Research on multi-agent behavior-driven countermeasures of urban domestic waste treatment PPP project

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Abstract. The problem of municipal solid waste is one of the most important environmental problems at present. The annual garbage removal volume has reached 200 million tons and is increasing year by year. The predicament of garbage siege needs to be solved. With the development of society, the level of urban domestic waste management has become an important indicator to measure the degree of civilization and modernization of a country, a city. In view of the problems in the garbage disposal PPP project, this paper adopts the grounded theory method, analyzes the interview information and network data through open coding, spindle coding and selective coding, establishes the driver model of garbage disposal project, and builds the residents and enterprises. Leading strategies for green garbage disposal behaviors with the government and other entities.

1. Introduction
PPP is short for Public-Private-Partnerships. In short, PPP is a way for the public sector to provide public goods or services by establishing a partnership with the private sector[1]. At present, the annual urban domestic garbage removal volume in China is nearly 200 million tons, and according to the China Statistical Yearbook data from 2006 to 2016, the average annual compound growth rate of urban domestic garbage removal is 3.2%, and the average annual growth rate is 3.7%. There is a lot of pressure on garbage disposal, and there is an urgent need to solve the problem of garbage around the city. In order to solve the financial difficulties of the garbage disposal project and improve the operation level of the garbage disposal project. The four ministries and commissions, including the Ministry of Finance and the Ministry of Housing and Urban-Rural Development, jointly issued the Notice on the Full Implementation of the PPP Model for Wastewater and Waste Treatment Projects Participated by the Government in July 2007. This document requires a full implementation of the PPP model for government-sponsored wastewater and waste treatment projects. However, in the practice of garbage disposal PPP project, the implementation of the project was blocked, the phenomenon of low-price bidding occurred frequently, the speculative behavior of enterprises occurred, the investment in green equipment and technology was insufficient, and the standard of garbage disposal was low. These conditions caused an increase in pollutant emissions. It has harmed the public interest, triggered public protests, and produced a series of problems such as "not in my backyard ".

For these issues, relevant scholars have also put forward their own views and suggestions from many angles. Bennet et al. analyzed the selection of different PPP modes. Putting forward the financial pressure of the public sector, we should give full play to the technical and financial advantages of the PPP model and develop infrastructure construction[2]. Sandra Cointreau-Levine discussed the choice of private participation methods from a multi-factor and multi-faceted perspective,
with particular emphasis on the role and responsibilities of local governments in each case. A comparative analysis of the participation of municipal governments and the private sector in the treatment of municipal waste was carried out, and further explanations were given on the way private participation was conducted[3]. From the perspective of economics, Liu Yan pointed out that the public-private partnership between the government and the private sector is a game-related relationship. The result is subject to four factors: “the role of government and the private sector, pricing, risk management and regulatory mechanisms”[4]. Liu Ningning started from the garbage disposal methods abroad, and analyzed the problems from the perspective of residents through experiments and explained the importance of garbage classification[5]. Zheng Jiliang and others analyzed the problems and put forward rationalization suggestions around the application and innovation development of the PPP model[6]. Liu Xiaofeng and others explored the evolution of neighboring avoidance projects and residents' environmental behavior through computational experiments, and made recommendations to relevant stakeholders from different perspectives[7].

China's garbage disposal PPP project is in the development stage. In the process of project implementation, not only the cooperation of residents, but also the research and development, innovation, upgrading and application of green technology, as well as the support of government financial policy are needed. At the same time, the collaborative management of social organizations is carried out, and the multi-agent elements participate together to improve the operational performance of the garbage disposal PPP project by realizing the effective integration of various social organizations. Based on this, this study attempts to use the grounded theory model, taking Wuhan as the main research object, starting from the above multi-agents, collating and analyzing the driving factors in the development process of garbage green processing PPP project, constructing the driving factor model of garbage disposal PPP project, and Introduce a guiding strategy for the green disposal behavior of households such as residents, enterprises and governments.

2. Multi-agent composition of garbage disposal PPP project

There are many subjects and participants involved in the PPP project. Although the subjects will change under different PPP models, they all include the following categories: government or its authorized institutions, equity investment institutions representing the government, private investment institutions, and PPP projects. Companies, intermediaries, financial institutions, operators, insurance companies and product purchasers[8].

The multi-agent structure diagram of garbage disposal PPP project is shown in Figure 1.

As shown in the figure, these subjects can be divided into three categories, namely government, enterprises and residents, among them:

The government is the grantor of the PPP project franchise. It is responsible for formulating relevant laws and regulations, improving the management regulations and garbage classification standards related to waste disposal, and making overall plans for the project with reference to the recommendations of the intermediary agencies. In some large-scale ppp projects, the government authorizes specific equity investment institutions and private investment institutions to make shareholder agreements, investing in ppp projects in the form of state-owned facilities, government bonds, land, etc., become a shareholder of the project company and supervise the project operation process.

The enterprise includes a company specially established for the construction and operation of waste disposal facilities. It is responsible for the operation of a project from the initial preparation stage to the procurement and execution stage. It also bears the liability and operational risk of the project. It is the legal and executive subject of the project. Its income sources are mainly manifested in garbage disposal fees, government financial subsidies, sales revenue of recycled products and so on.

The resident public is not only the purchaser of the recyclable resources in the garbage, but also the purchaser of the electric energy and other resources generated after the garbage is processed.
3. Research methods and processes of multi-agent behavior drivers

3.1. Research methods
Since the garbage disposal PPP project is an emerging environmental protection management model in recent years, its core is to solve the problem of urban garbage siege by fully utilizing the advantages of various aspects through cooperation between the government and social resources. This paper aims to describe and explain the driving factors of green garbage disposal, not only to consider the influence mechanism of specific factors on the green treatment of garbage, but also to explore some new variable categories and their impact on garbage disposal. Therefore, for the driving mechanism of urban domestic garbage green processing PPP project, this paper uses exploratory qualitative research. That is, grounded theory.

The grounded theory systematically analyzes and generalizes the original qualitative data, makes it conceptualized and categorized, and then through continuous comparison and further enrichment, establishes links between various concepts and category elements, and finally forms a theoretical framework[9]. The specific steps of the grounded theory analysis mainly include Open Coding, Axial Coding and Selective Coding. The specific process is shown in Figure 2[10].

Figure 1. Multi-agent structure diagram of garbage disposal PPP project.
**Figure 2.** Grounded theory research flow chart.

**Table 1.** Specific sources.

| Num | title                                                                 | Sampling          | Source                                    |
|-----|-----------------------------------------------------------------------|-------------------|-------------------------------------------|
| 1   | National fly ash treatment chaos investigation: six provinces into blind areas, enterprises landfill, use hard to safe | R01,R02,R04,R06,R07 | Southern Weekend,2013.11.7                  |
| 2   | Wastewater, garbage disposal PPP mode full coverage Enterprise learn to identify "pseudo PPP" | R03               | Polaris Solid Waste Network,2018.1.2        |
| 3   | Knowing the violations, it is also difficult to stop the ash in Wuhan | R05               | Southern Weekend,2013.11.7                  |
| 4   | Wuhan Metro fully promotes waste sorting, and the trash can has been replaced. | R08               | Chutian Metropolis Daily,2018.9.2          |
| 5   | The first lesson of Wuhan starts to talk about garbage classification. More than 2,000 primary school students participate in the interaction. | R09               | People's Network,2018.9.2                   |
| 6   | Wuhan Huantou Interview Report                                          | R10               | 2018.7.20                                  |
| 7   | The status quo of domestic garbage in major cities and the country.     | R11               | China Recycling Resources Recycling Association,2017.6.21 |
| 8   | Under low prices, or trigger a crisis of environmental trust. Garbage incineration: is welcoming a tragic price war | R12               | Southern Weekend,2015.8.27                  |
| 9   | Wuhan: burning garbage can not be poisoned                              | R13               | CCTV "Economy Half an hour", 2013.12.27     |
| 10  | Interview report of Wuhan Xinghuo Waste Incineration Power Plant        | R14               | 2018.7.13                                  |
| 11  | Garbage incineration plant siege                                        | R15               | Southern Weekend,2012.4.26                  |
| 12  | Directly facing the avoidance effect, 33 garbage incineration enterprises collectively open “Enterprises have to turn around to face the media” | R16               | Southern Weekend,2015.4.30                  |
| 13  | Five waste incineration plants in Wuhan produced 600 tons of fly ash every day. | R17               | Sina Hubei,2013.12.17                        |
| 14  | Wuhan waste incineration plant is involved in illegal operation. The local government is accused of pushing hands. | R18               | Beijing News,2015.1.15                      |
3.2. Research process

3.2.1. Sample collection and screening. This paper selected 10 pieces of information for rooted coding analysis. In the process of rooted coding, in order to ensure the reliability and validity of the research, it is strictly operated according to the rooted coding technology program of Strauss & Corbin. The original materials in the grounded theory are mostly expressed as words rather than numerical or quantitative data. In this paper, it is an in-depth interview record and network information with representative enterprises. Among them, the management personnel of the company include Manager Wang of Wuhan Xinghuo Waste Incineration Power Plant and Manager Tang of Wuhan Huantou. The network data selects “Wuhan Waste Disposal PPP Project” and “Garbage Incineration” as keywords to search for relevant reports. In order to ensure the authenticity of information, the reports selected in this paper are from well-known newspapers and periodicals, randomly selected 2/3 data as sample analysis, and the specific sources are listed in Table 1.

3.2.2. Open coding. In the open coding process, the first is the decoding of the original data, which requires word-by-word coding of any available words in the original data (Source statement), and giving a conceptual label (category). This article tries to use the original words of the interviewed object, and directly naming the concept or extracting related concepts to eliminate the influence of the individual's bias.

Table 2 reflects the conceptualization and categorization process of the original interview records. The result of categorization is the relevant influencing factors of urban garbage green processing behavior.

| Source statement                                                                 | category                                      |
|----------------------------------------------------------------------------------|-----------------------------------------------|
| R02: In some places, garbage disposal is not standardized. The slag and fly ash  | Relevant policy implementation and validity    |
| after waste incineration are mixed. Because the slag is not a hazardous waste,  | technical skills                              |
| they are finally put together in a sanitary landfill, which ultimately has a     | Environmental sensitivity                      |
| serious impact on the environment.                                             |                                               |
| R03: The Ministry of Finance clearly stated that for some local governments and  |                                               |
| their affiliated institutions and institutions to conduct illegal and illegal   |                                               |
| financing through non-standard government and social capital cooperation (PPP),  |                                               |
| they must continue to strengthen supervision, accountability according to law   |                                               |
| and public exposure.                                                            |                                               |
| R10: Now that the state has implemented laws, regulations, inspections and enforcement in the field of environmental protection, including the implementation of the new environmental protection law in 2016, it is the number of tons of penalties to be imposed on the day. This is a good thing for environmental protection companies. Only the real laws and regulations keep up. After the stricter law enforcement, our market will come out. |                                               |
| R13: I have reflected three channels, the Environmental Protection Bureau, the Letters and Visits Office, and the District Government. The Environmental Protection Agency has come and left. There is no second word, no following, no action. |                                               |
| R04: Some fly ash that has been solidified and then legally landfilled may leak out if there is rain, because the fly ash contains high concentrations of heavy metals and toxic substances such as dioxins. Release, the harm to the human body is self-evident. |                                               |
| R06: The current domestic chelation technology is used by most companies because of its relatively low cost, but its safety factor is obviously not as high as that of fusion technology used in Japan and other countries. |                                               |
| R05: In Wuhan, the illegal disposal of fly ash to non-qualified enterprises has become an undercurrent. In Hubei, the only qualified disposal company has its license display expired and the contact telephone number has been shut down. More realistic The situation is that even a qualified processing company may not receive fly ash. |                                               |
| R14: The Environmental Protection Agency will come to inspect regularly. The    |                                               |
residents around us are mainly vegetable farmers, who can feel the changes in the environment. The relationship between villages and enterprises is quite good. Many of our company's cleaning and security personnel are nearby people, and they are also very recognized.

R02: All supervision requires cost. If the cost is too high, it cannot be implemented. How to supervise it still needs to be explored.

R06: Fly ash disposal chaos is a means for enterprises to reduce costs, which directly leads to low-cost operation and vicious competition in the industry.

R07: At present, the garbage disposal fee includes the disposal of fly ash at the end. There are different standards everywhere. If it is subsidized by the government, it is easy to implement, and whether the financial support can be the key. If it is charged to individuals, it is very difficult.

R10: In fact, the government’s investment in sanitation and environmental protection is too small, so that we now have no place to deal with and dispose of garbage after the occurrence of garbage.

R01: China has a special liking for garbage resources, but I think there are serious problems with flying ash. The safety standards used first are not clear. For example, bricks used in the past were made of clay, not flying ash. The indicators of heavy metals are not considered at all. If the fly ash is made into bricks, then the toxicity cannot be detected.

R08: Wuhan Metro Operating Company has been carrying out a pilot project on garbage sorting in some stations of rail transit line 4 since April this year. Through long-term publicity, environmental awareness will be formed among passengers, garbage sorting will become a habit, and the public passengers will be advocated to be practitioners and disseminators of environmental protection.

R09: In the campus to carry out waste classification activities, help students from an early age to cultivate environmental awareness, develop good hygiene habits, the school will also use the theme class, the flag of the speech, volunteer social practice activities and other channels, multi-form publicity activities of waste classification.

R10: Financially also said that risk reduction, and then de-lever, this is now a big problem in our financing

R10: The biggest problem now is the unclear role of the government and the platform. How about six to seven projects in the circular economy industrial park to reconcile the interests between different authorities is the most troublesome thing.

R11: From the perspective of management mechanism, the resource recycling belonging to the commercial department and the sanitation system belonging to the urban management department are under the separate leadership. Both departments have their own focus and starting point, and the work coordination is insufficient.

R12: As long as you can build a waste incineration plant into Japan and operate like them, I will not oppose it.

R10: To be honest, you need to do environmental protection and sanitation, but no one wants to be at your doorstep. If you consult the surrounding local government, or their opinions, they also It is all against, and this depends on your city government, the municipal party committee and the municipal government to coordinate.

R10: because of the government debt consolidation and liquidation, we are now facing difficulties in financing, financing expensive problems, and then the industry malicious low-price competition problem, mainly this.

R12: We don't want the industry to ignite a fierce price war, because no one will believe that “zero cost and high standards of environmental protection technology” will naturally question “low-cost and high-standard environmental commitment”.

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| Input and cost | Behavioral outcome perception | Environmental knowledge | Financing risk | Unclear distribution of benefits | Unclear responsibility and power distribution | Mass pressure | Social atmosphere |
|---------------|-------------------------------|-------------------------|---------------|---------------------------------|--------------------------------------------|--------------|-----------------|
| R02: All supervision requires cost. If the cost is too high, it cannot be implemented. How to supervise it still needs to be explored. | R09: In the campus to carry out waste classification activities, help students from an early age to cultivate environmental awareness, develop good hygiene habits, the school will also use the theme class, the flag of the speech, volunteer social practice activities and other channels, multi-form publicity activities of waste classification. | R01: China has a special liking for garbage resources, but I think there are serious problems with flying ash. The safety standards used first are not clear. For example, bricks used in the past were made of clay, not flying ash. The indicators of heavy metals are not considered at all. If the fly ash is made into bricks, then the toxicity cannot be detected. | R10: Financially also said that risk reduction, and then de-lever, this is now a big problem in our financing | R10: The biggest problem now is the unclear role of the government and the platform. How about six to seven projects in the circular economy industrial park to reconcile the interests between different authorities is the most troublesome thing. | R11: From the perspective of management mechanism, the resource recycling belonging to the commercial department and the sanitation system belonging to the urban management department are under the separate leadership. Both departments have their own focus and starting point, and the work coordination is insufficient. | R11: From the perspective of management mechanism, the resource recycling belonging to the commercial department and the sanitation system belonging to the urban management department are under the separate leadership. Both departments have their own focus and starting point, and the work coordination is insufficient. | R10: because of the government debt consolidation and liquidation, we are now facing difficulties in financing, financing expensive problems, and then the industry malicious low-price competition problem, mainly this. | R10: To be honest, you need to do environmental protection and sanitation, but no one wants to be at your doorstep. If you consult the surrounding local government, or their opinions, they also It is all against, and this depends on your city government, the municipal party committee and the municipal government to coordinate. |
3.2.3. Axial coding. Axial coding is the connection between discovering and establishing the various conceptual categories. In the Axial coding, the researcher only conducts an in-depth analysis of a category at a time, and further explores the correlations around this category, and analyzes whether each category has a potential correlation at the conceptual level. After analyzing the correlation between each group of categories, it is also necessary to identify the level of the categories within the group, and then establish the relationship between the main category and the sub-categories under continuous comparative analysis.

The Axial coding process and results is shown in Table 3.

Table 3. Axial coding process and results.

| Main category                     | Corresponding subcategory | Category relationship                                                                                                                                                                                                 |
|-----------------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Social reference specification    | Social atmosphere         | Social ethos will lead companies to follow the trend in the waste treatment industry                                                                                                                                   |
|                                   | Mass pressure             | Mass pressure and social evaluation will cause resistance of the government and enterprises in the process of project landing                                                                                      |
| Institutional technological situation | Policy implementation and validity | The implementation and effectiveness of relevant policies to promote green disposal of garbage will affect the institutional and technical scenarios for residents and enterprises to carry out green disposal of garbage. | 
|                                   | technical skills          | The technical ability of green garbage disposal will affect the system technical situation of enterprises for green disposal of garbage.                                                                         |
| Related personnel cognition       | Environmental knowledge   | The understanding and mastery of urban residents about environmental knowledge, especially the knowledge related to green disposal of garbage, will affect their psychological cognition in making green judgments of garbage disposal. |
|                                   | Environmental sensitivity  | The concern and sensitivity of business managers to environmental issues will affect their psychological cognition of making green garbage judgments.                                                               |
| Behavioral outcome perception     | Behavioral outcome perception | Whether the relevant garbage disposal behavior perceived by the individual will affect personal life development                                                                                                    |
|                                  | Financing risk            | The financing problem of enterprises will affect the project implementation results of green garbage disposal.                                                                                                        |
| capital                           | Input and cost            | The costs incurred by the government and enterprises in the green disposal of waste and the green disposal of waste will affect the implementation results of the project.                                            |
|                                  | Unclear interest distribution during project implementation | Unclear allocation of interests between various government departments and enterprises during project implementation will affect the project implementation results of green garbage disposal. |
3.2.4. **Selective coding.** Selective coding is to mine the core category from the main category on the basis of spindle coding, and systematically establish the relationship between the core category and other categories. In the process of continuous comparative analysis, core categories must be repeatedly proved to be dominant over most categories, to clearly describe the relationship between most categories, and to encompass most categories within a theoretical framework with coverage.

Results in Table 4 imply that the typical relationship structure between the main categories formed after selective coding.

**Table 4.** Selective coding results.

| Core category | Typical relationship structure | Relationship structure |
|---------------|--------------------------------|------------------------|
| Mental cognition | Willingness → Behavioral will → Behavioral outcome perception | From cognition to emotion to will is the formation process of attitude, cognition is the internal cause of will, and the level of psychological cognition of industry-related personnel directly determines the willingness of green garbage disposal. |
| Garbage green processing behavior driving mechanism | Social reference specification → Willingness → behavior | Behavioral outcome perception as a outcome variable after behavior, with a callback effect on behavior and willingness |
| | Institutional technical situation → Willingness → behavior | The social reference norm is the external constraint situation factor for the implementation of garbage green treatment behavior, and the social reference norm as the adjustment variable affects the strength and direction of the relationship between individual behavioral will and behavior. The institutional technical situation is the external constraint situation factor for the implementation of garbage green treatment behavior, and the institutional technology context as the adjustment variable affects the strength and direction of the relationship between individual behavioral will and behavior. |
| | | Funding is the external constraint situation factor for the implementation of green garbage disposal behavior. The amount of funds as a regulatory variable affects the strength and direction of the relationship between individual behavioral willingness and behavior. |

3.3. **Theory saturation test**

The theoretical saturation test is to further develop the characteristics of a certain category without acquiring additional data, as an identification criterion for stopping sampling[11]. In order to test whether the theory of this paper is saturated, based on the interview data and network data, this paper further sort out the other 1/3 reports on the green treatment of urban domestic garbage between the news media of Southern Weekend, People's Daily and Xinhuanet from 2010 to 2018. The results show that the model The scope is rich enough that no new concepts or new categories emerge. Therefore, we believe that the rooted analysis of this paper has reached theoretical saturation.
3.4. Constructing a multi-agent driving factor model for garbage disposal PPP project

Through the above-mentioned grounded theory of Open coding, Axial coding and Selective coding, the core category "Garbage green processing behavior driving mechanism" was determined. And the main category "Mental cognition, behavioral intention, social reference specification, funds, institutional technical situation, behavioral outcome perception", the relationship structure between different categories is also sorted out. On the basis of this, combined with the theory of planned behavior[12] and value-belief-normative theory[13], etc. The following drive mechanism model for garbage green processing behavior in the PPP project operation process is constructed.

Figure 3 shows the driving mechanism model of garbage green processing behavior.

![Driving Mechanism Model](image)

**Figure 3.** the driving mechanism model of garbage green processing behavior.

It can be seen from the driving mechanism model of garbage green processing behavior in Figure 3 that the six categories of psychological cognition, behavioral willingness, social reference norms, funds, institutional technical situations, and behavioral outcome perception all have an impact on the
green processing behavior of garbage. However, the impact mechanism is different. The following explains the mechanism of the model:

Psychological cognition indirectly influences the behavior of garbage green treatment through the individual's behavior intention, while behavior intention directly affects the final green behavior. In the theory of planned behavior, the main determinant of real behavior is the intention of action. However, attitudes, subjective norms and perceived behavioral control affect real behavior through behavioral intention, that is, the internal factors that drive individuals to implement green behavior are their cognitive factors, so psychological cognition acts on the final green behavior through individual behavioral intention.

The three aspects of social reference norms, funds, and institutional technical situations are external factors that promote individual green garbage disposal behavior. Among them, the social atmosphere and mass pressure in the social reference norm mainly affect the individual's choice of green garbage disposal process, and various policy systems, technical conditions and investment financing and other financial issues are also important factors that can influence whether individuals have corresponding actions.

The perception of the actual results of the implementation of the green garbage disposal behavior has a certain callback effect on the actual behavior and behavioral willingness. In the process of taking root, the “non-green treatment sequelae” mentioned by the parties is a manifestation of the perception of behavioral outcomes. Because of this perception, it will in turn promote or stimulate its willingness to act and waste disposal behavior.

4. Multi-agent behavior-driven strategy for garbage green processing

4.1. Residents and community level
From the results of the previous selective encoding, it is known that psychological cognition ultimately affects the green treatment behavior of garbage by affecting the willingness of behavior. Therefore, in order to fundamentally improve the current situation of green disposal behavior of garbage in China, it is urgent for residents and community groups to establish a correct awareness of garbage disposal. First of all, residents need to change the current situation of the deteriorating and unreasonable attitude of the ring, establish a common sense of the environment and environmental protection responsibility, starting from the garbage classification. Secondly, residents should actively learn the classification standards of garbage, relevant laws and regulations, and passive requirements for active development. Furthermore, the community should take the initiative to assume the responsibility of publicity and popularization, and popularize the harm of non-green treatment of garbage and the green treatment of garbage in the publicity column of the community, so that more people can gradually understand that they become daily habits, and should also The process of garbage disposal and the possible occurrence of hazardous materials are popularized to promote the improvement of the relationship between residents and enterprises. Finally, the community should also assist the government in doing relevant supervision work, promptly remind residents of the behavior, and improve the positive effect of behavioral outcome perception.

4.2. Enterprise level
From the perspective of the enterprise, it is based on profit, but the enterprise as a legal person exists in this society, and must also bear certain social responsibilities. That is, in addition to considering its own business development and profit level, the enterprise also needs to Considering the natural environment and social impact, from the above-mentioned rooted data, many companies have problems with data disclosure, and residents are therefore skeptical about the treatment of enterprises. Some chemical substances with odor but harmless are regarded as harmful substances. Therefore, enterprises should first disclose information on various substance contents, so that residents can have data to follow, and know how to reduce friction with enterprises. Secondly, all personnel of the company should raise their awareness of social responsibility, hold regular trainings, and carry
forward the values of being positive and courageous. Finally, companies should increase their investment in technological capabilities and encourage innovation.

4.3. Government level
The first thing the government must do to guide the green treatment of social waste is to raise awareness of the green treatment of garbage by residents and businesses. Psychological cognition affects the final behavior through behavioral willingness. Many people in the society have insufficient knowledge of garbage disposal, or think that garbage disposal is far away from themselves. It is considered that the problem of solving this part is the government and the state, and has nothing to do with it. Therefore, the primary task for this phenomenon is to improve their correct understanding of waste disposal, enhance their sensitivity to the environment, and increase the attention and awareness of residents on waste disposal through various channels and means of publicity. Understand the hazards of non-green disposal of garbage and conduct warning education. Secondly, in terms of publicity channels, the government can make full use of the self-media to make up for its shortcomings in information dissemination, and carry out various educational activities through public service advertisements and knowledge contests, so that residents can be forced to accept initiatives. The transformation. It is also possible to motivate residents by involving residents in management.

In terms of policy and system, for normative policies, the government should promptly check for vacancies, and make detailed explanations for some vague areas. It should not allow enterprises to exploit legal loopholes, strengthen supervision, and crack down on corporate style of arrogance and arrogance. In terms of development, we should promptly adjust and develop according to the state of social development. At the same time, we should encourage and assist enterprises to improve the level of technology research and development, and provide financial assistance to enterprises when necessary to ensure the stable operation of the waste treatment industry.

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