

Passing on the Experience of Minamata to the Future

Message from Minamata, Kumamoto



We, having experienced the ravages of pollution, must disseminate “the Message”.

About half a century ago, the disease broke out in a corner of Japan and it shocked the whole world. It was Minamata disease, which said in Japan to be the first case of environmental pollution.

It was officially recognized in 1956. At that time a strange disease of unknown cause had been feared by the local people. The cause was eventually found to be methylmercury compounds contained in the factory effluent from the factory of Shin-Nippon Chisso Hiryo (fertilizer) Co., Ltd. (currently Chisso Corporation: hereinafter referred to as “Chisso”). It was in 1968 that the cause, the production of acetaldehyde, was stopped and was announced officially by the national government. It has been 12 years since the official recognition of Minamata disease.

Some people died horribly of fulminant Minamata disease, some were born with severe disabilities, some still suffer the various symptoms even after many years and some people harbor health concerns. Due to the discrimination and prejudice against patients and their families, as well as the friction between patients and local residents who try to protect the causative company which was the biggest industry in the area, the damage extended not only to people’s health, but also to minds and hearts.

It took a long time for the Minamata Bay to recover and for the safety of its products to be confirmed. During that time, no fishery activities were carried out, and even local industries stagnated due to damage caused by harmful rumors. Minamata disease hangs over the whole damaged area as dark clouds.

The damage caused by Minamata disease was the most severe during the postwar reconstruction and high economic growth periods. Richness and convenience were pursued and profit and efficiency were prioritized over the environment, human lives and health of people. In the end, their attitudes proved to be harmful both to humanity and to the economy. The government essentially has the role of protecting health and life of the local people. However, the government was accused of ignoring its responsibility for not preventing the expansion of Minamata disease. And this failure could happen anywhere in the world which aims solely for economic development.

We hope that no other countries or regions will have the same tragedy as Minamata experienced. We hope the lesson learned from our harsh experience can be shared with as many people as possible who will make good use of it as a guide for development. This is the role and the responsibility of us who experienced the terror and tragedy and learned many important lessons.

In Minamata and Ashikita region which were damaged once by pollution, people started to join together to make the effort to restore their hometown in 1990s. That is the challenge to make good use of the lessons of Minamata disease in their daily life and their industry, and also to develop their society sustainably and symbiotically with the environment. Once polluted area is now transforming into an “Environmental Model City”, where many people from both home and abroad come to visit and to learn.

In restoring the beautiful sea despite the huge cost and investment in time, Minamata and Ashikita region found a new light to the future. What kind of journey has this area come through for those 60 years? We would like to tell the history and lessons of Minamata disease as our message to the whole world along with our pledge to all the lives who were sacrificed, “We will never repeat the same fault.”

Kumamoto Prefecture

Beautiful Nature of Minamata and Ashikita Brings the Sauce of Our Lives

The Minamata and Ashikita region, which includes Minamata City, and the towns of Ashikita and Tsunagi, is located in the southernmost part of Kumamoto Prefecture in the southwest of Japan, and is adjacent to Kagoshima Prefecture. This ria coast is surrounded by hills on three sides and a view of the islands of Amakusa is commanded through the Shiranui Sea in the west. Water rich in nutrients springs out from the lush green mountains and flows into the sea. Therefore, the area used to be a rich fishing ground called “place where fish springs out.”

How did this naturally rich and scenic area become damaged with pollution? First, let us tell the history from the modern period.

The Minamata and Ashikita region has been part of the main road through Kyushu island from ancient times. In accordance with the organization of municipalities, the village of Minamata was incorporated with a population of 12,040 in 1889. It was the period when the Meiji national government was promoting a policy of encouraging new industries, aiming for modernization compatible with western countries. Therefore, Minamata port started to bustle around that time. However, it was a small fishing village only with the salt industry utilizing the tidal flats. And this salt industry vanished in 1910 due to the monopolization of salt by the national government.

In order to set up a modern industry in Minamata, Nippon Chisso Hiryo Co., Ltd., which was a former company of Chisso, was invited by local people in 1908. The village of Minamata developed continuously along with the prosperity of this invited company. In the Taisho period (1912~1926), Minamata became a town and infrastructure, such as the opening of the railway, was developed. In the Showa period (1926~1989), the company increased its production, but declined due to the defeat in the war. However, Chisso quickly resumed production. After World War II, the town was incorporated as a city and in 1949. In the middle of the 1950s, it became a

prominent modern industrial city in Kumamoto Prefecture with a population of over 50,000.

There was a trend at that time in which people started to use more and more plastic products in their daily life along with modernization, postwar recovery, and rapid economic growth. Chisso which had produced a large amount of acetaldehyde, raw material of plasticizer for plastic, became an important enterprise supporting the economic development of the nation at that time.

Along with industrial development, the Minamata and Ashikita region became more prosperous. However, after 1956, the year of official recognition of Minamata disease, the population of Minamata started to decrease and the city itself headed for a long period of decline.

Presently, Chisso, the disease’s causative corporation, strives to push forward technological development and has become a world-leading company in liquid crystal production and its business condition has improved with the financial supports of the national and the prefectural governments. Minamata City, along with society as a whole, is taking the lead in aiming for construction of a resource-circulating type society while utilizing the lessons from Minamata disease. Inviting recycling companies while promoting environmentally-friendly agriculture, environmental education, and environmental protection activities implemented by collaborations between the government and the private sector are their initiatives.

Beautiful sea and mountains, hot springs, fresh seafood, fruits and vegetables peculiar to its mild climate... the Minamata and Ashikita region has recovered its beauty. This area, once having suffered from pollution, is valuing the environment and life and is now creating its own lifestyle and industries which can coexist with the nature.





Outbreak

What is Minamata disease?

The outbreak of Minamata disease was officially recognized in Minamata City for the first time in 1956 by Kumamoto Prefectural government. Methylmercury compounds drained from the Chisso factory located in Minamata, and it polluted fish and shellfish in the nearby sea. It is a toxin which affects the nervous system and is caused by consuming a large amount of polluted fish and shellfish daily. The environmental pollution and the damage to health occurred in Minamata was an unprecedented. After the once polluted sea had been restored, Minamata disease patients are still suffering even today.

In 1965, a similar outbreak occurred, which was caused by methylmercury compounds drained from the factory of Showa Denko Co., Ltd. in Kanose Town (currently Aga Town), Niigata Prefecture. These two incidents are now recognized as Minamata disease.

There are two cases of Minamata disease; one is acquired Minamata disease with which patients consumed polluted fish (infant Minamata disease, with which people were affected when they were children is included in this category), and the other is fetal Minamata disease, with which fetuses through the placenta were affected by fish contaminated with methylmercury.

Minamata disease is a disease caused by pollution, and it relates to environmental pollution. It is neither a contagious disease which infects through the air or food, nor inheritable. It is not an endemic disease, either.

Main symptoms of Minamata disease

Minamata disease is caused by methylmercury taken into the body and it damages the brain and nervous system.

Its main symptoms are numbness; sensory disorders, which mean loss of sensation in the hands and feet; ataxia, which means difficulty in daily movement such as easily falling over or difficulty in walking; concentric constriction of the visual field, which means narrowing of the field of vision; hearing impairment; disequilibrium, which means impairment of faculties for maintaining balance; speech impediments, which mean speech becomes slurred and unclear; tremors, which mean trembling of the hands and feet; and ocular movement disorder, which means eye movement becomes erratic.

These symptoms occur due to not only Minamata disease; therefore, they are hard to distinguish from those of other diseases. For a certain diagnosis of Minamata disease, not only these symptoms, but also the known intake of methylmercury is required.

At the beginning of the outbreak of the disease, many patients exhibited a full set of symptoms and, among them, many were fulminant patients suffering convulsions or losing conscious and dying. At a later date, less severe Minamata disease patients who exhibited only some of the slight symptoms were also seen.

Outbreak area of Minamata disease patients

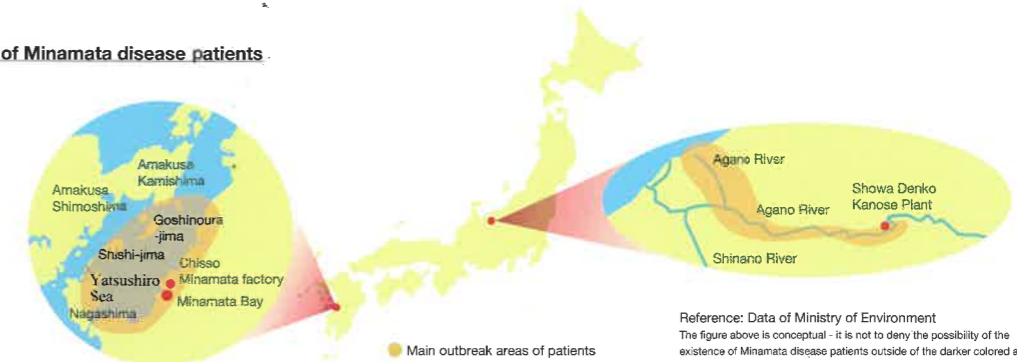
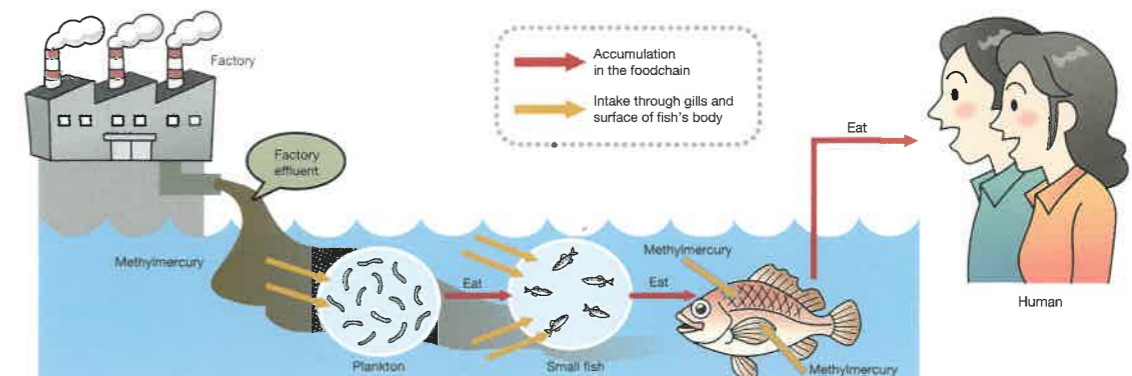


Figure of food chain



Outbreak and Investigation of the Cause

Outbreak of Minamata disease and its expansion

The disease started with a few girls who lived in Minamata, having a very severe brain condition whose cause was unknown, were hospitalized at the Chisso Minamata Plant Hospital and was reported to the Kumamoto Prefectural Minamata Health Center by Dr. Hosokawa, the director of that hospital in 1956. This notification constituted the "official recognition of Minamata Disease."

After the official recognition, the Minamata City Strange Disease Countermeasures Committee was established with the Kumamoto Prefectural Health Center, Minamata City, the Medical Association of Minamata, Minamata Municipal Hospital and the Chisso Hospital. And Kumamoto Prefectural government asked Kumamoto University for investigation into the cause, while the Ministry of Health and Welfare [MHW: presently the Ministry of Health, Labor and Welfare(MHLW)] formed the Minamata Food Poisoning Special Group and Food Hygiene Investigation Committee.

In November 1956, the Minamata disease research group of Kumamoto University Medical School reported that the possibility of intoxication by certain heavy metals was high and local fish and shellfish were suspected of having some relation to the cause.

Delayed cause investigation

In August 1957, Kumamoto Prefectural government referred to MHW for prohibition of fishing based on the Food Sanitation Act, but in the next month, MHW replied, "The Food Sanitation Act cannot be applied because the evidence that all the fish and shellfish in Minamata Bay are toxic has not been confirmed."

Furthermore, Kumamoto Prefectural government provided administrative guidance for the Minamata City Fishermen's Cooperative to impose voluntary restraint on fishing in Minamata Bay.

In September 1958, Chisso changed the effluent path in acetaldehyde manufacturing process from Minamata Bay to the mouth of the Minamata River. Under the new process, the effluent was stored at Chisso's premises (Hachiman Pool), and supernatant water was discharged. Later outbreak of new patients in the vicinity of the mouth of the Minamata River was recognized, and subsequently, Chisso stopped draining effluent into the mouth of the Minamata River under the instruction of Ministry of International Trade and Industry (currently Ministry of Economy, Trade and Industry).

In July 1959, the Minamata disease research group of Kumamoto University Medical School reported that "Minamata disease is a neurological disease caused by consuming local fish and shellfish, and mercury is highly suspected as a toxic substance polluting fish and shellfish." However, some scientists disagreed, and later on even the Food Hygiene Investigation Meeting of MHW reported to the Minister of Health and Welfare that "the main cause of Minamata disease is some kind of organic mercury compounds."

Wastewater from Chisso Minamata Plant

After the announcement of the organic mercury theory by Kumamoto University, fishermen demanded Chisso to install the purifying facility and suspend the production process until the installation of the facility.

Regarding purification of factory effluent, Chisso completed installation of flocculation precipitation treatment apparatus in December 1959. However, it didn't have the perfect removal effect on methylmercury compounds.

In June 1966, the drainage system was improved to be a complete circulation system. In addition, the production of acetaldehyde ended in 1968, the drainage of methylmercury was terminated.

The outbreak of Niigata Minamata disease to government's consensus opinion

In 1965 Professor Tsubaki of Niigata University and his group reported to Niigata Prefectural government that there was the outbreak of patients who were suspected to be victims of organic mercury toxicity in Niigata. Niigata Prefectural government implemented a health survey for the residents of the Agano River basin and reported to MHW that the cause was wastewater from Showa Denko.

The national government announced its consensus opinion that "Minamata disease is a toxic central nervous system disease caused by methylmercury compounds in September 1968. Methylmercury compounds generated as by-products in the production process of acetaldehyde at the Chisso Minamata factory was drained along with factory effluent and polluted the environment by accumulating and becoming concentrated in fish and shellfish. This disease occurred in residents who ate a large amount of fish and shellfish contaminated by methylmercury compounds. Subsequently, Minamata disease was certified as a pollution-related disease. It had been 12 years since the official recognition of Minamata disease in 1956.



Chisso Minamata Factory Photo taken around 1960 (Provided by the Minamata Disease Municipal Museum)

Lessons learned from the expansion of Minamata disease

The reason that the expansion of Minamata disease could not be halted was the attitude that profits and efficiency ought to be prioritized over the environment and the lives of people for the sake of rapid economic growth.

Even if we consider such historic and social backgrounds, Minamata disease still provides valuable lessons today for us, such as the importance of initial countermeasures and how we should deal with preventive measures in the face of scientific uncertainty.

Situation of damage

- Health damage

Minamata disease occurred in Minamata Bay and its vicinity area and in the Agano River basin in Niigata. The disease caused serious damage to health. Many people either died or are suffering from various symptoms. As of December 31, 2014, the number of certified Minamata disease patients based on "the Act Concerning Compensation and Prevention of Pollution-Related Health Damage" (refer to p.8) is 2,979. And that of persons eligible for relief based on "the Act on Special Measures Concerning Relief for Victims of Minamata Disease and Solution to the Problem of Minamata Disease" is 55,081 as of August 29, 2014.

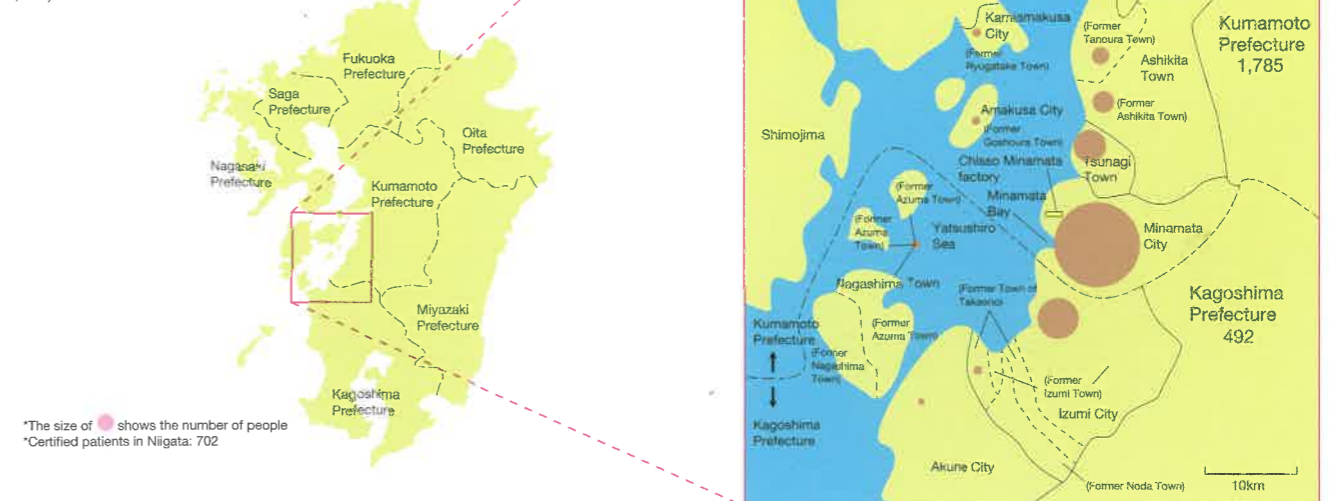
- Environmental pollution

The wastewater which contained methylmercury compounds from the Chisso Minamata factory over a long period of time, polluted Minamata Bay seriously. A huge amount of sludge contaminated with mercury accumulated at the bottom of the sea. In only 12 years, which is from the official recognition of the disease to the termination of acetaldehyde production, it is estimated that the amount of mercury which contained drained methylmercury compounds was about 70 to 150 tons and the thickness of the sludge at the bottom of the sea at most reached 4m.

- Issue on human rights

There were misunderstandings that Minamata disease was contagious due to its unknown cause at the beginning. Patients and their families were discriminated against by communities, and prejudice, such as being deprived of chances for marriage and employment, also occurred. Especially in Minamata City where Chisso's influence was very strong, some residents felt unpleasant against patients and that broke the relation between patients and citizens psychologically. Even outside of Minamata City, with misunderstandings that it was a contagious disease or an endemic disease, discrimination and prejudice against the people of and all things Minamata became a sad reality.

Distribution of Minamata disease patients (2014, Dec. 31st)



- Financial damage

Minamata disease evidence has exposed the fact that environmental pollution generates critical damage to health as well as disruption to the living environment. Recovery is not an easy undertaking. It also proves that prioritizing economic activities so single-mindedly over the environment was not a wise economic choice when balanced against the cost of preventing pollution beforehand.

The following is the results of research done in 1991 for comparison between Minamata disease-related damage in the Minamata Bay area and costs for prevention of pollution measures. If it is calculated in today's terms, the amount of the damage would be much bigger.

Comparison between Minamata disease-related damage in Minamata Bay area and cost for prevention of pollution measures

Countermeasures cost Annual average cost in investment for prevention of pollution of Chisso	123,000,000 yen
Amount of damage (The sum of following)	12,631,000,000 yen
Health damage (The yearly average amount of compensation paid to the patients based on the compensation agreement)	7,671,000,000 yen
Environmental pollution damage (Yearly average expenditure for Minamata Bay dredging project)	4,271,000,000 yen
Fishery damage (Redeemed amount per year in case of level payment for fishery compensation)	689,000,000 yen

Reference: Experiences of Pollution in Japan, edited by the Global Environment Economy Research Group, 1991



Provided by Sakae-no-mori (Hotto House)

Measures

Measures concerning health damage

-Certification system by the compensation Act-

Damage to health

Regarding measures concerning health damage, four ways of relief have been taken. The first one is compensation for Minamata disease certified patients based on law (described later). The second is compensation by trial. The third is compensation by the political solution of 1995 [described P.9 (application for this certification was terminated)]. And the fourth is the relief measures approved by the cabinet in 2010, based on “Act on Special Measures for Relief for Minamata Disease Victims and Solution to the Problem of Minamata Disease” enacted in 2009 in keeping with the Supreme Court decision of 2004 [described P.10, (application for this certification was terminated)].

Certification system by law and compensation agreement with Chisso

- Compensation of Minamata disease patients by law

In December 1969, “the Act on Special Measures Concerning Relief for Health Damage by Pollution” was enforced. The law also includes other pollution-related disease by air pollution, and it was decided that medical expenses shall be paid to the patients certified by the prefectural governor and mayor concerned. The certification process is that, with applicant himself, an epidemiological survey (investigation of consumption of fish and shellfish contaminated with methylmercury) and medical examinations are conducted and whether this person contracted Minamata disease or not will be decided with reference to opinions of the certification council. This Act on Special Measures succeeded “the Act Concerning Compensation and Prevention of Pollution-Related Health Damage (hereinafter referred to as the “Compensation Act”)” enacted in October 1973 and became the system to provide compensation for disabilities and other claims.

- Compensation for certified patients by compensation agreement with Chisso

Regarding compensation for Minamata disease patients, in 1959, Chisso and the Minamata Disease Patients Mutual Aid Society concluded the “solatium (Mimaikin)” agreement in which 300,000 yen for each the deceased victim, survivorship annuity (100,000 yen for adults, 30,000 yen for infants), 20,000 yen for funeral assistance and so on were paid. This agreement included the stipulation that, “even though the cause of Minamata disease is undoubtedly factory effluent of Chisso in the future, new demands for compensation could not be claimed”. This agreement became null later because the court judged it violated public order and morals.

In next year of government’s consensus opinion (1969), 112 sufferers from 28 families filed suit against Chisso in the Kumamoto District Court, for a total amount of 1.588 billion yen in damages. In 1973, the district court found Chisso responsible and severely admonished the company’s actions, saying that “The Chisso Minamata Factory was negligent as a chemical manufacturer.” The court handed down a verdict, ordering Chisso to pay total damages of 937.3 million yen: 18 million yen to each deceased victim, and between 16 million yen to 18 million yen to each surviving victim (The First Minamata Disease Lawsuit).

Then plaintiffs (all were certified Minamata disease patients) claimed compensation negotiation with the group of certified patients who had already had an independent negotiation with Chisso, and in 1973 a compensation agreement was concluded between Chisso and the patients’ group.

In this agreement, it was decided that a lump sum payment with three ranks (16 million yen, 17 million yen and 18 million yen) medical expense, annuity and so on will be paid and after the conclusion of agreement, the fact that the compensation agreement will be applied for certified patients who desire it was stated.

It has become common that certified Minamata disease patients choose to this compensation agreement instead of receiving the compensation under the Compensation Act.

- Certification criteria of Minamata disease

In order to judge without bias whether an applicant contracted Minamata disease or not, the criteria for certification has to be clear. In the latter half of 1970s with the increase of applicants showing incomplete main symptoms or those with slight symptoms, it became difficult to judge. Therefore, the Environmental Agency [presently the Ministry of the Environment (MOE)] issued a notification titled “Certification Criteria for Acquired Minamata Disease” (the so-called ‘certification criteria of 1977’) in 1977. Over this criteria, various concerns were raised in the courts later. The Supreme Court decision of April, 2013 stated that the judgment based on combinations of symptoms indicated in the certification criteria of 1977 had a certain rationality, but it was also important to discuss and judge comprehensively the cases in which the combination of symptoms was not recognised. Therefore, in March 2014, MOE released a comprehensive examination method based on the ruling of the Supreme Court.

- Promotion of administrative work on certification

Due to a rapid increase in the number of applications for Minamata disease certification in the 1970s, administrative work on certification was delayed significantly, and this became an issue.

Kumamoto Prefectural government made efforts to strengthen the system of certification examinations, but this issue was not resolved. In order to promote the certification work, the “Special Measures on Promotion of Administrative Work on Minamata Disease Certification” was enacted in 1979. And not only the prefectural governments, but also the national government were to carry out the work of the certification. The application to the national government was legally limited until September 30, 1996. Therefore, it was suspended in 2002. Later, with an amendment, the national government was allowed to carry out the work of certification for a while, and the national government resumed the work in July 2014 after a 12-year hiatus.

Measures Concerning Health Damage

Lawsuit concerning Minamata disease

After the First Minamata Disease Lawsuit, 141 people, including 34 rejected applicants for Minamata disease certification, and 10 sufferers and their family members, filed a suit against Chisso in 1973, alleging infliction of damage, and seeking compensation in the amount of 22 million yen per victim, and 1.684 billion yen in total. In 1985, the Fukuoka High Court determined that 4 out of the 5 plaintiffs seeking certification were suffering from Minamata disease and ordered Chisso to pay each between 6 million yen and 10 million yen, for a total of 32 million yen.

In 1980, 85 people, including 69 unrecognized victims and victims' families filed suit, for damages in the amount of 18 to 28 million yen per person, and as much as 1.377 billion yen in total. In addition to claims lodged against Chisso, the suit also claimed damages from the national government and Kumamoto Prefecture, under the National Compensation Law., for negligence in having failed to prevent the outbreak and spread of Minamata disease.

From 1982 to 1988, a string of lawsuits seeking redress under the National Compensation Law were filed in courts in Osaka, Tokyo, Kyoto and Fukuoka. The lawsuits became protracted, and involved over 2,000 people as plaintiffs.



Protest meeting in front of the gate of Chisso
(Source: Minamata Disease -Its History and Lessons- 2007, Minamata City)

Political Settlement in 1995

- The sequence of political settlement

Applications on Compensation Act never ceased and the negotiation was lengthened. People who demanded for relief by direct negotiation with Chisso went on a long-term sit-down strike at the front gate of Chisso Minamata Factory from 1988 to 1989. Minamata disease became a major social issue. Some administrative measures were required for those who had not been certified but had some health problems due to exposure to a certain degree of methylmercury.

Under these circumstances, the Comprehensive Program to Address Minamata disease was introduced in 1992. Under the program, a medical treatment passbook was issued to those who were found to be suffering from peripheral limb dominant sensory disturbance (both sense of touch and sense of pain in the distal portion of four extremities) which is also seen as a symptom of Minamata disease. Thereby, the self-pay portion of the medical treatment cost and medical care allowance were paid and residents health checks became available for local people.

In this situation, the three ruling parties at that time (Liberal Democratic Party, Japan Socialist Party and New Party Sakigake), listening to the opinions from the national and the prefectural governments concerned and patients' groups, put forward a solution for a full and final settlement and facilitating an amicable settlement in September 1995. By December of the same year, both the groups of victims and Chisso had accepted this proposal and signed on agreement to settle the conflict.

- Outline of Political Settlement in 1995

The settlement was to solve all conflicts over Minamata disease swiftly, finally, and completely.

1) The company was required to make a lump sum payment of 2.6 million yen for each person satisfying certain requisites, such as suffering from peripheral limb dominant sensory disturbance, which is also seen as a symptom of Minamata disease. An additional payment to groups of patients was required (4.94 billion yen by Chisso to five groups).

2) The national and the prefectural governments concerned express regret or responsible attitude and issue a medical care passbook as well as payment of the medical treatment cost, medical care allowance, and other benefits to those determined under 1) above.

3) Those accepting the relief measures end conflicts including lawsuits.

The national and the prefectural governments decided to issue a health care passbook along with partial payment for medical treatment cost to those who were found ineligible for the medical care passbook but who were suffering from certain neurological symptoms.

- Implementation of Political Settlement Agreed in 1995

Based on the consent of all parties concerned, the Cabinet approved the "Measures to Deal with Minamata Disease" in December 1995, and the national and the prefectural governments concerned implemented the following measures.

1) The accepting applications under the comprehensive medical care program was restarted in January 1996 and continued until July of the same year. During this period, 11,152 people were found to be eligible for the medical care passbook (eligible for the lump sum payment, medical care allowance, and medical treatment cost) and 1,222 people were found to be eligible for the health care passbook (eligible for medical treatment cost).

2) The lump sum payments and additional payments to be made by Chisso would be financed by a fund to be established by the Kumamoto Prefectural government (85% would come from the national government subsidy and 15% would come from prefectural bonds). In regards to the 27 billion yen the national government subsidy, the Cabinet approved the release of Chisso from its obligation for loan repayment in 2000.

Following the implementation of these measures, plaintiffs from 10 out of 11 lawsuits for compensation withdrew their actions.

The Supreme Court ruling for the Minamata disease Kansai Lawsuit and measures for Minamata disease introduced later on

The only one lawsuit remained without accepting "the political settlement in 1995", that plaintiffs who moved from the coastal area of Shiranui Sea in both Kumamoto and Kagoshima Prefectures to Kansai area. In October 2004, the Supreme Court handed down its ruling that 37 plaintiffs were entitled to compensation for damage ranging between 4.5 million yen and 8.5 million yen. Also the ruling found the national and Kumamoto Prefectural governments jointly liable for not preventing the expansion of Minamata disease as from January 1960.

After the lawsuit, the number of applicants for Minamata disease certification had increased, and many other lawsuits against Chisso and the national and Kumamoto Prefectural governments followed.

Taking the forthcoming opportunity of the 50th anniversary of the official recognition of the disease, fulfillment of medical care measures and promotion of regeneration of the Minamata disease outbreak area, as well as efforts towards reconciliation were announced as national policy.

In 2006, "Basic idea of new relief measures for Minamata disease sufferers" was indicated with establishment of "Ruling Party Minamata disease related project team" by Liberal Democratic Party and Democratic Party.

In 2009, The Act on Special Measures Concerning Relief for Victims of Minamata Disease and Solution to the Problem of Minamata Disease (hereinafter referred to as the "Special Relief Act") was passed and enforced, and the Cabinet decided on an implementation policy for relief measures based on this law in 2010. It stipulates that

1) Chisso, etc. shall make a lump sum payment of 2.1 million yen per person and an additional payment of 3.15 billion yen to three groups,

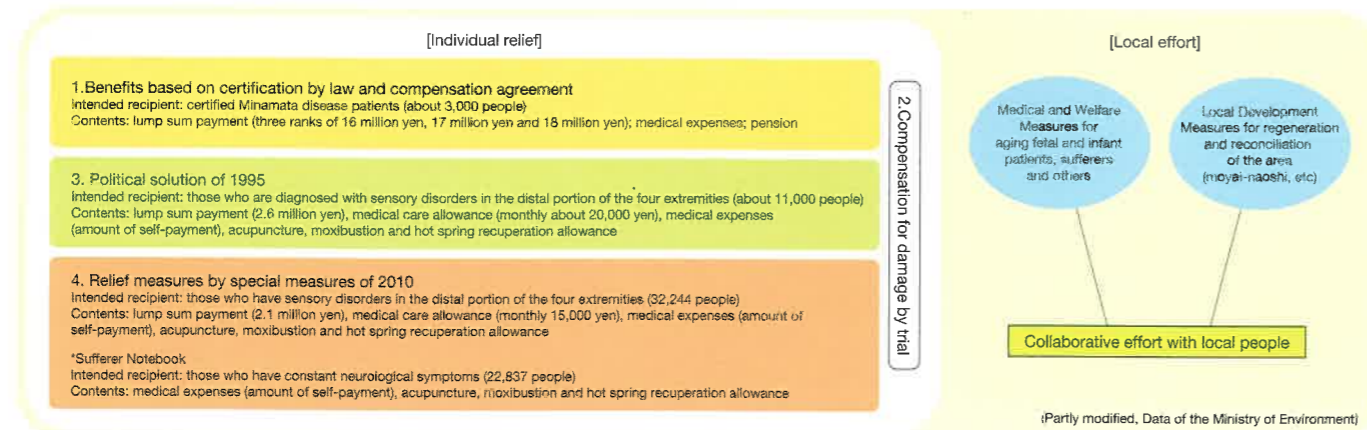
2) the national and the prefectural governments concerned shall pay the medical care costs and medical care allowance to each person eligible for payment referred to in 1) above, and

3) the governments shall issue the Minamata Disease Victim Passbook to those people whose sensory disturbance does not reach the level of severity of those sufferers eligible for the lump sum payment and who are suffering from symptoms shared by Minamata disease, such as numbness and shaking, and shall pay the medical care costs, etc.

When the 'No More Minamatas' state compensation suit (against Chisso and the national and Kumamoto Prefectural governments) was reconciled in parallel with relief measures under the Special Relief Act, an additional amount (3.45 billion yen) was paid to the group along with a lump sum payment of 2.1 million yen per person. This was in an effort to achieve a final solution to Minamata disease for those who had not been certified as Minamata disease patients, but needed to be relieved, should be accepted as Minamata disease sufferers.

Based on the Special Relief Act, the acceptance of relief applications was carried out in Kumamoto Prefecture, Kagoshima Prefecture and Niigata Prefecture from May 2010 to July 2012. There were 64,730 applicants (42,757 people from Kumamoto Prefecture) in all. 1) Among them, 32,244 people (19,306 from Kumamoto) became eligible for lump sum payments. In addition to 1), 6,013 people (3,510 from Kumamoto) became eligible for medical expenses. Above these the health care passbook was replaced with the Minamata disease victim passbook and the number of those who were eligible for only the medical expenditure totaled up to 16,824 (14,797 from Kumamoto Prefecture, as of the August 29, 2014, provisional numbers of Niigata Prefecture included).

Summary of relief for Minamata disease sufferers



Measures to Control Environmental Contamination

Regulation of Factory Effluent

From 1932, effluent containing methylmercury, created in the acetaldehyde manufacturing process of the Chisso Minamata factory was discharged into Minamata Bay (once also into the mouth of the Minamata River). In May 1968, the pollution source disappeared due to the discontinuation of acetaldehyde production.



Hyakken Water Gate (2014)
The effluent was discharged from here to Minamata Bay. (Provided by Minamata Disease Municipal Museum)

In February 1969, the Economic Planning Agency designated the sea near the Minamata Bay as an 'appointed area' under the (now former) Water Quality Control Law, and started to regulate methylmercury under the (former) Factory Effluent Control Law. In 1970, the Water Protection Control Law was enacted, followed by nationwide uniform regulation of the discharge of toxic substances such as mercury.

Measures Taken Regarding the Contamination of Fish and Shellfish

From around the end of 1956, during the pursuit of the cause of Minamata disease, initial recognition that the consumption of fish and shellfish from Minamata Bay was inducing the disease, set in. For this reason, Kumamoto Prefectural government implemented voluntary restrictions on fishing and consumption of fish and shellfish.

Even after the cessation of the discharge of methylmercury, some fish and shellfish (containing average total mercury of over 0.4ppm, and average methylmercury of over 0.3ppm) were found. In order to prevent the damage from the spread of harmful rumors or misinformation, in 1974, Kumamoto Prefectural government began construction of dividing nets which would close off the mouth of Minamata Bay. And measures regarding fish and shellfish were taken along with the Environmental Restoration Project (refer to P.12).

In 1989, Kumamoto Prefecture Special Committee on Fish and Shellfish in Minamata Bay, consisting of scholars, members of prefectural assembly, local citizens, was held to carry out investigations into 180 species of fish and shellfish, inhabiting in the closed area by dividing nets in Minamata Bay. According to the result, 16 species of fish and shellfish were cited exceeding provisional regulatory levels on mercury contamination in fish and shellfish, so the committee decided to leave the dividing net in place for longer, to ensure against the circulation of contaminated fish from the bay into the local market.

From April 1990 to October 1997 (until the day after the dividing nets were removed), Chisso decided to purchase the fish and shellfish that fishermen of Minamata Fisheries Co-op caught in Minamata Bay.

In 1997, the dividing net was dismantled because the mercury level of all fish and shellfish inhabiting the bay were below the provisional regulatory levels based on monitoring over three consecutive years.

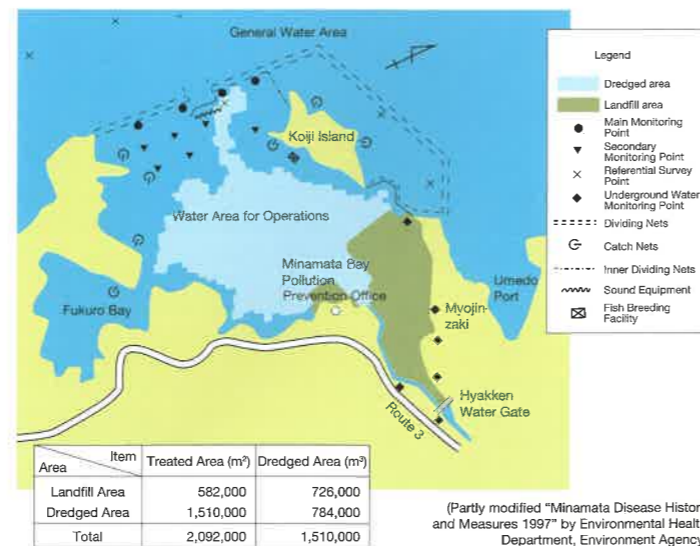
Administrative Aid to Support the Fishing Industry

To aid local fishermen, Kumamoto Prefectural government provided finance to families whose income has decreased due to the inactivity of fishing operation and also provided advice regarding employment.

In 1958, the shallow water landfill project was established by the national and Kumamoto Prefectural governments, in the area where thought to be pollution free, and breeding ground reef and concrete feeding bed were constructed, and the project laying out rocks for the sea weeds farming was also promoted. In 1959, the prefecture provided assistance in a plan to convert the fishing industry, encouraging fishing operation in nearby sea, and culturing of mother pearl. In 1960, the national and Kumamoto Prefectural governments provided monetary aid to the Minamata Fisheries Co-op for the purchase of fishing vessels, to be used in new fishing activities. From 1973, Kumamoto Prefecture provided finance, loaning funds for living expenses to members of Minamata Fisheries Co-op, and Minamata City gave the subsidy for the interest costs associated with these finance accounts.

Following this, in the period from April 1975 until the Pollution Prevention Project was over in March 1990, the Minamata Fisheries Co-op stopped fishing operations, and Kumamoto Prefecture provided compensation (total amount 3.315 billion yen) to the Fisheries Co-op.

Dredging Operation of Minamata Bay



Operation under Environmental Restoration Project

Environmental Restoration Project

Even after the Chisso Minamata factory stopped discharging mercury, sedimentary sludge containing mercury was left.

For this reason, Kumamoto Prefectural government initiated the Environmental Restoration Project (Mercury-Contaminated Sediment Disposal Project in Minamata Bay) in 1977 to remove sedimentary sludge containing over 25ppm of total mercury based on standard calculation by the prefecture.

In this project, the deepest part of the bay (extending 580,000m²) where the mercury content was high was enclosed with a metal sheet, and the area extending 1,510,000m² which had low mercury density was dredged of 780,000m³ of sedimentary sludge. The ground surface was enveloped with a synthetic sheet and loam, and the top was covered with soil taken from a nearby mountain to confine the mercury-contaminated sludge.

During the project, meetings of the Project Monitoring Committee made up of scholars and local representatives were opened to the public. The contents of operations and the results of monitoring were also displayed daily so as to gain the understanding of citizens.

In 1990, after 13 years and 48.5 billion yen (more than 30.5 billion yen born by Chisso, the remainder halved between the national and Kumamoto Prefectural governments), the project was completed, and the environment was restored.

The reclaimed area by the project is now a park called "Eco Park Minamata", dealing with environment and health.

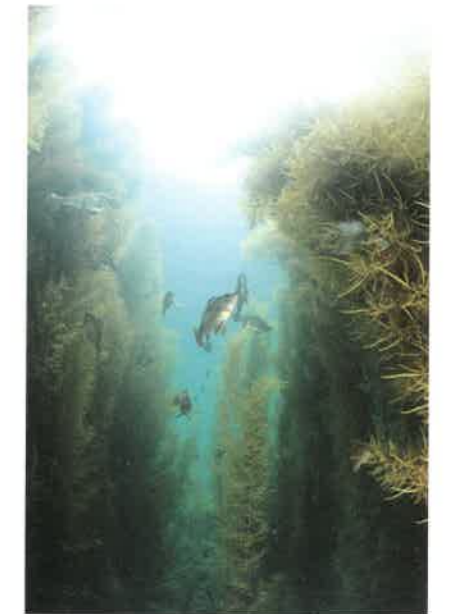


Dredged Area in Minamata Bay
(Provided by Minamata Disease Municipal Museum)

Trend of Pollution in the sea

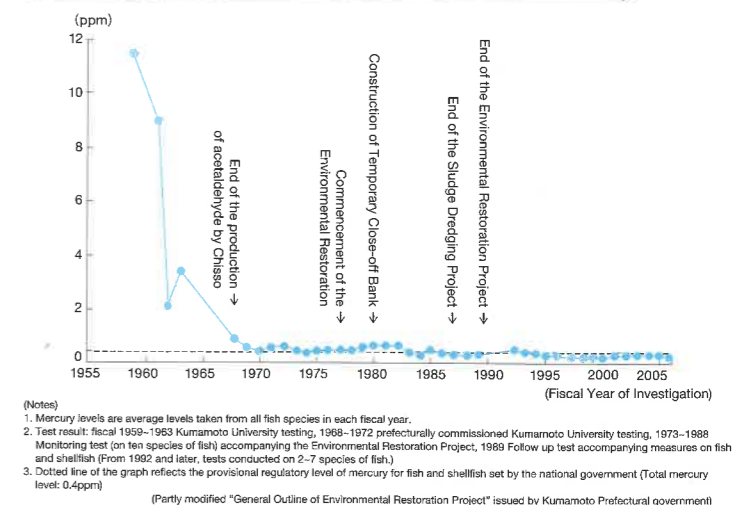
Surveys were conducted regarding environmental pollution around the areas of Minamata Bay. According to the results, the concentration of mercury in residents' hair and umbilical cord mercury of newborns no longer showed levels that might cause Minamata disease after 1969. And it concluded that such continuous methylmercury exposure that could lead to the onset of Minamata disease is no longer identified.

According to the survey regarding mercury that Kumamoto Prefectural government conducted in 2013, water quality cleared the environmental standard level (total mercury showed 0.0005mg/l or less, and alkyl mercury was not detected). Levels of mercury on the bottom sediment showed below the provisional removal standard, and the level showed below the provisional regulatory standard of mercury in fish. The condition of the areas around the bay is similar to that of non-contaminated marine environments.



Restored Minamata Bay
photo taken by Tamaki Ozaki

Trend of Total Mercury Levels of Fish and Shellfish in Minamata Bay



Programs for Medical Care, Welfare

Medical Treatment

- Treatment of Minamata Disease

Those who suffered from Minamata disease were prescribed with drugs to excrete methylmercury from their body in its an early stage. Even therapy for basic treatment had not yet been discovered. Prescribing painkillers (symptomatic treatment) and rehabilitation therapy were the main methods of treatment.

- Minamata Disease Certification Applicants' Research and Treatment Project

In order to cover the medical expenses of Minamata disease certification applicants who fulfilled certain conditions, the national government and Kumamoto and Kagoshima Prefectural governments started to subsidize a portion of expenses incurred relating to fees for medical treatment from 1974. Targets are provided with medical treatment research expenses, as well as expenses for acupuncture, and moxa cautery.

- Comprehensive Medical Care Project of Minamata Disease

In areas affected by Minamata disease, the national government and Kumamoto and Kagoshima Prefectural governments instituted a project to reduce and eliminate health problems by insuring medical treatment for people not certified with Minamata disease, but who have a loss of sense of the limbs, and also people possessing certain nerve-related symptoms like Minamata Disease. The medical care program started in 1992, and the targets were provided with a medical treatment notebook or a Minamata disease sufferer's notebook, medical expenses, as well as therapy expenses for acupuncture and moxa cautery.

Welfare Project

The Minamata Municipal Meisuien was established in 1972, where Minamata disease patients were able to spend time of recuperating and receiving medical treatments. And Kumamoto and Kagoshima Prefectural governments provide treatment advice to the patients at home, and lend beds and wheelchairs to them, based on the Compensation Act, to mitigate their health damage by Minamata disease.

And with supporting by the national and Kumamoto Prefectural governments, "Social Welfare Corporation Sakae-no-mori (Hotto House)" and "Incorporated Non-profit Organization Minamata Disease Kyodo Center ("Toumi-no-ie" and "Hotaru-no-ie")" provide various physical and household assistance to disabled sufferers and help them find enjoyment in life, such as on outings.

The national and Kumamoto Prefectural governments support the construction of a housing, where disabled sufferers can live with their families together by Minamata City, and construction of a care home by Hotto House, to ensure a comfortable life for them.

Furthermore, 1) Kumamoto Prefecture and local municipalities concerned prepared desks for consultation services about Minamata disease. 2) They also provide rehabilitation service so that the sufferers living on isolated islands can receive services to mitigate their nerve-related symptoms caused by exposure to methylmercury, and to maintain their bodily motor functions.



Minamata Municipal Meisuien



Sakae-no-mori (Hotto House)

Content of the Comprehensive Minamata Disease Medical Care Project

Medical Treatment Notebook Targets	Minamata Disease Sufferer's Notebook Targets
Recuperation Expenses Medical Expenses (amount of self payment) Medical Expenses Associated with the Long-Term Care Insurance Act (amount of self payment)	Recuperation Expenses Medical Expenses (amount of self payment) Medical Expenses Associated with the Long-Term Care Insurance Act (amount of self payment)
Acupuncture, Moxa Cautery Surgical Operation, and Hot Spring Recuperation Expenses Acupuncture, Moxa Cautery Surgical Operation, and Hot Spring Recuperation Expenses Unassociated with Insurance Total amount Up to ¥7,500/month	Acupuncture, Moxa Cautery Surgical Operation, and Hot Spring Recuperation Expenses Acupuncture, Moxa Cautery Surgical Operation, and Hot Spring Recuperation Expenses Unassociated with Insurance Total amount Up to ¥7,500/month
Recuperation Allowance ^(note) Only persons qualified Those Who Receive Medical Service Hospitalization Facilities Service: Monthly sum of up to ¥23,500 Medical expenses for outpatients: More than once a month For patients over 70 years old: Monthly sum of up to ¥21,200 Under 70 years old: Monthly sum of up to ¥17,200	Recuperation Allowance ^(note) Only persons qualified Those Who Received Medical Service Hospitalization Facilities Service: Monthly sum of up to ¥17,700 More than a day spent going to hospital More than 70 years old: Monthly sum of up to ¥15,900/month Under 70 years old: Monthly sum of up to ¥12,900
	Remote Island Allowance Monthly sum of up to ¥1,000

Measures against Human Rights (Discrimination)

Human right issues regarding Minamata disease include internal discrimination and prejudice directed toward sufferers and their families in the Minamata region, external discrimination and prejudice toward Minamata citizens from other regions, and harmful rumors.

The internal issues involve prejudice toward sufferers and their families because the cause of the disease was not identified for a long time, and the sufferers who were thought to have had infectious disease were isolated in hospital. After a long while, people realized that the cause of the disease was the consumption of fish and shellfish contaminated by the effluent containing methylmercury discharged from Chisso. However, citizens who were supported by Chisso, which provided economic affluence in the region, worried about losing their jobs if the company's operations ceased. Some worried about their own business. And others even believed that the sufferers were faking their symptoms because they wanted to receive compensation. Sufferers were subjects of scorn by those people. And the serious conflict and psychological divisions that deteriorated the trust between local citizens emerged subsequently.

In areas outside of Minamata as well, citizens of Minamata were subjects of rejection as the disease was mistakenly believed to be infectious, hereditary, or endemic, and such prejudice and discrimination curtailed citizens' opportunities for employment and marriage. Harmful rumors also spread and products of Minamata were not accepted in the market. Many citizens were not able to reveal where they were from.

For the issue of human rights that might uproot the foundation of the community, Minamata city started to promote "Regeneration" through various opportunities of dialogues and events to restore relationships between citizens, accepting the strong support from Kumamoto Prefectural government.

As a result, "Moyainaoshi" Community Centers were established to facilitate reconciliation. Subsidized by the national government as a part of the final plan for the settlement of Minamata disease case, "Ashikita Moyainaoshi Center -Kizuna-no-sato-", "Minamata General Moyainaoshi Center -Moyai-kan-" and "Minamata Southern Moyainaoshi Center -Orange-kan-" were established between 1996 and 1998. Following them, other centers were added with the subsidies from the national and the prefectural governments, such as "Isana Center" in Gosyoura-machi, in the city of Amakusa in 2010 and "Yume Moyai Center" in Ashikita Town in 2012. These facilities are utilized as places for interaction among citizens and as bases for the provision of social welfare services.

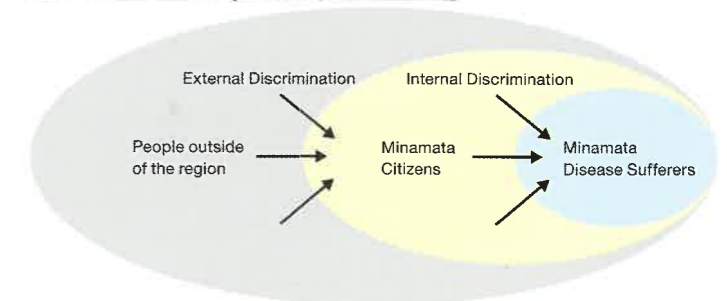
In spite of the trend of reconciliation, discriminatory comments directed toward Minamata disease sufferers and citizens still remain.

Therefore, the government of Japan, Kumamoto Prefecture and Minamata City promote the dissemination of information and provide opportunities for the people to acquire proper knowledge and learn the importance of a clean environment by establishing the Minamata Disease Museum in 1993, and Kumamoto Prefectural Environmental Education and Intelligence Center in 1992. At the museum, the sufferers of Minamata disease introduce their own painful experiences by way of a storytelling service. Additionally, sufferers introduce their own stories at various places, responding to the request of the prefectural government. All 5th grade students of primary schools in Kumamoto Prefecture visit Minamata City. Through such activities, lessons of Minamata disease are conveyed throughout the region.

What is "Moyainaoshi-Regeneration"?

"Moyai" means mooring boats or doing something together by supporting with each other. "Retying a rope" is called Moyainaoshi in the Minamata area. Minamata citizens use this word for reconciliation, restoring the human relations destroyed by Minamata disease and mending the environment, as well.

Structure of Human Right Issue (Discrimination)



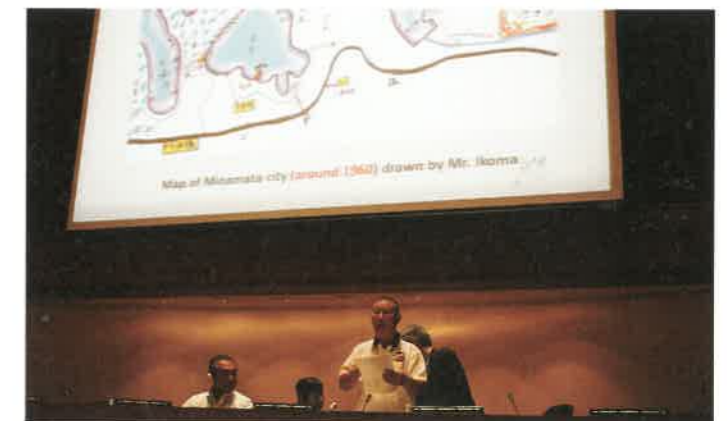
Reference: "Minamata Disease Q&A" (Minamata Disease Municipal Museum)



Minamata General Moyainaoshi Center "Moyai-kan" (Provided by Minamata City)



Minamata Disease Municipal Museum (Provided by Minamata Disease Municipal Museum)



Minamata disease sufferers who talk about their own experiences of the disease in overseas



Provided by Minamata City

Regeneration

Promoting Regeneration and Harmony of the Area



Moyai boats practicing fishing operations, tied to each other by ropes

Minamata disease broke out in a city where the causative company supported the civic economy. Because of this, prejudice and discrimination directed toward the sufferers was even stronger, and the conflict between citizens was more serious. In order to overcome this painful experience, Kumamoto Prefectural government and Minamata City has been promoting “Moyainaoshi”, or ‘regeneration’ since 1990 to restore bonds between citizens under the Minamata and Ashikita regional development plan.

The national and Kumamoto Prefectural governments established “Moyai-naoshi Centers” at 5 places including the cities of Minamata and Amakusa (Gosho-no-ura), and the town of Ashikita. And they are the bases to provide welfare service, and to enhance interaction and solidarity between citizens. Besides, those governments introduce the experiences of Minamata disease and the lessons citizens learned from their experiences are introduced to people from around the world with their invaluable cooperation.

In 2006, commemorating 50 years from the official recognition of Minamata disease, the national and local governments concerned, Minamata disease related organizations and citizens established a committee and held memorial services for Minamata disease sufferers, while holding symposiums, an exhibition to pass on the lessons of Minamata disease.

Following them, other events of “Moyainaoshi” are ongoing.

- 1) Memorial ceremonies such as Memorial Service for Minamata Disease Sufferers and Fire Festival dedicated to the sufferers.
- 2) Exchange programs between children of Minamata and Niigata Exchange program between disease sufferers.
- 3) Establishing and promoting environmental study program with the cooperation of governments and people.

Providing Seminars such as Minamata Environmental College short seminars to nurture human resources who will be responsible to conserve environment.

Promoting Environmental study and the maintaining facilities such as Minamata Disease Museum.

- 4) Promoting programs for children in Minamata to encourage environmental activities based on the experiences of Minamata disease, and introducing their activities to people across Japan and around the world.
- 5) Promoting programs to make affected area by Minamata disease an “Environmental Field Museum”, and disseminating such innovative programs across Japan and around the world and as inviting school tours.



Memorial Monument of Minamata Disease

It was constructed 50 years after the official recognition of the disease. On the monument, the words “All souls in the Shiranui Sea, we will never repeat such a tragedy. So please be sure to rest in peace.” are engraved.



Students on a school trip hear explanation about Minamata Disease at the amenity-oriented sea dyke of Ecopark Minamata.

Creation of a World-Class Environmental City

Minamata City, now having regained a sound and natural environment, is turning the negative legacy of Minamata disease into a positive, and is now promoting the creation of an environmental city with the closer cooperation of the municipality and its citizens.

Creation of an Environmental Model City (International Environmental City)

Minamata City declared in 1992 its intent to establish an "Environmental Model City". It was the first such declaration in Japan, and the guideline was shown to the citizens. Through it the city and its citizens expressed their strong determination not to repeat the same kind of tragedy caused by pollution. After the strenuous efforts of the municipality and its citizens based on this guideline, a unique city plan focusing on environmental conservation attracted international attention, and many people continue visiting here to learn about the environment. The city also received the title of "Environmental Capital" in 2011, which was the only one granted in Japan. The area, which had suffered so severely from pollution, began its rebirth and has been serving as a model for the rest of the world.



Shinsui Gogan in Eco Park.

Separating, Collecting, Recycling, and Reducing Waste

To reduce and recycle household garbage, Minamata City has promoted collecting waste, after the separation of waste into 24 categories, with the cooperation of communities and schools since 1993. The city is going to make further efforts to achieve a "zero-waste society" by recycling and reducing waste.



Support to Create an "Environmental Pact of Each Community"

To conserve the living environment in each community, citizens are encouraged to create an "Environmental Pact of Each Community" so that each citizen in the community will comply with environmental etiquette.

An Entire Village as a Museum to Show People's Life

Four sectional areas: Toishi, Okawa, Kukino, Ekiba, are designated as an "Entire Village Museum" to show the way citizens live here to visitors. Local curators are certified to show the life of citizens and to introduce products of craftsmen from their community.

System to Approve "Eco Shops"

The shops promoting recycling and reducing wastes are approved as "Eco Shops". The system has been practiced since 1999, and 17 shops (13 shops are now open) were qualified as "Eco shops" by 2013.

From Acquisition of ISO14001 to Self Declaration by Municipal Government

The Minamata city government acquired ISO14001 approval in 1999 - the environment management system to promote conservation and improvement of environment - and made efforts to facilitate environmentally friendly activities and services. It also made a self-declaration in 2003 to further fulfill its efforts, and, in order to reflect citizen's opinions to its services, it decided to conduct an audit by citizens.

Promotion of "School ISO" and "Home ISO"

The city mayor certifies primary schools and junior high schools which are carrying out environmentally friendly approaches following the guidelines of ISO14001 that the city government acquired. The city government encourages environmentally friendly efforts in schools and at home by providing home ISO.

Creating a Biotope

A 'biotope', where many living creatures can survive in harmony with people, has been conserved since 1998.

Environment Meister Approval System

Those who produce products in organic or sustainable way using natural ingredients are approved as "Environment Meisters". Thirty-three meisters are approved now who engage in producing organic paper, tea, or rice.



Conference of Plenipotentiaries on the Minamata Convention on Mercury

In October 2013, Conference of Plenipotentiaries on the Minamata Convention on Mercury (organized by UNEP) was held in Kumamoto City and Minamata City. More than 1,000 people, including ministers from more than 60 countries and members from governments, international organizations, and NGOs from 139 countries, have participated in the conference. Governor Kabashima from Kumamoto Prefectural government announced the "Kumamoto Declaration" to create a mercury free society. The Minamata Convention on Mercury was adopted by unanimous accord and will go into effect after ratification by more than 50 countries.



The Declaration to Create a Mercury-Free Society and Lessons Learned from Minamata Disease to Pass Down to the Next Generation

We who experienced Minamata disease will continue to inform the world of the importance of life and health, and of the difficulty involved in recovering a once devastated environment.

In order to support the earliest possible validation of "the Minamata Convention on Mercury", which regulates the usage of mercury - a causative agent for disastrous pollution, we declare our intent to achieve a mercury-free society, and to promote human life without depending on mercury.

We support the creation of a more energetic society where all people in damaged areas live in harmony with embracing the sufferers of Minamata disease.

The case of mercury pollution symbolized by Minamata disease is not only found in Minamata region or in a particular period in Japanese history. It could happen in any country or in any period, as long as mercury is used.

Minamata City, which learned lessons from the painful experience in the past and is now facing the tragedy seriously, decided to harmonize with the environment, and chose to be an "Environmental Model City". We hope that all pains and experiences suffered by people throughout more than half a century serve as an example of the ravages of mercury for the entire world not to repeat the same tragedy.

Lessons of Minamata Disease

1. Protecting human life, health, and the environment.

Minamata disease broke out when people prioritized economic development while ignoring human life, health, and the environment. During the high economic growth period after WWII, various types of pollution were found in many places in Japan. As a result, governments lost the trust of citizens, while spending enormous amounts of money to restore the environment. When economy is over-emphasized, devastating pollution that victimizes ordinary citizens, health, and the environment sneaks into our everyday life.

2. Preventing the Outbreak of Pollution Beforehand

You never can restore a human life which is once lost. To restore the damaged natural environment is also quite difficult. Before the pollution spread, the Minamata area was an attractive fishing village where people supported each other in the rich natural environment. Minamata disease devastated this peaceful and warm area. Everyone of us needs to have awareness, "Don't think about pollution after it causes problems but take measures against it before they arise."

3. When pollution breaks out, we need to respond quickly to prevent the spread of damage.

The damages from Minamata disease became so extensive and serious because the initial countermeasure was delayed. If a thorough investigation of cause is conducted quickly and proper measures are taken, when the pollution is first found, damage should be fairly limited. The responsibilities of the governments on preventing the spread of damages were strictly blamed in the judicial stage by the complaints of many sufferers. What is the most important is not to generate pollution, but, if it is found, to prevent the spread of damage by taking quick action to identify the cause and taking proper measures against it.

4. Each of us should behave conscientiously and properly to protect the environment.

Minamata disease broke out because factory effluent containing methylmercury was discharged into the ocean. We may unwittingly contaminate the environment in our daily life. Sewage flows into rivers and the ocean, and the wastes of which we dispose stress the environment. The behavior of the consumer is also closely related to pollutions. It is therefore important for each of us to have a strong consciousness to protect the environment and to behave properly.

5. Being Enlightened and Eradicating Discrimination

Pollution undermines people's health, and discrimination or prejudice hurts people's dignity, not to mention spoiling trust between people. The cause of Minamata disease was not clear at the beginning, so sufferers and their families were severely affected. Because sufferers and perpetrators lived together in the same community, rifts grew within the local community. In order to eradicate prejudice or discrimination, we need to have proper knowledge, and look at an issue from other perspectives as well.

Minamata Disease Health Care Affairs Division,
Department of Environment and Residential Life, Kumamoto Prefecture
Kumamoto Prefectural Office, New Administrative Building, Level 5
6-18-1 Suizenji, Chuo-ku, Kumamoto City, Kumamoto Prefecture, 862-8570 Japan
Tel: 096 333-2304 Fax: 096 382-3296 <http://www.pref.kumamoto.jp/>

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