

## Research on the Risk Communication Problem of the NIMBY Public Project

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**Abstract:** In China's urbanization and industrialization process, the state needs to build a large number of public programs to meet the needs of social and economic development, but some of the projects have negative externalities on the surrounding residents, known as NIMBY public projects. These items may cause conflicts between the public and the government, triggering NIMBY conflict. Different risk perception and invalid risk communication are the major factors leading to NIMBY conflict. Risk communication in the prevention and mitigation of conflict link cannot be underestimated, but the implementation of effective risk communication is restricted by many factors. This paper combined with the NIMBY conflicts occurred in recent years, analysis the characteristics of NIMBY public projects and the problems existing in the organization of the projects, to propose effective risk communication strategies. Aimed at the prevention and resolution of the social conflicts in the process of public project construction, to promote the orderly construction of public projects and the steady development of social economy.

**Keywords:** NIMBY; Public Project; NIMBY Conflict; Risk Communication

### INTRODUCTION

Recent years, with the rapid development of China's social and economic and the acceleration of urbanization process, some cities' public projects increasingly difficult to meet the needs of the public, and hind the urbanization process as well, which requires government increase investment and construction on the municipal projects and other public projects, improve public's living environment and the quality of life, and promote the government to the service-oriented.

Therefore, the government invest heavily in the construction of various public projects to meet the needs of urban development, such as subways, airports, libraries, nuclear power plants, sewage disposal plants and waste disposal stations. Some public projects like city libraries and parks are positive externality, have a positive impact on neighboring residents and the whole society, have been welcomed by the public; While some public projects like nuclear power plants, sewage disposal plants and waste disposal stations .etc. although help to enhance the welfare of the whole society, generating negative effect to the surrounding residents of the project, leading to the unequal of the surrounding's loss and the whole society's benefits, have met with strong resistance, be referred to NIMBY.

Recent years, the construction of NIMBY lead to a series of rational and irrational confrontation behavior, namely NIMBY conflict. In the process of China's rapid development of urbanization, on the one hand, the need of the residents and social for infrastructure are surging,

on the other hand, citizens' awareness of the rights have been strengthened, and the network and other mass media have been broaden, it is more easy to boycott the NIMBY. Such as the 2008 Nanjing Road "walk" event, that Shanghai citizens against the construction of maglev contact line; Guangdong Heshan's Conflict Events against the building of the nuclear power plants.

Inspect the NIMBY conflict recent years, public's resistance to the NIMBY projects, especially the type of risk aggregation such as nuclear power plants, chemical plants, mostly because of the fear and unknown to the risks; the government did not do an effective risk communication, while the public demand the right to know and participate in, ultimately, led to the mass incidents, and endanger the social stability. Therefore, how to solve the risk communication issues in the construction of NIMBY projects, and maintain the harmony relationship between the public and the government deserved to research and study.

### THE NIMBY PUBLIC PROJECT AND NIMBY CONFLICT

#### The NIMBY public project and classification

The item NIMBY is proposed by American scholar O'Hare in 1977, most scholars use the representation of NIMBY, that is Not In My Back Yard. Based on the other scholars' study and the characteristic of such facilities, China Taiwan scholars call it "NIMBY facilities".

NIMBY public project refers to the public facilities highly contaminated, which benefit the entire

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city, but may pollute the surroundings and bring negative externalities to the neighboring residents, the neighbors want to avoid or does not want adjacent to that facilities[1]. In the rapid development of China's urban construction, we must build a large number of public projects to meet the needs of social and economic development, however, public projects such as waste disposal plants, nuclear power plants, psychiatric hospitals .etc. serve the community as well as have negative impact on the surrounding residents' normal life, and resisted strongly by the surrounding public. Therefore, the construction of NIMBY public project become the widespread and troublesome phenomenon.

Depending on the two dimensions of expected loss and uncertainty, NIMBY facilities and the corresponding NIMBY actions can be divided into four types, namely: Pollution category (high expected losses-low uncertainty), risks clustering (high expected loss - high uncertainty), displeasure class (low expected loss-low uncertainty) and stigmatization class (low expected loss-high uncertainty)[2]. Pollution category include waste and sewage disposal plants, risks clustering refer to the nuclear power plants and chemical plants, displeasure class contain public cemetery and infectious diseases hospital, etc, stigmatization class like mental hospitals.

### **The NIMBY conflict and its reasons**

In the construction of public project, it can easily lead to public protests, marches and other social conflicts if we can not resolve the issue between the stakeholders properly. Recent years, the NIMBY conflicts emerging, such as the 2008 Shanghai conflict events against maglev construction, Guangzhou Panyu's NIMBY conflict because of the construction of waste incineration plants in 2009, 2013 NIMBY conflict in Kunming against PX project .etc. These projects in order to enhance the overall social welfare, but due to some uncertainty may harm the interests of the people around, as well as parties concerned did not do the risk communication well, which led to the NIMBY conflict finally.

Many reasons can explain NIMBY conflict, such as the public distrust the government and corporate, deficit in risk information, fear for danger, project construction policy is insufficient and psychological imbalance .etc. integrate these predisposing factors combined with several scale NIMBY conflicts, especially the risk aggregation NIMBY projects, we can find that the main reason that the residents resisted NIMBY project lies in risk perception. Such as Shanghai residents oppose maglev construction in 2008, the reason is that the public overestimate the risk, and the government blockade the information, does not

implement risk communication with the public; Kunming NIMBY conflict against PX project in 2013, is also because that the public lack of objective awareness of the PX project, and the government did not make effective risk communication; 2013 Guangdong Heshan nuclear fuel project disturbance due to the public's fear and unknown for the nuclear power plant which seemed have high risk, as well as communicate failure. Analysis shows that the underlying causes of NIMBY project conflict, in particular the risk aggregation project conflict mainly lies in public's fear of contamination and risks caused by the public projects, and their risk perception is different with the government and specialists, lack of effective risk communication strategies is also the main reason.

### **Risk communication and NIMBY conflict**

#### **Overview of risk communication**

The term of risk communication is proposed by the US Environmental Protection Agency's first Director William Ruckelshaus in the 1970s, In 1986, Covello defined it as "spread or transmit the degree of health or environmental risk, the importance or significance of risk, decisions or behaviors to manage or control risk between interest groups". On July 1986, after the first "National Seminar on risk communication", Foundation President William K. Reilly notes that the conflict or confusion in risk issues usually because of the mistakes in communication process, or at least exaggerate the issues itself, risk communicator did not do the job well[3]. This definition consider risk communication is equivalent to unilateral transmission of information, and just inform the stakeholders the risks associated with projects from the perspective of information disseminators.

In 1989, US risk perception and communication Commission defined risk communication as "the interactive process to exchange information and opinions among individuals, groups, organizations", This definition breaks the traditional concept of risk information that delivery unidirectional, turn the perspective into two-way interaction, extend the contents of risk communication.

In 1992, Covello considered risk communication is to exchange information on the nature, importance and control of the risk between interest groups, namely the interactional process of information and opinion between individuals, groups and institutions. 1998 Williams & Olaniran definite risk communication is the processes of view exchange about the nature, impact and control of the risk and other relevant information. At this stage, researchers realized the interaction between relevant interest groups, but risk

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communication is still limited to the level of information exchange.

In the early 1990s, US Environmental Protection Agency issued "the seven basic principles of risk communication, "emphasizes the protection of the public's right to know and participate. Thus, risk communication was placed in a broader context of "economic-social-cultural", runs through the whole events[4].

The research about risk communication in china was just started, and its connotation is still relatively vague, risk communication is an extremely important part in the risk society, which is the process of risk information cognition and exchange among stakeholders, which need the communicate subject's participation and interaction, and reach a consensus.

In China's process of public projects construction, we will encounter NIMBY conflict inevitably, such as waste disposal plants, sewage treatment plants, nuclear power plants, chemical plants and other NIMBY public projects, combined with the condition of fewer land and more people, it still damage another part of public interest even relocation, and bring corresponding external effects. If we insist on demolitions strategy, it's easy lead to NIMBY conflicts and mass incidents, and endanger the stability of society and economy. So we should change our concepts, turning violent response to positive solution, all parties must communicate, exchange views promptly at all the construction stage, and compromise to resolve the incident.

### **Risk Communication and NIMBY conflict**

Risk Communication has a close relationship with NIMBY conflicts, from 1970s, the NIMBY movements in United States are surging, the public not only against the construction of environmental risk projects in the vicinity of their own community, but also refused to accept the technical experts' interpretation that these projects risks are very low and controllable, on the contrary, the public tend to think that the technical experts, government and corporate conspiracy to cover up or reduce the environmental hazards when conduct the risk assessment. Due to public opposition, many engineering projects were forced to cancel even when the evaluation result is not environmental pollution [5].

The main purpose of risk communication is to get all parties concerned consistency on risk perception, through the risk communication among the public, enterprise, governments and experts, on the one hand, the public can obtain the information about the project, it is beneficial to get a correct and objective cognition on the projects under construction; On the other hand, enterprise, government and experts can understand the

public's fears and concerns, thereby, they can release information and adjust strategy , and avoid the occurrence of mass incidents as far as possible.

But not all risk communication is effective, practice has proved that a lot of risk communication work is not ideal. Throughout the recent NIMBY conflict, although many governments and enterprises have done more or less risk communication work, still lead to the outbreak of the NIMBY conflict. For example, Kunming municipal government carried out the relevant introduction on the PX project in 2013, popularized that PX project basically does not give a negative impact on public life, and at the same time will greatly enhance the social welfare, but still triggered mass incidents of Kunming people gathered in downtown Kunming Nanping Street demonstrations. Shanghai citizen in 2008 against the maglev contact line incident, although the Shanghai municipal government announced the relevant environmental impact assessment report and organized the forum, but still triggered people to Shanghai Nanjing road "walk", protested the construction of magnetic levitation, and finally the project was suspended. Many of the NIMBY public projects have experienced a "launched - protest - suspension" process, Caused social instability and waste of resources. Although the two governments have done some risk communication work, they did not allow the public to form a rational perception of risk and achieve the goal of avoiding conflict. This also shows that although the meaning of risk communication is easy to understand, it is not easy to prevent and resolve the conflict in practice through risk communication.

The successful prevention and resolution of the conflict in the case of the risk communication is not much, er did not appear before the public. But in the NIMBY conflict that has erupted, many of them are because of the government and the enterprise risk communication work has erroneous zone, these ineffective risk communication led to the NIMBY conflict. The following are some of the common forms of ineffective communication:

(1) Lack of early and sustained intervention, "passive communication"

Local governments often do not have risk communication with the public in the process of project planning, but as far as possible to delay, until the public was informed of the project to start construction to do the risk communication, at that time the public is hard to believe the explanation made by the governments and enterprises. It is believed that the timing of information disclosure may affect its utility and role in the decision making process[6]. The earlier the information is provided, the more likely it is to have a greater impact on the substance of the decision. Whether it is the risk

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takers or risk managers, are most likely to receive information in the early, once the risk situation has been confirmed, the risk managers need to communicate the information to the risk takers in a timely manner. If it is not done, it will be considered that risk managers lack a frank attitude and try to cover up the risk, at this point, although the government and enterprises try to explain, the effect will be greatly reduced, so that communication becomes more complex. For example, in the event of a nuclear fuel project in Jiangmen, Guangdong, in July 2013, local people said the government did not communicate with them before signing with Nuclear Group, when the government explained until the public protested, they are “difficult to understand”[7]. This kind of invalid risk communication can not prevent the occurrence of the conflict.

### (2) One-way and unequal communication

That it the government and enterprise transfer the risk assessment to the public unilaterally, without consideration or listening to the public opinions and suggestions. At the same time, the government does not take the public as a partner to interact, simply ask the public to accept the risk assessment made by experts. This type of communication can not achieve effective risk communication goals, effective risk communication requires two-way interaction and participation. In the risk of communication, the government, enterprises and experts have to listen and answer the public's views and questions, fully dispel public doubts and include the public to the main body, so as to gain public trust. For example, in the Shanghai magnetic levitation event, the government simply unilaterally EIA report for publicity, did not invite public participation, at the same time, there have been questions raised by the residents but the government and the company didn't respond. This is contrary to the principle of two-way communication, residents have more and more questions about the project, and ultimately led to the NIMBY conflict.

### (3) Lack of technical norms communication

The prerequisite for effective risk communication is to do a risk assessment, provide a factual basis and technical support for risk communication<sup>[8]</sup>. However, risk assessment is an extremely complex task, many institutions and researchers are very difficult to completely and accurately grasp, different scholars and experts on the same project risk assessment may be completely different. In the network information age, there has been debate among experts on the different views of the same project. It also makes the public can not do the accurately judge for the project's risk, Influence public decisions, and could eventually lead to NIMBY conflict.

## **Build effective risk communication mechanism**

Effective risk communication is an important means to prevent and resolve NIMBY conflicts, if government want to maintain social stability in the construction of NIMBY public projects, effective risk communication strategies must be constructed. We should disclose the public projects' information timely and proactively, and adhere to equal two-way communication, establish a standardized risk assessment mechanism to get the public's trust.

### (1) Establish timely and open risk communication mechanisms

The government, enterprises and other risk communication mechanism should use various channels, such as TV media, network, timely release the NIMBY public project related information, and should ensure that risk information is released before the project's decision.

Before the Government decided to build a garbage disposal plant, nuclear power plant, they should first announce the surrounding public message, including the location of the project, risks and benefits, etc., to solicit public opinion, rather than wait until after the project had been completed. And they should make advance social assessment of the project in a timely manner to the public.

### (2) Establish two-way and equal risk communication mechanisms

Government, experts and enterprises should perceive the public as a partner relationship, emphasize the interaction with the public, and the public should be included in the decision level of the public projects' construction, listen to the views and aspirations of the public, so as to obtain the public's trust. In addition, government and enterprises should adhere to the two-way communication principle, to change the original simple unilateral transport projects related risk information, and more important is to communicate with the public channel, so that the public has the opportunity to express their views and suggestions.

When the government decided to build a NIMBY public project, for example a nuclear power plant, the public should be incorporated into the project evaluation. The government should announce the project's risk information to the public before project's decision, such as location, possible risks and benefits, and they should do a feasibility study, timely disclosure to the public. If the public have questions about the project, the government should smooth communication channels, with hearings, letters, media, Internet and other means to interact with the public, patience to listen to the voice of the public and to make timely response to prevent brutality strong construction.

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(3) Establish standardized and unified risk assessment mechanisms

The vulnerability of risk assessment leads to many obstacles in communication. Due to the lack of unified evaluation index, various researchers evaluating risk attitude differences, even to the risks of holding diametrically opposed attitude, which is not conducive to the public to objectively understand the project risk and hinder the risk communication between the government and the public.

Therefore, before the government do the feasibility studies and risk assessment for NIMBY public project, they should as much as possible to convene experts in all aspects of society, to seek the views of different scholars in the field and make a standardized feasibility study and risk assessment report. To avoid the public's dissatisfaction with the evaluation results of the government's internal staff, thereby misleading the public.

### **Conclusion and discussion**

In recent years, China has actively built various types of public works, which also led to a lot of NIMBY conflict. These problems not only exhibit a high trend in number, but also expanded in size. The NIMBY conflict reflects the surrounding residents to defend their own interests, it also reflects the people's dissatisfaction with government's attitude and practice to solve the related problems. Effective risk communication strategies as an effective measure to prevent and resolve conflicts NIMBY need we pay attention to them, strengthen the effective risk communication design, adhere to timely, equality and

two-way communication principles, speeding up the construction of a unified and standardized risk assessment mechanisms to promote public projects fairness and justice from the system level.

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