

Municipal Solid Waste to the Countryside and Environmental Equity

WEI Yongfen

Department of Anthropology, Sun Yat-sen University

垃圾下乡与环境公平

摘要: 文章从环境公平的视角, 在阐述农村居民在垃圾下乡中面临的环境不公平的基础上, 描述垃圾下乡对当地社会在自然环境、经济发展、社会稳定三方面的影响, 认为环境不公问题的解决在于提高民众的环境公平意识, 将环境公平作为环境立法的基本原则, 调整人与自然、人与社会关系的失衡, 实现可持续发展。

关键词: 环境公平、垃圾下乡、公平意识

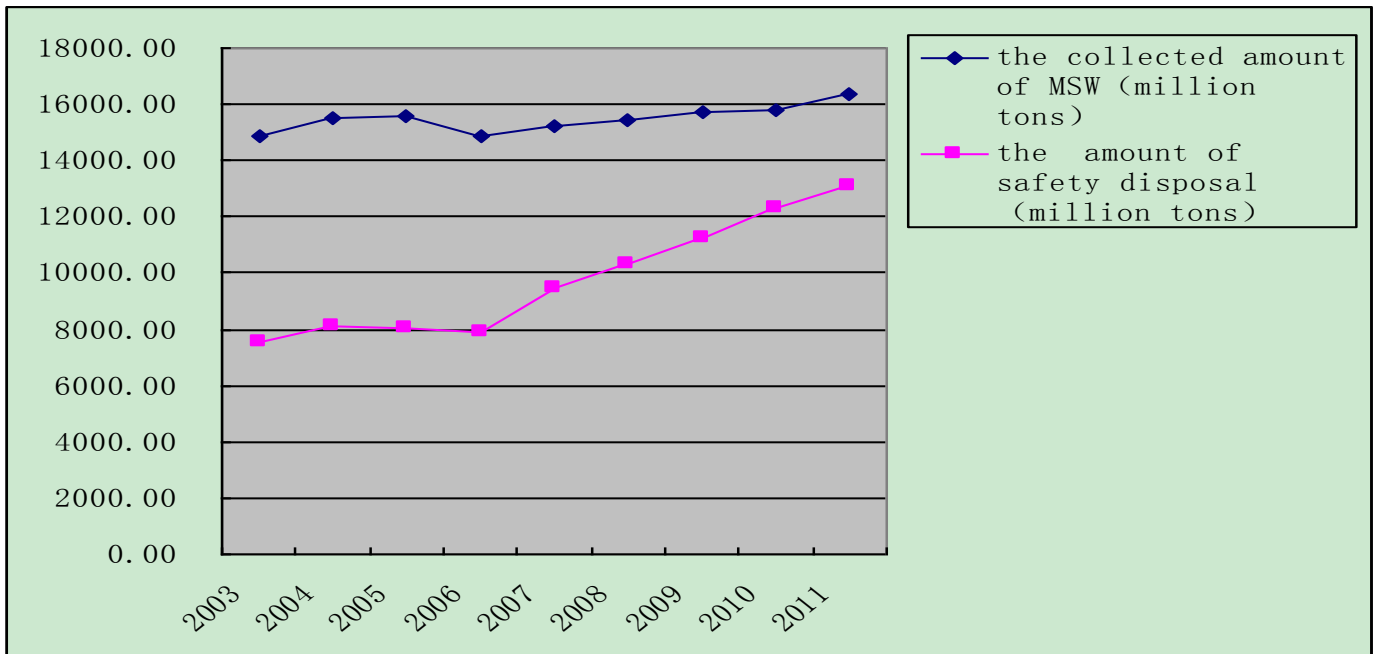
Abstract: From the perspective of environmental equity, the thesis sets forth the fact that rural resident face inequity in the process of municipal solid waste to the countryside. Municipal solid waste to the countryside affects local nature environment, economic development and social stability. Based on above discussion, the thesis poses that to solve the environmental inequity problems we need to improve people's consciousness of environmental equity and let environmental equity be the cardinal principle of environment legislation, which can adjust the imbalance of man and nature, man and society relationships, and achieve sustainable development.

Key Words: Environmental equity, Municipal solid waste to the countryside, Consciousness of equity

1. Introduction

In the process of urbanization, municipal solid waste, as a product of urban metabolism, is the burden of urban development, and cities increasingly involve with "city besieged by waste" situation. According to statistics, the collected amount of municipal solid waste in China increased from 137 million tons to 164 million tons from 2000 to 2011. The sharp increasing of the collected amount of municipal solid waste makes solid waste disposal problem become serious, so that waste disposal is a problem to be solved urgently in course of urban development. Due to the limitations of various aspects in reality, the city does not have enough capacity to contain municipal solid waste and enough space to build the landfill, while rural land is vast and cheap. At the same time, urban residents have high requirements on the living environment when the rural

president lacking the consciousness of environmental protection can not be fully aware of the negative impact of the construction of landfill and also were unable to fight. With the influence of various factors, the city will transport municipal solid waste to the countryside to stack, landfill



and incinerate, and this is municipal solid waste to the countryside.

Picture1. The collected amount of Municipal Solid Waste and the amount of safety disposal in China from 2003 to 2011 (Data sources: China Statistical Yearbook 2004-2012)

Putting in those terms, municipal solid waste to the countryside seems to be a last resort option, but secondary pollution of municipal solid waste to the countryside has brought a series of problems. Although there has been a noticeable improvement in waste treatment technology in the past decade, for example, using high density polyethylene film as a barrier material and recycling landfill gas and reusing, there will have secondary pollution which are the release of landfill gas, the leachate leaks and landscape pollution in course of landfill use and closure. Secondary pollution do great harm to the environment despite the harm is immediate or potential. A variety of collective events occurred frequently caused by the secondary pollution all over China, such as Wanshan waste landfill pollution in Anhui province, Liulitun waste landfill event in Beijing. What makes things worse is that similar events continue to take place in Panyu of Guangdong, Guilin of Guangxi, Lu'an of Anhui and so on. Rural residents suffer from secondary pollution and pay for the city's economic development, which is an obvious environment inequity.

From the perspective of environmental equity, this thesis takes the municipal solid waste disposal in X city in south of Anhui province for example to elaborate that municipal solid waste to the affects countryside local nature environment, economic development and social stability. So the author poses that to solve the environmental inequity problems we need to improve people's consciousness of environmental equity and let environmental equity be the cardinal principle of environment legislation. With the rise of civil environmental movement, as well as the raise of public's awareness of environmental rights, environmental equity issues will cause greater social concern. In the survey, the author found that environmental equity is an important part of social fairness. Environment inequity strengthens social unfairness. In turn, social unfairness led to environmental inequity. The interaction causes environmental issues to get more and more serious. Only deepening the consciousness of fairness and fostering civil awareness of environmental equity, will it ultimately realize environmental equity and achieve social fairness.

2. Environmental Inequity and Its Performance in the Process of Solid Waste to the Countryside

The concept of environmental equity comes from the outbreak of a large-scale protest in Warren County, North Carolina, United States in the 1980s, which aims to protest the construction of PCB wastes landfill near the communities where black and minority ethnic live in. This movement is now seen as the prelude to the movement of environmental equity. In 1987, the book "the only way: to fight for environmental justice" presents the outbreak in Warren. The book use the "Environmental Justice" for the first time. In 1988, the State University of New York Press published the book of John Rawls, "theory of justice". This book describes the fairness, efficiency, and safety issues in the field of the environment and explains the issue of environmental equity in theory for the first time. In 1991, the first time of National Advancement of Colored People's Environmental Leadership Summit held in Washington, more than 200 representatives officially present the 17 principles of environmental equity. In February 1994, the then U.S. President Bill Clinton issued an executive order that requires federal agencies to attach importance to environmental equity issues related to minority groups and low-income. Thus, environmental equity issue attracted widespread concern and the concept of environmental equity is worldwide and popular. In 2001, the U.S. Environmental Protection Agency defined Environmental Equity as:

from the aspect of formulation, compliance and enforcement of environmental laws, regulations and policies, all people, regardless of their race, ethnicity, income, national origin and level of education, should be given a fair treatment with effective participation.

Domestic concern of scholars on the issue of environmental equity is much later. Fair problem belongs to the category of ethics, so environmental ethics was started in the 1980s and has developed very quickly until the 1990s. In the field of sociology, the main representative of environmental equity study is Professor Hong Dayong. In the thesis "Environmental Equity: Environmental Issues Sociology viewpoint", he pointed out that environmental equity has two meanings: the first meaning refers everyone should enjoy the right to a clean environment without adversely environmental damage, the second meaning refers that the responsibility of the damage to the environment should be symmetrical with environmental obligations. In the face of environmental problems, the nature of environmental equity is how the risk of environmental hazards equitable distributes in different international, regional and groups. When this distribution is relation with national development, regional economic class, race and other social factors, environment inequity comes. Professor Hong Dayong indicated that there exists environmental equity on three levels of the international, regional and groups. Of the three levels, the regional level including urban and rural inequity and east and west equity, the inequity which is caused by municipal solid waste to the countryside can be classified as urban and rural environmental inequity.

Next, the author tried to take municipal solid waste to the countryside to Xiadu landfill in X city for example, and then elaborate the impact of municipal solid waste to the countryside and the its secondary pollution on the surrounding rural from three aspects of natural environment, economic development and social stability.

X City, in the south of Anhui province, has Xiadu landfill and Xichong landfill in Guquan. Xiadu landfill is built in 1995. At that time, municipal solid waste was nowhere to be down, then the government decided to site in Xiadu woodland in the south of the city and build landfill within a short time. Original, the landfill covered an area of 10 acres of land, but now it expands to 50 acres because of the amount of solid waste growing, which is close to overload state. And the main approach to dispose municipal solid waste is simply buried. The latter, the Xichong landfill is a new, harmless and sanitary landfill, sanitary landfill, which has specialized leachate treatment

pond and landfill gas control equipment. The impervious treatment uses high-density polyethylene film as a lining materials and synthetic lining layer, then the clay layer. The municipal solid waste in X city is main transported to Xiadu landfill, where municipal solid waste is just simple stacked without any protective measures against leakage and leachate collection. Then the leakage directly enters to underground and surface runoff. The landfill gas directly scatters into the atmosphere in the lack of recycling or control.

(1) Municipal solid waste to the countryside has a direct impact on rural natural environment. Solid waste is stacked and accumulated with no harmless treatment. This waste effects local water, soil, air and public health with the destruction of the original walls that can against leakage and leachate collection

Firstly, water pollution caused great harm to the health of domestic water of the surrounding villagers. Even if the waste is in a timely manner, there still would produce large amounts of harmful liquid. Especially on a rainy day, a large number of hazardous liquids with the rain four overspill. However, solid waste is simple stacked in waste zone and commonly untreated. Large amounts of toxic and hazardous substances with the infiltration of rain water flow into the ground or alluvial surface runoff, causing water pollution. The river and pond near landfill is brown, multi floating white foam on the surface. Local residents now already can not use the original source of drinking water.

Secondly, toxic and hazardous substances in the soil may be absorbed by the growth of crops, so the local residents who purchase of the consumption of these crops may suffer from health threats. On one hand, solid waste piled up, causing groundwater pollution then resulting in the decline in the fertility of the land. On the other hand, part of the wastewater through surface runoff directly causes fields pollution. Landfill often sited in the valley and woodland nearby also suffered some damage due to construction and the need for waste dump. There exists soil erosion phenomenon too.

Thirdly, landfill gas generates a lot of negative impact on health of farmers nearby. Accumulation of solid waste and chemical reactions that produce large amounts of odor, make the area near the landfill share strong acid odor. According to local residents, this gas has torture them for decades, and odor is constant throughout the year. Especially the summer wind direction, odor particularly strong, so that many rural residents did not open the doors and windows frequently.

(2) municipal solid waste to the countryside affects the local rural economic development. On one hand, the waste pollution has a negative influence on agricultural environment, and it is difficult for local people to develop agriculture. Xaidu landfill located at the top valley of XiaDu woodland and Xiangchong, Banqiao, Panjia and Jiangjia villages located in the forest foothills. Landfill leachate sewage down the valley to flow directly into the nearby agricultural land, such as woodland, farmland, ponds and so on, which leads to environmental factors, water and land, are polluted. Not high Original profit of agricultural production and the destruction of the production environment of the region, make the development of region's agricultural production difficulty.

On the other hand, the presence of landfill is not conducive to economic development, hindering the local investment, widening the gap with the surrounding area. Xiadu village is only 8 kilometers away from the city, and located in the national highway traffic online with convenient transportation and obvious advantages. However, due to the presence of the municipal solid waste landfill, majority of investors came to inspect the investment environment and shelved investment plans. Investment can not be achieved and the other advantage of the surrounding areas can not be effectively realized. All of these is not conducive to the increase of jobs for local residents. Their living standards improve slowly, widening the gap with neighboring villagers. The landfill has become one of the major constraints of the development of Xiadu and the surrounding area. According to the village, the development of the surrounding areas in Xiadu village boom continues to heat up in recent years. There also had a number of companies want to site the plant in this. They beat a retreat and cannot accept to build factory near landfill.

(3) Municipal solid waste to the countryside affects social stability in rural areas. First and foremost, it weakens the region's sense of identity. When overlook from the village to a distance, a waste mountain stands in front which seriously affect the perception of the region. At the same time, there is a deviation of the region identity. The surrounding villages are dubbed the “garbage village” due to the existence of the landfill. Also, there exists discrimination when marry with others outside the village. All of these phenomena make “garbage village” divided from other villages and exist apparent identity of the estrangement.

Then, municipal solid waste to the countryside brings harm to the relatively weak rural residents group, which easily aroused dissatisfaction and social conflict. The Xiadu landfill has been ran for 15 years, and there are more problems on the management of waste disposal and field

area from the beginning. Simple Waste disposal methods and poor oversight bring serious impact on local residents, having effect on their life. Rural residents try to appeal to the higher authorities at all levels for help several times and this problem had to be left unresolved. Later, rural residents intercept waste transport vehicle, break out mass brawl and have conflicts with Environmental Protection Agency, which becomes one of the important factors that endangers the stability of local society.

Despite the current lack of domestic exact statistical data and materials, it is difficult to use objective data to describe differences between urban and rural residents exposed to environmental pollution. But, it clearly shows that rural residents face environmental inequity issues have been quite prominent with experience survey above. In China, city is the top priority of economic development, and that even if there is enough land, there will not be built in the city landfill. The rural area has a lot of spare land with less development. Then municipal solid waste comes and the rural becomes a city waste dump, to pay for the economic development of the city. All solid waste in city after simple classification transported to rural area. It inevitably damage the interests of the rural residents and deprive them enjoy the same clean environment and their equal rights to the use of clean resources.

3. The Consciousness of Environmental Equity and Environment Legislation

Limited to the reality, municipal solid waste to the countryside is objectively inevitable and environmental inequity between urban and rural is objectivity of its existence. Promoting the concept of environmental equity is a green thought, which is also constrained by objective reality situation. To look at this problem, we have to admit that the pressure of waste disposal technology constraints and the large number of municipal solid waste generated, so municipal solid waste to the countryside is in the demand of realistic. However, we should also see the irrationality and inequity of this phenomenon. What's more, this equity will sharp social contradictions without being effectively addressed in the development of the city.

As a dynamic full social phenomenon, municipal solid waste to the countryside does with many groups in a wide area. In most case, it has various effects on society. Therefore, we need every to play their respective roles and promote the solution to the problem of environmental inequity. In all measures, the ideological cognition is the premise and the spiritual motivation and

intellectual support of action. Now it is necessary to culture, improve and deepen public consciousness of environmental equity in the entire environmental problem solving process. By government propaganda, we can guide the practice of NGO, as well as residents of their own practical action, fostering a consciousness of equity in the whole society. At the individual level, as involving municipal solid waste to the countryside members, both urban and rural residents in the day-to-day life should practice environmental behavior.

Rural residents, the source of the manufacturer of, will affect the waste disposal. They can not completely inhibit the generation of solid waste, but they can reduce the amount of municipal solid waste through less use of non-renewable resources and fewer bags in life. To ordinary rural residents, we should encourage and guide them to actively participate in the waste disposal which they can deal with, such as leftover food can be used for fertilizer and used to feed stray animals. In real life, NGO can advocate green consumption and low-carbon life for urban residents. The most importance is that the public change their view on environment issues, attracting their concern on municipal solid waste to the countryside and the following social morality and interests.

Due to weak environmental consciousness, rural residents can not fully aware of the negative impact of municipal solid waste to the countryside before everything is worse. Rural residents are more weakness than urban residents when faced with pollution because of less development in rural areas. As the most vulnerable, rural residents have to fend for themselves, seeking the basic necessities of life on the one hand, and they can not do anything in the face of professional barriers. On the other hand, their level of education and awareness of legal rights is relatively weak. Sometimes, they just like loose sand without non-governmental organizations. They hate the landfill, but several struggles with the Environmental Protection Agency and the Sanitation Department are failed. They have no alternative but to choose silence. Although rural residents express the "unresponsive" in the face of the harm with municipal solid waste to the countryside, they now have also realized the necessary to do something to protect their homes. What we can do is to actively guide rural residents to establish a sense of environmental rights, and enhance their own consciousness of environmental equity. And they should have the courage to say NO to municipal solid waste to the countryside garbage countryside. Of course, rural residents can play more proactive role in reflecting their demands to higher authorities, always observe the changes

of the living environment, and actively cooperate with the higher authorities of the environmental monitoring.

The environmental equity only as a concept is not enough. We need a powerful system for the protection of environment when deal with environmental issues, such as municipal solid waste to the countryside, then environmental equity can be possible to achieve. However, there are many deficiencies to promote and advance environmental equity under the existing legal system. Imperfections and defects of environmental legislation, coupled with the relative neglect of environmental legislation in social development, results that concept environment equity is difficult to be effectively implemented.

At the national level, legislature can make environmental equity be the basic principles of environmental legislation, integrating environmental legislation with the concept of sustainable development and harmonious society and implement the principle of environmental equity in various systems to ensure the achievement of environmental equity. It is necessary to rely on the system model and a strong organization to promote the true realization of the concept of environmental equity and civil environment right. Therefore, to improve the construction of legal system of environmental legislation is important through the establishment of the environmental aspirations mechanisms and environmental rights judicial protection mechanisms. Otherwise, environmental equity will be forever stuck in the paper or the concept, which will not be able to play its due role, nor to promote eventually achievement of environmental equity. Finally, increase enforcement of Environmental Protection Law to implement the principles of environmental equity especially in rural areas. Environmental protection is technical and professional, so some residents can not clearly understand the environmental impact of certain activities in many cases. Rural residents even can not conscious of the harm with lower educational level. In the environmental enforcement process, it is not only necessary to try to guarantee the rights of environmental equity and environmental acquainting rights, but also necessary to set specialized standards and working methods, which is in line with the actual situation of the local environmental.

4. Conclusion

When we mentioned municipal solid waste to the countryside, it is a factual judgment. The

harm with municipal solid waste to the countryside is a clear value judgment and the outstanding performance of environmental inequity. On one hand, this environmental inequity between urban and rural areas in the level of environmental protection is related to the structure of center-margin for a long time. Such as environmental legislation, it is mostly in connection with urban environmental issues. That is to say, law-making takes the city as center and failed to create a more complete legal framework for rural environmental protection. At the same time, all laws of environmental protection are only the related system requirements, and there is a lack of specific legal system and operable application process. On the other hand, limited to some factors in reality, such as the technical level, the economic development and gap between urban and rural areas, the environmental inequity will exist in a certain period of time. But, it does not mean that these factors are the necessary condition of the harm with municipal solid waste to the countryside. In the survey, the author found that the harm is more response from the human factors, such as management confusion, the unclear responsibility, neglect of the public and so on.

Environmental issues have been paid close extensive attention in the worldwide, and this results in more concern on environmental equity. To trace to its source, environmental inequity is the imbalance of the relation of human beings with nature and society. Thus, the realization of environmental equity is urgent and need people to improve their consciousness of equity, putting the philosophy of environmental protection into practice, and ultimately achieve comprehensive, coordinated and sustainable development of human beings in harmony with nature and society.

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