

The Minamata Convention on Mercury

--Its Significance and Challenges--

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Introduction

While chemicals demonstrate their usefulness in various aspects of our lives and economic activities, including healthcare and agriculture, our experiences of pollution-related illnesses such as Minamata disease and drug-induced suffering have also demonstrated that hazardous chemicals, if used improperly or released into the environment, may have significant negative effects on human health and the environment. Many of these problems caused by chemicals were previously seen as local or regional issues. However, the evolution of scientific knowledge has gradually revealed that chemicals may affect human health and the environment as they diffuse globally through atmospheric and oceanic circulation and via human activities such as international trade. Problems with chemicals are now recognized as issues that need to be addressed globally.

Mercury is also regarded as an issue that needs to be addressed globally. Since the diffusion of mercury is extensive, even a country where mercury emissions are negligible may be negatively affected by mercury emissions from other countries. Mercury pollution of lakes, rivers and, particularly, oceans is a global issue, raising concerns about its impact on the health of aquatic life and the organisms that consume it. Actually, mercury is detected at high concentrations even in the arctic region, which is distant from the emission sites.¹⁾ Although the amount of mercury used in developed countries is decreasing, a decline in mercury prices due to the decreased demand is leading to mercury use in developing countries for purposes for which alternatives to mercury are already available. International cooperation, including financial support and technological transfer, is necessary for the promotion of anti-mercury measures in developing countries.²⁾

Based on such an understanding, an intergovernmental negotiating committee (INC) with the authority to prepare a global legally binding instrument on mercury was established according to a 2009 decision of the Governing Council of the United Nations Environment Programme (UNEP).³⁾ The INC commenced its work in 2010 to conclude negotiations prior to the 27th session of the UNEP Governing Council in 2013. The text of the Minamata Convention on Mercury⁴⁾ was agreed on by the fifth session of the INC in January 2013, and adopted by the Conference of Plenipotentiaries held in the city of Kumamoto, Japan, in October 2013. As of March 15, 2014, only the United States has ratified the Convention while many countries including Japan are preparing for the ratification of the Convention.

This paper first presents an overview of the Minamata Convention, and then discusses its features and significance, as well as the challenges to its implementation.

1. Contents of the Minamata Convention

(1) Objective of the Convention

The objective of the Minamata Convention is to protect human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds (Art. 1). In the preamble, the Convention acknowledges that mercury is a chemical of global concern owing to its long-range atmospheric transport, its persistence in the environment, its ability to bioaccumulate in ecosystems and its significant negative effects on human health and the environment. The Convention also confirms the necessity of international mercury control in recognition of health concerns, especially in developing countries, resulting from mercury exposure in vulnerable populations, especially women, children and future generations, and the effects of mercury on ecosystems and indigenous communities in the arctic region. On that basis, the Convention recognizes the substantial lessons of Minamata disease, in particular the serious health and environmental effects resulting from mercury pollution, and the need to ensure the proper management of mercury and the prevention of such conditions as Minamata disease in the future. Although the Convention does not expressly set out the polluter-pays principle or any precautionary approach, it reaffirms in the preamble the principles of the Rio Declaration adopted by the United Nations Conference on Environment and Development (Earth Summit) in 1992, which include these principles.

(2) Control of mercury supply

Each party to the Convention shall not allow any further primary mercury mining within its territory as of the effective date of the Convention for that party (Art. 3, para. 3). Each party shall only allow primary mercury mining that is already being conducted within its territory as of the effective date of the Convention for that party for a period of up to 15 years after that date (Art. 3, para. 4). Mercury from such mining shall only be used in the manufacturing of mercury-added products in accordance with Article 4, or in manufacturing processes in accordance with Article 5, and be properly disposed of in accordance with Article 11 (Art. 3, para. 4). Each party is required to endeavor to identify individual stocks of mercury or mercury compounds exceeding 50 metric tons, as well as sources of mercury supply generating stocks exceeding 10 metric tons per year that are located within its territory (Art. 3, para. 5 (a)).

(3) Control of the international trade in mercury

In the case of mercury exports and imports between parties to the Convention, each party shall only allow mercury exports to a party that has provided the exporting party with its written consent, and only for the purpose of 1) a use allowed to the importing party under this Convention or 2) environmentally sound interim storage as set forth in Article 10 (Art. 3, para. 6 (a)).

In the case of mercury exports from a party to the Convention to a non-party, the exporting party, if the above conditions are met, shall only allow mercury exports to a non-party that has provided the exporting party with its written consent, including certification demonstrating that the non-party has measures in place to ensure the protection of human health and the environment and to ensure its compliance with environmentally sound interim storage as set forth in Article 10 and the provisions on mercury wastes in Article 11 (Art. 3, para. 6 (b)). In the case of mercury imports from a non-party to a party to the Convention, the importing party shall only allow mercury imports from a non-party that has provided the importing party with certification demonstrating that the mercury to be imported is neither mercury from primary

mining conducted on or after the effective date of the Convention for the importing party nor excess mercury from the decommissioning of chlor-alkali facilities (Art. 3, para. 8).

In addition, mercury subject to such international trade controls only includes metal mercury and mixtures of mercury with a mercury concentration of at least 95% by weight (Art. 3, para. 1). After the Convention becomes effective, the Conference of the Parties (COP) shall consider whether to subject other mercury compounds to such controls in the future (Art. 3, para. 13). For the international trade in mercury wastes, Article 11 specifies the requirements (described later).

(4) Control of mercury-added products and manufacturing processes in which mercury or mercury compounds are used

Each party shall prohibit the manufacture, import or export of mercury-added products listed in Part I of Annex A (Table 1) after the phase-out date specified for those products (Art. 4, para. 1). Each party shall take specified measures for the mercury-added products (dental amalgam) listed in Part II of Annex A, such as minimizing its use, promoting the use of mercury-free alternatives and discouraging insurance programs that favor its use (Art. 4, para. 3). However, the following products are not subject to such product controls: (a) products essential for civil protection and military uses; (b) products for research, the calibration of instrumentation, or for use as a reference standard; (c) where no feasible mercury-free alternative is available, switches and relays, cold cathode fluorescent lamps (CCFLs) and external electrode fluorescent lamps (EEFLs) for electronic displays, and measuring devices; (d) products used in traditional or religious practices; and (e) vaccines containing thiomersal as a preservative. No later than 5 years after the effective date of the Convention, the COP shall review Annex A, which specifies such matters as products subject to product controls, exemptions and the phase-out date (Art. 4, para. 8).

Each party shall take measures to prevent the incorporation into assembled products of mercury-added products the manufacture, import and export of which are not allowed for that party (Art. 4, para. 5). Each party shall discourage the manufacture and distribution of mercury-added products unknown prior to the effective date of the Convention for that party, and provide the Secretariat with information on any such product (Art. 4, para. 6).

Each party shall prohibit the use of mercury or mercury compounds in the manufacturing processes listed in Part I of Annex B (Table 2) after the phase-out dates specified for these processes (Art. 5, para. 2). Each party shall take measures to restrict the use of mercury or mercury compounds in the processes listed in Part II of Annex B, including vinyl chloride monomer production, in accordance with the provisions provided therein (Art. 5, para. 3). Each party shall prohibit the use of mercury or mercury compounds in the manufacturing processes listed in Annex B in a facility that did not exist prior to the effective date of the Convention for that party (Art. 5, para. 6).

With regard to the phase-out of mercury-added products and the relevant manufacturing processes, each party may register for exemptions from the phase-out dates listed in Annex A and Annex B for a maximum of 5 years after the relevant phase-out date by notifying the Secretariat in writing on becoming a party to the Convention (Art. 6, paras. 1 and 5). The COP may, at the request of a party, decide to extend an exemption for a maximum of 5 years (Art. 6, para. 6). However, no party may have an exemption in effect at any time after 10 years after the phase-out date for a product or process listed in Annex A or B (Art. 6, para. 9).

Table 1 Part I of Annex A: Mercury-added products to be phased out under the Convention

Mercury-added products	Date after which the manufacture, import and export shall not be allowed (phase-out date)
Batteries (except button zinc silver oxide batteries with a mercury content of < 2% and button zinc air batteries with a mercury content of < 2%)	2020
Switches and relays (except very-high-accuracy capacitance and loss measurement bridges and high-frequency radio frequency switches and relays in monitoring and control instruments with a maximum mercury content of 20 mg per bridge, switch or relay)	2020
Compact fluorescent lamps (CFLs) for general lighting purposes that are ≤ 30 watts with a mercury content exceeding 5 mg per lamp burner	2020
Linear fluorescent lamps (LFLs) for general lighting purposes: (a) Triband phosphor < 60 watts with a mercury content exceeding 5 mg per lamp; or (b) Halophosphate phosphor ≤ 40 watts with a mercury content exceeding 10 mg per lamp	2020
High-pressure mercury vapor (HPMV) lamps for general lighting purposes	2020
Cold cathode fluorescent lamps (CCFLs) and external electrode fluorescent lamps (EEFLs) for electronic displays: (a) Short length (≤ 500 mm) with a mercury content exceeding 3.5 mg per lamp; (b) Medium length (> 500 mm and ≤ 1,500 mm) with a mercury content exceeding 5 mg per lamp; or (c) Long length (> 1,500 mm) with a mercury content exceeding 13 mg per lamp	2020
Cosmetics (with a mercury content exceeding 1 ppm)	2020
Pesticides, biocides and topical antiseptics	2020
The following non-electronic measuring devices (except non-electronic measuring devices installed in large-scale equipment or those used for high-precision measurement, where no suitable mercury-free alternative is available): (a) Barometers, (b) hygrometers, (c) manometers, (d) thermometers and (e) sphygmomanometers	2020

Table 2 Part I of Annex B: Manufacturing processes to be phased out under the Convention

Manufacturing processes in which mercury or mercury compounds are used	Phase-out date
Chlor-alkali production	2025
Acetaldehyde production in which mercury or mercury compounds are used as a catalyst	2018

(5) Control of artisanal and small-scale gold mining (ASGM)

Artisanal and small-scale gold mining (ASGM) in which a mercury amalgamation is used to extract gold from ore is the largest source of mercury emissions into the atmosphere, responsible for 37% of the world's total emissions in 2010.⁵⁾ Each party with mercury-used ASGM conducted in its territory shall take steps to reduce, and where feasible eliminate, the use of mercury and mercury compounds in, and the emissions and releases into the environment of mercury from such ASGM (Art. 7, paras. 1 and 2). Each party is required to notify the Secretariat and develop and implement a national action plan in accordance with Annex C if the party determines that ASGM in its territory is more than insignificant (Art. 7, para. 3).

(6) Control of mercury emissions into the atmosphere

The world's total anthropogenic emissions of mercury into the atmosphere in 2010 are estimated at 1,960 t.⁶⁾ This volume, in comparison with the total supply (3,040-3,860 t) and supply from the primary mining (1,350-1,600 t) of mercury in 2005,⁷⁾ and in consideration of the possibility of extensive environmental pollution with mercury transferred by atmospheric circulation, suggests that mercury emissions into the atmosphere need the most intensive

control on a global basis. Next to ASGM, coal combustion emits 474 t (304-678 t) of mercury, which accounts for 24% of the total mercury emissions into the atmosphere.⁸⁾ The amount of mercury emissions from coal-fired power plants in China in 2005 is estimated at 108.6 t on average (65.2-195.4 t), indicating that coal-fired power plants in China are a significant source of global mercury emissions.⁹⁾ The Convention, if its control of mercury emissions into the atmosphere encourages a power source switch from coal-fired power generation to other sources, can bring about the effect of improving the situation of local air pollution while reducing greenhouse gas emissions. In negotiations for the Convention, there were controversies between developed countries, specifically the United States, which aimed to make the control of mercury emissions legally binding, and developing countries, including China and India, which agreed to develop a national plan but found it premature to set a national goal and sought to confine the control of mercury emissions to within the range of voluntary regulations.

In connection with the point sources of mercury emissions into the atmosphere listed in Annex D, which include coal-fired power plants, coal-fired industrial boilers, smelting and roasting processes used in the production of non-ferrous metals, waste incineration facilities and cement clinker production facilities, each party, for its new sources (the construction or substantial modification of which is commenced after the effective date of the Convention for that party), shall require the use of best available techniques (BATs) and best environmental practices (BEPs) to control and, where feasible, reduce emissions, as soon as practicable but no later than 5 years after the effective date of the Convention for that party. A party may use the emission limit values that are consistent with the application of BATs (Art. 8, paras. 1, 2 and 4). For its existing sources, each party shall include in any national plan, and shall implement one or more of the specified measures, including the setting of a quantified goal for controlling/reducing emissions, the setting of emission limit values and the use of BATs and BEPs, as soon as practicable but no more than 10 years after the effective date of the Convention for that party (Art. 8, para. 5). Parties may adopt different measures in respect of different source categories; however, the objective shall be for those measures applied by a party to achieve reasonable progress in reducing emissions over time (Art. 8, para. 6). Moreover, each party shall submit a national plan to the COP within 4 years of the effective date of the Convention for that party (Art. 8, para. 3), and shall establish within 5 years after this effective date of the Convention, and maintain thereafter, an inventory of emissions from relevant sources (Art. 8, para. 7).

(7) Control of mercury releases to land and water

Article 9 concerns controlling releases of mercury and mercury compounds to land and water from the relevant point sources not addressed in other provisions of the Convention (Art. 9, para. 1). Each party shall, no later than 3 years after the effective date of the Convention for that party and on a regular basis thereafter, identify the relevant point source categories (Art. 9, para. 3), and shall take measures to control releases from relevant sources (Art. 9, para. 4). The measures shall include one or more of the specified measures, including the setting of release limit values and the use of BATs and BEPs, as appropriate (Art. 9, para. 5). Each party shall submit a national plan to the COP within 4 years of the effective date of the Convention for that party (Art. 9, para. 4), and shall establish within 5 years after this effective date of the Convention and maintain thereafter, an inventory of releases from relevant sources (Art. 9, para. 6).

(8) Environmentally sound interim storage of mercury and the disposal of mercury wastes

Each party shall take measures to ensure that the interim storage of mercury and mercury compounds, excluding mercury wastes, is undertaken in an environmentally sound manner,

taking into account any guidelines, and in accordance with any requirements, adopted by the COP (Art. 10, paras 1 and 2).

For the purposes of the Convention, “mercury wastes” means substances or objects (a) consisting of mercury or mercury compounds, (b) containing mercury or mercury compounds, or (c) contaminated with mercury or mercury compounds, in a quantity above the relevant thresholds defined by the COP, that are disposed of, intended to be disposed of, or required to be disposed of by the provisions of a national law or the Convention (Art. 11, para. 2). Each party shall take appropriate measures so that mercury waste is managed in an environmentally sound manner, taking into account the guidelines developed under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal¹⁰⁾ and in accordance with any requirements adopted by the COP. Each party shall also take appropriate measures so that mercury waste is only recovered, recycled, reclaimed or directly re-used for a use allowed to a party under the Convention or for environmentally sound disposal. Each party that is also a party to the Basel Convention shall take appropriate measures so that mercury waste is not transported across international boundaries except for the purpose of environmentally sound disposal in conformity with Article 11 and with the Basel Convention. In circumstances where the Basel Convention does not apply to transport across international boundaries, a party shall allow such transport only after taking into account the relevant international rules, standards and guidelines (Art. 11, para. 3).

(9) Contaminated sites

Each party shall endeavor to develop appropriate strategies for identifying and assessing sites contaminated by mercury or mercury compounds (Art. 12, para. 1). Any actions to reduce the risks posed by such sites shall be performed in an environmentally sound manner incorporating, where appropriate, risk assessment (Art. 12, para. 2).

(10) Health-related provisions

The Minamata Convention provides for measures against the health risk of mercury exposure (Art. 16). Parties are encouraged to promote the development and implementation of strategies and programs to identify and protect populations at risk, particularly vulnerable populations, as well as to promote appropriate healthcare services for prevention, treatment and care for populations affected by exposure to mercury or mercury compounds.

(11) Institutional arrangements

The Minamata Convention has the COP and the Secretariat in place as its sub-organs (Arts. 23 and 24). In addition to a procedure for settling disputes between parties (Art. 25), a committee to promote the implementation of and compliance with the Convention has been established as a subsidiary body of the COP (Art. 15). Given that prior treaties for controlling chemicals, including the Stockholm Convention on Persistent Organic Pollutants,¹¹⁾ agreed to install but failed to operate a procedure for compliance due to prolonged negotiations in developing the procedure, the Minamata Convention has the outlines of the committee and procedure defined in advance. To encourage the implementation of the Convention in developing countries, the Convention has a financing mechanism in place (Art. 13) and provides for capacity-building, technical assistance and technology transfer (Art. 14).

Each party may develop and execute an implementation plan for meeting the obligations under the Convention (Art. 20). The COP shall evaluate the effectiveness of the Convention, beginning no later than 6 years after the effective date of the Convention and periodically

thereafter (Art. 22). The Convention shall enter into force on the 90th day after the date of ratification of the 50th party (Art. 31).

2. Features and Significance of the Minamata Convention

(1) Mercury control as a global challenge

The adoption of the Minamata Convention represents a strong common recognition of the entire international community that a reduction in mercury risks is a global challenge. As mentioned earlier, the accumulation of scientific knowledge has revealed the diffusion of mercury beyond international boundaries and the expansion of mercury risks, making people aware of the scale and significance of the issue and thus contributing to the development of such a common recognition. The experience of Minamata disease has warned various countries of mercury risks and served as an important emotional prop among the negotiating parties for the Convention. In developed countries, measures against the negative effects and risks of mercury have been implemented to varying degrees through domestic mercury controls. In developing countries, the use of mercury has increased while mercury control at the levels that have been applied in developed countries has not necessarily been introduced. As a result, the health and environmental risks of mercury exposure tend to emerge most markedly in developing countries. The Minamata Convention is expected to lead to an international consensus on the minimum rules for mercury controls, thereby raising the levels of mercury control in the parties, particularly in developing countries, and internationally support the implementation of anti-mercury measures in developing countries.

(2) The comprehensive approach of the Minamata Convention

One of the features of the Minamata Convention is that it employs a comprehensive approach in which mercury is controlled to reduce its negative effects on the environment and human health via all exposure routes throughout its life cycle, including mining, product, product manufacturing, international trade, emissions into the atmosphere, releases to land and water, and final disposal. For instance, the Minamata Convention has considerable similarities to the Stockholm Convention, which was referenced as a model treaty in negotiations for the Minamata Convention. However, while the Stockholm Convention leaves most of the measures to be taken to the discretion of each party to the convention, the Minamata Convention provides more specific international rules for the respective exposure routes, albeit to varying degrees.

(3) Product and international trade control

Product and international trade control is part of a significant consensus in the Minamata Convention. As described above, mercury emissions into the atmosphere is one of the exposure routes considered to be of the highest priority for taking action from the viewpoint of reducing the global risks of mercury. In particular, mercury-added products contribute considerably to mercury emissions to the atmosphere and water. In 2010, the contribution of waste products to the anthropogenic emissions of mercury into the atmosphere was 5%, and their contribution to mercury emissions into waters was about 90 t, the second largest following the production of non-ferrous metals.¹²⁾ Mercury risks may expand through international trade if mercury-added products are traded across international boundaries and improperly managed and disposed of. It is therefore critical in reducing mercury risks to minimize the use of mercury in products.

Today, as products are traded globally across international boundaries, control of the international trade in products is indispensable for improving the effectiveness of product controls. If Country A where mercury controls are in place imports mercury-added products

from Country B with no such controls, the effectiveness of the mercury controls in the importing country may be impaired. Furthermore, this may distort global competitiveness as the products of Country B, which are less expensive due to the lack of controls on mercury content, become competitive in global markets. It is therefore important in improving the effectiveness of product controls to incorporate international trade controls in the Convention.

For businesses, product and manufacturing process control means the restriction of mercury use in products and manufacturing processes. On the other hand, it also means the expansion of the markets for mercury-free or mercury-alternative products and technologies. While developed countries have already introduced mercury controls at the level required by the Minamata Convention, developing countries, including China, have yet to introduce such controls. Therefore, as developing countries ratify and implement the Convention, businesses with mercury-free or mercury-alternative products and technologies may have a chance to benefit from the market expansion.

3. Immediate Challenges to the Minamata Convention

(1) Early entry into force and the development of effective implementation rules

Ratification by at least 50 countries is necessary for the Minamata Convention to become effective. The point is to make the Convention effective at an early date, and to encourage as many countries as possible to ratify the Convention, particularly developing countries where adequate mercury controls have yet to be introduced.

Although the international consensus on mercury controls in the Convention is meaningful, the level of control by the Convention is only the greatest common denominator agreed on by the parties as a result of balancing their conflicting interests. This is not specific to the Minamata Convention, but is the fate of all international treaties. It is common for an environmental treaty to have an agreed level of control that does not fulfill the level necessary for resolving relevant environmental issues. In this respect, environmental treaties, including the Minamata Convention, are always incomplete with regards to issue resolution. Therefore, a continuing future challenge to the parties to the Convention will be to make it effective at an early date, then accumulate consensus decisions among them under the COP's initiative, and develop more effective controls while supervising and assessing the implementation of these consensus decisions.

Although the Minamata Convention provides fairly detailed international rules, there remains technical or other pending issues on which the parties failed to reach a consensus. The Conference of Plenipotentiaries held in Kumamoto adopted a resolution to continue the INC, where negotiations for the Convention had been conducted, and work on 1) issues to be prepared (e.g., application forms and necessary information for an exemption), 2) issues to be intensively discussed and provisionally adopted by the INC for a final decision by the COP1 (e.g., mercury export/import procedures, guidance on BATs and BEPs for emissions to the atmosphere), and 3) issues required to be supported by the INC according to their priority (e.g., guidelines for environmentally sound interim storage, thresholds for the definition of mercury wastes) during the interim period lasting until the Convention becomes effective.¹³⁾ Making rules on these issues will be an immediate challenge to the Convention for its effective operation and implementation.

(2) Challenges to Japan's ratification and implementation of the Convention

Japan has so far embraced the “full security principle,” under which a country enters into a treaty after the performance of all its international obligations under the treaty are fully secured, when it ratifies the environmental treaty.¹⁴⁾ What measures should be taken to secure the performance of such obligations depends largely on the government’s discretion in accordance with the provisions of the treaty. However, the arrangement of domestic laws and ordinances is necessary in some cases. For instance, when a treaty requires a specific act by certain entities, it is necessary for domestic legislation to secure their performance of the act as an obligation. When a treaty requires the criminalization of acts in breach of the treaty, or the application of penal rules to such acts, it is necessary in Japan under the legality principle for domestic legislation to provide for such criminal acts and the applicable penalties.

As stated in its provisions, the Minamata Convention requires each party to restrict the export and import of mercury so as to control the international trade in mercury, to discontinue the manufacturing and export/import of relevant products within a specified period for product control, and to prohibit relevant processes within a specified period for manufacturing process control. Control by domestic legislation will be necessary to ensure the implementation of these provisions. Both the prohibition of the export and import of ozone-depleting substances to and from non-parties under the Montreal Protocol on Substances that Deplete the Ozone Layer and the restriction of the export and import of hazardous wastes under the Basel Convention are implemented through domestic legislation. As for mercury emissions into the atmosphere, discussions on domestic measures to be taken to control mercury emissions under the Minamata Convention will be necessary, given that no standard for mercury emissions is provided for in the Air Pollution Control Act.

Compared with other environmental treaties, the Minamata Convention has specific challenges in its implementation in Japan. As described above, the Convention employs a “comprehensive approach,” providing for mercury control measures for each exposure route. Japan already has different laws and ordinances applicable to mercury control, which means that there are different laws/ordinances and presiding ministries that will require adjustments during negotiations for the ratification of the Convention. For example, mercury risks to the environment will be addressed by the Ministry of the Environment, product control in general by the Ministry of Economy, Trade and Industry, and health issues by the Ministry of Health, Labour and Welfare. How to make adjustments among the different presiding ministries to ensure the consistency of Japan’s domestic mercury control will be a challenge in securing the performance of obligations under the Convention. Another specific challenge in implementing the Convention in Japan is that, as mentioned above, the development of international implementation rules and guidelines as required by the Convention will commence prior to its entry into force. It is therefore necessary to build systems for implementing the Convention in Japan in view of the progress of negotiations for such international implementation rules.

4. Conclusion

With the adoption of the Minamata Convention, the international community has set the starting point for international mercury control. However, it is hard to deny that the Convention, an agreement on international rules that represent the greatest common denominator acceptable to all parties, including developing countries, is inadequate to resolve the issue of mercury risks. Even after the Convention becomes effective, each party should make efforts to raise the level of the international consensus on mercury control through cumulative negotiations while developing the control and implementation capabilities of the developing countries. In certain

provisions, the Convention appears to have failed to reach a consensus on detailed international rules, and left the specific methods and levels of mercury control to the discretion of each party. In light of these characteristics and achievements of the Convention, the preparations for Japan's ratification of the Convention should not end up securing the minimum performance of its obligations under the Convention, but serve as an opportunity for both the government and the public to reconsider how mercury should be controlled in Japan and what political measures should be implemented to achieve such control. Further, it is also necessary to discuss the means of providing support for developing countries that become sources of mercury emissions as the use of mercury expands, especially ways of cooperation to promote mercury control in Asia.

Notes:

- 1) UNEP, *Global Mercury Assessment 2013: Sources, Emissions, Releases and Environmental Transport* (2013), p.28.
- 2) UNEP Chemicals, *Global Mercury Assessment* (2002), p.v, para. 14.
- 3) UNEP Governing Council Decision 25/5: Chemicals management, including mercury, para. 25 and later.
http://www.chem.unep.ch/mercury/GC25/GC25Report_English_25_5.pdf (Referenced on March 15, 2014) Unless otherwise noted, the websites below were referenced on the same date as above.
- 4) The details of the Minamata Convention, including its English text as adopted, are available at the following website:
<http://www.mercuryconvention.org/Home/tabid/3360/Default.aspx> (A provisional Japanese translation by the government is available at the following website:
<http://www.mofa.go.jp/mofaj/files/000016594.pdf>)
- 5) Same document as Note 1 UNEP, pp.9-10.
- 6) Same document as Note 1 UNEP, pp.9-11.
- 7) UNEP, *Summary of Supply, Trade and Demand Information on Mercury* (2006).
- 8) Same document as Note 1 UNEP, pp.9-10.
- 9) INC 2 Meeting Document, Reducing Mercury Emissions from Coal Combustion in the Energy sector (2011).
- 10) Adopted in March 1989 and effective since May 5, 1992; Japan acceded to the convention on September 17, 1993.
- 11) Adopted in May 2001 and effective since May 17, 2004; Japan acceded to the convention on August 30, 2002.
- 12) Same document as Note 1 UNEP, pp.9-11, 24.
- 13) Resolutions adopted by the Conference of Plenipotentiaries on the Minamata Convention on Mercury, Annex I of Final Act of the Conference of Plenipotentiaries on the Minamata Convention on Mercury, UNEP (DTIE)/Hg/CONF/4, 11 October 2013, pp.5-8.
- 14) Yukari Takamura, *Domestic Implementation of Environmental Treaties: From the Viewpoint of International Law*, Autumn 2013 issue of Ronkyu Jurist, pp. 71-72 (2013).