

**Environmental Justice in Japan:
Case Studies of Lake Biwa, Nagara River, Minamata, and Niigata-Minamata**

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How to Approach "Environmental Justice"?

Issues of "justice" concerning social relationships among people have been the subject of theorizing since Plato's time. Generally, "social justice" refers to issues of distribution of social resources: what kinds of people receive them; what kind of resources are distributed; and, in what manner and quantity are they distributed. "Resources" generally refers to the necessary material, social, and cultural means by which people satisfy individual desires and ensure the continuance of social systems. Let us think of "social resources" as those that are influenced by social relationships. Important among social resources are such things as money/currency, authority/status, role, and influence/power. In other words, in investigating conceptions of social justice, one inquires into the nature of social relationships between people.

What does "environmental justice" mean? Can we say, for example, that in relationships between living things, if large animals eat small animals in accordance with the food chain, then this is not "environmentally just"? This issue is one internal to the ecosystem of non-human living things, and I would like to exclude it from arguments about environmental justice. We can, therefore, restrict questions of environmental justice to those issues involving human interaction with the ecosystem.

However, if a certain human group hunts a large number of a certain animal to near extinction, this could be termed an "environmental justice" issue because intense level of human involvement in other creatures' lives. Environmental justice necessarily involves both environmental protection and the conservation of social justice. For this reason, in cases where toxic substances are sent from a certain locality to another (a neighboring town or a developing nation) in order to preserve the first locality's environment, one cannot say that environmental justice has been served.

Having defined environmental justice in this way, I would like to answer the following three questions in this paper that have been raised in this conference:

- (1) What kinds of public statements are made regarding environmental justice in modern Japanese society?
- (2) What cultural and historical background lies behind these statements?
- (3) To what extent are these statements about environmental justice contributing to solutions of environmental problems, and the satisfaction of individuals' basic as well as social needs and desires: e.g., food, clothing, income disparity/parity, and safe workplace?

This paper will address four case studies of environmental problems in Japan: two resource use problems involving Lake Biwa and the Nagara River water environment issues and

two industrial pollution problems related to Kumamoto Minamata Disease and Niigata Minamata Disease. Each of these four cases involves the issue of water, perhaps the most important environmental resource to Japan, an island nation historically engaged in rice production in paddies. Through a consideration of the resource and conservation issues revolve around water, it should be possible to paint a clear picture of distinctive elements of Japanese culture from them.

Minamata Disease: Damage to Health and Social Discrimination

In Japan, pollution problems began with an unhappy history of health problems caused by toxic substances released at mines and factories. From the Edo Period (1600-1864) onward, pollution problems with mining effluents existed. The problems became more serious as modern factories began spreading across Japan. The wastes produced by these industrial processes were released into rivers, seas, and the atmosphere, causing cases of health damage among people living nearby. It can be said that of all the health problems caused by modern industrial production in Japan, Minamata Disease and Niigata Minamata Disease not only created the most victims, but also caused complex, deep-rooted social problems. Both represent the "underside" of the modernization of Japanese society.

The Japan Chisso Chemical Fertilizer factory was built in 1909 in the small fishing village of Minamata, in southern Kyushu. Starting in the 1920s, damage to fish populations from factory effluent began. The town had become economically dependent on factory production, which undermined the factory's effluent from turning into a social issue at that time. The term for this sort of community dependant upon industry is an "industry castle-town". Starting in the 1950s, however, a strange disease, termed "dancing cat disease" broke out, mainly in fishing hamlets. Some research was performed in order to determine the cause of the disease, but the Chisso factory, national government, and researchers tried to cover up the problem. Many victims died without any help from society. The Kumamoto University Faculty of Medicine expressed its view that the cause was organic mercury contained in the effluent from the Chisso factory, which entered the human body through consumption of contaminated fish. The national government, however, did not accept this explanation.

In 1965, in Niigata Prefecture, in the Agano River area, the same disease broke out. It was proved that the cause was a Showa Denko chemical factory, which used the same industrial processes as Chisso in discharging organic mercury. The national government of Japan then officially accepted that the causes of Minamata Disease and Niigata Minamata Disease were the same: organic mercury. This constituted acceptance of the scientific justification and legitimated what had been a mysterious disease.

Here a path to relief from the national government opened by way of concrete economic

aid in cases of pollution-caused disease. In 1973, the Pollution Health Damage Compensation Law was enacted. Distinctively Japanese, it provided not only relief for disease victims, but also included the goal of providing relief for the polluting industry. The damage sustained by the polluting industry was to be relieved socially through tax money. This method of using tax money was under girded by the same fundamental principle that led to the “social injustice” of pouring public funds into bankrupt banks in the 1990s. Such structural, systemic injustice stands in stark contrast to the convoluted logic, which, in local Minamata society, for example, led many citizens to make such highly critical statements of disease victims as, “If Chisso is destroyed, the local economy will be crippled. Our jobs will disappear. Therefore, the Minamata Disease victims are bad.”

The next problem was the identification of Minamata Disease symptoms in order to recognize disease victims and distribute relief money to them. This identification of certified victims became the focus of an unfolding legal dispute among victims, industry, and the state. During this process, many patients were cast away as “uncertified.” In local society, they were branded as “impostor patients”. These uncertified patients received no relief from the state until 1995.

For this reason the actual number of Minamata Disease victims remains unclear. There are 2,952 officially designated victims in Minamata. An additional 11,149 victims received relief in 1995. However, if one includes those who were not officially certified, it is said that as many as 100,000 people experienced some sort of health problem. These are not only people who suffered direct health effects, but also many who experienced secondary effects.

In 1965 in Niigata victims with similar symptoms to Kumamoto Minamata Disease were discovered in the middle and lower reaches of the Agano River. The company that was the cause, Showa Denko in Kanose, was located in the middle reaches of the Agano River. Ultimately, it was the discovery that Kumamoto's Japan Chisso and Niigata's Showa Denko had the same manufacturing process that made clear the corporation's responsibility for the disease.

The Minamata Disease victims were forced to undergo two-fold suffering: the health problems which afflicted them and the above-mentioned social discrimination. Moreover, the social discrimination was not only at the hands of the national government and polluting industry, but also from nearby communities.

These people had done nothing out of the ordinary: the fish which they had long eaten as a staple food and which they caught in the sea or river near them contained poison. Those who held social power responded to the victimization of these people in a manner completely lacking in justice. The polluting industry, Chisso, shirked responsibility, politicians and bureaucrats backed that evasion, and researchers, mainly doctors, gave their scientific seal of approval. These social injustices ultimately created the countervailing power that fought them, which

include researchers and ordinary citizens who support the victim organizations and have developed into a powerful movement.

It has been written that, for many victims, the most difficult aspect of their experience was the discrimination and social rejection from their local communities. A victim whom we shall call "S-san" (Ms. S.), who contracted Minamata Disease in her 20s, raised four children while being ill, and is continuing to fish in her 60s, put it this way, "Both Chisso and the Environment Agency are far away, so I was able to endure it even when they discriminated against us. The hardest thing was the discrimination by people close to us." There was a rejection of relating to one another as human beings living together in society.

Health effects and social discrimination could both be called "environmental injustices" inflicted on Minamata Disease victims. Ultimately, this brought about the collapse of the local society called "Minamata".

Water Resource Development Issues and Environmental Justice

The Lake Biwa and Nagara River problems occurred as resource issues during the same time period that Minamata Disease was becoming the subject of controversy. In the 1950s, Japan, working for economic recovery after World War II, strengthened moves to industrialize and urbanize. At the same time, planning for water resource development was underway to respond to increased demand. In 1961, the Water Resource Development Promotion Law was passed. In the Kinki region, the water demand of Osaka, Kobe, and other cities was predicted to increase greatly. In the late 1950s, planning for artificial management of Lake Biwa's water level that would send large amounts of water downstream to the highly populated cities began. However, Shiga Prefecture, which surrounds Lake Biwa, did not just want to contribute to the development of the downstream cities. It would not agree to a water resource development plan unless there were some benefit given, i.e., regional development in the area around Lake Biwa. Negotiations continued for over 10 years, until in 1972 a combination of water resource development and regional development was agreed upon, and the Lake Biwa Comprehensive Development plan was put into effect.

After this, in 1976, Japan's first environmental rights lawsuit was initiated by downstream residents in an attempt to stop construction in the Lake Biwa area. They argued that water resource development resulted in worsening water quality, which infringed upon their right to drink clean water. In 1989, the courts decided against the plaintiffs.

Meanwhile, in the 1960s, before the Comprehensive Development plan began, worsening of Lake Biwa water quality (eutrophication) had been occurring due to increases in household and industrial wastewater. In 1977, freshwater red tide outbreaks occurred. Shiga Prefecture identified the cause of worsening water quality as the phosphorous contained in synthetic

detergent. In order to decrease the amount of phosphorous and nitrogen flowing into Lake Biwa, a Eutrophication Prevention Ordinance was enacted in 1979. At the same time, dam construction around Lake Biwa was being undertaken. In 1997, over 30 years after the planning began, this project to increase water flow to 40 metric tons per second was complete. However, during the intervening 30 years, Japan's rate of economic growth had declined, and the growth in water demand had not grown as projected. Once again, water supply and demand were becoming a problem.

In central Japan, east of the Kinki region, there was another water resource development project intended to respond to an increased demand for water: the Nagara River Estuary Dam. Decided upon in 1968 by the national Cabinet, the dam was to provide industry and municipalities in Aichi Prefecture, Mie Prefecture, and Nagoya City with water. Again, increased water demand was to be satisfied; 22 tons per second were to be apportioned under the plan.

However, in 1973, 26,000 fishermen from all over the Nagara River area began an opposition movement, protesting that the construction of an estuary dam would have a large, adverse impact upon ayu, trout, and other important fish. This protest delayed construction until 1988 when the last fishermen's organization formally agreed to the plan and construction began.

Soon afterwards, a second opposition movement organized by nature conservationists who opposed impacts of the dam on the surrounding ecosystem began. Celebrities and media personalities got deeply involved, making the Nagara Dam problem famous. It became a representative case within the Japanese environmental conservation movement. Nevertheless, in 1995, the construction begun 7 years earlier was completed and the estuary dam began operations, cutting off the Nagara River from the sea. Here, too, however, water demand had not grown according to plan, and the original goals of construction had been lost.

There are several themes the Lake Biwa and Nagara River water resource development cases have in common. First, there are questions of whether the water resource developments were necessary – we refer to this as “Development Necessity Theory.” These cases exemplify the obverse of “necessity theory”; rather than underdevelopment failing to meet demand and causing social injustice, it was the over-development of water resources that was the cause of social injustice. At the root of the problem in both cases are issues of public investment through tax spending. While carrying the banner of public works, the public need for these two water resource development projects was decided upon by bureaucrats at the national Ministry of Construction, a Liberal Democratic Party-controlled government, and large construction firms, an “iron triangle” of politicians, bureaucrats, and big business whose interests were satisfied by the projects. Without inquiry into genuine public interest and need, excessive public investments were made and a policy of debt financing was put in practice.

In the 1960s, the assessment of “necessity” informing plans for water resource development was based on a projected increase in water demand. The projection did not predict the ways in which not only slower economic development, but also the spread of water conservation awareness and water conservation technology would reduce the demand for water. The particularities and effects of this time gap factor differed in the Lake Biwa and Nagara River cases.

Lake Biwa and Nagara River both faced the problem of excessive predictions of water demand. In the Nagara case, water supply development was a completely new project. Lake Biwa, however, had been sending water downstream via its natural river outlet for tens of thousands of years and a weir had manipulated the water level since 1905. The Lake Biwa Comprehensive Development Plan was thus aimed at reworking a previously existing system.

A second difference was that, in the Nagara case, the development project goals were altered to account for both organized sentiment and social trends. Here the contradictions between various government responses became visible. The estuary dam had originally been aimed at water utilization, but when water user demand decreased flood control, a new goal, was created and made public. Many local residents, the mass media, and activists voiced concern over the inconsistent logic of the water development project. In contrast, the Lake Biwa Comprehensive Development consistently advocated three main goals from the start: flood control, water utilization, and conservation. As time passed and the environmental conservation trend grew stronger, the relative weight given to conservation projects increased and public criticism was largely avoided.

A third difference is that the Lake Biwa Comprehensive Development was not only a water resource development scheme for downstream cities, but also had the goal of local development for the upstream area. It included more diverse goals than a simple water resource development plan. For this reason, social criticism of excess development did not become widely politicized in this case. On the contrary, projects such as water works and sewage treatment, land improvement, and road construction projects were accepted and welcomed by local society. However, it cannot be denied that the lack of wide social criticism of these projects led to the deterioration of the ecosystem and the worsening of environmental problems.

Public Environmental Statements – Turning “Life” Into a Metaphor

While the specificities of the contexts of these four cases differ, they have produced legal discourse and opposition movements that contested development plans on similar terms. In particular, all have involved the contestation of the issues of water and life.

As stated above, “environmental justice” has been defined as a situation in which both statements of the relationship between humans and nature and statements of the relationship

between humans and other humans are considered.

First, on the topic of resource issues, consider the Lake Biwa case: both government and local residents, as well as the downstream residents who were the main actors in the legal battle desired better water quality, or what was called in the Lake Biwa trial, “the right to receive clean water.” In other words, protecting good water quality was the greatest aspiration of Lake Biwa environmental conservation. Environmental justice in this case would have meant the achievement of this aspiration. However, the securing of water quality was also a relatively new theme. Lake Biwa had functioned for many years as a water resource for large cities like Kyoto and Osaka, but what was most sought after in its main role as a water source was the quantity it could provide. Thus, among the goals of the Lake Biwa Comprehensive Development plan was a 40 metric ton per second new water use amount, not new standards of quality. The water quantity standards were set forth in the Water Pollution Prevention Law in 1972. The issue of water quality conservation only entered into the discourse around water development in Lake Biwa after the 1970s, when water quality had deteriorated.

Another particularity of the Lake Biwa water quality debate was that water quality was discussed in terms of chemical materials, namely phosphorous and nitrogen, rather than addressing the issues of plankton, fish, or other elements of the food chain existing within the ecosystem. The discussion of scientific materials that had become central, eclipsing discussion of the ecological food chain, was in turn suddenly buried by a new public discourse with spiritual overtones conducted in terms of “the water of life”. The conducting of the debate in spiritual terms disallowed consideration of the fundamental ecological meanings water holds. As a result, Lake Biwa's problems continued to be addressed by the government and scientists through further engineering, while the water quality debates in the public sphere were conducted using spiritual expressions such as “Mother Lake”, a metaphor for “The Water of Life”.

The implication of the inclusion of idioms ‘life’ in the public debate around Lake Biwa is that discussion of the ‘death’ of the lake also entered into the discourse. In fact, the statement, “we cannot make Lake Biwa a dead lake,” appeared consistently throughout the 1970s and 1980s in newspapers and magazines. However, there has been almost no ecological or social discussion of whether the lake was really close to death.

The metaphor of life was also a part of the public discourse in the Nagara River case. However, in the Nagara case, movement groups rejected the use of the water for supply purposes, and did not directly make water quality into an issue. In this case, rather than the chemical components of the water being the issue, the ayu and trout fish species, were symbolized with the language of “life”. The images of the clear-flowing Nagara River where such fish lived, or the un-dammed, natural Nagara River were common dialogues for the various movement groups. This symbolization is most likely connected to the fact that the people

involved in the movements were particularly concerned with fish; in the beginning it was fishermen, while during the second half of the movement, professional conservationists and hobbyists became active.

Both resource and pollution problems display a common attachment to water and life. As was stated above, this may be a manifestation of Japan's unique water culture formed throughout history. From ancient times, people drank water directly from surface sources such as rain and river water. Because of the mountainous topography of Japan, many rivers have fast currents and so were used as dependable water sources rather than spring or ground water. River water was also usable for the washing of clothes and other household items. This culture of water use is directly related to the Japanese fish-eating culture, characterized by the consumption of fish caught in local rivers, ponds and in the water of the rice paddies. In the context of this water culture in which the purity of surface water sources is taken for granted, it is not surprising that the people of Minamata, who ate so many fish that they were almost bathing in them, met with health damage when their water sources were contaminated by industries. People also had a great trust developed over the years of the water as a source of nourishment. "Use the water and eat the fish from nature" – this ethos of Japanese culture had made water and life almost equivalent to one another.

Today public works projects are planned in Tokyo's Nagatacho district by politicians and business leaders. The meaning of the culture of water has not been passed down to them and they are therefore not considerate of the water culture and its significance to non-urban Japanese people. These technocrats work on the assumption that if sewers are built the water will be clean and the environment preserved; sewer construction is held up as a model policy of environmental conservation.

An elderly fisherman, Y-san, who lives in the middle reaches of the Nagara River put it like this, "If you were an ayu or trout, you sure wouldn't want the rivers to be lined with hard concrete [as they so often are in Japan]." For people who have battled with and received blessings from the rivers and lakes, nature is not something that can be managed. These people see fish in the water and life in the fish. Thus, while eating fish they make offerings and set others free. They do not objectify nature. Ayu and trout are seen as fellow living beings with which to coexist. This philosophy is completely different from the technocratic logic informing those who are agents in the planning and implementation of water resource management.

New Moves To Internalize Environmental Justice in Local Society

The Lake Biwa and Nagara River areas have seen progressive environmental deterioration due to an overabundance of public works projects; Minamata and Niigata experienced the breakdown of local community amidst the two-fold suffering of health damage

and social discrimination. How will these local societies interpret the experiences of the past 30-40 years in order to move in positive new directions? What solutions will they seek and move toward from here? How will the people who live in these communities learn and gain from their experiences with pollution and resource development problems?

At this point, let us suggest two types of community decision-making that exist within the four local communities (though this is a very hypothetical and schematic attempt at understanding).

First, it can be argued that the Lake Biwa and Kumamoto Minamata Disease cases share a common, distinctive characteristic: the entities that interpret and deal with the problems form close-knit communities. In other words, polluters and victims, development planners and those who receive the benefits, the entities who confront each other in social roles, live at socially and geographically close distance from one another. Because of this closeness, an ethic of keeping the debate and resolution of the complex and divisive issues of health maintenance, environmental conservation, and health of the local economy internal to that society has been developed. In a close-knit community, internally-devised responses to local human-environmental interaction problems can be brought experimentally into a cooperative energy that creates better relationships between people in the local society.

In Lake Biwa, in response to over-development there is currently a new move toward comprehensive conservation. Centered in Minamata, a new move toward “*moyainaoshi*” (a retying of social bonds) has begun, aimed at reviving a community exhausted by conflict. “Local-ology” (the study of local areas) is also attempting to bring back the traditional culture of water in Minamata at the same time as a movement by Minamata Disease patients to grow organic and pesticide-free produce. These efforts are proceeding steadily, effecting great changes. After the horrible experience of pollution and health damage, Minamata has become a center of pollution research on mercury, and there is a move to make it into an international research base.

Minamata Disease patients have brought their most important concerns back into local society. For example, the concerns of a coalition of patients came to inform their own lifestyle choices. The same Ms. S. who was quoted earlier said: “We ate poison and got sick, so we will not sell poisonous foods”. Her daily practices are informed by the environmental concern she developed following her experience of the ill effects of environmental degradation; for example in how she processes fish or produces oranges that are pesticide-free, low in pesticide, or in their most natural possible state. She not only practices her daily life in ways informed by her environmental consciousness born of her experience, but has also made it a point to share her philosophy with the community. For example, she has taught her children about picking persimmon fruits off of the trees: “Leave one for the crow, one for the tree, and one for the

spirits; you can't take all of them.” In this way, she critiques modern logics of the “pursuit of efficiency,” which would regard leaving untouched any available fruits of nature as inefficient waste, and practices and preaches her own philosophy informed by her animistic perspective.

‘Mr. O’, realizing that in order to apply to be certified as a patient of Minamata Disease and receive financial compensation, he would have to enter into the bureaucratic machinery of the modern social system, withdrew his application in favor of remaining inside his local community as a fisherman. This kind of person, who has demonstrated with his life the fundamental limits of modern society and who was born in Minamata, could be seen as testimony to the power of the events that occurred there.

In the Nagara River and Niigata Minamata Disease cases, the entities that interpreted and dealt with problems were dispersed, both in terms of government and community. These were areas where organizations and political bodies were not mature enough to formulate decisions in a constructive, forward-thinking manner; we refer to these as “dispersed” communities. In these communities, the ability to internalize the statements and energy of external mass media, activists, and others was weak, and entity-formation was insufficient. These communities were and still are a long way from cultivating entities that can deal in a socially constructive manner with problems.

However, it is necessary to consider the influence of movements that go beyond local communities and society. In the case of the opposition movement that arose around the Nagara “estuary dam,” the various movement organizations split. There was disunity in the local community and many feel that a feeling of powerlessness was left behind. Nevertheless, one must not disregard the significance of local contestation of structural problems of Japanese society, such as public works which do not actually work for the public, in the context of a modern bureaucratic state which has long taken the lead in distributing tax monies to the Liberal Democratic Party and to construction industries.

Japanese “Environmental Justice” in the American Sense

The Japanese Environment Agency does not have an "Environmental Justice" program as exists in the U.S. So-called “*meiwaku shisetsu*” (nuisance facility) problems tend to be treated as rural-urban risk perception and assessment problems.

The *meiwaku shisetsu*, like garbage incinerators or nuclear power plants, have tended to be located in remote, less-populated areas or remote rural areas (not necessarily “outcaste” communities, although there are cases of these sitings in outcaste areas). The research on this subject is still in the initial stages in Japan and appropriate research cases are limited. The national government and power companies have maintained that nuclear power plants are safe, although they never try to locate these plants inside densely populated areas of the Tokyo metropolis. Remote rural communities or municipalities have been forced to accept these nuisance facilities in return for “public investment,” for example, improved roads, public swimming pools, cultural centers, libraries, as compensation. For example, the central government has invested in numerous public works like road construction in the “nuclear power plant alley” of Wakasa, in Fukui Prefecture. At the same time, direct monetary payments to local municipalities are another important source of funds for local budgets in these areas.

In the past ten years Japanese local people started to express their opinions about whether to accept these *meiwaku shisetsu* through direct public polling (local assemblies usually easily accept nuisance facilities, mainly for economic and political benefits). The town of Maki, in Niigata Prefecture, was the first local government to decide to accept a nuclear power plant through enactment of a public poll ordinance in 1996. The number of votes against accepting the power plant was 12,478, while 7,904 people voted in favor.

As for waste incineration plants, in 1997 the town of Mitake, in Gifu Prefecture became the first town to utilize a public polling procedure for this sort of decision-making. The number of municipalities using public polling procedures has increased since then. The biggest issue for the general public who live in areas surrounding power plants and waste facilities has been environmental risk, causing a gap between the perceptions of the general public and the power elite. Fears held by the general public regarding the power plants have strengthened over time, especially after the incidence of Tokai Village in September.

At the national level, social compensation has functioned as a way to balance *meiwaku shisetsu* and generous public investment and financial input in local communities. At the international level, there are several notorious cases involving Mitsubishi, for example, the Asian Rare Earth case in Malaysia. It would be interesting to analyze whether the issue of compensation is treated differently for damages caused within Japan as opposed to damages caused overseas.

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