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MINAMATA AND THE GLOBAL TREATY ON MERCURY:

Honor Minamata, Learn From Minamata and
Build a Strong Mercury Treaty!

Photos by W. Eugene Smith and Aileen M. Smith © Aileen M. Smith

November 2010

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About CACP

CACP was established in 1997 and since then it has been working on policies and issues related to chemicals pollution in humans and environment such as Chemicals Policies including REACH, SAICM as well as Japanese Chemicals Laws; Toxic Chemicals including Mercury, Dioxins, Endocrine Disruptors and Pesticides; Toxic Wastes related to Basel Convention and Ship Breaking in South Asia; Nanotechnology Issues; Multiple Chemical Sensitivity and Children's Health.

For more information see http://www.ne.jp/asahi/kagaku/pico/index.html

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1. Introduction

1.1 About this Report

This report was prepared to provide information for the citizens and the media in Japan and all over the world about several mercury-related issues in Japan, including the case of the victims of Minamata disease and the global efforts toward a proposed Mercury Treaty (Mercury Treaty) to be concluded in 2013. It also intends to raise awareness about the importance of Japan's mercury export ban, and to make the treaty stronger by learning and using the lessons from Minamata.

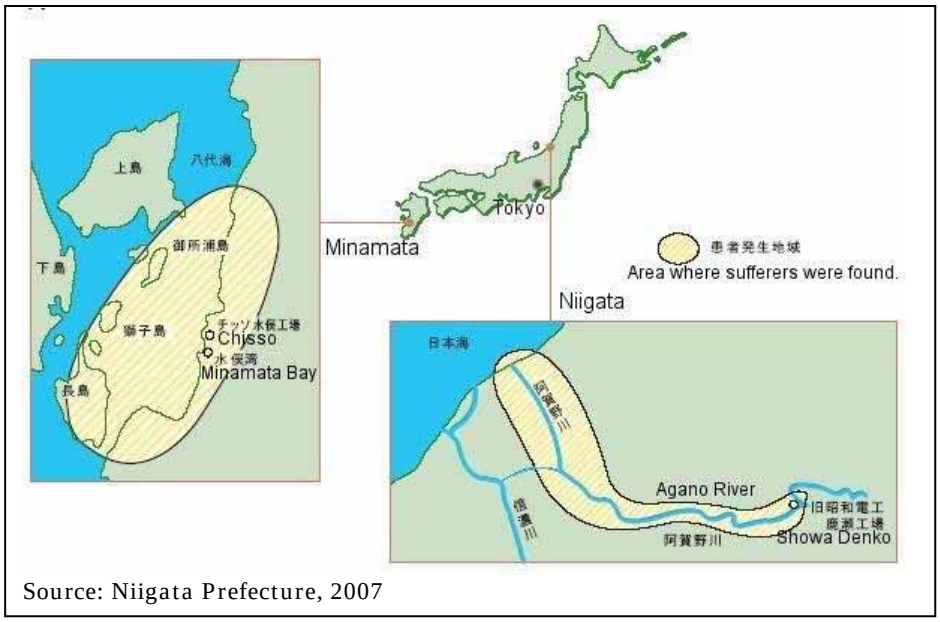
The contents of this work consist of the updated information presented by CACP, *Mercury Issues in Japan,* as one of the NGO' activities prior to and during the first session of the Intergovernmental Negotiating Committee to prepare a global legally binding instrument on Mercury (INC1) held in Stockholm in June 2010.

1.2. Overview of Mercury Issues in Japan

The mercury situation in Japan can be summarized as follows.

(1) Japan has experienced serious methylmercury poisoning incidents in Minamata and Niigata.
(2) The last primary mercury mining was closed in 1974
(3) All mercury-based chlor-alkali plants were closed by 1999.
(4) More than 100 tons/year of mercury is recycled from mercury containing products, wastes and by-products from smelters.
(5) Although mercury containing products are decreasing, they are not prohibited and about 10 tons/year of mercury is still used for production of such products.
(6) In the past four years, more than 150 metric tons of the recycled mercury was exported mainly to developing countries annually.
(7) Mercury concentrations in fish and consumption advisories for pregnant women were published several years ago.
(8) Nationwide investigations were made on Japanese hair mercury levels.
(9) High mercury levels were found in hair samples from residents of Taiji, a Japanese whaling town.

2. Minamata Disease



Source: Niigata Prefecture, 2007

In Japan, there are two Minamata disease incidents. One is Kumamoto Minamata disease, simply known as Minamata disease. It was found in the early 50s around Minamata Bay in Kumamoto Prefecture, caused by methylmercury in wastewater from Chisso Corporation. The other is Niigata Minamata disease which was found in the mid 1960s along Agano River in Niigata Prefecture, caused by the methylmercury in wastewater from Showa Denko.

Although it has been more than 50 years since the two incidents, compensation has not been completely resolved for many victims. Based on the Minamata Disease Victim Relief Law enacted in 2009, Chisso will be split into two companies, a parent company for compensation, and a subsidiary company for business. There is criticism that this allows Chisso to escape from their responsibilities, because it is said that the parent company, Chisso will be dissolved once the victims have been compensated..

In this report, Kumamoto Minamata disease (hereafter Minamata disease) is reviewed, and the summary of the history to date and some medical aspects are presented.

2.1. Minamata Disease Summary
What Happened in Minamata during 1932 to 2010?

1932-1968: Chisso operated acetaldehyde plant in Minamata. Inorganic mercury was used as a catalyst. Alkylmercury compound was being released to Minamata Bay although the public was not aware of the fact until 1959. It is said that the estimated quantity of methylmercury Chisso dumped in Minamata Bay was from 75 to 150 tons, but nobody knows the exact quantity..
1950s: Sufferers emerged among residents around Minamata.
1956: Minamata disease was officially confirmed, but the cause was unknown.
1959: Organic mercury was identified as the cause of the disease by Kumamoto University. Chisso repeatedly offered counterarguments mobilizing “expert scientists”.
1968: Chisso closed the acetaldehyde plant.
1968: Government officially recognized methylmercury from Chisso as the cause of Minamata disease
1969 When Ministry of Welfare set up a mediation committee, it demanded victims' submission of a note of confirmation to accept the committee's conclusion without objection. Victims split into two groups; one relied on the committee (Arbitration

Group) and the other insisted on lawsuits (Litigation Group).

1969: Victims of “litigation group” took Chisso to court for responsibility and compensation. (The first lawsuit.)

1970: Victims of "arbitration group" signed Chisso's monetary settlement, which did not refer the company's responsibility.

1973: Victims won the first lawsuit. Chisso's responsibility for Minamata disease was recognized for the first time.

1973-89: Many victims raised lawsuits against Government, Kumamoto Prefecture and Chisso.

1977: Government set criteria for certification of Minamata disease but it was limited.

1995: Government offered political solution for the issues of uncertified victims.

2004: Supreme Court denounced inaction of Government and Kumamoto Prefecture in preventing spread of the disease and recognized their responsibility.

2009: Minamata Disease Victim Relief Law was passed at the Diet, which allowed Chisso to split into two companies. This was criticized for allowing Chisso to escape from their responsibilities.

2010 March: Kumamoto District Court recommended a settlement and the majority of victims accepted but one group decided to continue their lawsuit, seeking a more substantial solution.

2010 April: Government announced a policy for the relief of Minamata and Niigata victims, based on the Minamata Disease Victim Relief Law and the Settlement by the district court.

2010 May: Then Japanese Prime Minister Yukio Hatoyama attended the 54th annual memorial service for the victims of Minamata disease and apologized to Minamata victims. He also expressed hope Japan will actively contribute to creating an international treaty for preventing such mercury poisoning and naming the treaty the Minamata treaty.

2010 July: The Ministry of Environment designated Chisso as Specified Corporation as the first step for the procedure.

2010 July: The Osaka District Court ruled against the state's criteria for certifying patients of the Minamata disease which requires certain plural symptoms at a time. It said that there is no medical basis for it, and ordered the Kumamoto prefectural government to recognize an 84-year-old woman as a sufferer.

2010 August: The Kumamoto prefectural government appealed the ruling to the Osaka High Court, claiming that the ruling was different from those made at higher courts by past judges.

2.2 Estimated Numbers of Victims

The Japanese government has not conducted comprehensive health studies on Minamata disease and the law still does not require it. Thus the government has not gotten hold of the total number of Minamata victims who suffered and are suffering from methylmercury discharged by Chisso. Nobody will be able to know the full true picture of the Minamata disease. There are many victims who could not disclose their disease for fear of discrimination in their community, who already died without being recognized, and fetuses who died before delivery. There is no record for these victims and it will vanish into the night forever. The following are a rough estimate for the number of victims derived from some official and some other sources including media.

Victims compensated

Those who were recognized (as of Dec. 31, 2009)	2,271
1995: Those who accepted the political settlement	approx. 11,000

2004: Those who were recognized by Supreme Court	51

Victims to be compensated (Mainichi Shimbun March 29, 2010)

Those who applied for recognition (as of Feb 28, 2010)	7,608
Those who received free medical treatment (as of Feb 28, 2010)	26,670
Those who may be identified later	??
Estimated total number of compensated victims	**47,600 + ??**

2.3 History on Minamata Disease

1932-1968: Chisso operated acetaldehyde plant in Minamata. Inorganic mercury was used as a catalyst. Alkylmercury compound was being released to Minamata Bay although the public was not aware of the fact until 1959. It is said that the estimated quantity of methylmercury Chisso dumped in Minamata Bay was from 75 to 150 tons, but nobody knows the exact quantity.

1950s: Sufferers emerged among residents around Minamata.

1956: Minamata disease was officially confirmed.

1958: Kumamoto Prefecture inquired with the Ministry of Health and Welfare (MOHW) about the possibility of ban in the sale of seafood from Minamata bay under Food Sanitation Act. MOHW replied that the Act could not be applied to the case.

1959: Organic mercury was identified as the cause of the disease by Kumamoto University. Chisso repeatedly offered counterarguments mobilizing “expert scientists”.

1959: Dr. Hajime Hosokawa of Shin Nihon Chisso Hospital confirmed that a cat (cat No. 400) fed with wastewater from Chisso acetaldehyde plant showed typical symptoms of Minamata disease and reported to the management of Chisso. Chisso prohibited him from disclosing the fact and it was July 1970 when Dr. Hosokawa testified the fact from his sick bed for a Minamata disease lawsuit.

1959: Chisso made a contract with 79 victims for “sympathy money” under which 300,000JPY were given to dead persons and 100,000JPY to survivors, but Chisso did not acknowledge their responsibility of the pollution and harm. The contract also required victims not to claim anything to Chisso, even if the wastewater from Chisso would be identified in future as the cause of Minamata disease. This contract was criticized later as an act contrary to public policy.

1963: Methylmercury in wastewater from Chisso was proved as the cause of Minamata disease by Kumamoto University.

1968: Chisso closed the acetaldehyde plant.

1968: Government officially recognized methylmercury as the cause of Minamata disease, which was a by-product produced in the acetaldehyde manufacturing process at Chisso Minamata factory.

1969 When Ministry of Welfare set up a mediation committee, it demanded victims' submission of a note of confirmation to accept the committee's conclusion without objection. Victims split into two groups; one relied on the committee (Arbitration Group) and the other insisted on lawsuits (Litigation Group).

1969: Victims of “litigation group” took Chisso to court for responsibility and compensation. (The first lawsuit.)

1970: Victims of "arbitration group" signed Chisso's monetary settlement, which did not refer the company's responsibility.

1972: Minamata victims and media including photographers W. Eugene Smith and his wife gathered at Chisso factory in Goi, Ichihara city, near Tokyo to have a scheduled meeting with Chisso. During waiting for the meeting approximately 200

of Chisso employees suddenly attacked them. Mr. Smith was seriously injured in his head.

1973: Victims won the first lawsuit. Chisso's responsibility was recognized for the first time.

1973: Victims took Chisso to court for recognition of Minamata disease and compensation. (The second lawsuit.)

1977: Environmental Agency set criteria for certification of Minamata disease, which accepted only limited conditions with certain symptoms to avoid increase in number of victims to be compensated.

1980, 81, 89: Victims took Chisso to court for certification of Minamata disease and compensation. (The third lawsuit.)

1982: Victims who had moved to Kansai area (Osaka area) filed a lawsuit against the Government, Kumamoto Prefecture and Chisso for their responsibility, certification of plaintiffs as Minamata disease and compensation. (Kansai lawsuit.)

1987: The district court first recognized the responsibility of the Government and Kumamoto Prefecture as well as Chisso. (The third lawsuit.)

1995: Government decided "final" solution for the issues of uncertified victims but did not mention Government's responsibility.

2004: Supreme Court denounced inaction of the Government and Kumamoto Prefecture in preventing spread of the disease and recognized their responsibility. (Kansai lawsuit.)

2005: Victims raised lawsuits against Government, Kumamoto Prefecture and Chisso for certification of Minamata disease and compensation.

2007: A victims group took Chisso to Kumamoto District Court for compensation for damage caused by the methylmercury exposure from Chisso while they were still in the womb of their mothers and/or during childhood

2009: Minamata Disease Victim Relief Law was passed at the Diet Two essential features of the law, among others, were: 1) payment of a lump sum to uncertified victims with certain symptoms, and 2) the splitting of Chisso into two companies. Some major victims' groups decided to accept the relief based on the law (political solution) considering aging victims who need support quickly, but other groups did not accept the law and decided to seek legal solution. There are criticisms surrounding the following issues:

(1) The split of Chisso into two companies, a parent company for compensation and a subsidiary company for business, allows it to escape from their responsibilities. It is said that once the victims have been compensated, the parent company, Chisso will be dissolved.

(2) The criteria for certification of the disease remain unchanged, although uncertified victims are to be subject to the relief based on the law. Certification is one of the most important factors for the essential solution.

(3) No comprehensive health study has ever been made and the law still does not require it. Thus nobody will be able to understand the full true picture of the Minamata disease. There were/are many victims who could/can not disclose their diseases for fear of discrimination in their community due to the diseases, who already died without being recognized, and who died as fetus before delivery. There is no record for these victims and it will vanish into the night forever.

(4) Those victims who were born after November 1969 are not eligible for compensation, despite possibility of the mercury pollution still being present after Chisso's closure of the plant in 1968.

(5) There is a provision that stipulates persons for relief be identified within 3 years. A time limit should not be provided for application for relief given the persistent

nature of mercury and some victims who still can not disclose their disease.

2010 March: Kumamoto District Court recommended a settlement which consists of lump-sum payments of 2.1 million yen ($22,600) each and monthly medical allowances of up to 17,700 yen ($190). The Government and Kumamoto Prefecture accepted the settlement. The political solution groups (about 4,300 victims) who had already accepted the Minamata Disease Victim Relief Law also accepted the settlement. The majority of the legal solution groups (2,123 victims) also accepted the settlement considering aging victims who need support quickly. Government intends to apply the relief to all uncertified victims based on the settlement in order to end the half-a-century Minamata saga.

(1) Those who had filed application for certification (7,608 victims).

(2) Those who had received new health notebooks for free medical treatment instead of certification of Minamata disease (26,670 victims).

However, another group in Minamata who had criticized the Minamata Disease Victim Relief Law decided to continue their lawsuit, seeking more substantial solution, and so the Minamata issue has not yet reached a full-scale and equitable solution.

2010 April: Victims and supporters held a symposium with the themes "Question of responsibility of Chisso and the Government" and "Is it allowed for wrongdoers to escape from their responsibility by the Minamata Disease Victim Relief Law?“ They adopted a Statement calling for the Government and Chisso's responsibility for compensation and relief as long as victims exist.

2010 April: Victims and their supporters met the Vice Minister of Environment and handed over the Statement.

2010 April,: Government decided its policy for the relief of all uncertified Minamata Disease victims including those from Niigata, based on the Minamata Disease Victim Relief Law and the Settlement recommended by Kumamoto District Court.

2010 April,: Victims and supporters held a meeting in Minamata , confirming that the redress measures including the Minamata Disease Victim Relief Law will not solve the problem.

2010 May: Then Prime Minister Yukio Hatoyama attended the 54th annual memorial service for the victims of Minamata disease in Minamata and apologized to Minamata disease victims for the government not being able to prevent the spread of the disease in Japan's worst industrial pollution case. He also expressed hope Japan will actively contribute to creating an international treaty for preventing such mercury poisoning and naming the treaty the “Minamata treaty.“

2010 July: The Ministry of Environment designated Chisso as Specified Corporation as the first step for the procedure for the split of Chisso. It is criticized that there is a strong concern that it will allows Chisso to escape from their responsibilities.

2010 July: The Osaka District Court ruled against the state's criteria for certifying patients of the Minamata disease which requires plural certain symptoms at a time saying there is no medical basis for it, and ordered the Kumamoto prefectural government to recognize an 84-year-old woman as a sufferer.

2010 August: The Kumamoto prefectural government appealed the ruling to the Osaka High Court, claiming that the ruling was different from those made at higher courts by past judges.

2.4 Medical Examinations

The following are some of medical examinations published in papers or ruled at courts on Minamata disease.

2.4.1. Low Level Mercury Exposure

The study by Harada et al. (2009) criticized Government and Chisso for the lack of comprehensive studies on Minamata disease as follows.

As for the Minamata disease, the high-level acute mercury poisoning was emphasized but the low level exposure, especially to fetuses and children was not paid much attention for the following reasons.

- Government and Chisso ignored or even tried to hush up the truth because they did not want the real damage disclosed to be bigger, in order to avoid increase in their responsibility and cost for compensation.
- There were/are some victims who could not disclose their disease for fear of discrimination in their community.
- Consequently, studies for the low level exposure were behind other countries although there were a lot of things to be investigated for the Minamata disease.

Now it is the last chance to make this clear to pass on the facts to future generations as the lessons learned from Minamata disease, which was the first largest incident ever happened of environmental pollution and food poisoning through food chain.

Source: Clinical and Epidemiological Study
Examination on Methylmercury Contamination Effects on Fetus and Children
The Study of Social Relations January 2009
Masazumi Harada and Masami Tajiri
http://www3.kumagaku.ac.jp/srs/pdf/no14_no01_200901_005.pdf

2.4.2 Umbilical cords show exposure to methylmercury even after Chisso plant closure in 1968, Methylmercury levels still high for those born till 1974

In 1968, Japanese Government officially recognized methylmercury as the cause of Minamata disease, Methylmercury is a by-product produced in the acetaldehyde manufacturing process at Chisso Minamata plant and Chisso closed the plant in 1968. Based on the fact, Japanese Government has argued that no new Minamata disease should exist, and have excluded victims born after December 1969 from relief and certification for Minamata disease.

According to the website asahi.com on June 22, 2010, however, Dr. Mineshi Sakamoto and his colleagues at National Institute for Minamata Disease in Minamata City presented at the International Society of Environmental Toxicology held in Guangzhouin, China in June 2010 that the levels of methylmercury in the umbilical cords of those who were born until 1974 around the Shiranui Bay coastal area including Minamata were higher than those born in other areas. This suggests that fetuses born until 1974 in this area might be exposed to high level methylmercury in wombs.

Source: asahi.com on June 22, 2010
http://www.asahi.com/health/news/TKY201006210462.html

2.4.3. Adverse Effects of Methylmercury: Environmental Health Research Implications

Philippe Grandjean et al. published a report *Adverse Effects of Methylmercury:*

Environmental Health Research Implications on Environmental Health Perspective 118(8)_Aug_2010. The following are EHP Editor's Summary and Authors' conclusion.

The following are extracted from the above paper.

EHP Editor's Summary

Health effects have been associated with exposure to methylmercury for well over a century. Yet, in the case of a severe neurological disorder known as Minamata disease, public health officials and environmental scientists were slow to make the connection between the appearance of neurological signs and environmental exposure to methylmercury. Grandjean et al. (p. 1137) provide a retrospective look at the various political, legal, and scientific forces associated with this delay. The authors note that understanding the cause of methylmercury-induced health effects was impaired by a reliance on narrow case definitions and uncertain chemical speciation, and point out that although methylmercury was known to be capable of producing developmental neurotoxicity as early as 1952, researchers did not understand the vulnerability of the developing nervous system to heavy metals such as methylmercury. They note that scientific uncertainties, as well as various political and economic considerations, led to calls for more research rather than for the development of strategies for mitigation and prevention of future exposures. The authors conclude that the case of methylmercury and Minamata disease is a cautionary tale for the environmental health community and public health officials as they respond to current and future environmental crises.

Diagnostic Difficulties

Part of the inertia was probably due to previous embarrassments caused by having to retract mistaken conclusions of earlier suspected causes, in combination with legal and political rigidity. The resistance and lack of cooperation from Chisso were also an important factor. Most embarrassing, toxicity experiments were carried out in the late 1950s by Chisso's company doctor, Hajime Hosokawa. Ten cats were fed standard cat food mixed with effluent from the acetaldehyde plant, where mercury was used as a catalyst (Eto et al. 2001). At that time, the researchers were not aware that the effluent contained methylmercury. The exposed cats developed symptoms similar to those seen in cats that had eaten fish from the bay. Only in 1969 did Hosokawa reveal that the results existed and had been suppressed by his employer. A detailed scientific account was eventually published after a 40-year delay (Eto et al. 2001).

Authors' Conclusion

Although Jun Ui's critique (D'Itri and D'Itri 1978), given in the introduction of this review, referred to Japanese regulatory agencies themselves being afflicted by signs of methylmercury poisoning, here we suggest that environmental health research, too, has suffered tunnel vision, forgetfulness, lack of coordination, and some of the other symptoms noted in poisoning cases. Like methylmercury poisoning itself, such abnormalities deserve preventative action.

Source:
Environmental Health Perspective 118(8)_Aug_2010, Philippe Grandjean et al.
http://ehp03.niehs.nih.gov/article/fetchArticle.action?articleURI=info%3Adoi%2F10.1289%2Fehp.0901757

2.4.4. Osaka district court rejects state criteria for Minamata disease certification

On July 16, 2010, the Osaka District Court ruled against the state's criteria for certification for patients of the Minamata disease, saying there is no medical basis for it, and ordered the Kumamoto prefectural government to recognize an 84-year-old woman as a sufferer. The court said the state's 1977 certification criteria under which a patient needs to show two or more symptoms of the disease lacked medical legitimacy.
She had been recognized as suffering from the disease in a Supreme Court ruling in 2004, which recognized government responsibility for the disease's spread and took a broader approach about patients than the criteria.

On August 22 the Kumamoto prefectural government appealed the ruling to the Osaka High Court, claiming that the ruling was different from those made at higher courts by past judges.

The certification criteria, created in 1977

Under the criteria, a patient needs to show two or more symptoms of the disease, which was caused by eating fish contaminated with industrial mercury discharged into Minamata Bay in Kumamoto Prefecture. Symptoms include numbness in the limbs, sensory disturbance and restricted vision.

3. The Proposed Mercury Treaty

3.1 UNEP's Efforts to Reduce Risk from Mercury

The United Nations Environment Programme (UNEP) has been steadily working to address the global mercury pollution since 2001.

In its 2002 Global Mercury Assessment Report, UNEP noted that releases of mercury have harmful effects on human health and may damage ecosystems of environmental and economic importance. This critical finding has led to continuous global action to address mercury pollution. A key to global action has been the various UNEP decisions that have shaped how countries have taken action. The following table shows the landmark decisions on mercury:

Table 1. UNEP GC Decisions on Mercury[1]

Session	Year	Main decision on mercury
21	2001	• Development of a global assessment of mercury in order to consider international actions on mercury
22	2003	• Technical assistance and capacity-building activities to support the efforts of countries to take action regarding mercury pollution
23	2005	• Initiating national, regional and global actions and partnership, both immediate and long-term, to protect human health and the environment against mercury, in order to eliminate releases of mercury and its compounds into the environment in collaboration with all stakeholders • Identification of the five partnership areas: a) Mercury releases from coal combustion; b) Mercury cell chlor-alkali production; c) Mercury in products; d) Mercury air transport and fate research; and e) Mercury in artisanal and small-scale gold mining.
24	2007	• Establishment of an ad hoc open-ended working group of governments, regional economic integration organisations and stakeholder representatives to review and assess options for enhanced voluntary measures and new or existing international legal instruments • Identification of the additional partnership areas: a) Reduction of global mercury supply; b) Waste management, including environmentally sound long term storage; c) Vinyl chloride monomer production; d) Non-ferrous metals mining; and e) Cement production.
25	2009	• Convening an intergovernmental negotiating committee (INC) to prepare a global legally binding instrument on mercury, commencing its work in 2010 with the goal of completing it prior to the 27th regular session of the GC/Global Ministerial Environment Forum in 2013.

[1] 6th Draft Basel Technical Guidelines on Mercury Wastes, Basel Convention.

Of all the decisions outlines above the most significant came during the 25th session of the UNEP Governing Council. The body adopted a decision on chemicals management including mercury, which requests the Executive Director of UNEP to convene the intergovernmental negotiating committee (INC) to prepare a global legally binding instrument on mercury and develop a comprehensive and suitable approach to mercury, including provisions on:

(a) To specify the objectives of the instrument;

(b) To reduce the supply of mercury and enhance the capacity for its environmentally sound storage;

(c) To reduce the demand for mercury in products and processes;

(d) To reduce international trade in mercury;

(e) To reduce atmospheric emissions of mercury;

(f) To address mercury-containing waste and remediation of contaminated sites;

(g) To increase knowledge through awareness-raising and scientific information exchange;

(h) To specify arrangements for capacity-building and technical and financial assistance, recognizing that the ability of developing countries and countries with economies in transition to implement some legal obligations effectively under a legally binding instrument is dependent on the availability of capacity building and technical and adequate financial assistance; and

(i) To address compliance.

The work to prepare this instrument will be undertaken by the INC supported by the Chemicals Branch of the UNEP Division of Technology, Industry and Economics as secretariat. The goal is to complete the negotiations by the twenty-seventh regular session of the Governing Council/Global Ministerial Environment Forum in 2013.

Participation in the INC is open to all Governments. Intergovernmental organizations and non-governmental organizations may also take part as observers. The UNEP Governing Council established an ambitious timeline for the proposed treaty when they mandated that the work of the INC will be carried out over five sessions as follows:

INC 1 - 7 to 11 June 2010, Stockholm, Sweden;
INC 2 - 24 to 28 January 2011, Chiba, Japan;
INC 3 - 30 October to 4 November 2011, Burkina Faso;
INC 4 - June 2012, Uruguay-
INC 5 - early 2013, Brazil or Switzerland.

3.2 The First Intergovernmental Negotiating Committee (INC1)

The First Intergovernmental Negotiating Committee (INC1) was held from 7 to 11 June, 2010 in Stockholm. Governments of 119 countries and representatives of intergovernmental and non-governmental organizations took part in the meeting. NGOs were represented by a team of approximately 55 NGOs from 29 countries. The team included the International POPs Elimination Network (IPEN), the Zero Mercury Working Group (ZMWG), and others in the health sector area, groups working on dental amalgams, and indigenous peoples' organizations.

At the meeting, governments, intergovernmental and non-governmental organizations

expressed their opinions on specific issues relating to mercury, e.g. supply, fate and transport, waste, etc., which will form part of the agenda to be decided during a course of INCs for the Mercury Treaty.

3.2.1. The agenda at INC1

Governments and inter-governmental and non-governmental organizations stated their opinions on the item of the agenda to be incorporated into the treaty, which were based on the decision GC25/5 paragraph 27, made at the twenty-fifth Governing Council of UNEP in February 2009. The agenda included:

- Rules of procedure;
- Objectives;
- Financial and technical assistance and capacity building;
- Awareness-raising and exchange of scientific information;
- Compliance;
- Supply;
- Storage;
- Products and processes;
- Atmospheric emissions;
- Trade; and
- Waste and remediation.

3.2.2. “Minamata Treaty” proposed by Japanese Government

At the meeting, the government of Japan stated that “Japan will positively contribute to the INC so that the tragedy of Minamata disease should never happen again in any place around the world”. In addition, Japan confirmed its interest in hosting the 2013 diplomatic conference that will adopt the treaty, and in naming the new mercury treaty the Minamata Convention. Japan's proposal was based on the statement made by then Prime Minister Yukio Hatoyama on May 1, 2010 at the 54th annual memorial service for the victims of Minamata disease in Minamata that "Japan will actively contribute to creating an international treaty for preventing such mercury poisoning and hopes to name the treaty the Minamata treaty.”

Some people argued that Japan is not eligible to propose a ”Minamata Treaty” until it stops the mercury export, compensates all Minamata victims, and fulfills its responsibility for the Minamata issues. Others say that Japan has to stop the mercury export and make every effort to create a strong treaty as it committed.

Takeshi Yasuma of Citizens Against Chemicals Pollution (Japan) gave an intervention on how the mercury treaty must learn from the lessons of Minamata. (See Annex 1)

3.3 Project in Japan prior to INC2

CACP is carrying out the Project in Japan prior to INC2 with financial support by the Garfield Foundation and the European Commission via the European Environmental Bureau (EEB) on behalf of the Zero Mercury Working Group (ZMWG) and partly by the International POPs Elimination Network (IPEN) prior to INC2 to be held in January 2011 at Makuhari, Chiba in Japan. The purpose of the project is to make the treaty strong by honoring Minamata victims and their supporters, learning the lessons from Minamata and incorporating them into the Mercury Treaty, as well as to stop the Japanese mercury export. The project consists of the following four activities.

(1) A report on *Minamata and the Global Treaty on Mercury.* This is the current report and in order to realize the project purpose, this report is made in both Japanese and English, and will be spread to Japanese citizens and media. It will also be made available internationally through the internet and NGO networks such as ZMWG.

(2) Coordination with Minamata People
In order to make the treaty strong by incorporating the lessons learned from Minamata, it is important to get the Minamata community involved in the Mercury Treaty process. On September 12 to 14, 2010, CACP visited Minamata to enhance the relationship with the community, and made a presentation on the Global Treaty on Mercury and exchanged information with Minamata people. CACP also attended the Symposium held by Minamata supporters/victims on November 3, 2010 in Tokyo, and made a presentation on the Global Treaty on Mercury again.

(3) NGO International Mercury Symposium in Tokyo
In order to raise awareness of Japanese citizens and media about the mercury treaty and mercury issues in Japan, CACP will hold the NGO International Mercury Symposium on December 4, 2010 in Tokyo, inviting an expert on Minamata disease, Minamata victims, supporters for Minamata victims and two experts from overseas NGOs working on mercury issues. The symposium will consist of two sessions: (1) “Learn from Minamata Disease”, and (2) “Global Mercury Issues”.

(4) Minamata People's Intervention at Makuhari for INC2 and Minamata Photo Exhibit
CACP is making arrangements for a Minamata victim and two supporters to convey their strong message to the INC2 participants at a side event and during the plenary session at INC2. Also CACP is planning to exhibit the photographs Minamata by W. Eugene Smith & Aileen M. Smith at one of NGO booths for INC2.

4. Civil Society Organizations Joint Statement
Japanese Government Needs to Enact Mercury Export Ban Act

Japan is the only country in Asia apart from Kyrgyzstan that exports mercury, mainly derived from nonferrous metal smelters and recycling of mercury-containing products. Japan continues to export more than 100 metric tons of mercury mainly to developing countries, in spite of its horrendous Minamata legacy.

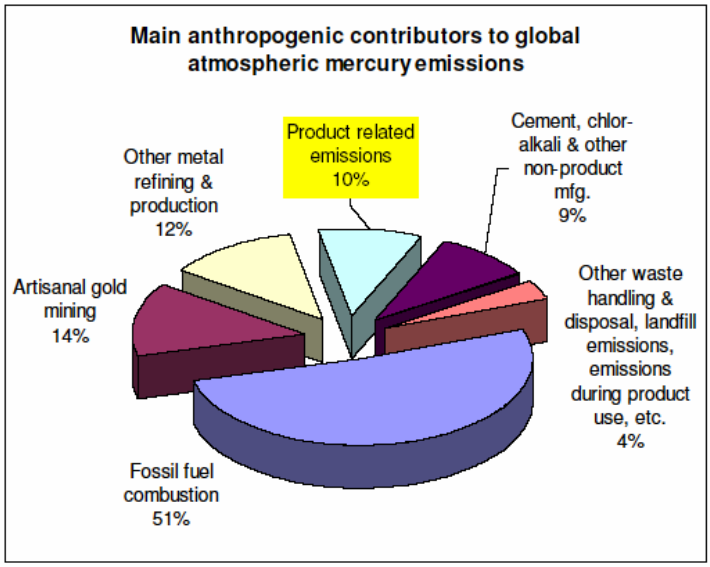
It is not possible to know accurately where and how the exported mercury is used because there is no traceable system to identify its final destination and actual use. But it is presumed that much of the exported mercury is used in Artisanal and Small-Scale Gold Mining (ASGM) in developing countries, threatening the health of millions of miners, their families and the environment.

On October 15, 2009, Japanese civil society groups lead by CACP presented to the Japanese government a petition entitled “Enact Mercury Export Ban Act” to stop Japanese trade of the toxic element, mercury. The petition was endorsed by 114 civil society organizations (CSOs) from all over the world who are concerned about the worsening mercury pollution. (See Annex 2.)

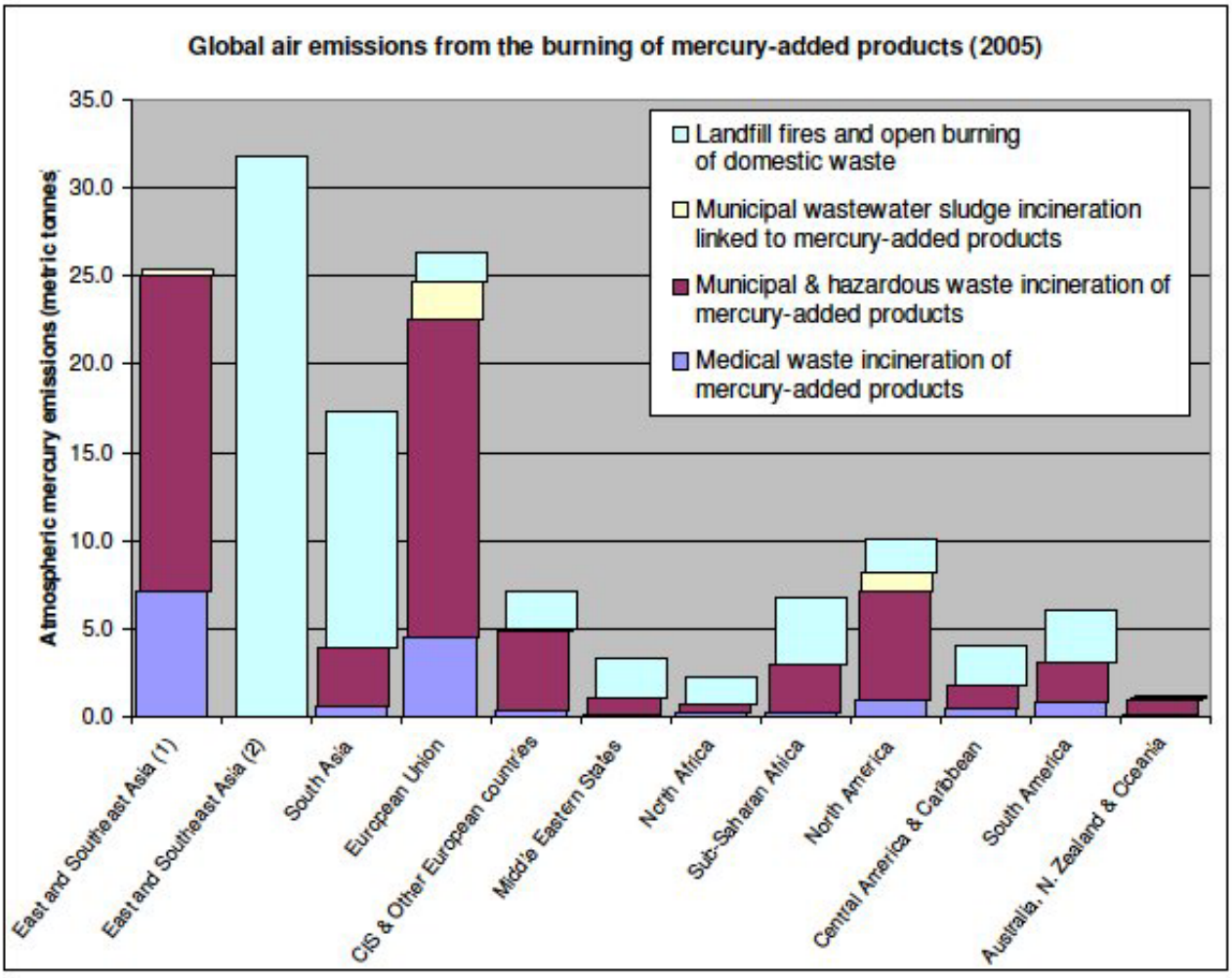
5. Some Data on Mercury Issues

5.1. Main anthropogenic contributors to global atmospheric mercury emissions

The Mercury Policy Project (MPP), a US-based NGO working on global mercury issues, co-released with the Zero Mercury Working Group (ZMWG), Ban Toxics! and the Global Alliance for Incinerator Alternatives (GAIA). a report entitled "MERCURY RISING Reducing global emissions from burning mercury-added products, January 2009"
The report includes many useful data on mercury issues, such as the graphs shown here,



Regional distribution of mercury emissions (tonnes) to air from burning mercury-added products

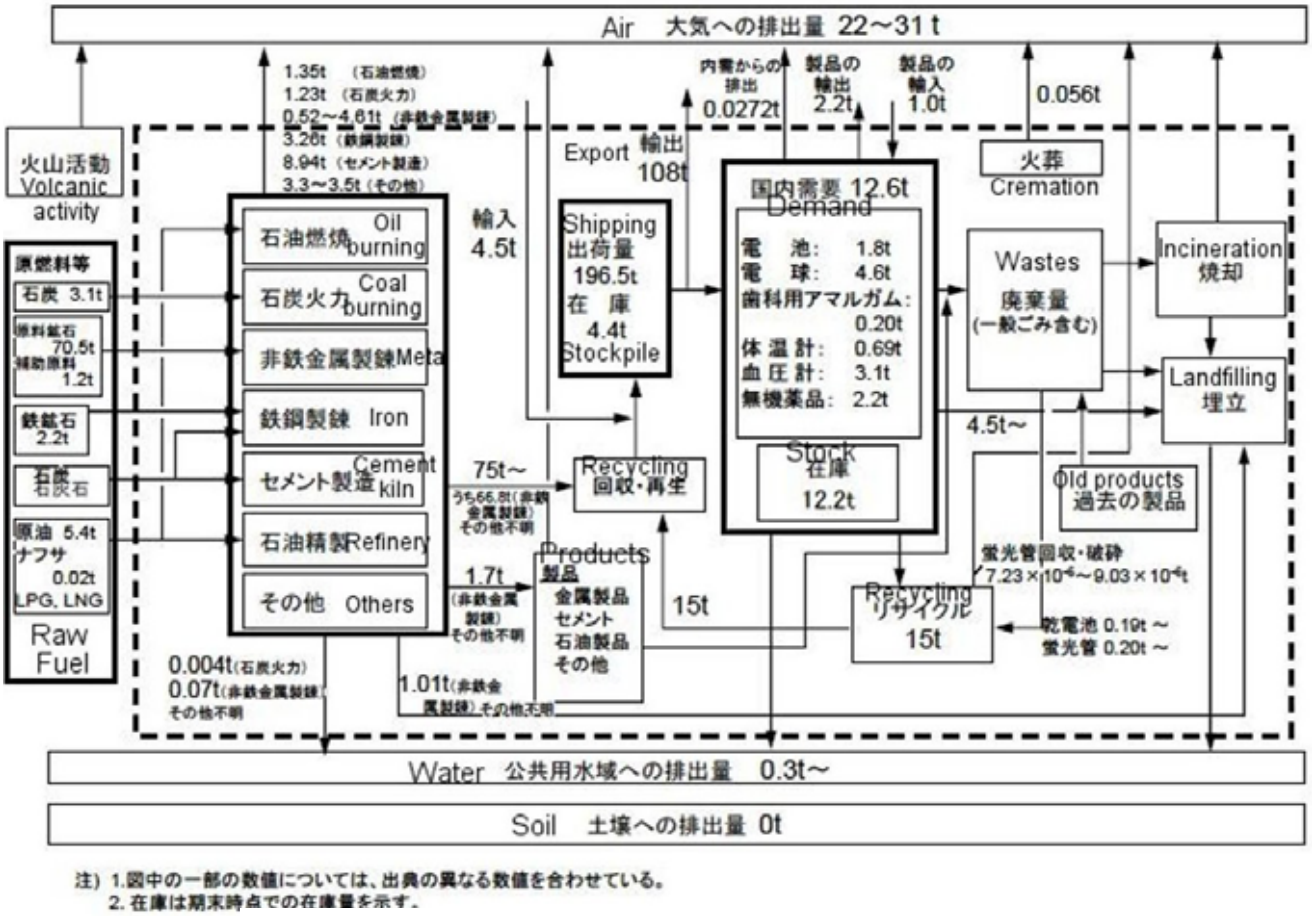


Source: Mercury Policy Project (MPP) 2009
http://mercurypolicy.org/wp-content/uploads/2009/02/final_mercuryrising_feb2009.pdf

5.2. Mercury Business in Japan

5.2.1. Material Flow of Mercury in Japan

The Ministry of the Environment has held the Toxic Metal Investigative Commission since 2006 once or twice a year. As of today, mercury is the main subject. Various basic data were submitted and discussed. The following material flow of mercury in Japan was presented as an interim report.



注) 1.図中の一部の数値については、出典の異なる数値を合わせている。
2. 在庫は期末時点での在庫量を示す。

Material Flow of Mercury in Japan (Ministry of Environment, 2008)

5.2.2. Mercury Recycling in Japan

- Nomura Kohsan for Mercury Recycling
  According to the website of Nomura Kohsan, Nomura Mining, the predecessor of Nomura Kohsan operated the largest mercury mine (Itomuka Mine in Hokkaido Prefecture) for over 30 years till the closure of the mine in 1973. After the closure of the mine, Nomura Kohsan entered the business of treating mercury-containing waste, including batteries, fluorescent lamps, clinical thermometers, hemodynamometers, pressure gauges, flowmeters, mercury switches, mercury relays, mercury-ark rectifiers, mercury-contaminated concretes, wood, slate, mercury-containing oil, waste acid, waste alkali, waste plastic and others.
  http://www.nomurakohsan.co.jp/us/index.htm
- Mercury Recycled: More then 90 tons/year
- Export of mercury: More than 150 tons/year for past 4 years.
- Domestic demand of mercury: About 13 tons/year

5.2.3. Recycle of Mercury in Japan

						Unit: ton
Recycle from	2003	2004	2005	2006	2007	Average
By-products from Smelters						>75t
Mercury-Containing Products						>15t
Mercury-Containing Batteries	0.28	0.26	0.17	0.13	0.10	>0.19t
Fluorescent Lamps	0.19	0.18	0.2	0.22	0.22	>0.20t

Source: Ministry of Environment, 2008

5.2.4. Demand of Mercury in Japan

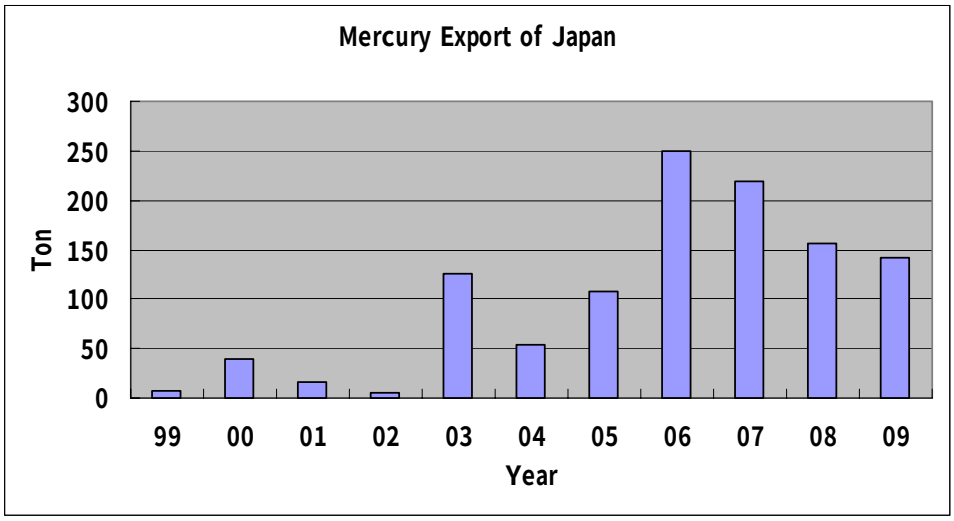
Items	2001	2002	2003	2004	2005	Average
Batteries	2,500	2,030	1,810	1,910	1,830	2,016
Lamps/Light bulbs	5,062	4,498	4,551	4,656	4,722	4,698
Dental Amalgam	549	328	219	220	150	293
Body Temperature Thermometers	825	543	1,069	792	587	763
Blood Pressure Cuffs	7,611	4,425	3,986	3,664	1,890	4,315
Inorganic Drugs	2,200	3,200	1,900	1,900	1,700	2,180
NaOH Production	0	0	0	0	0	0
Pesticides	0	0	0	0	0	0
PVC Monomar Production	0	0	0	0	0	0
Total	18,747	15,024	13,535	13,142	10,897	14,256

Source: Ministry of Environment, 2008

5.2.5. Mercury Export of Japan

Japan is the only country in Asia apart from Kyrgyzstan that exports mercury, mainly derived from nonferrous metal smelters and recycling of mercury containing products. Japan continues to sell mercury in spite of its horrendous Minamata legacy. Difficulty in storage of surplus mercury seems to be one reason for Japan's mercury export.

Civil Society Organizations around the world are calling on Japanese government to stop mercury export and to place in safe, long-term storage all surplus mercury produced in Japan.



Source: Trade Statistics of Japan Ministry of Finance 2010

Citizens Against Chemicals Pollution (CACP)
Z Bldg. 4F, 7-10-1 Kameido, Koto-ku, Tokyo, 136-0071, Japan TEL/FAX +81-3-5836-4358

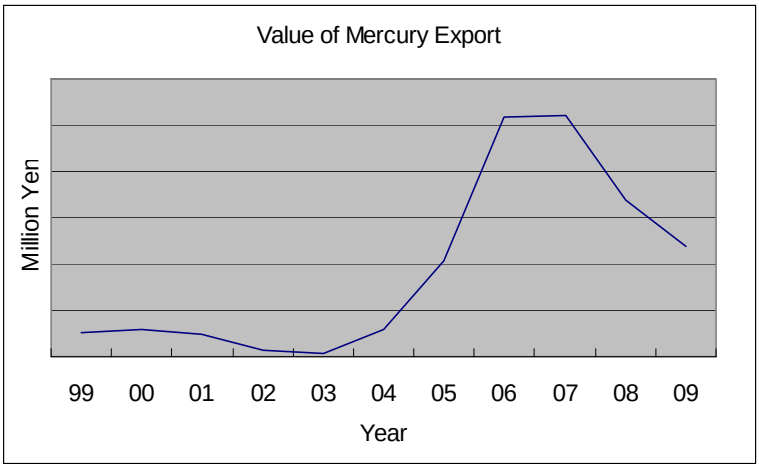
5.2.6. Destination of Mercury Export of Japan

2006		
CTRY Code	Country	QTY (Kg)
133	IRAN	81,420
108	HG KONG	56,925
123	INDIA	34,500
227	HUNGARY	30,800
207	NETHLDS	17,250
117	PHILIPPINE	12,938
122	MYANMAR	6,900
127	BANGLA	2,484
103	R KOREA	2,088
113	MALYSIA	1,725
110	VIETNAM	1,070
118	INDNSIA	835
	Total	248,935

2007		
CTRY Code	Country	QTY (Kg)
133	IRAN	100,050
108	HG KONG	58,650
207	NETHLDS	34,500
122	MYANMAR	10,350
103	R KOREA	2,967
127	BANGLA	2,484
410	BRAZIL	2,070
118	INDNSIA	2,046
111	THAILND	1,785
506	EGYPT	1,500
110	VIETNAM	1,070
213	GERMANY	1,035
106	TAIWAN	5
	Total	218,512

2008		
CTRY Code	Country	QTY (Kg)
108	HG KONG	43,125
207	NETHLDS	34,500
112	SNGAPOR	29,325
122	MYANMAR	20,700
133	IRAN	17,760
111	THAILND	4,284
103	R KOREA	3,312
118	INDNSIA	1,719
110	VIETNAM	1,070
541	KENYA	862
127	BANGLA	200
113	MALYSIA	127
	Total	156,984

Source: Trade Statistics of Japan Ministry of Finance 2010



Source: Trade Statistics of Japan Ministry of Finance 2010

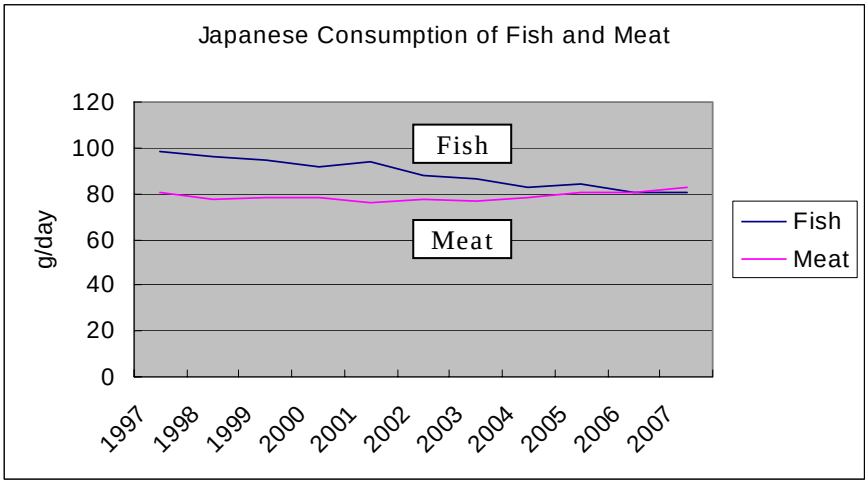
2009		
CTRY Code	Country	QTY (Kg)
112	SNGAPOR	54,200
108	HG KONG	27,600
122	MYANMAR	20,700
123	INDIA	19,320
207	NETHLDS	8,970
410	BRAZIL	5,175
111	THAILND	1,759
110	VIETNAM	1,606
103	R KOREA	1,335
118	INDNSIA	898
106	TAIWAN	5
	Total	141,568

The volume of Japan's mercury exports reached its peak in 2006, when 250 metric tons of mercury valued at over ¥500M was exported to Iran (81.4 tons), India (34.5 tons), Netherlands (17.3 tons) and the Philippines (12.9 tons), among others. From 2006 to 2009, Hong Kong, Netherlands, Myanmar, Korea, Vietnam and Indonesia consistently imported mercury from Japan.

Despite these regular exports, there is no traceable system to identify the final destination and actual use of the mercury. Japan continues to sell mercury in spite of its horrendous Minamata legacy. Difficulty in storage of surplus mercury seems to be one reason for Japan's mercury export.

5.3 Japanese Mercury Consumption

5.3.1. Japanese Consumption of Fish



Source: Fisheries Agency (2008)

According to Fisheries Agency Japan, fish consumption in Japan exceeded meat consumption, despite declining trends in fish consumption. However, it reversed in 2006, with meat consumption being higher than fish consumption. The agency analyzed the reasons of declining as follows:

(1) Children do not like fish. (2) Cooking is troublesome. (3) Fish is relatively expensive.

5.3.2. Mercury in Fish and Allowable Limits

魚介類名 Fish	天然または蓄養 Natural or Cultured	測定部位 Measured Portion	検体数 Number of Sample	Total Mercury 平均値 (ppm) AVG	Total Mercury 標準偏差 (ppm)	Methyl Mercury 平均値 (ppm) AVG	Methyl Mercury 標準偏差 (ppm)
キハダ Yellowfin tuna	天然	筋肉部	20	0.08	0.04	0.06	0.03
クロマグロ Bluefin tuna	天然	筋肉部	60	● 0.72	0.40	● 0.50	0.27
	蓄養	筋肉部	30	● 0.61	0.23	● 0.44	0.18
		(小計)	90	● 0.68	0.35	● 0.48	0.24
ビンナガ Albacore tuna	天然	筋肉部	15	0.25	0.04	0.16	0.04
ミナミマグロ Southern bluefin tuna	天然	筋肉部	42	● 0.40	0.11	0.28	0.07
	蓄養	筋肉部	30	0.25	0.03	0.17	0.03
		(小計)	72	0.33	0.11	0.24	0.08
メバチ Bigeye tuna	天然	筋肉部	67	● 0.65	0.38	● 0.46	0.26
クロカジキ Bulue marlin	天然	筋肉部	22	● 1.16	2.29	0.21	0.19
マカジキ Striped marlin	天然	筋肉部	22	● 0.41	0.23	● 0.31	0.17
メカジキ Swordfish	天然	筋肉部	37	● 0.93	0.32	● 0.65	0.21
カツオ Skipjack tuna	天然	筋肉部	30	0.14	0.04	0.09	0.02
メヌケ類 Sebastes alutus	天然	筋肉部	20	0.21	0.17	0.12	0.09
キンメダイ Alfonsino	天然	筋肉部	36	● 0.73	0.47	● 0.48	0.29
ギンダラ Sablefish	天然	筋肉部	20	0.33	0.24	0.21	0.15
ベニズワイガニ Red snow crab	天然	筋肉部	10	0.30	0.11	019	0.06
エッチュウバイガイ Finely-striate buccinum	天然	可食部 (内臓含む)	10	● 0.74	0.10	● 0.49	0.06
サメ類 (ヨシキリザメ) Blue Shark	天然	筋肉部	30	● 0.54	0.12	● 0.35	0.06
		合 計	501				

Ministry of Agriculture, Forestry and Fisheries / Fisheries Agency, 2004

Tentative Allowable Limits of Mercury for Fish and Shellfish
except tuna, swordfish, bonito, shark, river fish and deep sea fish
Total Mercury 0.4 ppm
Methylmercury 0.3 ppm

1973 by Ministry of Health, Labour and Welfare

The figures with ● mark in the left table exceed the allowable limits of mercury including the fish excepted.
11 of 19 fish for total mercury and
10 of 19 fish for methyl mercury exceed the allowable limits.

Mercury Analysis Manual has been set by the Ministry of Environment, Japan in March 2004 for sampling methods and analytical methods for T-Hg and M-Hg for standardization.
http://www.nimd.go.jp/kenkyu/docs/march_mercury_analysis_manual(e).pdf (English version)

5.3.3. Recommendations for pregnant women to select and eat fish and shellfish

Recommended amount (muscle)	Kind of fish and shellfish
Up to about 80 grams (average 1 meal) per 2 months (10 grams/week)	Bottlenose dolphin
Up to about 80 grams (1 meal) per 2 weeks (40 grams/week)	Short-finned pilot whale
Up to 80 grams (1 meal) per week*1 (80 grams/week)	Alfonsino Swordfish Bluefin tuna Bigeye tuna Finely-striate buccinum Baird' beaked whale Sperm whale
Up to 160 grams (average 2 meals) per week*1 (160 grams/week)	Yellowback seabream Marlin Hilgendorf saucord Southern bluefin tuna Blue shark Dall's porpoise

Ministry of Health, Labour and Welfare (MHLW), 2005
Advice for Pregnant Women on Fish Consumption and Mercury
http://www.mhlw.go.jp/topics/bukyoku/iyaku/syoku-anzen/suigin/dl/051102-1en.pdf

MHLW emphasizes that children and adults other than pregnant women are unlikely to have a health risk from mercury in fish and shellfish they normally eat, and repeatedly emphasizes the benefit of fish and shellfish.

Fishery Agency also seems to fear a bad reputation for eating fish and shellfish.

5.3.4. Contamination by mercury in the cetacean products from Japanese market

A paper published in PubMed 2004 Mar by Endo T et al. of Health Sciences University of Hokkaido reports on contamination by mercury in the cetacean products from Japanese market as follows.

Cetaceans hunted coastally in Japan include several species of odontocete (dolphins, porpoises and beaked whales), and fresh and frozen red meat and blubber, as well as boiled internal organs, such as liver, lung, kidney and small intestine, are still sold for human consumption. Furthermore, red meat and blubber products originating from mysticete mink whales caught in the Antarctic and Northern Pacific are also sold for human consumption. We surveyed mercury and cadmium contamination levels in boiled liver, lung, kidney and red meat products being marketed in Japanese retail outlets.

Total mercury (T-Hg) and methyl mercury (M-Hg) contamination levels in all the cetacean products were markedly higher in odontocete species than in mysticete species, and slightly higher in females than in males.

The contamination levels of T-Hg and M-Hg in odontocete red meat, the most popular whale product, were 8.94+/-13.3 and 5.44+/-5.72 microg/wetg, respectively. These averages exceeded the provisional permitted levels of T-Hg (0.4 microg/wetg) and M-Hg (0.3 microg/wetg) in marine foods set by the Japanese Ministry of Health, Labor and Welfare by 22 and 18 times, respectively, suggesting the possibility of chronic intoxication by T-Hg and M-Hg with frequent consumption of odontocete red meat.

Source:
PubMed 2004 Mar http://www.ncbi.nlm.nih.gov/pubmed/14675844
Endo T, Haraguchi K, Cipriano F, Simmonds MP, Hotta Y, Sakata M.
Faculty of Pharmaceutical Sciences, Health Sciences University of Hokkaido

5.3.5. Current hair mercury levels in Japanese: survey in five districts

The research by Yasutake A et al., Institute for Minamata Disease, Minamata, published in PubMed 2004 Mar;54(11):1653-62 reports as follows.

To understand the current Japanese hair mercury levels, Yasutake A et al. analyzed the total mercury levels of 3,686 hair samples collected at beauty salons, barbershops and primary schools in five districts, Minamata, Kumamoto, Tottori, Wakayama and Chiba. The geometric mean of the total mercury concentration was significantly higher in males than in females, i.e., 2.55 microg/g and 1.43 microg/g, respectively. The geometric mean in each district varied from 2.23 to 4.79 micro g/g for males and from 1.23 to 2.50 microg/g for females.

The average hair mercury levels were highest in Chiba among the five districts both in males and females. A multiple regression analysis revealed a significant correlation of the mercury level with age, sex, amount of daily fish consumption, tuna and bonito as usually consumed fish and artificial waving.

Source:
Current hair mercury levels in Japanese: survey in five districts
PubMed 2003 Mar http://www.ncbi.nlm.nih.gov/pubmed/12703660
Yasutake A, Matsumoto M, Yamaguchi M, Hachiya
N.ational Institute for Minamata Disease, Minamata 867-0008, Japan.

5.3.6. Whale-eating Town, Taiji

Taiji is a small town in Wakayama Prefecture with a population of about 3,500. Taiji has been well-known as a whaling town and also as a whale-eating town.

Image: Taiji-Cho

An annual dolphin hunt takes place off the coast of Taiji. This gained worldwide attention and criticism in 2009 following the release of the documentary film The Cove, which focused on the

cruelty of the hunt as well as the high mercury levels present in dolphin meat.

The National Minamata Disease Multidisciplinary Research Center of Ministry of the Environment (Japan) presented that 30% of the total inhabitants of Taiji, having a diet whale and dolphin, was found to have four times national average mercury concentration in hair.

5.3.7. Mercury concentration in the hair of Taiji inhabitants

In 2010, hair samples from 1,137 Taiji residents were tested for mercury by the National Institute for Minamata Disease. The average amount of methylmercury found in the hair samples was 11.0 parts per million for men and 6.63 ppm for women, compared with an average of 2.47 ppm for men and 1.64 ppm for women in tests conducted in 14 other locations in Japan. One hundred eighty-two Taiji residents showing extremely high mercury levels underwent further medical testing to check for symptoms of mercury poisoning. None of the Taiji residents, however, displayed any of the traditional symptoms of mercury poisoning, according to the Institute. Japan's National Institute of Population and Social Security Research, however, reports that the mortality rate for Taiji and nearby Koazagawa, where dolphin meat is also consumed, is over 50% higher than the rate for similarly-sized villages throughout Japan.

The chief of the NIMD, Koji Okamoto, said, "We presume that the high mercury concentrations are due to the intake of dolphin and whale meat. There were not any particular cases of damaged health, but seeing as how there were some especially high concentration levels found, we would like to continue conducting surveys here."

Source:
Taiji, Wakayama
From Wikipedia, the free encyclopedia
http://en.wikipedia.org/wiki/Taiji,_Wakayama

6. Conclusion and Recommendations

6.1 Conclusion

The issues of mercury in Japan that have been discussed in this report include various aspects and topics of varying complexities that it is hard to conclude this report with simple pronouncements. Instead, the author tried to incorporate some facts which seem to contain important suggestion into the four categories as; (1) Japan's mercury export; (2) Unethical acts of Chisso responsible for Minamata disease; (3) Inaction and insincerity of the Japanese Government; and (4) Findings by medical scientists.

6.1.1 Summary of issues

(1) Japan's mercury export

Although Japan has labored under the tragic history of Minamata, Japan until this day continues to export mercury. More than 100 metric tons per year are exported by Japan, mainly derived from nonferrous metal smelters and recycling of mercury containing wastes, to some developing countries and countries with economies in transition, resulting in re-circulating mercury into the global marketplace.

Much of these exports are uncontrolled and more likely that Japan has no clear idea how the mercury is used and where it ends up. The Japanese Government has explained the difficulty of storing surplus mercury as one of the reasons for the export of mercury

In the autumn of 2008, the European Union (EU) and then the United States enacted mercury export bans and took related actions to promote safe storage of excess mercury. As a major trading giant in the world with powerful influence and also as a country which intimately knows the dangers posed by mercury through its Minamata experience, Japan should address its surplus mercury through the creation of storage options and become the third global power to ban mercury export following the EU and US.

(2) Unethical acts of Chisso responsible for Minamata disease

History has shown us the brazenness and maliciousness to which Chisso Corporation polluted Minamata Bay, but also to how it dealt with the victims and its critics. The following pattern of corporate behavior speaks of the foul deeds that led to Minamata disease.

- It is uncontroversial that Chisso continued to dump methylmercury containing wastewater into Minamata bay and caused Minamata disease which was the first largest incident ever happened of food poisoning through food chain and .environmental pollution more than 50 years ago.
- The company did not acknowledge of its responsibility for Minamata disease for a long time.
- Chisso willfully concealed the result of a study for 10 years which showed the wastewater from Chisso as the cause of Minamata disease. It was only until Dr. Hosokawa who conducted the study testified the fact from his sick bed for a Minamata disease lawsuit.
- Chisso tried to delay in bringing the facts of the case to light by presenting various counterarguments mobilizing “expert scientists” as a way to cover up its

culpability.

- Chisso made a contract with victims for "sympathy money" which was criticized later as an act contrary to public policy, because it required victims not to claim anything from Chisso, even if the wastewater from Chisso would be identified in future as the cause of Minamata disease.
- The company employed violence on victims and media including photographers W. Eugene Smith and his wife.
- Chisso delayed in giving compensation to Minamata victims; and
- Chisso was allowed to escape their responsibilities through the split of Chisso into two companies under the Minamata Disease Victim Relief Law.

(3) Inaction and insincerity of the Government:

The government did not take adequate measures for Minamata disease and victims. As a result, it failed in preventing spread of the disease and caused delay of relief of victims. The following irresponsible actions speak volumes of the government's failure:

The following irresponsible actions speak volumes of the government's failure:

- It did not apply the Food Sanitation Act to ban the sale of contaminated seafood from Minamata bay at the initial stages, and this allowed the damage of Minamata disease to expand to such a large extent.
- It did not require Chisso's responsibility for the damage even after the cause was identified as wastewater from Chisso.
- When a mediation committee was set up by the government, it demanded victims' submission of a note of confirmation to accept the committee's conclusion without objection. This caused victims' split into two groups.
- The government established criteria for certification of Minamata disease which accepted only limited conditions with certain symptoms to avoid increase in number of victims to be compensated. The Osaka District Court later criticized this vacuous criteria, since the court deemed there was no medical basis for the criteria.
- The government was castigated by the Supreme Court because of its inaction and irresponsibility in preventing spread of the Minamata disease.
- It enacted the Minamata Disease Victim Relief Law which allowed Chisso to split into two companies, did not require to review the certification criteria for Minamata disease and also did not require thorough health investigation of residents in the area contaminated by the methylmercury from Chisso.

(4) Findings by medical scientists that brings new light to the injustice and death in Minamata:

- As for the Minamata disease, the high-level acute mercury poisoning was emphasized but the low level exposure, especially to fetuses and children was not paid much attention. Consequently, studies for the low level exposure were behind other countries. (Harada et al. 2009)
- Government and Chisso ignored or even tried to hush up the truth because they did not want the real damage disclosed to be bigger, in order to avoid increase in their responsibility and cost for compensation. (Harada et al. 2009)
- Methylmercury research was impaired by inappropriate attention to narrow case definitions and uncertain chemical speciation. It also ignored the link between ecotoxicity and human toxicity. As a result, serious delays affected the recognition of methylmercury as a cause of serious human poisonings in Minamata, Japan.

(Philippe Grandjean et al. 2010)

- A key experiment showing that cats developed the characteristic disease when fed effluent water from a polluting factory was suppressed by the sponsoring company, and the detailed results became available only after a delay of 40 years (Philippe Grandjean et al. 2010/Eto et al. 2001).
- Environmental health research, too, has suffered tunnel vision, forgetfulness, lack of coordination, and some of the other symptoms noted in poisoning cases. Like methylmercury poisoning itself, such abnormalities deserve preventative action. (Philippe Grandjean et al. 2010)

6.1.2 Lessons learned from Minamata

Based on the facts which contain some important suggestions as shown in the summary mentioned above, the author summarizes the 10 lessons learned from Minamata. The author wishes these lessons to be incorporated in some form into the mercury treaty.

(1) Make all information on mercury issues available to the public and communicated properly. (Freedom of Information)
(2) Do not allow the unethical acts such as made by Chisso like intentionally concealing facts of the Minamata case, delaying in bringing the facts to light by presenting various counterarguments mobilizing "expert scientists", dealing with the victims contrary to public policy and using violence from happening again. (Company's Unethical Acts)
(3) Do not allow undermine science under the name of "sound science" in order to raise doubts about inconvenient scientific evidence. (Exclusion of Undermining Science)
(4) Polluters should recognize their responsibility for mercury pollution and should be responsible for the compensation for victims of mercury pollution. (Responsibility for Pollution and Compensation)
(5) Put polluters under an obligation to clean up the pollution they caused. (Polluter-Pays Principle)
(6) Do not allow Government's inaction for existing or foreseen mercury pollution, or damage caused by mercury pollution, and insincerity to relief of victims (Government's Political Responsibility)
(7) If abnormal signs or symptoms are found or appears the health of residents' or in the environment of communities, an investigation must be made immediately to determine what has happened. Action must not be delayed under the excuse of uncertainty of the relation of cause and effect. (Precautionary Principle)
(8) Conduct thorough and continuous health and environmental investigations in mercury contaminated areas. (Health and Environmental Investigations)
(9) Raise public awareness of the risks caused by mercury, and especially ensure it for those people with potential risk from mercury exposure. (Raising Awareness)
(10) Eliminate mercury using processes and mercury containing products, where alternatives exist. (Elimination of Mercury Use)

6.2. Recommendations

Taking the lessons learned from Minamata into account and carefully considering discussions on mercury issues which are being widely made in the NGO community, the author outlines the following recommendations:

6.2.1 Mercury Export Ban and Safe Storage of All Surplus Mercury

(1) As a country with Minamata experience, Japan should become the third global power to ban mercury export following the EU and US.
(2) Japan should safely place in long-term storage all surplus mercury produced in Japan

6.2.2 Principles to be Incorporated into the Mercury Treaty

(1) Incorporate the Precautionary Principle, the Polluter Pays Principle, and other relevant Rio Principles. As was the case in Minamata, abnormal signs were found in the community but no immediate actions were taken. The Mercury Treaty should embrace the Precautionary Principle and other relevant Rio Principles, including Environmental Justice, so that pertinent authorities investigate immediately incidence of mercury pollution and immediately take the necessary action against to prevent harm to human health and the environment. (Precautionary Principle and related Rio Principles)

(2) The Mercury Treaty must also recognize vulnerable populations such as children, women of childbearing age, Indigenous peoples, island dwellers, fisher folk, the poor, workers, other disproportionately affected populations, as well as workers occupationally exposed to mercury and its compounds. (Vulnerable Populations)

(3) Reduce the global mercury supply by banning the export of mercury and related mercury compounds. (Reduce Supply of Mercury)

(4) Address the need for environmentally safe long-term mercury storage by promoting best available techniques and practices for long-term storage and the development of adequate mercury storage capacity to sequester mercury from further use. (Develop Mercury Storage)

(5) Reduce mercury demand *in products*, by prohibiting new uses of mercury and phasing-out mercury use in the manufacture of products which have appropriate safe alternatives. Also reduce mercury demand *in industrial processes* by prohibiting new uses of mercury, phasing-out existing mercury uses in processes (e.g. chlor-alkali and vinyl chloride) based upon the availability of safe and cost effective alternative processes, establishing low-use or mercury-free techniques for demand reduction in other processes (if any) currently without mercury free alternatives, protecting workers occupationally exposed to mercury and its compounds, etc. (Reduce Mercury Demand)

(6) Phasing out the trade in mercury products where mercury use in manufacturing is prohibited, so that these products cannot be dumped into the developing world. (Phase out Trade in Mercury)

(7) Reduce the use of mercury in artisanal and small scale gold mining by reducing the global mercury supply, and developing mechanisms aimed at minimizing and/or eliminating mercury use in this sector. (Address Mercury use in ASGM)

(8) Minimize, and where feasible eliminate, releases of mercury derived from priority anthropogenic sources such as coal combustion, ore processing, cement production, and waste incineration. (Address Mercury Emissions)

(9) Address the environmentally sound management of wastes containing mercury by, among others, developing and promoting best available techniques and practices for the safe collection and separation of mercury-containing wastes as well as safe treatment and storage. (Environmentally Sound Management of Mercury Waste)

(10) Provide opportunities to facilitate the effective monitoring and remediation of

contaminated sites by developing and implementing strategies and tools for identifying, assessing, prioritizing and remediating contaminated sites including a thorough health and environmental investigation. (Contaminated Sites)

(11) Raise public awareness of the risks caused by mercury, and especially ensure it for those people with high potential risk from mercury exposure. One way to do this is establish and maintain a global fish and marine mammal monitoring network for the purposes of providing appropriate advice to populations regarding the consumption of aquatic food sources and monitoring treaty effectiveness. (Raising Awareness)

(12) Include strong, fair and balanced mechanisms to support transparency in data collection and reporting systems, and monitoring treaty compliance and effectiveness. Make all information on mercury issues available to the public. (Transparency of Information)

(13) Develop mechanisms for providing information exchange, capacity building, technical assistance, and financial support to countries in need of such help. (Build Capacity to help in Treaty Implementation)

(14) Develop a just and efficient process for victims to seek redress against mercury polluters that covers compensation for victims of mercury pollution. (Responsibility for Compensation)

(15) Recognize the role and importance of public interest, health and environmental stakeholders, as well as Indigenous people. (Role of NGOs and other Stakeholders)

6.2.3. Japanese Government to clarify specifically what Japan learned from Minamata and what Japan intends to incorporate into the Mercury Treaty

The Japanese Government stated at INC1 that Japan would actively contribute to INCs so that the tragedy of Minamata would never happen elsewhere in the world. Japan also confirmed its interest in naming the treaty the Minamata Convention and it offered to host the 2013 diplomatic conference that will be held to adopt the Convention.
In light of these significant pronouncements, the Japanese Government should clarify specifically what Japan has learned from Minamata and what Japan will incorporate among them into the Mercury Treaty.

- END –

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Annex 1

Intervention by CACP at INC1 on June 11.2010 in Stockholm

Thank you very much, Mr. Chairman,

I am from Citizens Against Chemicals Pollution (CACP) in Japan.
My intervention is with respect to the proposal for calling this historic mercury treaty the "Minamata Convention" by the Japanese government.

The Minamata Convention would directly connect the tragedy of human mercury poisoning to our global efforts to protect human health and the environment. If the treaty bears this name then we must honor Minamata and learn from its lessons.

The Chisso Corporation used mercury in an industrial process. The resulting disaster teaches us that the mercury treaty must phase-out mercury-based products and processes and replace them with sustainable, non-toxic, alternatives.

The dumping of mercury into Minamata Bay by the Chisso Corporation and the additional contamination at the plant teaches us about the need for the polluter pays principle and private sector responsibility for clean-up of contaminated sites.

In Minamata more than thirty thousand people suffered horrible crippling illnesses and many had to struggle to be recognized. A treaty named after this tragedy must include measures for liability and compensation for victims and communities.

The citizens of Minamata received no information about mercury in their seafood or environment. A treaty named for Minamata must correct this situation. The treaty must honor the public's right to know. Information must be free, accessible, and understandable.

The contaminated seafood eaten by Minamata residents poisoned them as it poisons all people around the world who depend on fish for protein. A treaty named after Minamata must establish a global monitoring system for mercury in fish and humans to monitor its effectiveness.

To conclude Mr. Chair, Minamata is NOT just a name, a place or a disease. It is tragedy, pain, corporate irresponsibility, loss, and discrimination. Minamata is about people, of community. It is about their struggle to survive, and their determination to live. This is the real Minamata. We at the INC can do no less than to honor and respect the real Minamata. We can show our respect by substantial actions for a strong global treaty that eliminates all human sources of mercury.

Thank you very much.

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Annex 2

Civil Society Organizations Joint Statement on October 15, 2009 Japanese Government Needs to Enact Mercury Export Ban Act

We, civil society organizations concerned about world-wide mercury pollution strongly request the Japanese Government to enact a Mercury Export Ban Act at the earliest possible time.

At the 25th session of the Governing Council of the UN Environment Programme at Nairobi in February 2009, governments unanimously decided to launch negotiations on a legally binding international mercury treaty to deal with world-wide emissions and discharges of a pollutant that threatens the health of millions, from fetuses and babies to small -scale gold miners and their families.

They also agreed that the risk to human health and the environment was so significant that an accelerated action under a voluntary Global Mercury Partnership is needed whilst the treaty is being finalized.

The eight -point partnership plan includes:

- Boosting the world-wide capability for nations to safely store stockpiled mercury
- Reducing the supply of mercury from for example primary mining of the heavy metal
- Carrying out awareness-raising of the risks alongside projects to cut the use of mercury in artisanal mining where an estimated 10 million miners and their families are exposed
- Reducing mercury in products such as thermometers and high-intensity discharge lamps to processes such as some kinds of paper-making and plastics production.

At the Asia Mercury Storage Inception Workshop held in Bangkok in March 2009, all participating Asian countries, international groups and non-governmental organizations confirmed the necessity of safe permanent storage of excess mercury in the Asian region as one of the tools necessary to further cut mercury supply.

In the autumn of 2008, the European Union (EU) enacted mercury export bans and took related actions to promote safe storage of excess mercury. The United States followed suit later in the same year.

The rationale for putting up the EU and US export bans is the fact that in many developing countries and countries with economies in transition, majority of mercury imports from the EU or the US ends up being used unsustainably.

Despite Japan's tragic history of mercury with Minamata, it unfortunately exports more than 100 metric tons of mercury per year, mainly derived from nonferrous metal smelters and recycling of mercury containing wastes. This is shipped to some developing countries and countries with economies in transition, resulting in re-circulation of the mercury into the global marketplace.

As a major, influential trading giant in the world, and also as a country with Minamata experience, we believe that Japan should become the third global power to ban mercury export following the EU and US. We are certain that the combined EU, US and Japanese mercury export bans will have a big impact on the movement toward similar export bans

and mercury reduction worldwide, and will surely contribute to accelerating the promotion of the effective international mercury treaty to be set up by UNEP in the immediate future.

We strongly request the Japanese government to take the following action immediately.

1. To enact a Mercury Export Ban Act.
2. To safely place in long-term storage all surplus mercury produced in Japan
3. To show good leadership to realize the International Mercury Treaty and increase effort to create mercury storage capacity for Asia and the Global Mercury Partnership.

END

Signatory Organizations: Total 114.
Japanese organizations: 54
Overseas organizations: 60