



# HOKKAIDO UNIVERSITY

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## **Sociology of Law Perspective on Industrial Waste Problems in Hokkaido, Japan**

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### **I. Introduction**

After World War II, the prefectures in Japan were reformed in the hopes of encouraging greater autonomy. Although local government is subordinate to the central government in other areas, they have been autonomous and active in the environmental field. One of outstanding exception to the national government's domination has been

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the local governments' venture into the area of pollution control and natural environmental preservation.<sup>1</sup> During 1950s, the local governments followed the national government targets for economic growth and thereby attracted large factories.<sup>2</sup> However, they gradually realized the severe adverse health effects resulting from industrial pollution and begin to establish more stringent standards than those set nationally.

However, despite their leadership in many environmental issues, local governments are still strongly influenced by national policy. Local authorities get about 40 percent of their revenue from central government plus 35 percent from local taxes and 25 percent from bonds and miscellaneous revenues, so few of them can afford to directly oppose central government for fear of having these fund cut off.<sup>3</sup>

The changes in environmental quality led to changes in societal attitudes, which were reflected in political pressures, which brought about changes in governmental protection. Similar changes took place in most developed countries, but were probably less dramatic than in Japan.

A rather rapid change in societal attitudes toward pollution occurred in the late sixties. Japan had traditionally been and to a large extent still is a consensus society. It means that the goals and actions decided by society and its leader largely go unquestioned. In the post war period the Japanese people accepted and endure to pay the price of economic growth in terms of environmental degradation. In the sixties, some people began to find that the price was too high. In 1963 and 1964, a project for petrochemical complex at Mishima and Numazu, Shizuoka Prefecture, was rejected by local residents and local government.<sup>4</sup> In addition, in 1996 the residents opposed the construction of industrial waste disposal facility's development in Wakkanai and in 1998 the residents of Takasu Town opposed industrial wastes facility development at Takasu.<sup>5</sup>

Local ordinances enable the local governments to cope with environmental problem. A few local governments began to pass pollution control ordinances in the 1960s, most notably the Tokyo Metropolitan Environmental Pollution Preservation Ordinance of 1969 (The Tokyo Ordinance).<sup>6</sup> This ordinance provided the greatest impetus for local legislation. It introduced the supremacy of environmental conservation over economic growth.<sup>7</sup> At the same year this council served their duty. On July 1969, Hokkaido

government began to make regulation for pollution prevention.<sup>8</sup> Environmental Coordination Section Environmental Policy Planning Division Office of Environment Affairs Department of Environment and Lifestyle, Hokkaido Government created the first ordinance for pollution prevention after World War Two. This Ordinance was enacted with the aim to comprehensively promote measures for pollution control to protect the health of the prefectural residents as well as to conserve the living environment, through clarifying the responsibilities of corporations, the Prefecture and municipalities, prescribing the prefectural basic policy considerations and other necessary matters to remove the existing pollution and prevent pollution. This Ordinance, made up of 8 chapters containing 87 articles in total, was promulgated on October 21, 1971 and enforced on June 30, 1972. Chapter 6 of this Ordinance, concerning the Hokkaido Council on Environmental Pollution Control, was deleted, as the Hokkaido Environment Council Ordinance which stipulates the establishment of the Hokkaido Environment Council was promulgated on July 8, 1994, in accordance with the enactment of the Basic Environment Law.<sup>9</sup>

After 1969, the trend toward decentralization of pollution control was accelerated all over Japan.<sup>10</sup> Many local governments provided newer or more stringent regulations than the national level. Other unique ordinances specifically protect such things as coastal zones, fireflies, trees along the road, and reed field.<sup>11</sup> Moreover, there is a local ordinance prohibiting the sale of organic synthetic detergents containing phosphorous in order to prevent the deterioration of the water quality of Lake Biwa. Another local ordinance establishes a "National Trust" endowed for the protection of scenic and historic sites.<sup>12</sup> Such ordinances have ruled to be constitutional.

In addition to the power of the national government, local government may also promulgate "guidelines" for land development.<sup>13</sup> For example, the Kawasaki guideline was instituted by the city administration in 1964, requiring land developers to insure that their land development would not harm the environment.

Furthermore, in order to receive a construction permit, land developers have to obtain the prefectural approval of their environmental preservation measures before the construction of a disposal wastes facility or industrial facility could begin.<sup>14</sup>

Other types of guidelines have incorporated the use of water supply suspension sanction. For example, a water suspension sanction is imposed when a land developer

violates a guideline should that occur, the local Water Company cuts off the water service to the violator's building.

## II. Industrial Wastes Sitting Facilities Cases in Hokkaido

In this study, we have selected two designated cities, Takasu Town and Wakkanai City. The selection of these cities based on some considerations. First, in Takasu Town, there is an industrial waste company proposes to build a new disposal waste facilities but the communities oppose to the construction plan. The case is still in the process of Hokkaido Government.

On the other hand, in Wakkanai City, the industrial waste companies have proposed to build a disposal waste facility, but opposed by the community and the Hokkaido Government rejected the project proposal.

The characteristics of pollution resources in this area are similar to the characteristic of pollution cause in Indonesia. Pollution problems facing by these two cities may happen or is being faced by developing countries such Indonesia. The findings and solutions for industrial waste sitting facilities case model in the study area will be very valuable and useful for Indonesia to protect the environmental from pollution such as industries and waste disposal facilities.

## III. Sitting Industrial Wastes' Disposal Facility Case in Takasu Town

### 1. Introduction

Sitting industrial waste disposal facility in Japan requires a planning stage and implementation stage, which consists of public acceptance, licensing and construction.<sup>15</sup> Total lead times require to develop industrial waste disposal facility in Japan are highly variable and have become on average longer since 1997, the new revised law.<sup>16</sup> At some stages of sitting, there is more stability or other there is less. The major source of variation in total lead times across space and overtime is the instability in public acceptance time. Sometimes the industrial waste companies are forced to sue the prefectural in order to get the license from the court decision such a in Kushiro case or either lost the chance to get the license because of losing in the court

such a in Wakkanai case.

Site selection is continued task and involved the use of least-cost techniques to establish a facility of candidate site. There are some major criteria to establish the waste disposal facility. A relative lower population density, a low economic growth, accessibility to transportation routes, and far from the community, housing and school, except Kushiro case (more or less 500 meters from housing area and school).<sup>17</sup> Those conditions are to convey the candidacy status for a particular site by attaching relative weights to selection criteria. For example, when the features of two sites are similar except for proximately to housing, the closer site will be excluded because it will be more expensive and more difficult to get the license due to resistance from the community.

Although these criteria are universal, there are some important features of the location of industrial disposal waste sitting in Japan.<sup>18</sup> The first is that apart from the facility, almost of all industrial waste disposal facility close to the river. Fast flowing rivers provide sufficient to discharge the water-water after having treatment through treatment process facility.

The second, characteristic sitting feature is the relatively high concentration of facilities in a given area. Site availability in Japan is limited as well as at the research side, because of climate, scare land, competing claims for resource use, and other historical reason. Industrial waste company want to make optimal use of scare site but, as we shall see they also concentrate facilities in specific location for political reason.

Third, sitting feature is the ruralization of facility location. Overtime, Japanese utilities have used up scare urban sites and have had to site the facility farther away from these urban locations such in Takasu Town rural area. Most of the industrial waste facilities are increasingly reliant on mountainous sites in more rural areas.

It requires community acceptance, receives necessary permits, and construct the industrial waste disposal project. Key starting and finishing points for each stage is defined as veto points or decision that must be made by relevant participants to enable a process to start or to proceed to a subsequent stage. Veto points are critical as project may be delayed or abandoned at any of the stage. Chart 1 presents at taxonomy of the major steps together with significant decision points, criteria for reaching them, and key actors who judge whether criteria have been meet.<sup>19</sup>

Chart 1. Steps in Sitting Disposal Waste Facilities in Japan

Step	Process	Key veto points
Public Acceptance	Bargaining over Burden sharing	Utility decision declaration of interest: <i>Listening to the voice local government (City, Town and Village).</i> Listening the voice of community close to the project.
Licensing	Regulation to balance Risk and benefit	Approval from the Special Committee of Waste Disposal Treatment Facilities (Consists of specialist from university, prefectural government official and community).
Construction	Optimizing Construction Costs	Construction planning permits.
Operation	Optimizing Operation Cost	Commercial operating permits.

Source: Hokkaido Government, Department of Environment and Life Style Official on June 1999.

## 2. The Present State

At the Takasu Town area, there are two institutions have the industrial waste disposal facilities. First, the Takasu Town has incinerator, intermediate facility, and landfill. There are two types of landfill belongs to the Takasu Town such as anteigata (Inert/stable type landfill site) and kanrigata (Controlled type landfill site). Second, private company, Hokushin Kougyo Ltd, which has anteigata (Inert/stable type landfill site). Both of the Takasu Town and the Hokushin Ltd just process and receive industrial waste from their own related factory or industry.<sup>20</sup>

Sitting risky in building industrial waste disposal facility involve deciding who win and who lose from developing those projects where communities have a veto power, negotiation agreements requires developer to compensate community interests for losses expected to incurred from facilities. A Crucial element is whether industrial waste company expect there to be net private gain after bargaining and construction cost have been taken into account. Where they expect net losses, they may reschedule the site of industrial waste disposal facility's project and develop other, less costly ones. Relative bargaining and construction cost of competing project will influence approach to scheduling negotiations at alternative site.

The Takasu case is important, because it highlights sitting difficulties encountered in setting industrial waste disposal facilities, which come about 1997. It has been on the process since in 1997 at the Hokkaido Government, but the project of the facility site

have been facing resistance from Takasu Town community since in 1998. During 1980s and 1990s almost all of Japan's industrial waste disposal facilities expansion came from developing subsequent projects, which had shorter bargaining time due to lenient regulation in establishing the new landfill sites. The few approved times initial industrial waste disposal facilities project, including Takasu dispute more easily resolved (Kita-Hiroshima case) and the most difficult ones (Kushiro case). In the Kushiro case, the industrial company is carrying out the environmental impact assessment of the plant done by the Hokkaido Government. The industrial company unable to build the landfill project until now. The total cases of industrial waste disposal sitting facility in the whole Japan is about 1000 cases.<sup>21</sup>

Takasu case is different comparatively in that very large numbers of community are about 87 percent, 6364 people of 7253 population of Takasu Town are opposed the project.<sup>22</sup> Until the writer is writing this article, Hokkaido Government is still being processing the case, whether the industrial company will get the license or not. In order to construct the industrial waste disposal facility site must have the license from Hokkaido Government. In order to understand the Takasu case in detail let us follow the following chronological process of the case.

### **3. Sitting Waste Disposal and Resistance**

In the late January 1997, Kyokusei Clean Ltd., Industrial waste company based in Asahikawa City, the neighbor city of Takasu Town, submitted a proposal at the Health Center, Asahikawa City. In the proposal stated that the industrial waste company decided to develop industrial waste disposal facility at Hibarigaokareien, Takasu Town area, about 5 kilometers North-west of Takasu Town Municipal.

On the following year, on March 1998, the community close to the project established the "sangyo haikibutsu kensetsu hantai kiseikai" (Industrial waste resistance toward realization of plant).<sup>23</sup> The background and purpose of this organization is to oppose the construction of new industrial waste disposal facility. People who live in Takasu Town worry about the effect of the industrial waste disposal facility. Since 1/3 of the Takasu Town area is a rice field. In July 1998, one of the industrial waste disposal facilities sites (Controlled type landfill site) in Tomakomai area is leaking, which the concrete walls are cracks and the leachates get out from the landfill.<sup>24</sup>

The concrete wall crack accident at Tomakomai industrial waste disposal facility site is not surprising thing. The Iburi Administrative Office is one of Hokkaido Prefecture administrative office. Iburi supervises four cities (Tomakomai City, Noboribetsu City, Date City and Muroran City), 9 Towns (Hobetsu Town, Mukawa Town, Azuma Town, Hayakita Town, Oiwake Town, Shiraoi Town, Shobetsu Town, Abuta Town, and Toyoura Town) and 2 villages (Toyo Village and Otaki Village). In the Iburi Administrative Office, there are only six personals are working under the waste counter measure section. On the other hand, the total number of industrial waste disposal facilities in this area is about 500 sites. For example, at Noboribetsu area, the officials carry out the inspection toward industrial waste disposal facility sites once to twice a year. The inspection included such the following items:

- a. If there is any waste outside of the industrial waste list;
- b. Checking the wastewater from the water treatment facility such as the color and smell. This examination without using any appropriate equipment.
- c. The condition of inside facility depends on the administration report from the industrial waste company;
- d. The examination of pH of SS, CODMn and BOD. Based on the new law this examination should be done every month. Since it is very difficult for the official to carry out the examination, the administrative officials just receive the result from the industrial waste company.

It may be concluded that, there are some problems in inspecting the industrial waste disposal facilities in research area as well as in Hokkaido such as limited of personals and equipment. Because of these limitations, it is very difficult to enforce the standard of industrial waste disposal facility based on the regulation. The impact of the failure in enforcing the standard, the accident in Tomakomai can happen everywhere in Hokkaido, especially in Takasu's industrial waste disposal facility site. It is might be reasonable, if the community, especially farmers who have rice field, vegetables farm and fruits farm close to the project worry about the effect of the landfill.

The industrial waste disposal facility will discharge their wastewater to the river. In the mean time, the river had been being use by the farmers for the irrigation of their rice, vegetables and fruits field. Since the location of the industrial waste disposal facility is close to the rice, vegetable and fruits field. One of the farmers, Nakaie Akira

said,<sup>25</sup> "We have been here for generations and our income depend on rice field, if the rice field is polluted by the industrial waste disposal facility, the image of our rice will we vanish." What happen to our children and grand children? Where we can find another farming area?

As the response toward resistance from the community, on October 1998, the industrial waste company held a meeting with the community, which was attended by about 20 people from the community side.<sup>26</sup> At that time the industrial waste company explained about the plan of the industrial waste disposal facility's project to the community. The industrial waste company could not answer the questions from the community.<sup>27</sup> The industrial waste company made pre-consultation and presentation to the Health Center, Asahikawa City on November 10, 1998.<sup>28</sup>

The industrial waste company expected to start construction in 1999 and operation in the year 2000. It saw that the type of landfill to be built is Kanrigata (Controlled Type Landfill Site). The landfill has depth of 10 meters into the earth. The sheets will cover the landfill's walls and floors. The landfill capacity is about 20,000 ton of industrial wastes.<sup>29</sup> At the bottom of the landfill there will be pipe, which link the landfill to water treatment facility and a flow the leachates to the water treatment facilities. After the leachates have been process at the treatment facility, it goes to the river.

On the February 18, 1999, the industrial waste company submitted the application for the establishment of industrial waste facility license to the Kamikawa Administrative Authority. In the following month, on March, 12, the notification of license application, the Kamikawa Administrative Authority called the Takasu Town Municipal to review the application. Kamikawa Administrative Authority and Takasu Town Municipal finished review the application in the following month.<sup>30</sup> At the same month, there were about 1000 people meeting at Takasu Town and established a second group to oppose the industrial waste facility project. The organization named "takasuchou ikensyo atsumeru senninnokai (Takasu Town One Thousand Collection of Petition Organization)."<sup>31</sup>

As the response toward the establishment of the new organization, Takasu Town One Thousand Collection of Petition Organization, the industrial waste company on April 2, 1999, held another meeting with the community. This meeting was attended

about 200 people. Unfortunately, the industrial company could not answer the basic question from the people who attended the meeting such as if the sheet of the landfill is broken, how far the responsibility from the company toward the rice field and people living close to the site.<sup>32</sup>

Furthermore, on April 14, 1999, the company was held the meeting for the second time in the same month. There were about 300 people attended the meeting. The director of industrial waste company also attended the meeting. The same questions have been asked to the industrial waste company, but even the director could not impress the audience at the time. Even, the meeting made the audience more resistance toward the project.<sup>33</sup>

Since the establishment of the new organization (Takasu Town One Thousand Collection of Petition Organization), which is lead by the mothers, the collection of petition increased sharply. The first collected petition on April 26 1998 about 6,143 petitions were collected and on May 6, 1999 the total about 6,364 petition. These petition were submitted to the Head of Takasu Town Municipal and the Head of Takasu Town Municipal delivered the petition to the Hokkaido Government.<sup>34</sup>

In the mean time, the industrial waste company continues to proceed the process of industrial waste disposal project by having meeting with the Special Committee on Industrial Waste Facility Establishment on March 18. On June 17, the committee inspected the location of the project. In the following month June 28 and July 14, the industrial waste company held another meeting and made presentation to the committee. On August 27 the Hokkaido government requested the industrial waste company to hand out the material for examination. Again, on October 26, the industrial waste company asked the Hokkaido Government to prolong the reply limit time until March 30, 2000. Moreover, on March 30, 2000, the industrial waste firm once again asked the Hokkaido government to give them time until July 31.<sup>35</sup> In June 1999, the community of Takasu Town established another resistance organization toward the project. This organization is named "sumpai mondai kyougikai" (Industrial waste problems council). The organization carries out activities in Takasu Town such as recycling, meeting and seminar even invited speaker from outside Takasu Area. Finally, on July 31<sup>st</sup>, 2000, the industrial waste company withdraws the project due to the resistance from the community and unable to submit the requirement asked by the

Hokkaido government.

What interesting in the Takasu case that the community creates many activities and work hand in hand to oppose the industrial waste disposal facility project. The Takasu Town's officials, even, the Head of Takasu Town give very good response and support to the community activities. The Takasu Town has been very cooperative. The community and Takasu Town officials suspected that the Industrial waste company would not only to establish one landfill but also more than one due to the cost of the project. They also suspected that the industrial waste company would import the wastes from outside Hokkaido and oil waste since the company belongs to oil group industry.

## IV. Sitting Industrial Waste Disposal Facility Case in Wakkanai City

### 1. Introduction

Wakkanai is located in Japan's northern extremity. The city is located 43 kilometers across the Soya Straits from Sakhalin, Russia.<sup>36</sup>

The days when this area inhabited by the Ainu, Hokkaido's indigenous people constitute an important part of the history of Wakkanai. In 1879, a "gun-yakusho" (district office) and a "kocho-yakuba" (public office) were established in Soya, the birthplace of Wakkanai, and thus that year has been recognized as the year of Wakkanai's establishment.

Wakkanai has since developed by the efforts and wisdom of Japanese ancestor, who truly loved this area. Wakkanai port was opened in 1948 under the custom law and the town of Wakkanai was recognized as municipality in 1949.

With the 21<sup>st</sup> century the people and government of Wakkanai determined to promote city development. The development is not only people can live comfortably and peacefully but also intend to develop a society where people can live pleasantly and without anxiety. The development is also to develop industries, which support Wakkanai's growth and promote friendly environment city planning. It can be seen the seriousness of Wakkanai Government by establishment of Wakkanai City Research Center.

In recent year, there has been an inordinate amount of scholarly, public, even

member of congress and applied attention paid to the issue of whether, and where, to site industrial waste treatment facility in Hokkaido especially in research area. The issue of facility siting has been elevated in relative important on the public agenda because of a variety of simultaneously acting events. Through the decade of the 1990's, environmental awareness fueled concerned about the dangers that earth under our ground and in our water. The Community and Wakkanai City research center are very active in carry out the seminar with the theme of water, food and environment on September 20, 1999.<sup>37</sup> In the previous year, there are some seminars held in Wakkanai City. The topics of the seminars mostly concern about the wastes. On February 1, 1999 the topic is "kankyou senshin kuni wo manabou" (Learn from Develop Environment Country). On January 30, 1999, the topic is "gomi mondai wo nessin ni" (Concern Toward Waste Problems). On May 7, 1999, the topic is "chikyu gomi syori jijyo (World Waste Treatment Information). On May 13, 1999, the topic is "shimin dantai zemi" (Community Group Seminar). On May 14, 1998, the topic is "shimin ga kan oyobi gomi syori koza" (Lecture on Waste Treatment from Community and Official).<sup>38</sup> On January 28, 1997 there are some seminars with the topic concerning wastes. The committee invited speakers not only from Wakkanai City (The head of research center) but also from Hokkaido area such as representative from "hokkaido gomi mondai network" (Hokkaido Waste Problems Network).<sup>39</sup>

The more we learn about the danger of the wastes the more frightened we became. To some degree, our fears fed short-term public policy action, which actually made the problem worse. If this were not bad enough, our fears also prevented our policy makers from pursuing solutions that could actually diminish the danger.

## **2. The Present State**

The history of waste countermeasure in Wakkanai City started since in 1900, along with the Obutsu Seishohou (Sewage Cleaning Law) took into effect. At that time, the waste countermeasure in Wakkanai was using very basic system.<sup>40</sup> The waste was collected in one deposit waste place. After that, the waste countermeasure in Wakkanai City developed a little by little such a creating a waste disposal site. Followed by construction of waste disposal landfill site such a making a hole into the earth. Until than the system of waste countermeasure was based on collecting and burying the

wastes.<sup>41</sup> Before that there was natural combustion toward the waste such a burning of the waste done by the farmers. Industry and Wakkanai Municipal built the first industrial waste disposal landfill site in 1989.

In 1994, the Wakkanai Municipal established the Wakkanai Municipal Research Center. In the following year, 1995, the container and packaging law took into effect. Since the container and packaging law took into effect, the wastes should be separated in whole area in Japan. In Wakkanai City, the separation of cans, glass, pet bottle, milk packaging started in 1997. The separation of other wastes such as plastic tray and paper wastes will be carry out in the year of 2000. For the separation of electronic appliances such as Television set, refrigerators, air condition, washing machine will take into effect in the year 2002 in Wakkanai City.<sup>42</sup>

Wakkanai is very famous as the city of fish industry. The most difficult waste problem of the fishery industry is shellfish wastes. A part of the shellfish waste is contains the cadmium.<sup>43</sup> This chemical substance is very danger toward fishery and human being. The Wakkanai Municipal and community are challenged to solve the problem. They try to process the shellfish waste through the intermediate processing center facility and to the final waste disposal landfill site, but the cadmium still remain. The latest information that the only country that already solved the cadmium problem is America.

In Wakkanai City, there is one industrial waste company, Fuji Concrete, said to recycle the industrial waste such as construction wastes and road wastes. On the other hand, they discharge the road wastes, especially the oil from the waste to the mountainous area. The police found these activities and the license of the company was canceled.<sup>44</sup>

As explained previously that the Wakkanai City will build a new incinerator in the year of 2001. On the other hand, the plan probably will be canceled due to the danger of dioxin from incinerator.

The Wakkanai City and Hokkaido government also plan to build a new landfill site in Wakkanai area with 3 years capacity but the project probably will be canceled due to the very expensive cost, 4 billion yen.<sup>45</sup>

In order to understand the present state of landfill site in Wakkanai area, let us see the present condition of the waste disposal landfill site in Wakkanai City (Chart 2).

Chart 2. The Number of Facility in Wakkanai City

No	Name of Company Or The owner	Number of Facility And It use	Type of Facility			Type Of Waste	
			Intermediate	Final Disposal Waste Landfill Site			
				Inert Type	Controlled Type	Strictly Controlled Type	Domestic wastes And Industrial waste (Construction wastes)
1	Wakkanai Shi	1 General 1 Industry	1 (1990-2003)		1		
2	Taisei Sangyou	1 Industry		1 1991-99			Construction wastes
3	Okamoto Sangyou	1 industry		1 1993-20			Construction wastes
4	Wakkanai Chemical	2 Industry	1 (1997-2008)		1 (1997-2000)		Medical wastes
5	Wakkanai Suisan Butsuzansasyori-kyodokumiai	1 Industry	1 (1996- )				Shellfish wastes Contain cadmium
6	Fuji Concrete	1 Industry	1 (1992- )				Construction wastes
7	Wakkanai Suisan Haikibutsu Kyodo Kumiai	1 Industry	1 (1989- )				Fishery wastes
8	Hokuryouku Shibaken	1 Industry	1 (1999- )				Construction wastes Trees

Source: Interview with Wakkanai Municipal Research Center Head and staff on November 25, 1999.

### 3. Sitting Waste Disposal and Resistance

On June 16, 1996, there was a meeting between an industrial waste company, Shiribeshi Kogyo based in Sapporo with Wakkanai City Mayor. The topic of the meeting is that the company plans to have general waste disposal landfill site in Wakkanai area. The location is close to the water reservoir for tap water and for farm area. The general waste disposal landfill will provide for the wastes from outside Hokkaido area. Unfortunately, based on the Hokkaido waste management guideline that the Hokkaido wastes disposal landfill sites are not allowed to receive the wastes from other area.<sup>46</sup>

In the same month, on June 21, 1996, the company asked the mayor of Wakkanai

City for preliminary consultation. The mayor of Wakkanai City replied that the Wakkanai City rejected the company request.<sup>47</sup>

On August 6, 1996, the company submitted an application to the Hokkaido government. In the application stated that the company intends to build incinerator and final waste disposal site. Unfortunately, the submitted application was not complete yet.<sup>48</sup>

In September 1996, the Hokkaido Government asked the company to complete the submitted documents. On the following week, the company supplied additional documents to the Hokkaido Government and presented the proposal for the waste disposal site projects.<sup>49</sup>

On September 11, 1996, in the Wakkanai City, at Culture Hall there was a meeting and establishment of local organization called "syorikeikaku hantai shimin souketsuki syukai" (Community resistance toward landfill project). There were about 800 people attend meeting.<sup>50</sup> The people consist of some representative such as representative from transportation, chamber of commerce, fishery, farmer, and tourist organization

In December 1996, based on the Hokkaido general waste management guideline, for the preparation of the landfill construction projects, the company should consult with the community in Wakkanai. The meeting between the company and Wakkanai community has been done twice. In October 1996, the company also has already submitted the proposal for waste disposal landfill projects to the Hokkaido Government. On the other hand, the Hokkaido Government waited the additional document and the explanation from the company about the source of the wastes.<sup>51</sup>

In November 1996, the company carried out the inquiry to the Wakkanai City about their proposal. The Wakkanai Municipal asked the company again about the source of the waste. According to the company, the source of the waste is not so important.<sup>52</sup>

In the middle of November 1996, the company asked for preliminary consultation to the Wakkanai Municipal once again. In the preliminary consultation, the company just explains solely about the technical point of the construction of the landfill. Finally, Wakkanai Municipal rejected the company presentation. The Wakkanai Municipal decided not to make any consultation to the company.<sup>53</sup>

In January 1997, without any consultation to the Wakkanai Municipal, the company submitted application for landfill construction projects license. After receiving the

application, the Hokkaido Government found out that that there is something wrong with the proposal. There are many parts of the proposal were revised. The proposal is mainly about the technical of the construction project. The Hokkaido Government asked the company about the source of the wastes. In July 1997, the company submitted additional documents to the Hokkaido Government. Unfortunately, the additional submitted documents mainly about the technical of the construction projects.<sup>54</sup>

In August 1997, based on the law concerning disposal waste and public cleanliness, which under the Ministry of Health and welfare, the Hokkaido Government decided that the company is failure to fulfill the requested document. This causes the Hokkaido Government unable to examine the proposal.<sup>55</sup>

Another reasons that Hokkaido Government decided to reject the application of the company. First, the document is not put in order. It means that the submitted documents are not complete. The Hokkaido Government has already gave the company three times chances to revised and complete the proposal.<sup>56</sup>

In September 1997, the company sent their proposal directly to the Ministry of Health and Welfare for investigation request. For Hokkaido Government, without the complete documents, basic requirement, they cannot carry out the examination toward the application as well as field inspection.<sup>57</sup>

On May 12, 1998, for the fourth time the Hokkaido Government asked the company to revised and completed the part of documents as requested before, especially about the source of the wastes. The Hokkaido Government gave the company instruction and asked the company to present the important document.<sup>58</sup>

In the following week in the same month, the company stressed that if the Hokkaido Government do not give them construction license to build the waste disposal project, the company will sue the Hokkaido Government.<sup>59</sup>

In July 1998, the Hokkaido Government received another documents from the company, but the submitted documents consist of technical data. In the same month, the company requested the Hokkaido Government to investigate the submitted documents.<sup>60</sup>

In September 1998, once again, the Hokkaido Government decided to give the judgement toward the company proposal. The judgement is as follows. First, the

proposal is not complete. Second, the construction plan of the landfill is poor. Based on these judgements, the Hokkaido Government decided not to issue the license.<sup>61</sup>

The Hokkaido Government decision made the company brought the case to the court. The first pleading/ hearing was held n October 1998. Followed by other hearing until December 1998. The reason of the company submitted to case the court such as "why Hokkaido government rejected their proposal. In spite of the fact that the company has already submitted all documents to the Hokkaido Government."

As the answered of Hokkaido Government, "The company is already submitted their construction proposal but there are some important documents were not submitted." This cause the contain of submitted proposal was inadequacy. The Hokkaido Government also added that the real dependent in this case is not Hokkaido Government but the Ministry of Health and Welfare. It is misplace, if the company sue the Hokkaido Government.<sup>62</sup> Finally, the court rejected the case.

## V. Sociology of Law Analysis of Industrial Wastes Problems in Hokkaido

In this part, we try to identify factors that determine the relative success of institutionalization of the industrial waste problems in this situation. While we intend to make our theoretical framework as general as possible, we shall limit our analysis to a specific field for example the industrial waste sitting facilities resistance in Takasu Town, Wakkanai and Kita-Hiroshima City. This seemingly a narrow focus can be justified because the industrial waste problems are really one of the most serious problems facing any industrial and developing countries.

We cannot expect that any new industrial waste problems can be institutionalized by effort of single person. That would require collective effort and activities of many people. Industrial waste problems are a part of larger political and economical interest regime, and collective effort and activities that seek to alter the regime may be called the social construction approach to the industrial waste problems. Social constructionism focuses on the social, political, and cultural processes by which industrial waste conditions are defined as being unacceptably risky and therefore actionable. Industrial waste facility sitting debate reflect the existence not just of an absence of certainty such

as the industrial wastes and extend of the hazardous waste problems, but rather the existence of contradictory certainty. The contradictory certainty consists of severely divergent and mutually irreconcilable sets of convictions both about the impact of industrial waste facility sitting we face and the solutions that are available to us.<sup>63</sup>

In addition, social constructionist framework recognizes the extent to which industrial waste problems and solution are end product of a dynamic social process of definition, negotiation and legitimization both in public and private setting.<sup>64</sup>

Social constructionist approach grounds the study of industrial waste facility sitting matter in distinctly sociological paradigm.<sup>65</sup>

As conceptualized this way, we may draw out the sociology of social constructionist to drive our basic analytical framework.

Constructionist is not only helpful as theoretical stance but it can also be useful as an analytic tool. In this regard, Best suggests three primary foci for studying social problems from a social constructionist perspective: the claims themselves, the claims makers and the claim making process.<sup>66</sup>

According to Best there are several key questions to be considered when analyzing the content of a claim: What is being said about the problem? How is the problem being typified? What is the rhetoric of claim making and how are claims presented so as to persuade their audience?<sup>67</sup>

Best analyses the content of social problem claims by focusing on the "rhetoric" of claim making. Rhetoric involves the deliberate use of language in order to persuade. Rhetorical statement contains three principal components or categories of statements: grounds, warrants and conclusion.<sup>68</sup>

Ground or data furnish the basic facts, which shape the ensuing claims making discourse. There are three main types of ground statements: definition, examples and numeric estimates. Definitions set the boundaries or domain of the problem and give it an orientation; that is, a guide to how we interpret it. The examples make it easier for public bodies to identify with the people affected by the problem, especially where they are perceived as helpless victims. By estimating the magnitude of the problem, claims makers establish its important, its potential for growth and its range often "-epidemic" proportion.

Warrants are justification for demanding that action be taken. These can include

presenting the victim as blameless or innocent, emphasizing links with historical past or linking the claims to basic rights and freedoms. There are some questions could be address toward the claims such an in appropriate industrial waste disposal is risky and hazardous. Industrial waste is very dangerous for human being and environment. The price for the rehabilitation of dump' site will cost ten times. The location of landfill cannot be used for housing as well as for agriculture and inheritance from our ancestor and our responsibility to past it on to the future generation.

In order to alleviate or eradicate industrial waste problems, it might be appropriate to spell out the action. This frequently entails the formulation of new social control policies by existing bureaucratic institutions or creation of new agencies to carry out these policies.

In looking at the identity of claim makers, Best advises that we pose a number of questions.<sup>69</sup> Are claim makers affiliated to specific organization, social movements, profession or interest group? Do they represent their own interests or those third parties? Are they experienced or novice?

Many studies, which have been undertaken in the social constructionist mode, have pointed to the important role played by medical professionals and scientist in constructing industrial waste problem claims. Other have noted the important of policy or issue entrepreneur politicians, public interest law firms, civil servants whose careers are dependent upon creating new opportunities, programs and source of funding. Claims makers may also reside in the mass media, especially since the manufacture of news depends upon journalists, editors and producers quite diverse.

Best<sup>70</sup> poses a number of useful questions about the claims making process. Who did the claims maker's address? Were other claims makers presenting rival claim? What concerns and interest did the claims makers' audience brings to the issue, and how did these shape the audience response to the claims? How did the nature of the claims or the identity of the claims makers affect the audience's response?

Industrial waste facility sitting in Takasu Town and Wakkanai City, while morally charged are tied more directly to scientific findings and claims.<sup>71</sup>

Industrial waste facility sitting problems have a more imposing physical basis than social problems, which are more rooted in personal troubles that become converted into public issues.<sup>72</sup>

The respected American sociologists James Coleman and Donald Cressey briefly illustrate the constructionist definition of social problem by noting that "pollution did not become a social problem until environmental activists were able to convince others to show concern about condition that had actually existed for some time."<sup>73</sup> However, if we ask thousands of people did not know they were being poisoned by the in appropriate industrial waste treatment from industrial plant and waste disposal in Takasu Town and Wakkanai City, wouldn't industrial waste facility sitting still be a social problem?

Since the industrial waste facility sitting is our pressing concern, we believe that social constructionist analysis is worthwhile. In fact, our study should illuminate challenges that face any protection in this area. We also expect that our hypothesis will have wider application, even though different situation will probably require different sets of variables, we expect that factors that impact on the industrial waste facilities sitting in one direction in a certain situation will produce effects in the same way in other setting. Here we only need to pay our attention to possibility that the absolute levels of achievement will differ from one case to another, depends on the interaction between those basic factors and the characteristics of specific situations.

With this framework as a backdrop, we will now look at two examples of industrial waste facilities sitting resistance in Takasu Town and Wakkanai City.

The Takasu Town case is different from Wakkanai City case. The nature of those two areas is different in some ways such as, the process, the relationship of authority and the community group, and public participation.

In Takasu Town, there is industrial waste company proposed to build a new disposal waste facilities but the communities oppose the construction plant.

On the other hand, in Wakkanai City, the industrial waste companies have proposed to build a disposal waste facility, but opposed by the community and the Hokkaido Government.

There is a difference relationship between authority and community group in the three study areas. In Takasu Town, there is close relationship between community group and the authority as well as in Wakkanai City. The local authority tends to cooperate and support the community group resistance toward the proposed industrial waste facilities.

Unfortunately there is no direct public participation in pollution prevention agreements, which involved the community groups and the authority in Takasu Town as well as in Wakkanai City.

Looking in complaints in both cases that are still high, it is a sign that the institutionalization of the industrial waste problems may deserve explanation, if we wish to understand the industrial waste problems institutionalization and difficulties it has had to deal with.

Indeed, we may derive even from these very rough descriptions some suggestions about the relationship between the result of these cases and factors, such as assembling the industrial waste risk claim, presenting inappropriate industrial waste treatment claims and contesting the industrial waste facility sitting impact claims. If our theory is to explain outcomes of social constructionist framework for any industrial waste facility sitting risk, it should certainly be able to explain the differences the two of these cases.

In defining industrial waste risk, bringing them to society's attention and provoking action, claims-makers must engage in a variety and collective of activities. Some of these are centrally concerned with the collective necessary to improve them.<sup>74</sup> This is not to say that elements of definition and action do not interweave constantly. Nevertheless, industrial waste facility sitting risk does follow a certain temporal order of development as they progress from initial discovering to policy implementation.

We draw upon two prior models<sup>75</sup>, three process through which a public arena is built around industrial waste sitting facility problems<sup>76</sup> and three tasks which are necessary for a pollution issue to originate, develop and grow powerful within the political system.<sup>77</sup>

Borrowing from Susskind, in considering the construction of industrial waste problems, it is possible to identify three key tasks: assembling, presenting and contesting claims (See chart number 3).

The task of assembling the industrial waste risk claims concerns initial discovery and elaboration of an incipient impact of the industrial waste facility. At this stage, it is necessary to engage in variety of specific activities: naming the industrial waste facility sitting and its impact, distinguishing it from other similar or more encompassing industrial waste facility, determining the scientific, technical, moral or legal basis of

Chart 3. Key Task in Constructing Pollution Prevention

	Assembling	Task Presenting	Contesting
Primary Activities	<ol style="list-style-type: none"> <li>1. Discovering The problem</li> <li>2. Naming the Problem</li> <li>3. Determining The basis of Claim</li> <li>4. Establishing Parameter</li> </ol>	<ol style="list-style-type: none"> <li>1. Commanding Attention</li> <li>2. Legitimizing The claim</li> </ol>	<ol style="list-style-type: none"> <li>1. Invoking action</li> <li>2. Mobilizing support</li> <li>3. Defending ownership</li> </ol>
Central forum	Science	Mass media	Politics
Predominant "layer of proof"	Scientific	Moral	Legal
Predominant Scientific roles	<ol style="list-style-type: none"> <li>1. Trend spotter</li> <li>2. Theory tester</li> </ol>	Communicator	Applied policy analyst
Potential pitfalls	<ol style="list-style-type: none"> <li>1. Lack of clarity</li> <li>2. Ambiguity</li> <li>3. Conflicting Scientific Evidence</li> </ol>	<ol style="list-style-type: none"> <li>1. Low visibility</li> <li>2. Declining novelty</li> </ol>	<ol style="list-style-type: none"> <li>1. Co-optation</li> <li>2. Issue fatigue</li> <li>3. Countervailing claims</li> </ol>
Strategies for Success	<ol style="list-style-type: none"> <li>1. Creating an Experiential focus</li> <li>2. Streamlining Knowledge Claim</li> <li>3. Scientific Division of Labor</li> </ol>	<ol style="list-style-type: none"> <li>1. Linkage to popular issues and causes</li> <li>2. Use of Dramatic Verbal and Visual Imagery</li> <li>3. Rhetorical tactics and Strategies</li> </ol>	<ol style="list-style-type: none"> <li>1. Networking</li> <li>2. Developing technical expertise</li> <li>3. Opening policy windows</li> </ol>

Source: Susskind, L.E., *Environmental Diplomacy: Negotiating more Effective Global Agreement* (1994).

the claim and gauging who is responsible.

Industrial waste problems are frequently originates in the realm of science. One reason for this is that ordinary people have neither the expertise nor the resources to find the impact of industrial waste facility.

Some industrial waste problems however, do relate more closely to our life experiences. Concern over toxic wastes frequently begins with local citizens who live close to the industrial waste incinerators and waste disposal facilities. The people come to draw a causal link between the impact of those facilities and a perceived increase in the neighborhood incidence of human health related disease such as skin disease, respiration problem, leukemia, miscarriage, birth defects, cancer and other ailments. In addition, the impact toward environment for example lost and damage of animal, fish,

plant and crops.

Those who jobs or recreational pursuits bring them into close contact with nature on a daily basis (farmers, anglers, wildlife officers, environmentalist students, politician and professors and residents) may also be the initial source of claims. Because they pick up early pollution warning signals such as reproductive polluted in livestock such as damage of carrot and garlic plantation and the dead of fish in Kita-Hiroshima City.

In researching the origins of industrial waste risk claims, it is important for us to ask where claims come from, who owns or manages it, what economic and political interests claims makers represent and what type of resources they bring to the claim making process. In Takasu area the claim come from the farmers whose farm area close to the proposed industrial waste facility project. In Wakkanai area the claim come from residents who depend on tap water and the farmers who are using the water from the reservoir and river, where the water reservoir close to proposed industrial waste facility project.

In the present day pollution claims makers are more likely to take the form of professional social movement with paid administrative and research staff, sophisticated fund raising programs and strong institutionalized links to both to legislators and the mass media. Some group even use door to door canvassers who are an hourly wage or get to keep a percentage of their solicitation. In Takasu area, the residents voluntarily collect and sign the petition against the proposed industrial waste facility sitting. Campaigns are planned in advance, often pseudo military fashion. Grassroots participation is not encouraged beyond "paper memberships" with control centralized in the hands of a core group of full time activist. In Wakkanai area, the residents and municipal research center carry out campaign and seminars opposed the proposed waste disposal project.

The process of assembling pollution claims often involves a rough division of labor. While there are notable exceptions, research scientist are normally handicapped by a combination of scholarly caution, excessive use of technical jargon and inexperience in handling the media. Indeed, the nature of the relation between the news media and community group such as Hokkaido Waste Problem Network has become sufficiently institutionalized. It would be difficult for an emergence of industrial waste problems to penetrate the mass media arena without at least taken validation from them.

In assembling a pollution claim, the concept should be easily understood by the society. The more readily comprehensible constructs of nucleus the more likely to stick the public such as "extinction" or "destruction." Sometimes, the basic claim only becomes clear in the context of a political, economic or geographic crisis.

In presenting inappropriate industrial waste treatment claims or issues, community groups have a dual mandate: they need both to command attention and to legitimize their claim.<sup>78</sup> To command attention, the potential industrial waste problems must be seen to be novel, important and understandable, the same values which characterize news selection in general.<sup>79</sup>

One effective way of commanding attention is through the claimant's use of graphic, evocative verbal and visual imagery such as a song. Thus, the extreme photographic and interview with the pollution victim of Minamata tragedy by Hurdle and Reich has great impact not only across Japan but also to the world.<sup>80</sup> Visual language can be very especially powerful in carrying this task. For example, technical data on the industrial waste facilities, *management and recycling instantly lost relevance when Teshima Island residents and other activists released photos to the media and made a homepage of the mount of industrial wastes in Teshima Island.*

It is not unusual, however, for these visual images to be streamlined so as to underline a central image. On June 7, 2000, most of national newspaper articles and accompanied by television news on Kagawa Prefecture agreed to removed all industrial wastes illegally dumped on the Teshima Island and Kagawa Governor, Takaki Manabe apologized directly to the residents.

Industrial waste issue may be forced into prominence when exemplified by particular incidents or events, for example, Nose in Osaka, Tokorozawa in Saitama Prefecture, Suginami-ku in Tokyo, US Atsugi Naval Air Facility in Kanagawa Prefecture, Toyota City in Aichi Prefecture and near Shin Yokohama Station. Some Dramatic events like these are important because they assist political identification of the nature of an issue, the situations out of which it rises, the causes and effect, the identity of the activities and the group in the community which are involved with the issue.<sup>81</sup>

An event provokes industrial waste issue when it (1) stimulates media attention; (2) involves some arm of the government; (3) demands governmental decision; (4) is not

written of by the public as a freak, one time occurrence; and (5) relates to the personal interest of significant number of citizens.<sup>82</sup> These criteria are partly a function of the incident itself but also depend on the successful exploitation of the event by the community group.

In presenting claims, community group leaders engage in the process of "frame alignment," for example, the community group tap into and manipulate existing public concerns and perceptions in order to broaden their appeal.<sup>83</sup> For example, in Takasu Town the community groups carry out some activities such as the establishment of organization that opposed the proposed industrial waste facility project, encourage the residents to participate in resistance activities by collecting petition from residents and carry out seminars, which concern toward the industrial waste risk. They also confront the industrial waste company's responsibility in the future if the sheet of the landfill is broken and contaminated the river and rice field area. In Wakkanai City, the community leader, municipal research center and local diet member actively campaign against the proposed waste disposal project through seminars, which invite various speakers such lawyers and representative from Hokkaido Waste Problems Network. They keep asking the industrial company the types of wastes and the origin of wastes. In Takasu Town, the industrial waste company attempt to appeal to wider public by linking new ways to solve the industrial waste risk such as explaining to the residents that the landfill is leachate-controlled landfill which is safer than inert landfill.

Commanding attention is not, however, sufficient to get a new issue on the agenda for public debate.<sup>84</sup> Rather emergent industrial waste problems must be legitimated in multiple arenas such as the media, government, science and the public. In the three research areas, Takasu Town and Wakkanai City seems legitimated in multiple arenas such as the media, government, academics and the public.

There are two ways of achieving the legitimacy. First, by using of rhetorical tactic.<sup>85</sup> Best suggest pollution rhetoric have become increasingly polarized. Eco-feminists, deep ecologist and other critic of post- industrial society have tended to adopt "rhetoric of rectitude" which justifies consideration of industrial waste problems on strictly moral grounds. This cleavage can be illustrated with reference to the Teshima Island tragedy that the loss of local product market and destruction of local fishing industry are morally wrong. By contrast, environmental pragmatists, who advocate sundry

versions of the "sustainable development" paradigm, tend towards a rhetoric of rationality. Recycle, for example, is based on the premise that environmentalism can be both socially useful and profitable. Pragmatists argue that the industrial waste problem is a serious problem. The land for landfill and resources are limited.

Second, industrial waste problems claim can also be legitimated when their sponsors become legitimate and authoritative source of information. Greenpeace has achieved this kind of sustained success as a claim maker in a number of ways. For example, by acting as conduit for the dissemination of new scientific developments between the research community and the media: by becoming a "shorthand signifier" for everything environmental, environmental and industrial waste problem claims, green lifestyles, environmentally conscious attitudes and by producing knowledge and information which can be used strategically in public arena debates.<sup>86</sup>

However, scientific findings and testimony by themselves are not always sufficient to push an industrial waste problem case past break point of legitimacy. In the case of Teshima Island earlier complain and testimonies by local residents, the cause of various negative impacts to the islander from the mount of the industrial wastes did not attract comparable coverage or concern. It was only later when the issue became linked to claims that the mount of industrial wastes in Teshima Island is dangerous. This claims were link to international organization such a Greenpeace, the residents represented by Kohei Nakabo, a veteran lawyer and leader of a group of lawyers and sampling and analysis report by the Environmental Dispute Coordination Commission in 1996. These were given wide attention and media legitimacy.

In contesting industrial waste problem claims, one can interpret industrial waste issues history from the position that residents movement has been far more successful in getting listed on the broad political agenda than in getting their policies institutionalized within this agenda.<sup>87</sup> Especially where these policies might require the reallocation of resources away from large scale capital interests and national and local bureaucratic actors such as in Tokyo Metropolitan.

There are a number of factors, which can contribute to industrial waste issues in Takasu Town, and Wakkanai City being lost at the point of decision or action. Major external constraint such as the onset of national and local economic crisis may lead to the industrial waste issue being postponed, than altogether abandoned.<sup>88</sup> The industrial

waste problems may be transformed into less threatening political issue. Opponents within industries, industrial waste companies and government bureaucracies may use a number of tactics postponing discussion, referring an item back for further research or amendment which ensure that pollution issue will not immediately be acted upon.

In invoking action on industrial waste problems claim requires an on going contestation by claims makers seeking to affect legal and political change. While scientific support and media attention continues to constitute important part of the claim package, the industrial waste issues are principally contested within the arena of politics. Contesting an industrial waste issue within political policy stream is a fine art, given the cross pressures which legislators, bureaucracies and industries face.

In Takasu Town and Wakkanai City case, it seems that the community group put strong resistance toward the proposed waste disposal projects. They do not compromise with industrial waste facility sitting which will import the waste from other areas. As a consequent, they work very hard in some voluntarily activities such as collecting petition and submitting it to the authority, carry out campaigns and seminars. The relationship of the community groups, residents, the head of municipal and town head as well as officials in Takasu Town and Wakkanai City become relatively close. The municipal is placed in difficult position, if they do not cooperate with residents, they will loss in the future election and if they put stringent on industrial waste companies, the business lobby, especially pulp, paper, and automobile sectors will strenuously object.

In this case the community group must skillfully guide their proposals through a log-jam of vested and often conflicting political interest groups, each of which is capable of stalling or sinking the proposal.

In addition, the successfully contesting the industrial waste problem claims in the political area requires a unique blend of knowledge, timing and luck.

It is possible to identify six factors, which are necessary for the successful construction of industrial waste problems in Takasu Town, and Wakkanai. These are as follows.

First, industrial waste problems must have scientific authority for and validation its claims. Science may be an "unreliable friend" to the industrial waste resistance movement.<sup>89</sup> It is virtually impossible for industrial waste facility condition to be

successfully transforms into a problem without a conforming body of data, which comes from the physical or life sciences.

Second, it is crucial to have one or more scientific "popularisers" who can transform what would otherwise remain a fascinating but esoteric piece of research into proactive industrial waste problems claims. In some cases, there are some "popularisers" such as Kohei Nakabo in national level and Sensu Koichi, and Yamaguchi Yukiko in Hokkaido. Whatever the background, these popularisers assume the role of community group, re-framing and packaging claims so that they appeal to editors, journalist, political leaders and other opinion makers.

Third, the prospective industrial waste problems must receive a media attention in which the relevance claim is "framed" as both real and important. This has been the case for most of the well-known industrial waste problems decade such as dioxin, cancer, respiratory problems, dizziness, numbness in the limb, skin rashes, sore throats and eye problems, plant and crops.

Fourth, the potential industrial waste problems must be dramatized in highly symbolic and visual terms. For example, Greenpeace and other community groups began to exhibit dramatic photograph of the "mount of industrial wastes" on Teshima Island while labeling area the "Stop Toxic Dump" in English and "Don't Repeat Teshima" in Japanese. The image provides a kind of cognitive short cut compressing a complex argument into one, which is easily comprehensible and ethically stimulating.

Fifth, there must be visible economic incentives for taking action on the industrial waste problems. In Takasu Town, a variety of economic interests groups from the farmers, Hokkaido Waste Problems Network associations to residents in neighboring city supported the claim by scientists and environmentalists that dioxin and leachate emissions from industrial waste facility plants not only causing health problems but also the plant and crops. The case for acting boldly to stop the proposed industrial waste facility project was levered on the argument that the farm areas contained an untapped wealth of farmers, which would be the prime income resources for the residents and the Town.

Finally, for the prospective industrial waste problems to be fully and successfully contested there should be an institutional sponsor who can ensure both legitimacy and continuity.

## VI. Conclusion

This research has attempted to answer a number of some basic questions about industrial waste problems in Hokkaido such as facility siting cases in research areas.

Perhaps in closing it should be asked why industrial waste issues, more than other pressing social and political issues, should be single out as deserving of special treatment. Any significant measure of public participation, for example, in approvals for industrial waste facility projects, will surely result in great deal of trouble, expense and delay. But this may be justified by several considerations peculiar to the industrial waste problem debate.

First, the public are at risk with industrial waste problems in a real, a day to day sense not like in other issues. Not only are there significant concerns for the present quality of life affecting us all, but for the future generations as well. There is a stewardship role than can no longer be ignored. We are not only fouling our own environment, health, wealth, and diversity, but we may also be irrevocably despoiling it for our children.

Second, there is a real desire in the public, as discussed above, by getting involved. To the extent that the desire is frustrated, specially affected groups and the public generally will not "buy in" to agreements. This is not only strains the social and political fabric, but at a more immediate and practical level it carries the risk of later problems.

Third, the decisions to be taken are, above all, social decisions. They may concern not just the question of how, for example, an industrial waste facility project should proceed, but if it should proceed at all. They are frequently not just technical decisions, but may be characterized as polycentric problems. Their solution should not be left to the narrow short-term focus of industries, industrial waste firms, community groups, government or courts.

No doubt a significant public input would result in some "irrational" decisions which, together with higher costs and long delays, will cause some worthwhile industrial waste facility projects to be scrapped. But nobody claims that democratic values, or a clean environment, come free. Surely the honoring of deeply held social values, in this case clearly expressed by the public, is a worthy prize to offset what are

probably only marginal derogation from our material standard of living. The process, and not the result in any particular case, is all important the acceptability of a process is not simply a function of the number of correct or erroneous.

Fourth, as pointed out earlier, we are dealing with "soft variables" which are frequently undervalued or ignored in quantitative analysis. Perhaps the surest way to value them accurately is to let the public, or at least those affected, value them in terms of what benefits they are willing to forego to protect them. But, unfortunately, there is a serious imbalance of power that can only be redress by mandating and facilitating *meaningful public involvement*. *Interest groups must be tangibly represented as parties* as in a contract model. It is not enough to require that decision be taken "in the public interest."

Finally, and perhaps most compellingly, the industrial waste problems may be genuinely a "new" problem that calls for new solutions. Its impacts are so widespread and potentially devastating that arguably the public cannot be excluded from its resolution. *The issues is rarely broader than just "what is acceptable industrial waste facility? Rather, it becomes "on this issue, what broad right do the public have to make decisions which affect their lives?"*

Perhaps the only comparable issue is the threat of nuclear holocaust, whose peculiar characteristics enabled it to be sheltered and contained from public debate by political and military considerations. But the industrial waste problems, with no less frightening implications, are different. *It surrounds us, and permeates our lives. Attempts to deal with it through the usual channels have been unsuccessful, and have been seen to be unsuccessful. The process lacks legitimacy and credibility. Meaningful public participation, warts and all, may be the only way to make the process legitimate and get the job done.*

## VII. Notes

<sup>1</sup> Kunimoto, Yoshiro, (1971). *Pollution and Local Government, Japan Quarterly*. p.163.

<sup>2</sup> *Id.*, at 267.

<sup>3</sup> Barret, Brendan, ED and Therivel, Riki. (1991) *Environmental Policy and Impact Assessment in Japan*. p. 15.

<sup>4</sup> Organization for Economic Cooperation and Development, *Environmental Policies in Japan*, 16

(1977).

<sup>5</sup> Interview with Takasu and Wakkanai.

<sup>6</sup> Harada, Naohiko. (1981) .50.

<sup>7</sup> For details and other ordinance, see id, at 246-47.

<sup>8</sup> Tomakomai no Kanky (Tomakomai Environment) at 103, 1995.

<sup>9</sup> Interview with Environmental Coordination Section Environmental Policy Planning Division Office of Environment Affairs Department of Environment and Lifestyle, Hokkaido Government Officials on April 3, 2000.

<sup>10</sup> Harada, Naohiko. (1981).p.8-50.

<sup>11</sup> Yamamura, Tsunetoshi. (1989).p.247.

<sup>12</sup> Keikichi Kihara.(1993). The Emerging National Trust: Report on the Working of Constitution, Conv & Prop Law (n.s) 251.

<sup>13</sup> Gresser ET Al. (1981). p. 249-52.

<sup>14</sup> Id, at 251-52.

<sup>15</sup> The law concerning disposal and public cleanliness.

<sup>16</sup> The law concerning disposal and public cleanliness.

<sup>17</sup> Keeney, Ralp. 1980.

<sup>18</sup> Toyoda, M. (1976).

<sup>19</sup> Lester, Richard.(1983).

<sup>20</sup> Interview with Takasu Town, Sanitary Section Official on November 30, 1999.

<sup>21</sup> Interview with Professor Yoshida Fumikazu, Faculty of Economy, Hokkaido University on April 3, 2000.

<sup>22</sup> Interview with Hokkaido Government, Environment and Life Style Official on April 3, 2000.

<sup>23</sup> Interview with Takasu Town, Sanitary Section Official on November 30, 1999.

<sup>24</sup> NHK, Close up, Sangyo Haikibutsu Monday in Hokkaido (Industrial Waste Problems in Hokkaido) on July 1999.

<sup>25</sup> NHK, Close up, Sangyo Haikibutsu Monday in Hokkaido (Industrial Waste Problems in Hokkaido) on July 1999.

<sup>26</sup> Interview with Takasu Town, Sanitary Section Official on November 30, 1999.

<sup>27</sup> Interview with Official at Takasu Town, Sanitary Section Official on November 30, 1999.

<sup>28</sup> Interview with Hokkaido Government, Environment and Life Style Official on April 3, 2000.

<sup>29</sup> Interview with Official at Takasu Town, Sanitary Section Official on November 30, 1999.

<sup>30</sup> Interview with Hokkaido Government, Environment and Life Style Official on April 3, 2000.

<sup>31</sup> Interview with Takasu Town, Sanitary Section Official on November 30, 1999.

<sup>32</sup> Interview with Takasu Town, Sanitary Section Official on November 30, 1999.

<sup>33</sup> NHK, Close up, Sangyo Haikibutsu Monday in Hokkaido (Industrial Waste Problems in Hokkaido) on July 1999.

<sup>34</sup> NHK, Close up, Sangyo Haikibutsu Monday in Hokkaido (Industrial Waste Problems in Hokkaido) on July 1999.

<sup>35</sup> Interview with Hokkaido Government, Environment and Life Style Official on April 3, 2000.

<sup>36</sup> Wakkanai Seiyouran (Wakkanai facts and Figures), 1997.

<sup>37</sup> Jijiken Seminano Hokokusyonitsuite (Municipal Research Center Seminar Report, September 20 1999.

<sup>38</sup> Hokaiddo Shinbun. Kankyou senshin Kuni wo Manabou (Learn from Develop Environment Country) February 1, 1998.

\_\_\_\_\_Gomi Mondai wo Nessin ni (Concern Toward Waste Problems) January 30, 1998.

\_\_\_\_\_ Chikyu Gomi Syori Jijo World Waste Treatment Information), May 7, 1999.

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<sup>40</sup> Interview with Wakkanai Municipal Research Center Head, Diet member of Wakkanai City and staff, on November 25, 1999.

<sup>41</sup> Wakkanai Shi no Seisoujigyou Oyobi Resaikuru no Ayumi (The History of cleaning and recycle).

<sup>42</sup> Interview with Wakkanai Municipal Research Center Head, Diet member of Wakkanai City and Staff, on November 25, 1999.

<sup>43</sup> Interview with Wakkanai Municipal Research Center Head, Diet member of Wakkanai City and Staff, on November 25, 1999.

<sup>44</sup> Interview with Wakkanai Municipal Research Center Head, Diet member of Wakkanai City and Staff, on November 25, 1999.

<sup>45</sup> Interview with Wakkanai Municipal Research Center Head, Diet member of Wakkanai City and Staff, on November 25, 1999.

<sup>46</sup> Interview with Wakkanai Municipal Research Center Head, Diet member of Wakkanai City and Staff, on November 25, 1999.

<sup>46</sup> Interview with Wakkanai Municipal Research Center Head, Diet member of Wakkanai City and Staff, on November 25, 1999.

<sup>46</sup> Interview with Hokkaido Government, Department of Environment and Life Style Official. In June 1999.

<sup>47</sup> Interview with Wakkanai Municipal Research Center Head, Diet member of Wakkanai City and Staff, on November 25, 1999.

<sup>48</sup> Interview with Hokkaido Government, Department of Environment and Life Style Official. In June 1999

<sup>49</sup> Interview with Hokkaido Government, Department of Environment and Life Style Official. In June 1999.

<sup>50</sup> Shichou Gyousei Hokokusyo (Mayor Administrative Report). November 22, 1996.

<sup>51</sup> Shichou Gyousei Hokokusyo (Mayor Administrative Report). November 22, 1996.

<sup>52</sup> Shichou Gyousei Hokokusyo (Mayor Administrative Report). November 22, 1996.

<sup>53</sup> Shichou Gyousei Hokokusyo (Mayor Administrative Report). November 22, 1996.

<sup>54</sup> Interview with Hokkaido Government, Department of Environment and Life Style Official. In June 1999.

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<sup>57</sup> Interview with Hokkaido Government, Department of Environment and Life Style Official. In June 1999.

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- <sup>61</sup> Interview with Hokkaido Government, Department of Environment and Life Style Official. In June 1999.
- <sup>62</sup> Interview with Hokkaido Government, Department of Environment and Life Style Official. In June 1999.
- <sup>63</sup> Thompson, M., 1991.
- <sup>64</sup> Hannigan John A., 1995. 31.
- <sup>65</sup> Id.
- <sup>66</sup> Best, J., 1989.250.
- <sup>67</sup> Id.
- <sup>68</sup> Best, J, 32(2) 101-21 (1987).
- <sup>69</sup> Id.
- <sup>70</sup> Best, J, supra note 468 at 251.
- <sup>71</sup> Yearley, S. 1992. . 117.
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- <sup>77</sup> Solesbury, W., (54) 379-79 (1976).
- <sup>78</sup> Id.
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- <sup>81</sup> Solesbury, W. 384-5 (1976).
- <sup>82</sup> Enloe, C.H, 1975.21.
- <sup>83</sup> Snow ET AL, 464-81 (1986).
- <sup>84</sup> Solesbury, 1976.t 483.
- <sup>85</sup> Best,J. 1989. 468.
- <sup>86</sup> Hansen, A., (13-4) 443-58 (1991).
- <sup>87</sup> Gould ET AL, (16-3) 207-46 (1993).
- <sup>88</sup> Solesbury, supranote 483 at 392-5.
- <sup>89</sup> Yearley,S, 1992. 337