlined in regulations 18(3):

- It has to be formed upon the most recent scoping proposal or direction.

- An overview of the proposed development, that includes details about the location, the plan, scale, and other important aspects of the development.
- Likely impacts arising from the development on the environment.
- A detailed description of prevention and mitigation measures, as well as reasonable alternatives.
- All the information should be presented in a non-technical summary (T&CP Environmental Statements Regulation 18, 2017).

4. Public Participation

The ES must be made available to the general public through a public notice and electronic platforms. Afterwards, the consultation phase of 21 days occurs, where views on the proposal are expressed, and various groups will be identified by and consulted by the local planning authority. They are obliged to commence a formal period of public consultation, preceding to deciding a planning application. This includes the following groups:

- Statutory and Non-Statutory people, that were involved in the previous steps.
- The Public: citizens who might be directly impacted by a planning application, local organizations, and national and local groups with a particular interest who may want to offer comments on the applications. The comments submission period will be published in the media along with the planning application. This will be a minimum of 21 days, and 18 days if there is an application for public service infrastructure development, or 14 days if a notice is published on a news paper. It is crucial to submit comments prior to the mandated deadline to ensure they are considered. The Local Planning Authority (LPA) may not finalise an application before the public consultation period allowed has expired (Consultation and pre-decision Matters, 2022).

5. Decision-Making

The LPA and/or the Secretary of State must consider the Environmental Statement, any additional information that is crucial to the decision, and any comments and representations made on it when determining whether to approve the development (EIA Decision-making, 2020).

4.2.4 Public Participation - Aarhus convention

In a democracy context, the public is trusted to make decisions to their best interests; however, if that trust is only given to a small group of carefully chosen representatives and no progress is made, other strategies for ensuring legitimacy and making

improved decisions must be developed. By recognizing public participation as a right, the emergence of Aarhus Convention marks an important turning point, as It has adopted the narrative on moving towards discussion and inclusive based transparent communications (Bond et al. 2004) . The UK was one of the signatories of this convention in 1998 and progressively endorsed it into its laws from February 2005 (Aarhus Convention Ratified by the European Community, 2005). The Aarhus Convention secures people's right to exist in a healthy environment. As a result, a number of environmental rights were established to strengthen the role of citizens and organizations of civil society in environmental issues. It is the duty of the participatory countries to ensure that public authorities are contributing to the realization of these rights on all local, national, and regional levels (The Aarhus Convention | OSCE Aarhus, 2009).

Article (1) of the Convention necessitates “Parties” as in organizations that have expressed their intentions to comply and be bound by the convention, to pledge the convention’s pillars of ensuring the rights of:

- Access to information: Citizens' right to obtain environmental information held by public authorities.
- Public participation in decision-making: Citizens' right to participate in the development of programs, plans, policies, and legislations that may have an impact on the environment.
- Access to justice in environmental matters: Citizens' right to access and review procedures when their rights to information or public participation are violated.

These core points contribute to the protection of “present and future generations” to live in an environment suitable to their well-being (UNECE Convention on Access to Information, 2000). The Convention's criteria for public participation were transferred and integrated into EU law in the initial directive 85/337/EEC that has been synthesized into 2011/92/EU then amended by 2014/52/EU.

4.2.5 Waste Incineration Directive

The EU legislation to divert waste from landfill sites has led to an increase in the incineration of household and commercial waste. Food, plastics, glass, paper, electrical appliances, and other non-hazardous supplies are all common components of a waste incinerator feedstock. However, the composition of each incinerator's feedstock can differ depending on the combination of feedstocks, and combustion

emissions may contain pollutants such as dioxins, heavy metals, and furans (Douglas et al. 2017).

The Waste Incineration Directive (EU-WID) (2000/76/EC) primarily focuses on enhancing environmental protection. It also requires waste incinerator facility operators to publish a yearly report on the operation and maintenance of their facility.

4.2.6 Waste Incineration Facility – Edmonton EcoPark

1. Introduction to the Facility

The Edmonton EcoPark is a 38-acre waste management facility located in the north of London. The current energy from waste facility at the site has been in operation for over 50 years and diverted 21 million tonnes of waste from going to landfill. However, as the current facility is nearing the end of its lifespan, a replacement facility was claimed necessary to ensure the sustainable management of waste in the area. The new facility is supposed start operations in 2025 after construction started in 2022. The expansion/new energy-from-waste facility will be able to process 700,000 tonnes of waste per year, which is an increase of 27,3% compared to the old facility (Brown, 2017). The plans to replace the facility began in 2013, following public consultations in 2014 and 2015, and final government approval by 2017. Work to prepare the site for construction began in 2019, with the goal of moving operations to the new facility by 2028. The new Energy Recovery Facility was argued to have the capacity to manage non-recyclable waste from households in the North London boroughs and will also support a heat network, generating electricity for 127,000 homes and opening up job opportunities.

2. Summary of the participation process

Public participation took place in two rounds; the first cycle from 28. November 2014 until 27. January 2015 and the second from 8. May to 30. June 2015. Both phases included an exhibition taking place in surrounding areas. The public was given time until 30. June to submit comments and opinions. Some citizens expressed a dissatisfaction with the lack of communication and poor practice in the first phase input process for the North London Waste Authority (NLWA) waste management plan (Clarke, 2015). The people felt that their input was not given proper consideration, and not all points were addressed in the response. The general approach to addressing the public's concerns showed a lack of transparency. Especially concerns that the proposed high-capacity processing facility had the potential of imposing significant health risks were voiced, as well as concerns about the lack of waste

forecasting, and the need of additional external feedstock. Moreover, the fact that the calculation for the waste diversion, and its impact on CO₂ and Dioxins emissions seemed to have been made with the assumption of redirecting 700,000 tons of waste away from landfills. However, it had been stated that the goal is to send no waste to landfills before 2025.

Similar concerns were still voiced after the second phase of public participation consultation. According to respondents, the waste forecasting concerns still persisted, as well as uncertainties about and the impacts on health, a lack of convincing benefits, and risk analysis for the proposed incinerator expansion. Questions about the validity of the underlying data used were raised, and calls for a justification behind the high target capacity of 700,000 tpa. Residents argued that the absence of a comprehensive waste resource strategy makes it impossible to determine the accurate impacts. There was a significant amount of supporters, 61 out of 72 in the commentary initial phase. However, there was a wide expressed skepticism about the hefty £500m investment facility. Due to the recognized limitations of the data, the large size of the investment, beliefs that the waste hierarchy was not adequately met and neither did their concerns on the air quality and pollution generated health risks had been adequately addressed. Furthermore, the Environmental Agency had commented that there should be a stronger focus on environmental friendly waste management techniques meeting the waste hierarchy (Edmonton Consultation-2, 2015; North London Heat and Power Project, 2015).

Some respondents had mentioned that responses to their concerns were “broad and generic” and some others mentioned that the information was technical, extensive and challenging to read (Report reference no. 6.12.3). It is worthy to note that there are still ongoing protests and environmental movements calling for the termination of this expansion, such as; “Stop the Edmonton Incinerator Now” which was established in 2019, joined by Extinction Rebellion and the Labour Party.

5 Results

The following is an assessment criterion based on the five aspects “methods, benefits, tackled constraints, effectiveness and legal frameworks of public participation” as discussed in the literary chapter. The data is displayed in a comparative structure table, and assess implemented policies, with their application in reality, by comparing the two WIF case examples of the UK and China.

Table 2 - Assessment Criterion on Public Participation

	UK According to EIA Regulations			UK WIF Example			China According to EIA Law			China WIF Example		
	✓	—	x	✓	—	x	✓	—	x	✓	—	x
1. Validation of public participation in EIA	✓			✓	—		✓			✓		
2. Guidance on how to participate	✓				—		✓				—	
3. Simplified/non-technical reports	✓				—		✓				—	
4. Effectiveness and efficiency of public participation		—				x		—			—	
5. Public inclusion during scoping stage			x		—				x			x
6. Appeal Rights	✓			✓			✓			✓		
7. Diversity of public	✓			✓			✓			✓		
8. Public's remarks influence on decision making	✓					x	✓			✓		
9. EIA content publication	✓				—		✓			✓		
10. Sufficient timeframe to submitting comments	✓			✓			✓			✓		
11. Transparency and access to information	✓				—		✓				—	
12. Public's knowledge of project impacts	✓			✓			✓			✓		
13. Participation Methods used	Various			Exhibitions, public hearings and meetings.			Various			Public hearings, workshops		

1. Legalization of public participation within the EIA process in China came a long way. In the 1970s, the Chinese government did not acknowledge the legality of engaging the public in plans of future developments. This lasted until the late 1990s, when it finally obtained official legalization. As for the UK, public participation has been an integral part of their legislation since being introduced in 1988 through the EU 85/337/EEC directive and was utilized as a result of the UK being a part of the

Aarhus convention in 1995. The mandate of the people to participate in consultations in both countries is not obligatory yet highly encouraged.

2. In China, Information or guidance on how the public is allowed to participate in planning processes was not provided until the reformations occurred in 2011, which resulted in defined guidelines. However, when it came to the implementation of participation processes during the WIF consultation period, the execution through the government did not follow suit. Even though citizens were informed and aware about how to communicate their opinions through technology (email, fax, and phone calls), eventually the venues and locations were defined for them by the relevant authorities. As for the UK, there exists a clear guidance in the legislation, however, it is unclear if and how it was in the WIF case.

3. Non-technical summaries were mandated in China during the latest 2018 reforms, emphasizing that information should be presented in a language that accommodates to different demographics of people. As for the UK, it was stated from the beginning that accessible language should always be made available.

4. In theory, both China and the UK have comprehensive EIA regulations towards public participation. However, it is often unclear, whether implementation takes place, and if so, their degree of effectiveness. Especially in the case of the UK, the participation process is more of a theoretical construct, than an applied process of citizen participation, as becomes clear through obvious missing links and concrete data. China was initially struggling with efficient implication, but local authorities eventually managed to cooperate with people and improve the process effectively.

5. In China, public participation takes place according to the reformed legislation illustrated in **Figure 3**, that ideally occurs throughout the entire EIA process, however, it happens during the evaluation phase of the EIA report draft. Generally, in the UK the process starts in the ES phase. As for the cases in both China and the UK, the public participation was carried out in later stages, however, unclear at which one precisely.

6. A crucial part of enabling democracy and allowing citizens to express their views is the right to appeal. In China's reformed EIA system, people were granted right of appeal, in the case they were unhappy with a planned project. Through the signing of the Aarhus convention agreement, the UK emphasizes on the same aspect.

China's case was halted at some point when the public opposed to the Asuwei facility. After public disagreement, the relevant authority managed to listen to their concerns and changed specifications to their liking. In the case of the UK, opposition was not

met with any signs of public appeals being taken into serious considerations, or the will to change regulations accordingly.

7. Public Inclusiveness (gender, colour, social ranks) were both apparent in China's law and UK's legislation, as well as their WIF cases.

8. Public's ability to influence the decision-making process, according to both countries is mandated. The procedure happens through a public hearing process in which members of the public are invited to express their opinions and concerns about the proposal. The feedback from the public consultation is then ought to be considered in the decision-making process. In China's case, the public did have an eventual impact in decision-making, after the authorities genuinely heard their concerns. On the contrary, in the UK case, no changes resulted from the public opposition.

9. In both countries the relevant authorities are required to publish EIA and public feedback reports. This did happen at some point during the consultations in the case of China and UK, where the relevant authorities had published related information.

10. In China, the timeframe to submit commentary consists of 45 days. In the UK the period consists of 14-28 days. The first and second consultation rounds in the UK case, were carried out in two periods of 61 and 44 days.

11. Transparency in, and availability of information and content are mandatory in both countries. However, in The UK case, transparency is seriously lacking according to some respondents. While it was initially a problem in China as well, transparency and availability were improved, and information was provided readily.

12. Regulations in both countries require a thorough assessment to be made in regard to the evaluation of potential environmental and health impacts, along with a proposed alternative and a mitigation plan. In both WIF examples, the public was very well-aware of the hazards generating from waste incineration facilities. Hence, the severe objections towards them.

13. There exists a wide range of participation methods such as surveys, interviews, committee discussions, forums, and public hearings. Almost all of these methods were listed to be used in both legislations. The China case exemplified a range of methods, from protests to public hearings, committee discussions and consultations to workshops. The UK case included exhibitions, meetings and a public hearing.

6 Discussions

6.1 Fulfillment of Public Participation Objectives

The findings indicate that there was a lack of objectives achievement in the UK case. Hovland (1953) emphasized that communication between the agency and the public is likely to break down in the absence of a display of legitimate intention from the communicators, increasing the risk of error, misinformation and dispute. In the UK example, the agency failed to establish a relationship of trust with the public by failing to address their needs and concerns, with ineffective outreach, and a lack of communication efforts. In February 2022, multiple people were in a parliament debate in another attempt to halt the expansion of the WIF. The NLWA has received criticism from locals for ignoring 70 letters that scientists and health officials had signed and brought up during hearings. These letters provided medical and official proof for their concerns about the potential harm the expansion could cause to people's health. Residents described it as troubling dealing with a public body which is extremely difficult to be held accountable, and voiced worries that it does not speak for the interests of the people. This was emphasized by the, the government claiming they do not have "the power to intervene" (Proposed Expansion, 2022). The second phase of the consultations, the booklet that people had received on the expansion project had omitted the word incinerator and used refined terms such as, energy from waste or eco-park (Parsons, 2021). Hence, the approach fell short of demonstrating all the steps required to achieve the information objective, including a thorough diagnosis of problems and needs, transparency, and a sufficient evaluation of outcomes.

The outcomes from China, showed more success according to the acquisitions of public participation. After the process a better relationship was increased between the different stakeholder of the process. This resulted from efforts to increase mutual trust between the relevant authorities and the public, including successful public relations, as well as a cultural emphasis on cooperation and trust among community members.

Despite difficulties in the beginning, and an unsuccessful planning stage, there were efforts by the local authorities to fix the situation through diagnosis of issues and requirements, the creation of alternate solutions, and a thorough assessment of the results. For example, in response to public opposition, Beijing's government has modified its strategies for incinerator placement. Some local officials have made an effort to be receptive to citizens' concerns, after being confronted by citizens who are growing more concerned about waste incineration (Johnson, 2013).

6.2 Effectiveness of Public Participation in Both Countries

Effective public participation has the potential to increase the value of environmental protection and the productivity with which environmental institutions operate (Yang, 2008). On the Chinese aspect, the results demonstrate a significant improvement in their EIA system and public involvement. The Chinese EIA system shows clear signs of improvement and inclusivity throughout the years. Despite its early flaws, a notable example of these efforts and gradual success over a 6-year period provided in the Asuwei WIF. Therefore, the efficiency and success of public participation, depends not only on the project developers approach to seeking out public opinion, but also on the careful planning and organization of every participatory activity (IFC, 1998; Li et al. 2012).

On the other hand, the WIF examples have also proven that public involvement in EIA tends to be insignificant. For instance, the findings suggest that the UK's EIA system appears to have been thoroughly and efficiently constructed. Yet, the developers tend not to prioritize public participation, and in this specific case it did not consider the public sufficiently in the decision-making process, when there is an ongoing reluctance towards the waste incineration expansion project. Research on governmental and non-governmental projects carried out by Hasan et al. (2018), stated that public participation in EIA is minimal, and stakeholders usually have little influence on decision-making. Additionally, the process has also fallen short of guaranteeing broad participation, with stakeholders having only limited opportunities to provide input. This suggests that stakeholder participation may not meet crucial regulatory requirements and may be more for tokenism than for constructive feedback. Furthermore, the opinions of those affected by projects are frequently ignored if they contradict with project goals.

6.3 Social and Political Factors

6.3.1 China

The philosophical ethics stemming from religious beliefs, as well as Confucianism, have had a significant impact on the Chinese practices and culture, lasting throughout lengthy transitional periods. These values emphasize loyalty, respect for elders and benevolence, are all shaping how Chinese people treat one another and how morality, discourse, and creation of policies are interpreted in politics (Shapiro, 2012). Confucian values that promote loyalty to superiors and patriarchy, reinforce China's centralized authoritarian system, which began during the Qin Dynasty (Dang, 2018).

Furthermore, Buddhism promotes obedience and endurance, in the context of: achieving greater states of being is possible if a person can endure discomfort calmly, without being emotionally distressed (Smith-Stoner, 2003). This could also explain support for the centralized authority.

China's cultural traditions emphasize social hierarchy awareness, resulting in an authoritarian structure and a tendency for hierarchism within social affairs. Decision-making processes in such societies are frequently centralized, with inadequate public participation, which can lead to citizens relying on the government to solve environmental problems (Wong, 2010).

Presently, Chinese communities have the ability to resist government decisions that may have a negative impact on their neighborhoods and estates. O'Brien and Li (2006) speak on rightful resistance which describes the tension between the government and society in rural China. This type of opposition has been applied and witnessed in waste incineration facilities; Asuwei and Liulitun in Beijing, and both ended up with successful outcomes with the former having the project's standards adjusted heavily before proceeding, and the latter had the facility's development entirely halted.

Participation of the public in environmental decision-making can help to promote transparency and accountability, as well as provide a voice for communities affected by environmental issues that are important to many Chinese people. As a result, the relationship between China's socialist regime and public participation in EIA has the potential to influence people's social behavior. While the socialist regime theoretically encourages public participation, in practice, public participation in EIA is complicated and influenced by a variety of factors (Johnson, 2020). Furthermore, increased opportunities for public participation and engagement may contribute to more positive social behaviors in China, as indicated by the governmental latest reforms in public participation.

6.3.2 The UK

The political nature in the UK is governed by a constitutional monarchy and a parliamentary system, and the political institutions and practices of the UK reflect a history of democratic governance and a culture of public involvement. Political elites may have a dominant influence in society that is more at ease with the "status quo". This may have significant impact over decision-making processes and make it difficult for public participation actions to create change and therefore hinder the overall effectiveness of EIA.

As mentioned in Porter (2008) a lot of public participation in the UK today is unsuccessful. A large number of processes are flawed, either because the individuals in charge of them lack the knowledge or tools necessary to run them effectively or because the processes' motivations are dishonest. The common opinion is that decisions are usually already made before presented, and that consultations with other forms of engagement rarely have an impact on decision-making, and many things happen due to requirements rather than out of commitment to include people in decision-making.

It was pointed out in different articles, that waste incinerators oftentimes tend to be situated in areas where a large percentage of the population belongs to ethnic minorities (Laville, 2020; Li, 2019; Parsons, 2021; Roy, 2020). In a social research conducted in Edmonton by Parsons (2021) highlighted that many people believed that policy was made for the public rather than in partnership with them, and placed more emphasis on the advantages that happen to public figures than to participants. Furthermore, several participants did not have actual experience and chose not to take part in consultation activities, which left them unaware of its benefits.

7 Conclusion

Through comparing the role of public participation within the EIA process on waste incineration facilities in the UK and China, the thesis looked to figure out the extent of the public's influence on the decision-making process in this context.

The data concluded had revealed that the UK has a well-formed and well functioning EIA system. While China historically included their citizens to a lesser degree in their planning processes, it has recently shown development by fully including the public in the decision-making process in its EIA system. Furthermore, the Chinese government showed the desire to include the public more strongly by publishing, and providing clear guidelines which highlights the public's participatory and objection rights of its citizens.

Additionally, in the results, the data revealed the Chinese government is more willing to actively listen to the citizens impacted from such projects than the UK, where the public participation process can often be treated more like a ticking the box exercise.

The discussion section analyzed a few crucial factors including the fulfillment of public participation objectives; the establishing trust between the agency and public was noticed with an absence of legitimate intention display from the relevant authorities. As well as the information objective had fallen short in when it came to transparency and thorough diagnosis of community needs. Whereas China had displayed an eventual success in achieving both objectives with establishing a transparent disclosure of information and addressing the community concerns.

On the efficiency aspect, it showed two sided opinions one that success of public participation is dependant on thorough organisation of participatory activities. On the other hand, there had been views on participation processes granting limited expression of feedbacks.

Finally, the political and social factors of each country; China's political and societal hierarchy descending from the Confucianism and Buddhist values played an interconnected role in defining the socio-political behavior. Moreover, there had been a mention on current Chinese communities exercising rightful resistance, which had manifested in the Asuwei WIF example. On the UK aspect citizens are allowed to freely exercise their rights to be involved in decisions or appeal through demonstrations or official complaints, due to the history of democratic governance, however, this may be impacted by some political elites that have a dominant influence in society that is more at ease with the "status quo".

By reading public commentary about the planned expansion of Edmonton's WIF, it is obvious that people were not convinced that the developer and local authorities have genuine interest in their opinions and health due to somewhat generic responses by the developer to their questions and concerns. There was a general impression that their neighborhood was seen solely as a playground for an investment, rather than a home for people. A more caring approach would have solved and mitigated the displeasure, concerns and avoided the eruption of protests. This was especially clear in the comparison with the case example in China, after protests and opposing statements, the local authority tried different ways to solve matters and was eventually successful with clear communication and intensive involvement through multiple steps; Officials assigned a waste expert to serve as an intermediary between citizens and the government. One campaigner was invited to a 10-day workshop in Japan and Macau to inspect WIF facilities, which was regarded as a successful gesture (Johnson, 2013). The government increased transparency with the public and promised that the project would adhere to strict emission standards and be closely monitored. Lastly, it is critical for authorities and developers to prioritize citizens' well-being in any development project and to ensure that public participation is recognized and valued.

Although experts acknowledge the importance of involving the public in decision-making processes, as Creighton (2005) had mentioned; the question of how much participation is required for a decision to be considered purposeful remains unclear. It is understood that the goal of public engagement is not to achieve consensus among all parties, but to negotiate a relatively fair solution that may not satisfy everyone but is acceptable to the majority. However, achieving this goal can be challenging, as conflicts may arise over the differing perspectives. Regardless of how detailed a legislation is, there will always be challenges in the public participation aspect, as the project developer and local authorities are dealing with a large number of people from diverse backgrounds and needs. To overcome these challenges, it is essential to gain a better understanding of opposing viewpoints and to collect and consider various knowledge backgrounds to find a common ground in solving problems.

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