AT A GLANCE: MINAMATA CONVENTION ON MERCURY

Why develop an international treaty on mercury?

The Minamata Convention on Mercury was the first new global Convention on environment and health adopted for close to a decade. It is named after the place in Japan where, in the mid-20th century, mercury-tainted industrial wastewater poisoned thousands of people, leading to crippling symptoms that became known as the "Minamata disease".

Mercury is a highly toxic heavy metal that poses a global threat to human health and the environment. Together with its various compounds, it has a range of severe health impacts, including damage to the central nervous system, thyroid, kidneys, lungs, immune system, eyes, gums and skin. Victims may suffer memory loss or language impairment, and the damage to the brain cannot be reversed. There is no known safe exposure level for elemental mercury in humans, and effects can be seen even at very low levels. Fetuses, newborn babies and children are amongst the most vulnerable and sensitive to the adverse effects of mercury. Mercury is transported around the globe through the environment, so its emissions and releases can affect human health and environment even in remote locations.

No country can control transboundary effects of mercury alone. It can be effectively tackled only through international cooperation. With the adoption of the Minamata Convention, Governments from around the world have taken a major step in dealing with worldwide emissions and releases of mercury, which threaten the environment, and the health of millions.

Why is mercury present in our environment and how are we exposed to it?

Mercury is a naturally occurring element. It can be released to the environment from natural sources – such as weathering of mercury-containing rocks, forest fires, volcanic eruptions or geothermal activities – but also from human activities. Of the estimated 5500-8900 tons of mercury currently emitted and re-emitted each year to the atmosphere, only about 10 per cent is accounted to be from natural sources[1].

Due to its unique properties, mercury has been used in various products and processes for hundreds of years. Currently, it is mostly utilised in industrial processes that produce chlorine and sodium hydroxide (mercury chlor-alkali plants) or vinyl chloride monomer for polyvinyl chloride (PVC) production, and polyurethane elastomers. It is extensively used to extract gold from ore in artisanal and small-scale gold mining. It is contained in products such as electrical switches (including thermostats), relays, measuring and control equipment, energy-efficient fluorescent light bulbs, batteries and dental amalgam. It is also used in laboratories, cosmetics, pharmaceuticals, including in vaccines as a preservative, paints, and jewellery.

[1] UNEP, Global Mercury Assessment 2013; Sources, Emissions, Releases, and Environmental Transport

Mercury is also released unintentionally from some industrial processes, such as coal-fired power and heat generation, cement production, mining and other metallurgic activities such as non-ferrous metals production, as well as from incineration of many types of waste.
Once released, mercury persists in the environment where it circulates between air, water, sediments, soil and biota in various forms. Mercury can be transported long distances in the atmosphere. It can also be incorporated by microorganisms and converted to methylmercury, and then concentrated up the food chain.

Exposure to mercury occurs mainly through ingestion of fish and other marine species contaminated with methylmercury, its most toxic and bio accumulative form. People may also be exposed to elemental or inorganic mercury through inhalation of mercury vapour during occupational activities or spills or through direct contact from mercury use.

What are the objectives and the main obligations of the Minamata Convention?

The objective of the Minamata Convention is to protect the human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds. It contains, in support of this objective, provisions that relate to the entire life cycle of mercury, including controls and reductions across a range of products, processes and industries where mercury is used, released or emitted. The treaty also addresses the direct mining of mercury, its export and import, its safe storage and its disposal once as waste. Identifying populations at risk, boosting medical care and better training of health-care professionals in identifying and treating mercury-related effects will also contribute to implementing the Convention.

The Convention is made of 35 Articles and 5 Annexes, which can be divided into four main categories:

1. Operational provisions – describing the obligations for Parties to reduce anthropogenic emissions and releases of mercury and mercury compounds to the environment, with controls on all their lifecycle stages:
    - Controls on mercury supply sources and trade (Article 3)
    - Phase-out and phase-down of mercury use in products and processes (Articles 4, 5 and 6, Annexes A and B)
    - Controls on artisanal and small scale gold mining where mercury is used (Article 7, Annex C)
    - Controls on air emissions and releases to land and water (Articles 8 and 9, Annex D)
    - Storage, waste and contaminated sites (Articles 10, 11 and 12)

2. Support to Parties – with articles relating to:
    - A financial mechanism, which includes the Global Environment Facility Trust Fund and a specific international Programme to support capacity-building and technical assistance (Article 13)
    - The provision of capacity building, technical assistance and technology transfer (Article 14)
    - The establishment of an Implementation and Compliance Committee (Article 15)

3. Information and awareness raising articles, covering:
    - Health aspects (Article 16)
    - Information exchange (Article 17)
    - Public information, awareness and education (Article 18)
    - Research, development and monitoring (Article 19)
    - Implementation plans (Article 20)

4. Administrative matters:
    - Reporting (Article 21)
    - Effectiveness evaluation (Article 22)
    - Conference of the Parties (Article 23)

- Secretariat, hosted by UNEP (Article 24)
- Procedures such as the settlement of disputes, amendments to the Convention, the adoption and amendment of annexes, the right to vote, signature, ratification (or acceptance, approval or accession), entry into force, reservations, withdrawal, depositary, authentic texts (Articles 25 to 35, Annex E).

The text of the Minamata Convention is available in Arabic, Chinese, English, French, Russian and Spanish at: ***http://mercuryconvention.org/Convention.*** The six language versions of the Convention text are equally authentic.

How was the Minamata Convention developed?

Since 2001, UNEP has been actively engaged in bringing the science of mercury poisoning to policy implementation. In 2001 indeed, the Executive Director of UNEP was invited by its Governing Council to undertake a global assessment of mercury and its compounds, including the chemistry and health effects, sources, long-range transport, as well as prevention and control technologies relating to mercury. In 2003, the Governing Council considered this assessment and found that there was sufficient evidence of significant global adverse impacts from mercury and its compounds to warrant further international action to reduce the risks to human health and the environment from their release to the environment. Governments were urged to adopt goals for the reduction of mercury emissions and releases and UNEP initiated technical assistance and capacity-building activities to meet these goals.

A mercury programme to address the concerns posed by mercury was established and further strengthened by governments in 2005 and 2007 with the establishment of the UNEP Global Mercury Partnership. In 2007, the Governing Council concluded that the options of enhanced voluntary measures and new or existing international legal instruments should be reviewed and assessed in order to make progress in addressing the mercury issue.

In February 2009, the Governing Council of UNEP decided to develop a global legally binding instrument on mercury. The work to prepare this instrument has been undertaken by an intergovernmental negotiating committee that met in five sessions from June 2010 until January 2013. The fifth session of the intergovernmental negotiating committee agreed to the final draft text of the Minamata Convention on Mercury, which was adopted and opened for signature for one year at a Diplomatic Conference (Conference of Plenipotentiaries), held in Kumamoto, Japan, from 10 to 11 October 2013.

You can read the full history of the negotiations process at:
http://mercuryconvention.org/Negotiations/History

Information on the work by the UNEP Global Mercury Partnership may be found at:
www.unep.org/chemicalsandwaste/global-mercury-partnership

When did the Convention become legally binding?

The Minamata Convention entered into force on 16 August 2017, on the 90th day after the date of deposit of the 50th instrument of ratification, acceptance, approval or accession. For each State or regional economic integration organization that ratifies, accepts or approves the Convention or accedes thereto after that date, the Convention will enter into force on the ninetieth day after the date of deposit by such State or regional economic integration organization of its instrument of ratification, acceptance, approval or accession.

An instrument deposited by a regional economic integration organization is not be counted as additional to those deposited by member States of that organization.

The updated list of signatories and of countries having deposited their instruments of ratification, acceptance, approval or accession is available at: ***http://mercuryconvention.org/Countries***

How will we know if the Convention is meeting its objective?

The Convention contains three important elements that will contribute to identifying whether and how it is meeting its objective.

First an Implementation and Compliance Committee is established as a subsidiary body to the Conference of the Parties (COP) to promote the implementation of the Convention and review compliance with all its provisions. Article 15 of the Convention specifies the role, composition and functions of this Committee.

Second, the Convention embeds in its Article 21 the requirement for Parties to report, to the COP through the Secretariat, on the measures they have taken to implement the provisions of the Convention, on the effectiveness of these measures and the possible challenges in meeting the objectives of the Convention.

Third, the Convention sets up a process for the evaluation of its effectiveness, laid down in its Article 22. The COP is tasked with this evaluation mission, beginning no later than six years after the date of entry into force of the Convention and periodically thereafter. The evaluation will be conducted on the basis of available scientific, environmental, technical, financial and economic information. Among the information to be considered by the COP in its evaluation, the article specifically notes the reports and monitoring information on the presence and movement of mercury and mercury compounds in the environment as well as trends in levels of mercury and mercury compounds observed in biotic media and vulnerable populations; reports submitted by Parties; information and recommendations provided pursuant to Article 15 on the Implementation and Compliance Committee; and reports and other relevant information on the operation of the financial assistance, technology transfer and capacity-building arrangements put in place under the Convention. In addition several articles of the Convention have a specific requirement for the COP to monitor a particular issue.

Finally, if the COP decides more action is required to address an issue, it can use a variety of options, including adding or adjusting annexes, providing guidelines on technical issues or considering moving towards more defined targets, for example shifting from phasing down a mercury-added product to phasing out with a date. There are indeed provisions for the Convention text to be amended, or an annex adjusted, with such trigger already embedded either in the text itself or to be initiated by a Party.