

ANALYSIS ON THE CONFLICTING POINTS OF THE LOCATIONAL CONFLICT

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Abstract: A growing awareness of civil and political rights has deepened the conflict between local governments and residents concerning the location of unwanted facilities. As such, new ways of conceiving resident reaction towards policies concerning the location of unwanted facilities is needed. To that end, this study focuses upon the conflicting issues that were in place during the construction of Seoul's Nowon and Kangnam district incinerators. While the issue of safety regulation was predominant during the initial stage of the conflict, this study argues that economic compensation and the apparent contradiction between the means and the end were brought to the fore as time progressed. In addition, the residents are acquiring more and more information by learning and social awareness toward resident resistance movements are changing. These environmental changes have transformed residents' behavior from the passive to the active. So the government can no longer do its business with authoritarian development plans. From an institutional and operational viewpoint, the government should substantiate civil participation, appropriate and diversify economic compensation, and effectively link the compensation strategy with its other strategies. The government should furthermore formulate well thought-out plans grounded in scientific methods of research.

INTRODUCTION

Seoul's problem with overpopulation, along with the various other problems of being a metropolis, not only call for a quantitative expansion of the city as a whole but a qualitative improvement of public services like housing, sewage, waste disposal, roads, and parks. The introduction of these services, however, is hampered by a relatively new problem: resident opposition.

Of all the debates surrounding these proposals, policies concerning the location of unwanted facilities (hereafter referred to as "locational policy") are perhaps the most challenging. Although residents do not in principle oppose the construction of new facilities, they vehemently oppose any constructional efforts that are planned in their personal residential area. This so-called NIMBY (Not In My Backyard) phenomenon, a phrase first coined by

O'Hare, have been widely used to explain the behavior of individuals who oppose having their resident district become the site for public facilities.¹⁾

Government and resident conflict has been on a steep increase in recent days.²⁾ This conflict has become so commonplace in locational policy that the phenomenon is now widely referred to as 'the populist political philosophy of the 1980s' (Hall, 1989: 280). Although many policy makers still view civil opposition as egoistic and irrational, recent studies on the Nimby syndrome have

1) For definition see Mazmanian & Morell (1990: 123 ~ 125), Dear (1992: 288), Sellers (1993: 460 ~ 462). In Dear (1992: 288), terms such as NOOS (Not In Our Street), NIMTOOS (Not In My Term of Office), NOPE (Not On Planet Earth), and CAVE (Citizens Against Virtually Everything) are introduced to explain similar behavioral patterns.

2) According to a US EPA report, although 81 toxic waste disposal sites were planned between 1980 and 1987, only six have been constructed and are running as of 1993 (Kunreuther et al., 1993: 301 ~ 318 from Hunter & Leyden, 1995: 601).

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suggested that it should be taken more seriously in local policy making. According to this perspective, two factors should be stressed. First, the growing awareness of hazards related to these facilities will most likely create stronger and more organized opposition. Second, local policy authorities should learn how to respond to these reactions by residents when planning future sites (Takahashi and Gaber, 1998: 184~185).

Unfortunately, Korea does not have an extensive history of conflict resolution between the government and its residents. Analyzing recent conflict processes of unwanted facilities will, however, shed some light on the factors that hamper peaceful resolutions and the problems that may arise from government responses.

This study has selected the Nowon and Kangman districts for a comparative case analysis. Both districts have the same type of unwanted facility (viz., incinerators) as well as the same business contractor. While these cases differ in the final business outcome and the degree of success in negotiations, both were met with continual opposition from residents after the start of construction.

This study is based on document research and complemented with qualitative analyses through interviews. Reference documents include studies of both Korean and non-Korean works, official statistics and government documents, handouts, conference logs, internal memos and press releases. Information that was hard to find on paper, such as the different attitudes between groups or the relational dynamic between them, were sought through field studies and interviews.

THEORY OVERVIEW ON LOCATIONAL CONFLICT

Viewpoints on Residents' Opposition

There are two ways of looking at resident opposition. For a government whose essential duty is to

provide basic public services, the construction of unwanted facilities can be seen as a necessary inconvenience; while that same act can be seen by residents as a violation of their basic right to property, a clean environment, and overall personal well-being.

Those who are critical of resident opposition have viewed such acts as an abuse of the democratic process, arguing that there are alternate solutions that the State refuses to consider. These critics describe this so-called "Nimby syndrome" as a contagion which has spread to various other issues including the technical decision-making process for the safe disposal of toxic wastes (McAvoy, 1998: 274). Instead of deferring these issues to the people, who they claim have a limited knowledge of social issues, these critics maintain that only policy experts are able to resolve these problems.

Other theorists, however, not only question the premise that residents are uneducated and myopic, but reject the idea that the advice of "experts" is necessarily superior. To think otherwise assumes that there are such things as 'objective' interests that can be known irrespective of who you are and how you stand in relation to a given conflict. But, says these theorists, a scholar otherwise uninvolved in a conflict is in no position to deduce the interests of the involved members without first engaging in an open and informed discussion with those members (Dahl, 1989: 70~74). The decisions of policy experts are not neutral, as the argument goes, because they are prejudiced by their particular social-economic environment (Lindblom, 1990: 52).

Some studies suggest that resident opposition stems not only from economic costs related to the lowering living conditions but also from the psychological cost of having dangerous facilities like nuclear waste disposal sites nearby. The viewpoints that look favorably upon resident opposition assume that this way of thinking is rational and politically-correct (Kim, 1991: 39~43).

Points of Conflict

Scholars have argued that the reasons behind resident opposition can be understood in economic, risk-related (technical), and political (procedural) terms. The government could therefore respond accordingly by providing economic compensation, supervise/regulate risk-management, and institutionalize processes that guarantee resident participation.³⁾ The extent that these measures are carried out to placate residents during the locational stage will henceforth determine the degree of conflict between the two parties.

First, economic factors are a major force behind resident opposition. If facilities were placed adjacent to residential areas, residents would incur property damages, possible health hazards as well as the destruction of scenic images would depreciate property value. The argument from economics is split between those who emphasize economic losses in areas like land prices and product value on one hand (Kemp, 1990; Dear, 1992; Kim, 1993; Yoo, 1996; Huh, 1996), and those who emphasize the unfairness of cost and benefit ratios on the other (Mazmanian and Morell, 1990; Kraft and Clary, 1991; Kunreuter and Easterling, 1992). To relieve some of these economic problems, the government must initiate a compensatory institution. Economic compensation comes in various forms, from direct compensation, indirect compensation (like awards), contingency funds, economic goodwill incentives (such as donation to charities, establishing education facilities, giving out scholarships, etc.), and facility packages (Gregory and Kunreuter, 1990: 73~74). However, many are critical of the notion that compensation can settle environmental conflicts. In other words, even if social costs could

be compensated on a private level, reaching a consensus in the public arena on the form and amount of compensation is next to impossible (Bacow and Milkey, 1982: 277). In the case of nuclear waste disposal facilities which could directly threaten human lives, the utility of economic compensation may decrease.

Second, other than economic factors, the negative effects of pollution is also a major cause of residential dissent. These issues are easily explained with risk (technical) factors. Risk factors include damage to one's health (Mazmanian and Morell, 1990; Kraft and Clary, 1991; Kunreuter and Easterling, 1992; Hunter and Lyden, 1995), a proximity between facilities and residential area (Kraft and Clary, 1991; Lober, 1995), and technical appropriateness (Gevers, 1989; Huh, 1996). To mitigate these risk factors, safety regulations must be followed. The method of regulating safety can be classified into facility changes and operation changes (U.S. EPA, 1982: 37~42). The first changes the design of the suggested work to alleviate or settle resident opposition. This includes downsizing the size of the facility, creating a buffer zone between unwanted facilities and its surrounding areas, installing a 24-hour measurement system, opening an only-use road to prevent traffic congestion, changing delivery vehicles. Examples of the second include limiting operating times, limiting waste introduced to the facility, and increasing the lever of monitoring.

Third, political (or procedural) factors also play an important role in the government-resident conflict. Examples include the lack of participation by residents, and lack of transparency and democratic practices in the decision making process. In this case, skipping the political process is itself (even if there are no problems with the case at hand) a cause of conflict. Important examples include a lack of civil participation (Gevers, 1989; Petts and Edujee, 1994; Lober, 1995; Kim, 1993), a lack of risk information (Kraft and Clary, 1991; Petts and

3) Carnes (1987: 358~362) points out three effects that result from incentives that attempt to alleviate resident opposition. First, it can relieve the negative effects that may arise from the construction and operation. Second, it compensates current losses. Third, it compensates the risk and cost of covering other areas.

Edujee, 1994; Kim, 1993; Huh, 1996), and secret negotiation processes (Gevers, 1989). In the case of unwanted facilities, some of the ways to encourage participation include more information disclosures, a stronger commitment to guarantee the rights of decision-making, monitoring facilities,⁴⁾ and resident referendum.⁵⁾ However, civil participation is generally understood to be an unbalanced phenomenon and most studies acknowledge that there are different arguments surrounding the active, passive and general actors.⁶⁾

Points of Analysis

The following points are analyzed in this study.

First, the institutionalization process of issues was analyzed. In the initial stage of the conflict, both parties exchanged their formal opinion through the civil participation process. Since the initial conflict can change over time, this study not only confirmed the initial issues of each case but their changes as well.

Second, this study examined economic losses and any changes in the process of government compensation. In particular, the falling value of prop-

erty was most poignantly felt by the residents, which soon became the central issue in economic compensation. This study therefore examined the fall of real estate prices in each case, the dialogue between the government and residents, and the changes in economic compensation during the course of events.

Third, this study looked into the configuration of safety regulations. As mentioned earlier, risk-related factors include hazards to health, proximity between facilities and residential areas, and technical appropriateness. Of these factors, hazards to health would be the ultimate result of the other factors related to safety regulations, and also since the problem of proximity is a given premise in the cases, this study has focused on the problem of technical appropriateness and its relation to safety regulations.

Fourth, the study examined the depth and range of civil participation. The underlying reason behind resident opposition lies in the lack of participation and risk information. Among all the suggested ways to draw resident participation, those that are used in Korea such as explanatory meetings, public hearings, and public exhibitions will be examined. Furthermore the participation at the post-management and operational level will also be analyzed.

Finally, the paper studied the contradiction between the means and ends, which is so evident in the case of waste incinerators. The construction of incinerators and other basic facilities is an intricate process of recognizing problems, establishing objectives, searching and evaluating alternatives, and making final choices. In the case of facility construction the differing opinions of means and ends between the local government and its residents can become an important source of conflict.⁷⁾ In the beginning, Seoul's decision to build incinerators was the city's

4) Elliott (1984: 397~410) argues for a formalization of the local resident participation and long-term supervising mechanism so as to convince the residents that the facilities' operators are making efforts to ensure the safety of residents.

5) Armour (1991: 60~74) introduces the Canada Siting Process Task Force for nuclear waste disposal sites with its five stages, the fourth of which is evaluation of the region that has approved inspections, where referendum on profit-securing schemes promote participation.

6) Even if participation occurs, there is no guarantee that only a select class of interests will be represented. Beatley (1994: 185~196) classifies the different roles a resident representative can play into 3 categories: (1) Descriptive Representation where the representative is similar with the represented group; (2) Opinion Representation where the representative is similar with the opinion of the group; and (3) Trustee Representation, where the representative, acting out of conscience and acquired knowledge will act based on independent judgement, only to be evaluated at the next election.

7) Contradictions between means ends can go beyond the NIMBY phenomenon and become the NIABY (Not in Anybody's Backyard) phenomenon. Heiman (1993: 359~361) treats this case as the typical case for NIABY.

attempt to solve the waste problem. However as time progressed, residents argued that a stronger recycling program was needed, thereby throwing the issue into debate. This study analyzes the arguments of both sides each cases.

CASE ANALYSIS

Summary of the Cases

The conflict between the government and the residents of the Nowon district began with the residents of Nowon filing a petition against the construction plan (January, 1990) of a waste container station at the incinerator site. Following an announcement by city officials in August to instead build a waste incinerator, the conflict surrounding the container station disappeared only to create a new debate over the incinerators. Thereafter the residents and Seoul authorities exchanged opinions through bull sessions, explanatory meetings, and public hearings. Two and a half years were spent on filing petitions, written statements, organizing demonstrations, forced break-ups, and arrests. These events finally came to a close in August 1993 when Seoul downsized its original incinerator and started construction by force. Soon after the project began, however, protests and petitions erupted. Even after all the construction was completed in February 1997, Seoul changed its plan to only dispose waste from the Nowon district, by planning to use these facilities for a larger area. To this day, conflict still continues between the government and residents.

Meanwhile in the Kangnam region the government planned to build the nation's largest waste incinerator facility with a capacity of more than 1800 tons daily in order to accommodate 849 tons from Kangnam and 1413 tons from the neighboring Songpa districts. Problems arose when residents of Ilwondong within the Kangnam district filed a petition in September 1992, when the construction

plan was signed. Thereafter, with the involvement of local leaders, the opposition became more violent. In spite of the explanatory public hearings held by the city, and an aggressive propaganda campaign by Seoul to persuade the residents of the construction plan in 1995, opposition to the construction continued. Although construction of the building was initially set with a capacity of 600 tons, as of late 1999, a 900-ton capacity building was built. Conflict still continues, and at present, the facility is still undergoing safety evaluations.

Institutionalization of the Issues

In general, responses from residents first come during a review of the Environment Evaluation Report (hereafter referred to as 'EER'). However, as in the Nowon case, it is difficult to know the issues surrounding the conflict since residents do not express their opinions in the draft review. As mentioned above, the conflict arose with the waste container station problem before the incinerator problem. In the petition filed concerning the waste container station, the residents clearly state pollution and property damages as grounds for opposition. However in the petition submitted to Seoul and the Ministry of Environment after the public review of the draft of EER (June 16, 1992) the reasons for opposition are only pollution and disposal after recycling, but not property infringements.

In other words the initial issues were environmental degradation and losses in property, but thereafter the residents changed the focus from property damages to recycling and reducing waste as a precursor for incinerator construction. Therefore the major issues changed from pollution and property damages to pollution and the contradiction between means and ends.

8) This study surveyed 978 households of Siyoung Apt., 750 households of Kyungnam Apt., 300 households of Lotte Apt. 840 households of Sangah Apt., located in

Table 1. Reasons for Opposing Nowon Incinerator (including repeated responses)

Reasons	Specific Reason	No. of response	Percentage(%)
Harmful to the environment (88.9%)	emission of pollutants (such as dioxin)	121	53.0
	too close to residential area	82	35.9
Lack of resident participation (40.7%)	disregard for residents' opinions	93	40.7
Economic disadvantage (2.5%)	decrease of apartment price	5	2.1
	inadequate compensation	1	0.4
Other (54.7%)	waste of government budget	10	4.3
	harmful to recycling policy	115	50.4

Source: Han (1994; 79)⁸⁾

A survey done at that time reveals the results shown in Table 1. The major issues that concern the residents are environmental degradation, civil participation, and contradictions in the recycling policy. Economic loss is a relatively small issue, and as will be discussed later, was difficult to bring up at the time due to the current situation.

In the Kangnam case, issues that were important in the early phase of the negotiation can be classified into opinions suggested during a public review of the EER draft. Unlike previous cases in Nowon, residents of Kangnam expressed a variety of reasons for opposing the construction of a waste incinerator.

As seen in Table 2, the primary reasons given are environmental harm, regional and demographic inequalities, deterioration of the living environment, and economic losses. An interesting deviation in this observation is that because the proposed site for the incinerator was surrounded by other unpopular facilities such as water refinery and Korea Regional Heating Corporation, the problem of inequality became a heated issue unlike the other regions.

Chunggye-dong (total of 2,868 households) which are all directly affected by the proposal. Samples were taken and weighed according to each complex. Of the 250 samples taken, 228 responded.

Even in the case study of the Kangnam district, there is no mention of a contradiction between the means and ends such as the prioritized recycling policy in its EER. Unlike the Nowon case however, the prioritized recycling policy was proposed before any community representative group was organized, which was affected by exchanges with other communities through the media and various other meetings. It can be seen from this case that in the early phase, issues related to environment safety, equality among different regions, and the contradiction between the means and ends, developed. However, as it is argued below, as new apartments are being occupied, these issues become more complicated because the problem of economic compensation is now introduced.

Economic Compensation

Local residents were not only concerned with the health hazards of waste incinerators, but also their odor, noise, traffic, and the decline of real estate price caused by the facility and garbage trucks. In the Nowon district's negotiation with the Seoul City Government, however, no argument was made on economic grounds. This may be because the negotiators were concerned with the adverse reactions that might arise of economic concerns were seen as the motivating factor of their cause in

the early phase of their campaign. In fact, the letters sent by local residents to the City Government explicitly states that their opposition was not motivated by self-centered causes.

Nonetheless, the City addressed economic concerns by promising that measures be taken to minimize the environmental pollution and that the various community facilities built around the waste incinerator site will increase real estate values. In addition, before construction began, the City built a number of community facilities and reduced the local heating rate to meet local resident demands.

To see weather the presence of waste incinerators have any effect on surrounding real estate values, apartment prices adjacent to the currently operating waste incinerator are listed below.

There are many types of apartment complexes around the Nowon waste incinerator. To make the comparison more relevant, price samples are taken from Hyundai and Chunggu apartments located in Hagye-dong, in addition to Kyungnam, Sangah,

Table 3. Value of Apartments near Nowon Incinerator, As of Oct. 16, 1999

(Unit: 10,000 won, 1Pyung = 3.24m²)

	Area	Pyung	Price	
			Low	High
Kyungnam	Chunggye-Dong	31	13,000	13,900
Lotte	Chunggye-Dong	31	13,600	14,600
Sangah	Chunggye-Dong	31	13,400	14,300
Hyundai	Hagye-Dong	32	17,800	19,300
Chunggu	Hagye-Dong	32	18,600	20,100

Source: www.to

and Lotte apartments located in Chunggye-dong.

Residents of these above apartments have been the most outspoken opponents of the waste incinerator.

Price samples show that Kyungnam, Sangah, and Lotte apartments, which are located closer to the waste incinerator are lower by about 40 to 60 million won than the Hyundai and Chunggu apartments. Of course, there are numerous factors

Table 2. Reasons for Opposing Kangnam Incinerator (including repeated responses)

Reason	Specific Reasons	No. of Response	%
Harmful to the environment (95.1%)	- emission of pollutants such as dioxin	130	37.8
	- too close to the residential area	97	28.2
	- health hazards	35	10.2
	- odor from waste	35	10.2
	- children health is endangered	30	8.7
Regional inequality (40.7%)	- unfair to have in addition to water refinery	97	33.1
	- construction of middle class apt. is undesirable	26	7.6
Harmful to living condition (11.6%)	- worsen the traffic	27	7.8
	- will not look good	13	3.8
Economic (4%)	- decrease of property value	8	2.3
	- inadequate compensation	6	1.7
Other	- should be placed on the outskirts	84	24.4
	- should not be decided before moving in	21	6.1
	- request for park	16	4.7
	- should be place inside Kangnam gu	6	1.7

Source: Seoul Sanitation Board (1994, 5: 49~50).

Note: Responses less than 5 were not counted

such as location and grounds that influence the price of an apartment, but the large difference between these two groups indicate that the relative proximity to the waste incinerator has some bearing on the price without specifying exactly how much.

Such comparison shows that the waste incinerator has a negative influence upon the value of adjacent real estates. Nonetheless, other than the lowering the heating cost of the residents and constructing some community facilities. The City did not offer any compensatory measures to residents. As mentioned below, more significant measures began to appear when the Kangnam waste incinerator issue surfaced, and with the enactment of Promotion of Installation of Waste Disposal Facilities and Assistance, etc. to Adjacent Areas Act resident compensatory subsidy policy has been adopted.

In the case of the Kangnam district, after a number of failed attempts to begin construction of the waste incinerator, the City began offering a significantly better compensatory package in April 1996.⁹⁾ However, residents refused the new offer package, demanding a compensatory subsidy of 20 to 30 million won per household for the fallen value of their home.

The price of apartment complexes near the Kangnam waste incinerator were surveyed to be similar to the above. Table 4. shows that prices of the nearby Samsung, Daewoo, Hyundai-4th apartments, sizes of which ranged from 31 to 33 pyung, were 20 to 100 million won lower when compared to the 30~31 pyung Samsung, Samik, Kyunyoung, Samho apartments, which are located relatively farther away from the waste incinerator. In particular, the Samsung Apartments, which is the closest to the facility, is significantly lower than the

Table 4. Value of Apartments near Kangnam Incinerator, As of Oct. 16, 1999

(Unit: 10,000 won, 1Pyung = 3.24m²)

	Area	Pyung	Price	
			Low	High
Samsung	Ilwon-Dong	31	21,500	22,100
Daewoo	Ilwon-Dong	32	26,500	28,300
Hyundai-4th	Ilwon-Dong	33	23,700	25,500
Samho, Samsung	Ilwon-Dong	31	28,700	30,700
Kyunyoung, Samik	Ilwon-Dong	30	31,500	32,500

Source: www.apr.to

others, indicating once again that the facility has bearing on the value of real estate in a negative way.

In September 1995, the Kangnam Residents' Committee negotiated a compensatory package that allowed compensation to be paid to affected residents prior to the construction of the facility. This agreement indicated that residents be compensated per 100 ton of waste being disposed in addition to 100 million won for environment damages. By this formula, the Kangnam district paid a total of 3.6 billion won to its residents.¹⁰⁾ Such change in the compensatory package is not as progressive as per household compensation, but it is considered to be a step in the right direction.

Safety Regulation

From the beginning, residents in the Nowon district expressed their concern over the problem of dioxin. No regulations concerning the disposal of dioxin existed at that time, which was one argument against the construction of the waste incinerator. The City responded by citing examples from

9) The compensatory package offer by the District office includes the residents' right to participate in every process of construction, the construction of parking space and a park near the incinerator, the creation of a fund for a city beautification project, a 50% reduction of heating fees, and the construction of a recycling center.

10) Because of this change, compensation fees were paid to Nowon residents as well. However, with only a year left until the construction is complete, Nowon residents received only 500 million won, which provoked severe complaints from residents.

abroad that suggested that dioxin has a minimal effect upon human health and committed to take all necessary measures to prevent any possible harm. The two sides were held at an impasse over this issue until the ground breaking day. The last minute offer made by the City centered around the economic compensation seen above, and did not address the issue of health safety other than promising that the City will take the residents' concern into account once construction begins, and offer a revised draft for negotiations that includes reducing the facility size from 1,600 tons/day to 800 tons/day, and the installing the newest air pollution prevention system.

The negotiation concluded with a temporary agreement that the City will cease constructing the facility if the dioxin concentration sample taken in September 1996 is in excess of $0.1\text{Ng}/\text{m}^3$.¹¹⁾ The making of this article was a landmark event considering that a country without any regulatory dioxin measures adopted one of the most strict measure of dioxin concentration that is only seen in countries like Germany. Since then, the City adopted the $0.1\text{Ng}/\text{m}^3$ as the indicative line of measurement, which was far in excess of the recommended measurement by the Ministry of Environment. Furthermore, the City obligated itself to conduct the test bi-annually and make the test results public. Such a strict measure of dioxin concentration adopted by the City of Seoul affected other local governments. Under the temporary agreement reached with the City, the Nowon waste

incinerator is required to conduct environmental tests twice a year.

Even in the case of the Kangnam district, health safety related to the emission of dioxin has been a hotly debated issue from the beginning. However, as negotiations progressed, the size of the facility was emphasized over the issue of dioxin emission. Therefore, in the final agreement reached in Kangnam, there is no clause addressing the issue of dioxin.¹²⁾ In the case of Kangnam, it seems that the construction of the facility was accepted as a fact after some time had passed, and the negotiation naturally focused on the size of the facility.

Resident Participation

One of the most serious problems that can be identified in the case of the Nowon district is the lack of resident participation, which was largely discouraged by the City's exclusive reliance on legal and administrative procedures. Also, in organizing the community's review of the Mok-dong facility in November 28, 1991, the City only allowed selected officers of community organizations, thereby preventing meaningful participation from wide spectrum of community residents. During the Mok-dong facility review, the City also did not allow for night observations, which was critical for observing any environmental damages. As a result, it was criticized for being used by the City for the purpose of promoting its plans rather than inducing participation from its residents.

Before 「Promotion of Installation of Waste Disposal Facilities and Assistance, etc. to Adjacent Areas Act」 were made, the only legal channel for

11) This temporary agreement is composed of 13 articles, some of which contained the following: (1) a pledge to stop operations if the dioxin concentration exceeds $0.1\text{Ng}/\text{m}^3$, (2) nitrogenoxide maximum standard of 70pp, (3) initiating pollution reduction research with special attention given to the additional effects of incinerators, (4) the formation of a management task force consisting of 6 resident representatives and 4 public officials, (5) the employment of 3 resident auditors, (6) the prevention of waste from other localities, and (7) a set standard for food waste reduction.

12) The contents of this agreement are: (1) a layout of the ground work for a 900 ton capacity facility, however, begin construction on 600 ton capacity facility and later decide on the total capacity, (2) to construct an orphanage, community pool, youth facility, facilities for the handicapped, and to completely redevelop a nearby water refinery, and (3) form a resident audit organization and meet with local officials once a week.

resident participation prior to the actual construction was the public review of the draft of EER. So this process was extremely important as a resident participation. At the time, the City made an official announcement for public review on January 17, 1992. On February 11, 90 residents were allowed to visit the Mok-dong facility followed by a District (Gu) Assembly's presentation on the 14th with 10 assemblymen in attendance. At the end, only 3 assemblymen submitted their opinions, without individual opinions being sought from the community.

First, the residents' lack of interest and distrust of legal procedures can be identified as the primary reason for such a problem. Despite the fact that it is customary to make government announcements in Korea, the fact that the City announced a public review of the EER draft in *Seoul Daily* and *Kookmin Daily*, both with very low readership, did not contribute to increasing resident's participation. Furthermore, even those opinions submitted by the assemblymen are taken into consideration only for the sake of formality. At the time of the EER presentation, the assemblymen didn't necessarily oppose the proposal; however, they requested that there be a pre-construction agreement with residents of Chunggye 2-dong, which the City ignored.¹³⁾

Nonetheless, in its final report, the City indicated that all opinions presented by the assemblymen were adopted. Therefore, it may be said that resident participation was completely ignored in the early phase of the project, thus prolonging the conflict with City residents. This is a result of the City's overemphasis on the technical aspect of the procedure. Beyond a number of meetings and seminars that were held following the EER, no meaningful resident participation occurred.

The lack of communication between the City and the residents of Nowon district continued as construction had begun. However, an opportunity for

resolving this problem arose by the adoption of a temporary agreement modeled after an agreement between the Mok-dong Resident Committee and the City which included the clause that allowed resident participation in the operation of the facility. Currently in the day-to-day operation of the Nowon facility, residents participate actively.¹⁴⁾

On the other hand, as the first step in the official procedure, Seoul City announced public review of the draft of EER in *Hangyoreh Daily* and *Kyunghyang Daily* on March 23, 1993. After 40 days of a public review period, 481 opinions from residents were registered, all in opposition to the City's plan. Of the 481, 137 expressed opposition without condition and 344 expressed reasons for their opposition. These reasons are classified and analyzed in Table 2. Despite the 411 expressed oppositions, the final EER indicates that all except for three items which were deemed unqualified, were accepted. This shows that despite a relatively active participation from residents, Kangnam's resident participation remained a formality at best.

Another problem in the case of Kangnam was that the group that was most affected by the project—the owners of the new apartments—were left out in the process, since public review of the EER draft and the final EER draft were all completed before they moved in. This shows that even official procedures were manipulated by the City, thus worsening the distrust existing between the City and its residents.

On April 8 and 22 of 1994, the City unsuccessfully attempted to hold seminars as residents staged a violent opposition. Since then, in order to gather resident opinion, additional mailing and resident representative (tong-jang) seminars were held. First, on May 11, 1994, a mass mailing was sent to 2,934 households of Ilwon 1-dong. Of them, 112 responded, 103 with suggestions and 9

13) See Seoul Sanitation Board (1992, 5: 68~72)

14) In the case of the Nowon Resident Committee, upon acquiring permission from the Ministry of Environment and the Nowon Gu-Office, all 6 members of the Committee are representatives of the residents.

expressing plain opposition. However, this kind of exercise contained the following problems: first, the low return rate of the mailing (3.8%) indicates that the vast majority of residents expressed no opinion on the matter; second, the content of the questionnaire was focused on an issue that was irrelevant, namely community facilities,¹⁵⁾ because there was no concrete agreement over constructing incinerators. In conclusion, the mass mailing campaign failed to have any effect as a method to gather resident opinion. Instead, it only had a display effect by the City.

At the resident representative (tong-jang) seminar that was held in May 25, 1994, 41 of the 43 representatives were in attendance. However, even a seminar that is targeted at local representatives is inadequate because these representatives could not be said to represent the residents of their local areas. Once again, it only served the City as a promotional function. Nonetheless, similar to Nowon district, Kangnam also has a resident committee, which allows them to participate directly in the daily operation of the waste incinerator.

Contradiction Between the Means and the End

Starting with June 15, 1992 in letter entitled, "A Letter to the Mayor of Seoul from the Entire Residents of Nowon District Opposed to the Proposed Waste Incinerator," residents of Nowon argued that the construction of such a facility should begin 2 to 3 years later, after first implementing the waste reduction and recycling campaign. However, the City countered this argument by pointing out to the difficulty associated with obtaining a reclamation site, and that advanced countries show a high rate of waste disposal.

The argument put forward by the residents, especially concerning the issue of waste recycling,

is significant in that it was never before expressed officially. This indicates that the residents themselves began to recognize, through their interactions with the City, that the waste disposal policy was not complementary to the recycling program. Rather, it was a policy that can be detrimental to the recycling program. Furthermore, since the effectiveness of this kind of policy has proved to be limited even in advanced countries (where some are leaning towards recycling programs), a better policy may be to allow some time for further development before making an astronomical investment.

The move by residents to postpone the construction of waste incinerators until a recycling program is secured is supported by a study by the Ministry of Environment. According to this study, which surveyed 9 waste disposal facilities in operation in Korea as of January 1998, the Nowon facility, the capacity of which was reduced in half to 800 ton/day, was running at 290 ton/day with the operation rate of 36%, the lowest in the nation. In retrospect, if the City agreed to give a specified period of time to wait for the result of the recycling program and planned the waste incinerator accordingly, a mutual agreement might have been reached more easily. Instead, the City failed to recognize the rationale of its resident and committed itself to the construction plan. By failing to set the example of reaching an agreement with its residents, the City left a negative example for later negotiations. The residents' recycling-first proposal was partially adopted in the tentative agreement mentioned above, which allowed for a gradual reduction of 80% in waste by the year 2000.

With respect to the contradiction between the means and the ends, residents of Kangnam supported the recycling policy from the beginning. Not only were residents aware of most issues related to this problem through the example set in Nowon and Mok-dong, the Kangnam Residents' Committee even had many information on case

15) This questionnaire inquires that resident opinion on community facilities, which are classified into 18 different categories.

studies of foreign countries that were relatively unknown in Korea. Kangnam's consistent and heavily emphasized argument of placing a higher priority on the recycling program became the most difficult point of the entire negotiation process. However, it was later used effectively in reducing the capacity of the waste incinerator.

As for the capacity of the proposed waste incinerator, at the time of the EER review by both sides in December 1995, the specialist on the side of the residents suggested a maximum of 200~300 tons of waste/day whereas the City's specialist suggested a maximum of 500~600 tons of waste/day based on the district's future waste forecast. No agreement was reached immediately, and the issue of capacity was hotly debated. A compromise was reached eventually as both sides agreed on 2 units of incinerators with a capacity of 300 tons of waste/day each, with the possibility of placing another unit upon completion of a future waste forecast study.

EVALUATION AND CONCLUSION

It should be clear from the above case analyses that the concept and behavior of residents and their interaction with the government is changing.

First, the residents are acquiring more and more information. It should be also noted that this results is not from the government's efforts to open information. Rather, it is the result of the studious position that the residents have taken through the learning process. In the case of Nowon, a relatively low level of research is shown in the early phase of negotiations, due to the lack of a previous example. However, in the case of Kangnam, research activities took place instantly because information from environment organizations that were formed during earlier campaigns already existed. As a result, physical action was taken from the beginning and negotiation strategies were far more advanced, as more attention was placed upon limiting the capac-

ity of the facility rather than completely opposing its construction for environmental reasons.

Second, unlike previous cases, society is more sympathetic toward resident resistance movements. In other words, the so called NIMBY perspective, which viewed resident resistance as irrational and against public interest, is gaining acceptance as a legitimate form of opposition in the policy making process. Such a change in society's attitude is largely due to the media's changing portrayal of the resident resistance. In the past, the media was largely critical of so-called "regional selfishness." However, the current trend is to be more neutral in one's reporting, which provides a more favorable representation of the resident movement.

The resident's learning changing social attitude are allowing resident's behavior to change. This sort of change is especially visible in relations to economic compensation. In the case of Nowon, residents succumbed to outside criticism and retreated from demanding punitive compensation for the decreased land value. However, in the case of Kangnam, residents have stepped up their demand for compensation even after the law assured them certain economic compensation.

Because of these changes, the government can no longer implement authoritarian development plans. It now must take measures to respond to resident action against certain facility projects both systematically and administratively. From Seoul's experience, government regulation of dioxin standards and the organization of community representatives are already under change. However, despite these progresses, more improvement is needed.

First, ways to induce meaningful resident participation must be sought. Cases shown in this study illustrates that past seminars and presentations were merely perfunctory in nature, or more disturbing, served to promote their own plans. In other words, these events were usually held long after the site has been decided and plans have been adopted, leaving no room for resident suggestions. Further-

more, these events were often not open to the public, as only those supportive of the promotional function were invited. Therefore, participation from residents must be guaranteed, and measures to insure that resident ideas are reflected after the EER review must be adopted. Also, as seen in the case of Kangnam, to insure an unbiased EER, recommendations from specialists selected both by the City and the residents should be considered.

Second, in view of the fact that economic compensation is becoming more important, a standard of compensation should be made more diverse. Currently in Korea, compensation related to the construction of waste incinerators take the form of a reduction in heating costs, community facilities such as gym and libraries, and other subsidies. However, all of these methods have problems satisfying the demands of residents and allocating the budget more effectively. Recognizing that the primary resident demand is in the form of punitive compensation, there is a need to diversify the use of subsidies. A reduction in sanitary tax and scholarships for resident children, are a few possible examples.

Third, since health dangers associated with the waste incinerator can be fatal, other measures in connection with economic compensation must be sought. Of course, this must also be considered within budget limits. As illustrated above, in the case of Kangnam, residents demanded for household compensation and minimizing the capacity of the incinerator in addition to economic compensation, to which the City reached the final agreement by making changes to its plan to reduce capacity. This shows that depending on the characteristics of the facility in question, the single strategy of economic compensation has its limits, and must therefore be complemented with other measures. In this regard, safety regulations can play an important role since strict regulations may reduce the need for eventual compensation.

Finally, along with linked strategies, a well-

researched plan is needed. Especially with the question of the capacity of the incinerator, cases indicate that it was a heated issue until the very end. Concerning the decision on the capacity, there is room for local administrators to voice their input. Therefore, the rationality behind it is an important prerequisite for gaining resident confidence. As seen in many cases, residents are well aware of whether the object and method of a policy is due to the narrow gap in information asymmetry. As such, alternative policies such as the recycling policy and reduced capacity of incinerators are issues that greatly influence negotiations. Therefore, an accurate forecast of future waste volume and linkage to other policies are extremely important for rationalizing the incinerator's capacity.

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