Study on Environmental Protection Based on Urban NIMBY Facilities

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Abstract: With the rapid development of industrialization and urbanization in China, environmental problems have become increasingly prominent and citizen’s awareness of environmental protection has been constantly improved, especially for the new neighborhood avoidance projects which may cause significant environmental events. Moreover, it is difficult for citizens to find appropriate ways while safeguarding their personal rights and interests, which leads to NIMBY conflicts. Therefore, this paper makes an empirical analysis on the current situation and problems of NIMBY projects in Beijing, Tianjin and Hebei through questionnaire survey, and puts forward the strategies to solve the problems.

Keywords: Environmental Protection, NIMBY, development of industrialization.

1. Introduction

The word “NIMBY” which is called “Not In my Back Yard” was originated in Western countries originally. This concept was first proposed by O’Hare (1977) to describe facilities that can bring overall benefits to society but have a negative impact on a small number of people [1]. And it once became the life philosophy of the American people, so that the United States in the 1980s was called by the “New York Times” an “NIMBY Age” [2].

Since the reform and opening up, with the rapid development of society, rapid economic growth, continuous improvement of the socialist market economy, the public’s demand for infrastructure has gradually increased, and a large number of NIMBY facilities have emerged. Therefore, a large number of NIMBY facilities such as garbage incineration plants, PX projects, and sewage treatment plants have begun to appear. NIMBY facilities usually bring some benefits to the public, but at the same time bring some potential risks such as health hazards and environmental pollution to the surrounding public, which has caused “incompatibility of cost-benefit distribution” among nearby residents [3]. It is the main cause of avoiding conflicts. In recent years, neighboring conflicts have been happening in China. For example, the Xiamen people in 2007 opposed the PX project, the Guangdong people opposed the waste incineration plant in 2009, the Dalian PX event in 2011, the Shifang anti-molybdenum copper mine in 2012, and the Jiangsu PX. Events and the 2015 Shanghai Jinshan PX event and so on. Therefore, the research on the incidents of avoiding conflicts has gradually become a research hotspot in the field of domestic social governance [4].

The main reason for the conflict is that NIMBY projects may damage the local ecological environment, damage the sustainability of the development of the project site and cause public concern.
about health. In addition, environmental risk is uncontrollable. Once the risk is out of control, it will cause unpredictable damage to the health of residents near the project, and damage the surrounding ecological environment. That is, residents near the project site will bear more responsibilities and risks, which will lead to the recognition of the role of “policy victim”, and derive from it. The negative mentality of NIMBY is the result of the conflict between public individual interests and social collective interests.

Therefore, the emergence of environmental avoidance phenomenon also reflects the lack of scientific propaganda and education in the construction and operation of such urban public facilities, resulting in the decline of government credibility, and the government is unable to obtain support and understanding from surrounding people in the decision-making of public facilities construction and operation. Therefore, this study conducts a field study of the public around the environmental NIMBY facilities in the Beijing-Tianjin-Hebei region, and conducts an in-depth study of public risk perception and the public's trust in the government when the conflict occurs. In order to achieve the governance effect of “NIMBY conflict avoidance”, it is necessary to strengthen the risk assessment and operational supervision of the avoidance facility, reduce the negative externalities of the facility itself and weaken the public's risk perception. In addition, local governments should increase their NIMBY avoidance. The open system of facility-related decision-making information establishes sound laws to increase public trust in the government.

2. Questionnaire Survey and Empirical Analysis of Environmental Report in Beijing-Tianjin-Hebei Region

In Western democracies, when the legitimate rights and interests of the public are violated, they often seek legal aid to solve problems through legal channels. In a few cases, when the interests of a certain group are damaged and cannot be resolved quickly and effectively by legal means, pressure will be exerted on the authorities through assembly and procession to force the problem to be resolved. Although such large-scale events and the purpose of mass incidents in China are aimed at solving the problem of loss of interests, there is a fundamental difference between them: the way the Western people choose to solve this problem is the normal way to solve the problem. One is because of the benign expectations of the government, and hopes to get rid of its own difficulties through equal negotiation and fair game process, based on the trust of the government in solving problems; But the current mass incidents in China, the main reason is that the public is losing faith in the grassroots government. Local governments cannot obtain the trust of the public, improperly deal with mass incidents themselves, and local grassroots governments are unable to control and deal with them. The lack of trust and authority has made grassroots cadres feel helpless in the face of mass incidents and have no use. Therefore, this research organizes college students to conduct an empirical investigation on the public near the Beijing-Tianjin-Hebei neighboring project. The participating college students interviewed the public around them and filled out the questionnaire. In the survey, 360 questionnaires were distributed in Beijing and Tianjin, and 344 valid samples were recovered. The effective recovery rate was 95.6%. After the investigation, careful coding, and sorting, the data were statistically analyzed. The composition of the sampled farmers was shown in Table 1.

Although the simple sample survey has a certain degree of randomness and error, from the analysis of the data, it reflects a prominent problem: the current level of public trust in local governments (including village governments, township governments, and county governments) very low. The social capital of the grassroots government is extremely weak (in Table 2). Trust is the core element of government social capital. The rural grassroots government lacks the trust of farmers. The direct consequence is the lack of social management networks. The administration of rural grassroots governments is not supported by farmers, and even encounters various forms of resistance and confrontation.
Table 1. Composition of the interviewed public (%)

| Sex          | Male(59.4) | Female(40.6) |
|--------------|------------|--------------|
| Age          | 18-40(39.6) | 42-60(40.7) | 60 or more(19.7) |
| Education level | Below primary school(8) | Primary school (20) | Junior school (49.8) | High school (20.2) | High school or more (2) |
| Marital status | Married(85.5) | Unmarried(14.5) |

Table 2. Public trust in local governments and high-level governments (%)

| Option                  | trust | General trust | Hard to trust | uncertain |
|-------------------------|-------|---------------|---------------|-----------|
| Trust in local government | 0.6   | 4             | 93.4          | 2         |
| Trust in higher levels of government | 57    | 36            | 5.8           | 1.2       |

The first is that some of the NIMBY projects have the potential to pollute the environment, destroy the ecology and threaten human health. For example, the purpose of the construction of waste incineration power plants is to achieve the recycling of waste, but a considerable part of the waste is solid waste (such as foam, plastic, etc.) which is harmful to the environment. And the secondary incineration will aggravate the degree of pollution to a certain extent. In addition, the construction process of the adjacent avoidance project may also have the risk of soil erosion, ecological damage and environmental pollution, and the operation process may also be accompanied by waste water, waste gas and noise pollution.

Secondly, influenced by the traditional economic development concept, some local governments have only paid attention to the growth of GDP for a long time and are keen on the increase of the local economic aggregate. It is worthwhile to exchange environmental quality for economic growth. Although environmental damage has brought about a high-speed increase in GDP and local social welfare, the overall development of society has shown a low-quality economic development. Faced with the worsening social environment and living environment, the public pays more attention to their own life and health, cares about the quality of the social living environment, and attaches importance to the government's disclosure of relevant construction project information. In terms of information disclosure, public participation in decision-making of major construction projects has problems such as difficulty in information acquisition, information asymmetry, and distortion of information content, which restricts the effectiveness of public participation. It is manifested as: insufficient awareness of local government information disclosure, insufficient content, and subjective standpoint, the time lag of information disclosure and the way of information disclosure are single, lack of specific issues. In the 2014 Hangzhou waste incineration project, the initial efforts on information disclosure have been made to a large extent, the situation has also improved, but the problem of insufficient information disclosure and insufficient public participation is also obvious. Ganjie Li, deputy director of the Ministry of Environmental Protection, responded to the incident of the Hangzhou waste incineration project, saying that some localities and some units were unscientific and unreasonable in the process of development and construction, and the information disclosure was not enough. In some projects, the information in the planning and construction process is not public enough, the public participation is not in place, and the doubts about the public can not be answered in a timely manner, and can not be effectively publicized, thus increasing the public's doubts and distrust.

Finally, the division of environmental responsibility within the government is not clear enough. The government's environmental responsibility department is more complicated in its distribution. It has regulations on various functions such as planning and control. This is easy to lead to emptiness of duties, and even more people in each department shirk responsibility. The responsibility for prevention and supervision cannot be truly fulfilled. The new “Environmental Protection Law” clearly stipulates...
the environmental protection supervision department, but according to the relevant provisions of the law of the same level, this leads to the complicated distribution of the supervision department. However, according to the level, it can be divided into two categories. The first category is the establishment of environmental protection departments under the State Council by the central government, and the second category is other relevant administrative departments. Generally speaking, it is not very clear which departments directly regulate, which directly reduces the efficiency of environmental supervision. As well as the responsibility stipulation of government behavior is not clear enough, which makes the application of law more difficult. For example, what are the responsibilities for failing to perform their duties? How to punish? How is the procedure? The influence of official-based thought can easily reduce the effectiveness of environmental protection. Citizens lack the consciousness of supervision, less questions about environmental administration, and public participation is not high. The law only gives the government the corresponding legal power, which leads to the disconnection of power and responsibility, which limits the legislative means in restricting the government's power.

3. Solution Strategies for Environmental Protection

3.1. Governments improve information transparency
NIMBY, as a new environmental group event and social phenomenon, poses challenges to the state's governance mode, development ideas, public facilities construction and environmental policy, and also provides opportunities for the change of the state's governance mode, the enhancement of environmental awareness and the expansion of civil rights. From the perspective of environmental citizenship, “NIMBY conflict” is not only a practice of community conflict between a country and its residents, but also an interactive process of top-down and bottom-up communication and recognition of “rights”. “NIMBY conflict” is a community environmental movement that emphasizes "rights, interests, places" but neglects "obligations, environment and society". Its intrinsic nature constitutes a multiple rights dilemma around "environmental citizenship". The government can publicize government environmental information through official websites, newspapers, magazines, multimedia and so on, so that the public can understand the relevant information of enterprises and the information of government environmental behavior. Only when the public first understands, can they further realize their supervisory power, enhance their enthusiasm for participating in political life, contribute to environmental protection, and also prevent them from doing so. Illegal acts of dealing in rights and money, seeking personal gains by power and abusing power by government staff. In order to protect citizens'right to know, we should expand the scope of information publicity, improve the quality of information publicity, let people really understand environmental information, update and reply in time. In particular, major environmental incidents and special circumstances of travel should be timely and publicly avoided from mass unsafe incidents.

3.2. Increasing public participation
The public is an indispensable social force in the management of ecological environment. They are the people who know the hidden places of garbage and sewage outlets and become a new force to promote and assist the government in protecting the ecological environment. For this reason, the public should fully exercise their right of supervision, participation and claim, and take environmental protection seriously. When environmental pollution problems are found, the relevant departments should be promptly informed, and enterprises should be compelled to carry out environmental governance by using the power of public opinion supervision, so as to enhance their environmental awareness.

3.3. Strengthen environmental protection education
Establish institutions for relevant legal personnel, further strengthen the level of law enforcement and management of relevant governments and departments, and ensure the realization and development of relevant national environmental laws and regulations. If the state wants to protect the ecological environment in accordance with the established pace, it must have a strong legal system and a high-
quality law enforcement team. First of all, the state must cultivate a team of professionals who understand the law, know how to ensure the implementation of the law and their own requirements are very high, and have the professional skills to carry quality. Secondly, according to the actual needs of the work, regular staff should be sent to higher vocational colleges for further study. Thirdly, regular visits and training courses must be organized to learn relevant professional knowledge and strengthen their professional competence.

4. Conclusion
NIMBY conflict, as a new environmental group event and social phenomenon, poses challenges to the state's governance mode, development ideas, public facilities construction and environmental policy, and also provides opportunities for the change of the state's governance mode, the enhancement of environmental awareness and the expansion of civil rights. Give full play to the due value of environmental information disclosure and realize full communication between all parties in advance of relevant project construction. It not only reduces the administrative cost of the government and the production cost of enterprises compared with the conflict confrontation after the event, but also provides a legal and effective channel for the public to appeal for environmental interests, and avoids the public to take excessive or even illegal actions. Means to safeguard their own interests, and then to a greater extent to promote the rule of law of public participation in environmental protection.

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