

Japan's Decades of Social Conflict and Community Governance: Minamata and Ashikita Regional Strategic Platform Providing Opportunities for Citizens' Participation and Collaboration and "Minamata Studies"*

Takashi Miyakita**

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สำคัญ

ความขัดแย้ง, มินามาตะศึกษา, ศูนย์รวมความร่วมมือระดับภูมิภาค

บทคัดย่อ

บทความนี้เป็นเรื่อง ความขัดแย้งทางสังคมที่ยืดเยื้อหลายทศวรรษกับธรรมชาติในชุมชน ซึ่งจุดเริ่มต้นของปัญหาเกิดขึ้นเมื่อมีการปล่อยของเสียที่มีสารปรอทจากโรงงานเคมีลงสู่อ่าวมินามาตะในปี 1956 จนเป็นเหตุให้เกิดผู้เสียหายจำนวนมากที่ต้องทุกข์ทรมานด้วยโรคมินามาตะตามมา กระนั้นก็ตามรัฐบาลและองค์กรปกครองส่วนท้องถิ่นกลับไม่ได้มีมาตรการเยียวยาเหยื่อผู้เคราะห์ร้ายอย่างจริงจัง อย่างไรก็ตาม ได้มีความพยายามอย่างต่อเนื่องที่จะขจัดความขัดแย้ง ปัจจุบันมีการตั้งสาขาวิชามินามาตะศึกษาขึ้น เพื่อศึกษาข้อผิดพลาดในอดีตเพื่ออนาคตที่ดีขึ้น และจัดตั้งโครงการสร้างศูนย์ความร่วมมือระดับภูมิภาคในเมืองมินามาตะและอาชิกิตะเพื่อการพัฒนาอย่างยั่งยืน โดยความร่วมมือจาก หน่วยงานภาครัฐ ภาคเอกชน และองค์กรอิสระต่างๆ เพื่อธำรงไว้ซึ่งความสมดุลทั้งในด้านสภาพแวดล้อม เศรษฐกิจ และความยุติธรรมทางสังคม

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** Professor, The Open Research Center for Minamata Studies, Kumamoto Gakuen University, ที่อยู่: 2-5-1 Oe, Chuo-ku, Kumamoto 862-8680, Japan, อีเมล: miyakita@kumagaku.ac.jp

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1. Prologue

1.1 Minamata disease has not come to an end yet

It is estimated that after 1932 the Minamata factory of Nippon Chisso Hiryo K.K. (currently known as Chisso Corp., hereinafter referred to as Chisso) discharged 70-150 tons or more of organic mercury, a liquid waste from the acetaldehyde manufacturing process, into the entire Shiranui Sea. It is May 1, 1956 that Dr. Hosokawa, the director of the hospital attached to the factory, reported to the Minamata Health Center on that many local people had been developing a central nervous system disease of unknown cause. Later, this was designated as the day when Minamata disease was officially identified. Though over 58 years have passed, all the related problems including that the victims who ingested the mercury-contaminated seafood have still raised their voices

against the national government, Kumamoto prefecture and Chisso as an offending enterprise (Harada, M., 2004; Takamine T. 2012).

Both the national and the Kumamoto prefectural government have repeated taking halfway measures for such issues without any sufficient efforts and approaches. The appropriate measures should be based on democracy, should perceive the whole picture of the mercury contamination, prevent an outbreak of the damage, discuss the damage compensation, the livelihood support, the elimination of prejudice and the discrimination issue. However, their measures induced the victims to be divided against themselves.

Meanwhile, to restore the environment of Minamata Bay, a ¥48.5 billion project to treat sludge that had accumulated in

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** Professor, The Open Research Center for Minamata Studies, Kumamoto Gakuen University, Address: 2-5-1 Oe, Chuo-ku, Kumamoto 862-8680, Japan, e-mail: miyakita@kumagaku.ac.jp

Minamata Bay (65% of which was financed by Chisso and 35% by the national and prefectural governments) started in 1975 and was completed in 1990 (Kumamoto Prefecture, 1998; The Open Research Center for Minamata Studies, 2007). Currently, the former industrial waste processing site is utilized as Eco-Park Minamata, and 1.5 million cubic meters of mercury sludge and thousands of drums containing mercury-contaminated fish in concrete are buried under it (Figure 1). The reclaimed land is separated by cellular steel sheet piles from the

surrounding sea, but there is concern that mercury sludge may leak out, because more than 30 years have passed since the launch of the project. Cellular steel sheet piles are believed to last 50 years, and in February 2009, the Kumamoto prefectural government set up a committee to review this issue because it needed to take measures for the deteriorating cellular steel sheet piles, and because the earthquake standards for port and harbor facilities were revised in 2007.



Figure 1 Aerial photo: Urban center of Minamata City and Chisso Corp. (taken in 2007)

1.2 The national government's and Chisso's strategy for disrespecting and colonizing the area

Chisso led its postwar modernization and industrialization in Japan, being proud of

its world's most advanced technology at that time; however, Minamata disease is a corporate crime or an injury/murder case committed by Chisso. Dr. Hosokawa became aware of the change of the color of the sea, the poor fish

floating on the sea, the cats' death in madness. Then he experimented on cats: he fed them together with the industrial liquid waste of Chisso, and he ascertained the presence of Minamata disease, which occurred after 77 days of the experiment. (Oct. 1959) Nevertheless, in the same year, Chisso stopped him from announcing the result and continuing the experiments. Also, Chisso forced bits of compensation money-contract on the victims in the sit-in demonstration for about one month in front of the main gate of Chisso (Dec. 30, 1959).

As for the national government and the Kumamoto prefectural government, they had supported Chisso as a corporation of national policy and given silent approval of its waste discharge of mercury for no less than 36 years (1932-1968). At that time, Mr. Hasuo Ito, the director of the Minamata Health Center, confirmed that the onset of Minamata disease in experiments on using the seafood in Minamata Bay for feeding cats. Due to this result, Kumamoto prefecture decided to ban fishing in the Bay, based on Food Sanitation Act, and asked the Ministry of Health and Welfare at the time whether the Act could apply to the case. The Ministry, in fact, answered that there was no solid evidence that all the seafood in Minamata bay had been poisoned, and the Act was not applicable to the case.

Under these circumstances, in Minamata, "All Minamata" of 28 groups including the mayor, the president of municipal assembly, city council members, Chamber of

Commerce and Industry (CCI), and some labor unions advocated the continuation of the Chisso's operation. This led to a conflict with the victims. The workers were placed under the factory's tactic of driving them like a horse or a cow. Especially, many of the workers employed locally were suffered from the work-related injuries and illnesses.

While Chisso, supported by the national policy, had controlled economically and mentally the local area, the damages on Minamata disease had been expanded. The government and Kumamoto prefecture trivialized the incident of Minamata disease that happened in a faraway poor fishing village of Tokyo as a center of Japan, and have ignored the victims' dignities as human beings.

1.3 Stepping out of "the colonial rule" and independence from "the national government"

As a last resort, the government enacted the Act on Special Measures Concerning Relief for Victims of Minamata Disease and Solution to the Problem of Minamata Disease in July 2009. Only the victims who drop a claim for certifying as a Minamata disease patient based on the Pollution-Related Health Damage Compensation Act and who also meet specific requirements were to be paid 2.1 million yen as a lump-sum payment and their medical expenses. The acceptance of the applications was terminated in July, 2012. However, despite the baseless differentiation of the applicants such as their settled areas and the

year of their births, 65,151 people from all over Japan applied, contrary to the government's initial expectation.

Then, on April 16, 2013, The Supreme Court ruled in favor of the claim by Mr. Mizoguchi and pronounced a guilty verdict on the neglected application of certifying Mr. Mizoguchi's mother, died in 1977 at the age of 77, as a victim for 21 years since its dismissal by the Certification Council for Minamata Disease in Kumamoto Prefecture.

Only two days after this court decision, Ministry of Environment made a statement: the conditions for certifying Minamata disease in 1977, which include a comprehensive deliberation as a guideline of the intendances, are not denied. The Ministry has said it repeatedly. In the meanwhile, after the court decision, the Kumamoto prefectural governor, Mr. Kabashima only said, "the prefectural authorities have no power to interpret laws and would like to seek direction from Ministry of Environment. As a head of the local administration, he did not express a sincere stance toward the problems of many potential and uncertified patients.

Now, "stepping out of the colonial rules and independence from the national governments" are needed for any suffered area both at home and abroad facing up to various environmental and health damages. Each problem specific to each area might

well be discussed properly by relevant and diverse people in each area. Those areas should establish democracy, a process of the social consensus building, as a system to find out their own solutions. It is unacceptable by any means to leave our nation's future in the hands of such politicians as to ignore the reality of the victims' lives and as to say "When it comes to it, money's what it's all about".

2. Minamata Studies, a New Academic Branch to Use Lessons from Past Mistakes for the Future

Over half a century has passed since the Minamata disease was officially identified. Today, each and every one of us has to squarely face the history and present status of the Minamata incident again as victims of the disease have cut their way through all sorts of problems with the aid of supporters.

All of us who live today are urged to use lessons from past mistakes for the future, and this is the minimum responsibility we have to take for future generations. "Using lessons from past mistakes for the future" as referred to in this article means that all people should pay attention to problems in their communities and take actions to solve them across the boundaries of fractionalized fields of expertise and the frameworks of laymen and specialists. At the same time, it means that each and every one of us has to review his or her lifestyle and the way a society based on mass-production and mass-consumption should be.

In April 2005, based on this concept, Kumamoto Gakuen University established the Open Research Center for Minamata Studies with three projects as the main pillars of its research, studies, and practice. Project 1 “Research on Health and Social Issues Concerning the Present Situations and Reevaluation of the Damages by Minamata Disease” involves an attempt to clarify the damage that the disease caused through research and studies with close ties with the local communities concerned. It takes the approach of not only looking at the aspect of health hazards but also takes the impoverished conditions of affected individuals and local communities into consideration, the effects of the disease on local economies, and so forth. In Project 2 “Proposal of Community Rehabilitation Model in the Minamata and Ashikita Regions” various local people join forces or collaborate to find regional reconstruction policies and establish a platform to enable them to propose a strategic policy. Project 3 “Data Acquisition, Database Creation, and Worldwide Dissemination of Materials Related to Minamata Studies” aims to accumulate results obtained from Projects 1 and 2 and use them for the future.

As the main pillar of Project 2 mentioned above, the Minamata-Ashikita Regional Strategic Platform started efforts to provide a forum to think about the next 50 years of the Minamata and Ashikita regions by involving various people concerned with these commu-

nities. This article describes what the Platform aims at and discusses the results obtained so far and issues to be addressed in the future (Miyakita, T., 2010).

3. What Is the Minamata-Ashikita Regional Strategic Platform?

The Minamata-Ashikita Regional Strategic Platform provides local citizens, NPOs, researchers, private businesses, administrative officials, and other diverse stakeholders with venues for meetings, exchanges, learning, mutual understanding, discussion, and the establishment of relationships (development of social capital) as they attempt, based on the Minamata incident as their negative legacy, to question again how their lifestyles, ways of living as human beings, and local communities (such as the environment, welfare, economy, and education) should be. It is also positioned as a place where knowledge and information are acquired, accumulated, and communicated to explore new possibilities of their local communities. Furthermore, it is viewed as a place for diverse supporters of local communities (social actors) where they can learn, realize, grow, and transform.

This platform expects the Open Research Center for Minamata Studies to play its role as a facilitator of Minamata studies making maximal use of the University’s intellectual and human resources as well as its facilities and equipment.

What this platform aims at is summarized into two points. One is to realize sustainable communities in Minamata and Ashikita. This means pursuing the sustainability of communities from the three perspectives of environmental protection, local economy, and social justice, and create dynamic movements

to realize communities in Minamata and Ashikita where everyone can demonstrate his or her potential to the full and live an affluent life that suits him or her the best --- communities where everyone wants to continue living for ever (Figure 2).

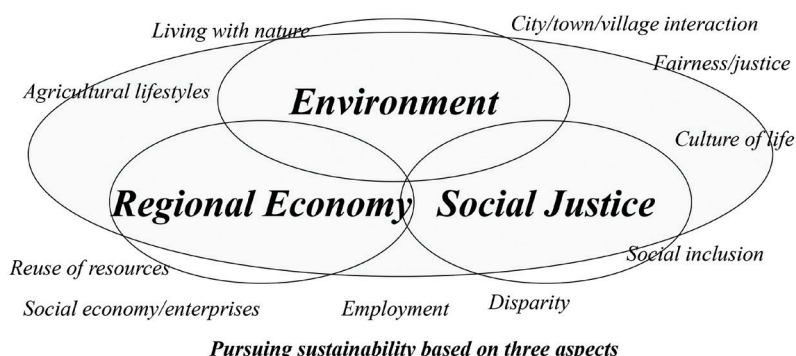


Figure 2 Aims of the Regional Strategic Platform:
Achieving sustainability in the Minamata-Ashikita Region

Figure 3 indicates the three elements of a sustainable society together with the subjects that the Open Research Center's Projects 1 and 2 view as issues they should address. Project 1 focuses on two of the three aspects of sustainability: the environment and social justice. The subjects involved include the need to obtain a general picture of mercury contamination in the Shiranui Sea, giving full particulars of damage caused by the Minamata disease, compensating victims for damage caused and supporting their lives, and elimi-

nating prejudice and discrimination attributed to the disease. Project 2, meanwhile, focuses on two aspects: the environment and local economy. Its goals are, among others, to propose and build regional reconstruction models making the most of the experience gained from 50 years of fighting the Minamata disease, invigorate the regional society and economy using Minamata resources effectively, and develop human resources, who will lead the future generation in Minamata.

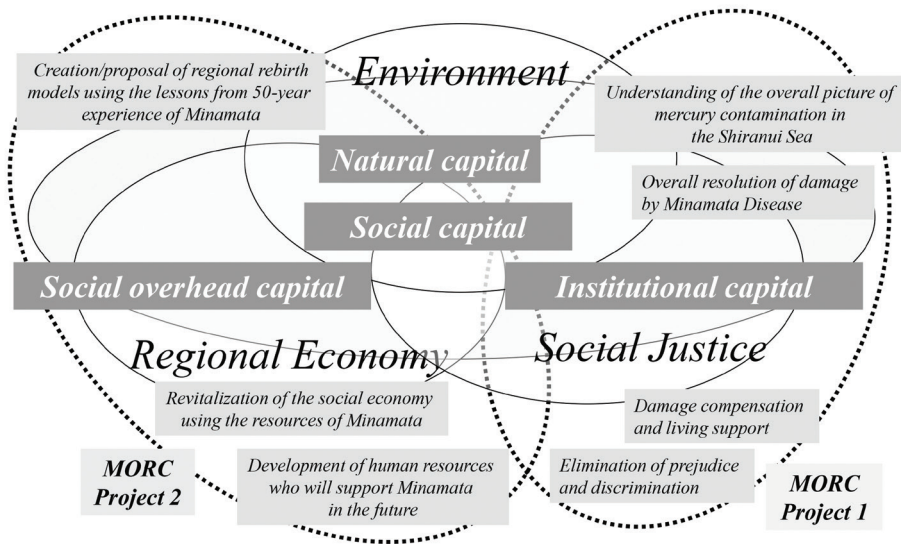


Figure 3 What is Needed Now to Achieve Sustainability in Minamata/Ashikita

Another aim of the Platform is to create new public spaces that will provide the foundation for a sustainable local community (Figure 4). To facilitate a shift from the previous society leaving everything to administrative agencies to one in which its members participate in community development, the Platform

is holding discussions about how to develop systems and human resources to ensure appropriate community governance through participation by a wide range of individuals, NPOs, and related organizations and collaboration among them (Miyakita, T., 2006).

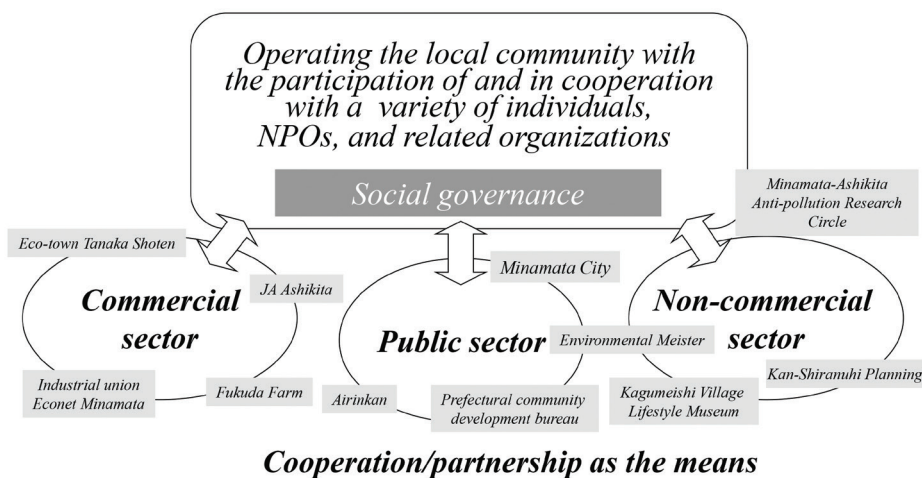


Figure 4 Aims of the Regional Strategic Platform: Creating new public spaces

Underlying these initiatives of the Platform are the Ottawa Charter for Health Promotion in 1986 and the five action areas for health promotion identified in the Charter (Renwick, R., Brown, I. & Nagle, M. (eds), 1996). In Particular, the Platform's initiatives, focusing on strengthening community action, developing personal skills, and building healthy public policy, aim to improve the quality of the lives of individuals living in these regions and the sustainability of local communities.

In Minamata, where various people living in its communities have long faced the Minamata incident from their respective standpoints, there are certain individuals and their networks that respond properly to various proposals submitted by administrative officials, citizens' groups, and local companies and put them into practice bringing out the best of them. The author believes that this strength will lead to the creation of new public spaces, where lessons from past mistakes will be used effectively for the future.

4. From Holding the Citizens' Forum for Garbage Reduction to Putting Together Proposals

In April 2007, in order to address the subject of waste reduction and recycling, the Minamata city government and Kumamoto Gakuen University co-hosted a citizens' forum on garbage reduction after analyzing points at issue based on a report of the Platform's study group. Many citizens, including the pro-

motors of garbage reduction and recycling, participated in this forum and expressed their opinions, based on the feeling of having lived life, in response to panelists' presentations. Subsequently, a group of Platform organizers again held discussions about the results of 15 years of garbage reduction and recycling in Minamata City and issues to be addressed in the future, and put together the results of the discussions into five proposals for Minamata City's garbage policy. In July 2007, the group submitted these proposals to Mayor Miyamoto, and this prompted exchanges of opinions for implementation. The gist of the proposals is as follows:

Proposal 1: Shift from forecasting (playing Whack-A-Mole), to backcasting

Proposal 2: Shift from taking measures to dispose of waste (downstream measures) on the assumption that garbage is discharged (in terms of quantity and quality) to proposing and implementing measures based on the priorities of 3Rs (upstream measures)

Proposal 3: Maintain forums to ensure sharing of practical and easy-to-understand information on waste processing and disposal and continuous discussion about the issues

Proposal 4: Identify needs and issues unique to each community (at the garbage station and neighborhood association levels) and the results obtained

Proposal 5: Adopt a declaration on zero waste and cooperate with cities in Japan and abroad that have adopted a similar declaration

“Forecasting” as referred to in Proposal 1 implies a way of thinking that starts from the present state of affairs. Basically, it sets moderate goals that seem to be attainable now taking the present state of affairs into consideration. In other words, it does so strictly by accumulating what is considered achievable at the moment. With “backcasting,” on the other hand, goal setters disregard the present state of affairs for the time being, clarify their vision and future aim, share it among themselves, and discuss their respective responsibilities and functions to realize the vision (Quist, J., 2007).

The zero waste declaration was adopted to stop building garbage treatment facilities on the assumption that garbage is discharged, and use the backcasting method to develop a vision of what garbage disposal should be (for example, avoid incineration or landfills) by involving a wide range of sectors in society and ensure that local residents, business firms, and administrative agencies work together to realize such a vision on equal footing. The basic policy for zero waste, called “4Ls,” is local leadership, low cost, low environmental impact, and low technology. In Japan, Kamikatsu Town in Tokushima Prefecture and Oki Town in Fukuoka Prefecture have already made a zero waste declaration, and Hayama Town in Kanagawa Prefecture, Machida City in Tokyo and other municipalities are preparing to make such a declaration.

One movement aligned with the Proposals is the Round Table on Zero Waste, which began operation in January 2008 as a forum to ensure sharing of information on and continuous discussion about waste. At the Round Table, discussions are under way about specific action plans for waste reduction as well as other subjects like basic matters, such as how to operate the Round Table and choose its members. In November 2009, the Round Table used the backcasting method mentioned earlier to draft and announce the Minamata Declaration on Zero Waste City Planning. It also clarified unique tasks that each of the 26 autonomous districts in the city should address and expected results, and planned and conducted a resource station survey with the participation of citizens and government officials to look for the next step that should be taken for “Garbage 23 Sorting”. In addition, discussions about the creation and operation of tea drinking spots are being held to facilitate a shift from recycling (one way) to reuse and reduction, and the test operation will start soon.

The framework of the Round Table is considered to be fully functioning as a forum to provide a foundation for the process of ensuring that diverse stakeholders share information on and discuss the regional task of waste reduction and recycling, promote mutual understanding, solve regional problems, and create new lifestyles and cultures in their communities.

5. Past Efforts to Realize Sustainable Communities in Minamata and Ashikita

Nature abounds in Minamata, which includes mountains as well as the sea, and rivers that connect the two. The people of Minamata have pursued safe manufacturing and comfortable lifestyles while paying attention to the natural environment so that it is effectively used and not destroyed. An initiative known as a "whole village as a living museum," which is also described as the "village starting to put on makeup," emphasizes ties between people and between people and nature that are rooted in the region's traditional lifestyles and culture. It is symbolized by "Garbage 24 Sorting", which is attracting attention around the country as united, continuous efforts by citizens, administrative agencies, and businesses involved in waste reduction are evolving each year. Efforts are not limited to reducing incinerated garbage and landfills and the effective use of resources (recycling) but are developing into initiatives that deepen bonds between people in the community and even envisage the creation of new lifestyles and cultures keeping a shift from recycling to reuse in mind. Minamata City ranked first in the fourth (2004), fifth (2005), eighth (2008), and ninth (2009) Japan's Top Eco-City Contests hosted by the National Eco-City Contest Network, and in the tenth (2010) contest, it became the first local government to accomplish its deepest wish when it obtained the title of a National Eco-City (The National Eco-City Contest Network, 2013).

What is needed today is a system of participation by citizens and collaboration to ensure that diverse stakeholders demonstrate their abilities to the full while respecting each other's characteristics and the differences between them and act voluntarily at their own initiative to solve public and local issues, and in doing so, establish new relationships and share the results thus obtained. We are urged to escape a society totally dependent on administrative agencies and shift to one in which citizens participate in community development. In the future, we will continue to gradually expand the scope of discussions so that the Regional Strategic Platform serves as a driving force behind efforts to realize such a society.

In the future, we will continue to squarely face challenges for Minamata to realize a lifestyle that is aligned with the pace of nature, an agricultural lifestyle with the basic principle of having enough time to feel, think, and enjoy, and which regards consideration for nature and other people as important, and a community where all the members live a meaningful life in their own way.

6. An Epilogue: Realizing a Society That Learns from Past Mistakes and Respects the Dignity of Life

Minamata studies, which face the reality of victims of Minamata disease, and aim to return all results of studies to the local community and at the same time communicate

them to the rest of the world crossing boundaries of fields of expertise and frameworks of laymen and specialists, urging each and every one of us to question again in the light of the Minamata incident how our lifestyles and society should be.

Dr. Masazumi Harada (who passed away on June 11, 2013) considered it important to compare the symptoms of victims and the results of examinations with the social situation and context in which they lived and position health problems and the resultant difficulties as part of the victims' lives. He continued to ask what caused the Minamata incident (and what it comprised) while listening to victims without being bound by established medical theories, but always walking close to them (KUMAMOTO NICHINICHI SHINNBUN & The Open Research Center for Minamata Studies (eds), 2012).

Dr. Harada said, "Discrimination does not arise where there is environmental pollution, but environmental pollution occurs where there is discrimination and prejudice". I have been involved in the U.S. military base problem in Okinawa (Kadena base noise lawsuit) since 1995, and to me, this remark of his really strikes the heart of the problem and provides sharp insight into its essence.

The same applies to the accident (incident) at the Fukushima Daiichi Nuclear Power Station of Tokyo Electric Power Company, and the greatest sacrifice is forced on those

who being discriminated against. It must be remembered that the message of Dr. Harada, who always walked along close to victims of the Minamata disease, is directed not only to researchers, but also widely to all people who live today and the children in the next generation.

In fishing villages along the Shiranui Sea, aborigine settlements in Canada, and many other places, Dr. Harada and I have seen that people who have lived close to nature, such as the sea, forests, rivers, and lakes, became the first to accept the most serious sacrifice in their lives (Harada, M., 1989).

Human beings, who are only part of nature and one living species, live in a chain of millions of forms of life while enjoying the blessings of nature brought by the ecosystem of the earth. Today, despite this fact, we are utterly steeped in an anthropocentric way of thinking that gives top priority to economic efficiency. To break with this situation, we are urged to review our way of living and the entire social and economic systems symbolized by the recent nuclear disaster.

Taking over the deceased Dr. Harada's wish to learning from the history of past mistakes and using lessons from the Minamata disease for the future probably means to make sure that what each and every one of us learns is put into action and that we thus persistently continue to bring about small changes in local communities persistently.

In both Minamata and the areas stricken by the Great East Japan Earthquake, efforts are beginning to rebuild local communities where all forms of life are considered as important and all their members can lead comfortable lives by regaining ties between people, between people and nature, and between forests, rivers, and the sea. Each and

every one of us should pay attention to his or her community's problems, find solutions to them while learning, realizing, growing, and changing together, and share them widely. The author believes that this will lead to the realization of a society where the dignity of its member's life is respected.

References

- Harada, M. (1989) . *The World Mirrored by MINAMATA*: Nippon Hyoron Sha Co. Ltd. (in Japanese)
- Harada, M. (2004) . *Minamata Disease*, Kumamoto Nichinichi Shinbun Culture & Information Center (First Published in Japanese by Iwanami Shoten in 1972).
- Kumamoto Prefecture. (1998). *An Outline of the Environmental Restoration of Minamata Bay*: Kumamoto Prefecture.
- KUMAMOTO NICHINICHI SHINNBUN and The Open Research Center for Minamata Studies, Kumamoto Gakuen University ed. (2012). *Memorial Collection of Masazumi Harada: This path he beat--from Minamata*: KUMAMOTO NICHINICHI SHINNBUN. (in Japanese)
- Miyakita, T. (2006). *Transfer from Government to Governance: Dynamic System of Capacity Building and Fostering Partnership among Public, Voluntary, Community and Private Sectors in United Kingdom (UK)*, *Studies in Foreign Affairs*, 34 (1), 153-169. Institute of Foreign Affairs Kumamoto Gakuen University. (in Japanese)
- Miyakita, T. (2010). *Minamata Studies Booklet No.8 Utilizing a lesson from Minamata Disease for the future: revitalizing a sustainable Minamata and Ashikita region*: KUMAMOTO NICHINICHI SHINNBUN. (in Japanese)
- Quist, J. (2007). *Backcasting for a Sustainable Future: the impact after 10 years*: EBURON ACADEMIC PUBLISHERS.
- Renwick, R., Brown, I. & Nagle, M. (eds). (1996). *Quality of Life in Health Promotion and Rehabilitation. Conceptual Approaches, Issues, and Applications*: SAGE Publications.

Takamine, T. (ed). (2012). *Minamata Studies Booklet No.6 Short Story of Minamata Disease*, KUMAMOTO NICHINICHI SHINNBUN. (in Japanese)

The National Eco-City Contest Network. (2013). Japan's 'Top Eco-City' Contest Providing a Path to a Sustainable Communities. Retrieved from http://www.kankyoshimin.org/modules/activity/index.php?content_id=50

The Open Research Center for Minamata Studies, Kumamoto Gakuen University. (2007). "Minamata Studies Booklet No.5 Guidebook: Walk in Minamata, Learn from MINAMATA", KUMAMOTO NICHINICHI SHINNBUN.

Appendix: Issues facing Minamata City and the Open Research Center for Minamata Studies

This figure overview the issues facing Minamata this half a century and also the connection of our Open Research Center for Minamata Studies with those issues. In the left, the brief history of Minamata Disease Case and measures to control environmental pollution. Production of acetaldehyde begins in 1932 and ends in 1968. This means that Chisso Corporation has continued to release waste water containing organic mercury for 36 years.

At the same time, central government and Kumamoto prefectural government have closed their eyes and taken no measures to preventing the outbreak and spread of Minamata disease. In 1973 the first lawsuit ruled in favor of plaintiffs, that is Chisso Corporation is guilty, and compensation agreement between Minamata disease patients and Chisso reached.

