

Overview of the Implementation of the Minamata Convention and Future Challenges

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Abstract

The Minamata Convention on Mercury was adopted at a diplomatic conference in October 2013, entering into force in August 2017. It had 113 parties at the time of the third meeting of the Conference of the Parties (COP) in November 2019. The first three COP meetings were held yearly, establishing rules and guidance needed for implementing the Convention. The objective of the Convention is to protect human health and the environment from anthropogenic emissions and releases of mercury. The largest source of anthropogenic mercury emissions to air is artisanal and small-scale gold mining (38%), 75% of which is from parties to the Convention. Their efforts to develop and implement national action plans are expected to curb this. Coal combustion and other point sources contribute to 47% of global emissions, 82% of which is from parties. The parties have legal obligations to take emission control measures as soon as practicable. Minamata Convention Initial Assessments being carried out in 111 countries provide critical information on parties' needs that will support targeted assistance for the effective implementation of the Convention by developing countries. Work towards the effectiveness evaluation, which is to be done six years after entry into force, started at COP-1 in 2017, and this will be one of the main agenda items for COP-4 in 2021. The interface between science and policy is being strengthened through groups of experts nominated by parties and scientific meetings such as the International Conference on Mercury as a Global Pollutant. The views expressed herein are those of the author and do not necessarily reflect the views of the United Nations.

Key words : effectiveness evaluation, heavy metal, mercury, Minamata Convention, UNEP

1. Background

Mercury is one of the ten chemicals of major health concern identified by the World Health Organization (WHO). It exists in various chemical forms—elemental, inorganic and organic, with different levels of toxicity to the nervous, digestive, immune and other systems. One of the most toxic forms of mercury is methylmercury, which caused Minamata Disease in Japan in the 1950s and 1960s with devastating neurological and developmental effects on those who consumed fish from Minamata Bay and the surrounding seas, and those exposed prenatally.

Mercury pollution is of a global nature. Once emitted to the environment, it travels a long distance through the atmosphere, deposits on land and water and is re-emitted to the atmosphere. It is methylated in the ecosystem, bioaccumulates in organisms and through the food chain, and finds its way into human body through the diet. Although mercury is a naturally occurring element, the United Nations Environment Programme (UNEP) (2019) estimates that the total atmospheric concentration of mercury is 450 percent higher than the natural level,

including the contribution of historical anthropogenic emissions.

When industrialized countries started to tackle widespread environmental pollution in 1960s and 1970s, mercury was one of the target pollutants. The Organization for Economic Cooperation and Development issued a Council Recommendation on Measures to Reduce all Man-Made Emissions of Mercury to the Environment in 1973. WHO selected mercury for its first Environmental Health Criteria series published in 1976.

In the 1990s, the international community started to address mercury pollution as a transboundary and global issue. The Aarhus Protocol on Heavy Metals under the Convention on Long-range Transboundary Air Pollution of the United Nations Economic Council for Europe was adopted in 1998. UNEP published its first Global Mercury Assessment in 2002, which presented information on the chemistry, toxicity and risks of mercury, its production and use, environmental pathways, and preventive and control measures. Based on the key findings of the Assessment, the Governing Council of

UNEP agreed at its 22nd meeting in 2003 that there was sufficient evidence of significant global adverse impacts from mercury to warrant further international action to reduce the risks to human health and the environment. The 23rd Governing Council in 2005 established a Global Mercury Partnership as a non-legally-binding mechanism to reduce the environmental and health risks of mercury. UNEP convened meetings of the open-ended working group on mercury in 2007 and 2008, and based on the outcome of these meetings, the 25th Governing Council in 2009 decided to elaborate a legally binding instrument on mercury, and established an intergovernmental negotiating committee (INC) with a mandate to prepare a global legally binding instrument by 2013. This timeline was comparable with that of a similar committee for persistent organic pollutants (POPs), which was established in 1997 in view of the global nature of POPs, and finalized a draft for the Stockholm Convention on POPs in 2001.

UNEP convened an ad hoc open ended working group meeting to prepare for the INC in 2009. The INC, through five meetings, finalized the draft for the Minamata Convention on Mercury in January 2013. The Convention was formally adopted at the Conference of Plenipotentiaries held in Kumamoto, Japan on October 10 and 11, 2013. This meeting was preceded by a ceremonial opening held in Minamata City on October 9, 2013. The Convention was opened for signature on October 10, and was signed by 91 countries and the European Union in Kumamoto during the first two days. It was open for signature until October 9, 2014, and the final number of signatories became 128. The Convention entered into force on August 16, 2017, 90 days after the 50th instrument of ratification, acceptance, approval or accession was deposited. At the time of the third meeting of the Conference of the Parties (COP) in November

2019, the Convention had 113 parties.

The Minamata Convention consists of a preamble, 35 articles and 5 annexes. Its preamble recognizes the substantial lessons of Minamata disease, and the need to ensure proper management of mercury and the prevention of such events in the future. Article 1 sets out the objective of the Convention to protect human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds. Articles 3 to 12 establish the obligation of parties to control the whole life cycle of mercury—from its supply to trade, use, emissions, releases, storage and disposal, and the management of contaminated sites (Fig. 1). Articles 13 to 15 provide for measures to support the parties in implementing the Convention. Articles 16 to 20 relate to information and awareness raising. Articles 21 to 35 concern administrative and procedural matters regarding the Convention.

2. Overview of Implementation

2.1 Development of Tools and Guidance for Implementation

After the adoption of the Convention, the INC met twice to prepare for the entry into force and implementation of the Convention. After the Convention entered into force, the first meeting of its COP was held in Geneva in September 2017. Building on the preparatory work by INC, COP-1 adopted rules and guidance for implementing the Convention, including rules of procedure for COP, financial rules and guidance on the financial mechanism, leaving a few unsettled issues in brackets. It also adopted technical guidance and formats on mercury trade, identification of mercury stocks, artisanal and small-scale gold mining (ASGM), mercury emissions and national reporting.

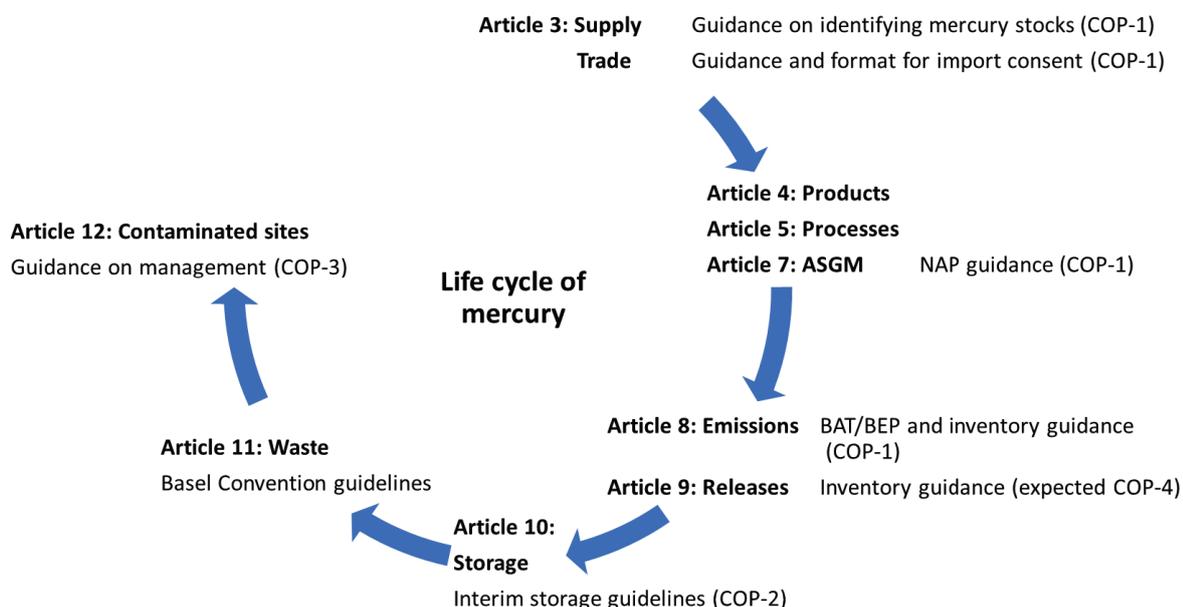


Fig. 1 Control measures and technical guidance under the Minamata Convention

The rules of procedure stipulate that the first three COP meetings were to be held on a yearly basis, and thereafter every two years. The second and third COP meetings were held in November 2018 and November 2019 respectively, and agreed on guidance documents on the interim storage of mercury and management of contaminated sites. COP-4 will be held in Bali, Indonesia in November 2021.

Work on technical issues continued between the COP meetings. A group of technical experts on mercury waste thresholds was established after COP-2. Building on the group's report, COP-3 agreed on a definition of wastes consisting of and containing mercury. COP-3 did not agree between two approaches to define waste contaminated with mercury—one based on total mercury content in waste and the other based on leaching potential. The group will continue to work towards COP-4. A group on mercury releases into water and land was established after COP-2, and it will also continue to work on guidance on the releases inventory. The group on effectiveness evaluation submitted a proposal to COP-3 for the framework for the first evaluation to be done in 2023. COP-4 will discuss the arrangements for the first evaluation further.

2.2 Support to Parties

Article 13 requires each party to provide resources for implementing the Convention, through domestic, bilateral and multilateral funding, as well as private sector involvement. The financial mechanism defined in that article to support developing country parties and parties with economies in transition in implementing their obligations under the Convention includes two elements: the Global Environment Facility (GEF) and Specific International Programme to support capacity-building and technical assistance (SIP).

GEF was supporting mercury-related projects even before it was nominated as part of the financial mechanism of the Minamata Convention. During its 5th replenishment negotiations in May 2010, it agreed to set aside USD 10 million of resources for assessment-type activities to support the development of a mercury agreement, and an additional USD 10 million was authorized for the funding of an early action pre-ratification program for the Minamata Convention in June 2013. The 6th and 7th replenishment cycles (2014–2018 and 2018–2022) indicatively allocated USD 141 million and USD 206 million respectively to implementing the Minamata Convention. The resources programmed for mercury-related activities until June 2019 are summarized in Table 1. Enabling activities include the development of the Minamata Convention Initial Assessments (MIA) in 111 countries and the National Action Plans (NAP) on ASGM pursuant to Article 7 of the Convention in 35 countries. Medium-sized (below USD 2 million) and full-sized (over USD

Table 1 GEF funding programmes for mercury-related activities (in million USD).

Project type	GEF-5 July 2010 – June 2014	GEF-6 July 2014 – June 2018	GEF-7 July 2018 – June 2019
Enabling activities	7.9	34.3	1.7
Medium-sized projects	11.3	1.2	0.9
Full-sized projects	1.9	34.9	15.3
Programs	-	64.0	4.8
Total	21.1	134.3	22.6

Compiled from GEF's report to COP. The figures do not include agency fees and project preparation grants.

2 million) projects support the fulfilment of the obligations under the Convention by parties. One major example of the programmatic approach is planetGOLD, in which USD 45 million was granted to address the use of mercury in ASGM in Burkina Faso, Colombia, Ecuador, Guyana, Indonesia, Kenya, Mongolia, Peru and the Philippines. The project aims at reducing mercury use in ASGM through the formalization of the sector, improved access to finance and the gold market, and demonstration of alternative technologies.

SIP is the other component of the financial mechanism of the Minamata Convention. This programme is intended to support capacity-building and technical assistance for implementing the Convention, with voluntary contribution from donors. COP-1 adopted guidance on the programme, and agreed that the programme be open for 10 years, with a possibility of extending it no more than seven years. It supports projects undertaken by developing country parties and parties with economies in transition for implementing the Convention with amounts between USD 50 and 250 thousand. The Governing Board, consisting of 10 members nominated by parties, reviews the applications and approves projects for funding. So far the Board has reviewed two rounds of applications, approving 15 projects for a total amount of USD 3 million. Major financial contributions to the Programme have been provided so far by Norway and Switzerland, as well as by Austria, Denmark, Germany, the Netherlands, the United Kingdom and the United States.

There are also other arrangements for supporting capacity-building, technical assistance and technology transfer for implementing the Convention. UNEP's Chemicals and Waste Management Programme supports institutional strengthening for implementing multilateral environmental agreements including the Minamata Convention. The Minamata Convention website includes a database of projects under multilateral and bilateral arrangements to support implementation of the Convention. The secretariat also implements capacity-building and technical assistance projects with funding from donors. One significant example is a project with funding from the European Union of half a million euros

to support parties in implementing the Convention's provisions on mercury trade and emissions.

The Minamata Convention has a mechanism for promoting implementation of the Convention and reviewing compliance with it. Article 15 establishes an Implementation and Compliance Committee consisting of 15 members elected from among the parties. The Committee examines issues of implementation and compliance in a facilitative manner, and makes recommendations to COP as appropriate. The Committee considers issues on the basis of submissions from parties with respect to their own compliance, national reporting and requests from COP. So far the Committee has met twice and elaborated on its rules of procedure, terms of reference and template for written submissions.

2.3 Secretariat

The secretariat of the Minamata Convention is hosted by UNEP. It is headed by the Executive Secretary and consists of 15 staff positions. It is located in Geneva, Switzerland, where the secretariat of the Basel, Rotterdam and Stockholm Conventions and the Chemicals and Health Branch of UNEP are also located. These three entities have established a joint task force to focus on programmatic and other collaboration in the work of chemical and waste management. COP-1 agreed on the initial arrangements for the secretariat, and COP-2 decided to continue that arrangement. COP-3 requested enhanced cooperation within the UNEP's chemicals and waste cluster by setting up inter-secretariat working groups under the overall steering of the task force to cooperate on administrative, programmatic and technical matters, and to continue sharing services between the two secretariats.

2.4 Initial Implementation Efforts by Parties

As discussed in Section 2.2, GEF supports developing country parties and parties with economies in transition in developing their MIA, which consists of the following:

- A National Mercury Profile, including identification of significant sources of emissions and releases, as well as inventories of mercury and mercury compounds;
- An overview of structures, institutions and legislation already available for implementing the Convention;
- Challenges to implementation, including identification of legal and/or regulatory gaps to be addressed prior to ratification
- Capacity building, technical assistance as well as other needs required for implementing the Convention.

MIA reports provide a basis for examining parties' needs for capacity-building and technical assistance. The secretariat analyzed 39 MIA reports submitted by August 2019, and found that mercury-added products (Article 4) and mercury waste (Article 11) are recognized as priority areas by almost all the parties (Secretariat of the

Minamata Convention, 2019). Other major priority areas include ASGM (Article 7), emissions (Article 8), releases (Article 9) and monitoring (Article 19).

Control measures under the Convention have differing timelines. Obligations on mercury trade under Article 3 have immediate effect. Parties can export mercury only if they receive written consent from the importing country, and only for the purposes allowed under the Convention or for environmentally sound interim storage. UNEP (2017) examined the pattern of international trade in mercury, and observed that the mercury export bans enforced in the European Union and the United States in 2011 and 2013, respectively, had caused a major shift of mercury trade to international hubs such as Hong Kong, Singapore, Viet Nam and Turkey. It also observed that the increase in mercury prices in the global market had provided incentives to increase mercury mining in countries such as Indonesia and Mexico, and export from these countries. Since parties are to report on the import consents that they have received as a part of their first short reporting under Article 21 by the end of 2019, it is expected that a clearer picture on mercury trade will be available soon.

Although parties are making efforts to control mercury trade, illegal and illicit trade in mercury remains a major challenge. UNEP (2020) estimates that 15 major ASGM countries informally import mercury in the range of 365–1075 tonnes per year, whereas the reported mercury import in these countries was about 375 tonnes per year. Confiscation of dozens of tonnes of illegally traded mercury and mercury compounds have been reported in Brazil, Indonesia and other countries, but the main routes for illegal trade of mercury and other hazardous chemicals pass through places where regulation or monitoring is weaker.

Another control measure that has a relatively short timeframe is stipulated in Article 4 and Annex A, which do not allow the manufacture, import or export of certain mercury-added products after 2020, unless parties register exemptions for up to five years. Exemptions have been registered by 11 parties only. China, the largest manufacturer and exporter of many mercury-added products such as batteries and medical devices (UNEP, 2017), registered exemptions for the manufacture of clinical thermometers and sphygmomanometers, but not for their import or export. Therefore, the manufacture, import and export of mercury-added products are expected to decrease considerably after 2020.

Control of mercury emissions has a longer timeframe. Parties are required to take control measures on new and existing emission sources as soon as practicable but no later than five and 10 years after the entry into force of the Convention respectively. Annex D to the Convention lists five point source categories controlled under the Convention: coal-fired power plants, coal-fired industrial boilers, non-ferrous metal

Table 2 Estimated mercury emissions into air (2015, in metric tonnes).

	Parties	Non-parties	Total
ASGM	624	213	838 (38%)
Stationary combustion of coal	409	65	474 (21%)
Non-ferrous metal production	257	70	327 (15%)
Cement production	186	47	233 (10%)
Waste from products	103	44	147 (7%)
Waste incineration	13	2	15 (0.7%)
Others	153	38	191 (9%)
Total	1,745	479	2,224

Calculated from data in UNEP (2019).

production, waste incineration and cement clinker production. These sources account for 47% of total anthropogenic mercury emissions to the atmosphere (Table 2). Of this, 82% originates from parties to the Minamata Convention. As UNEP (2019) found that anthropogenic mercury emissions to the atmosphere are still on an upward trend, with emissions in 2015 20% higher than in 2010, implementation of Article 8 of the Convention is very important for reversing this trend. Although parties have more time to comply with Article 8, it is encouraging to note that many of the large emitting countries, such as China, India and Indonesia, have already established regulations to limit mercury emissions from major point sources (Secretariat of the Minamata Convention, 2020).

One important immediate obligation of parties is national reporting under Article 21. Parties are to report to COP, through the secretariat, on the measures they have taken to implement the Convention, effectiveness of such measures, and challenges in implementing the Convention. COP-1 agreed on the timing of the reporting and format for it. Parties must submit a short report every two years starting from December 31, 2019, and a full report every four years starting from December 31, 2021. The short report addresses four topics: primary mercury mining, stocks and supply of mercury, export of mercury and facilities for the final disposal of waste consisting of mercury. An on-line reporting tool is available to facilitate the submission and compilation of biennial reports. The secretariat will put together information on reporting and submit it to COP, which will review the report pursuant to paragraph 5(c) of Article 23. National reports will also be used by the Implementation and Compliance Committee (Article 15), and for evaluating the effectiveness of the Convention (Article 22). COP-3 requested the secretariat to draft guidance for the full report to be used in the first full reporting in 2021.

3. Future Challenges

3.1 Responding to Parties' Needs

The Minamata Convention in its preamble stresses the importance of financial, technical, technological and capacity-building support, particularly for developing countries and countries with economies in transition. Article 13 on financial resources and mechanism states that the overall effectiveness of implementation of the Convention by developing country parties will be related to effective implementation of that article.

Many developed countries had already implemented obligations under the Conventions when they became parties, as notified by Canada, Japan and the United States pursuant to Paragraph 4 of Article 30, and as shown in legislative instruments established at the time of becoming parties, such as the European Mercury Regulation (EU, 2017; and also see the European Commission's proposal for regulation (COM/2016/039 final), which includes an explanation on the coverage of Minamata obligations by European legislation). Major challenges remain for developing country parties and parties with economies in transition. It should also be noted that many countries with considerable production, use, emissions and releases of mercury are still to become parties to the Convention.

111 countries have developed, or are in the process of finalizing, MIA reports that include an overview of mercury inventories, existing legislation and challenges in implementing the Convention. These reports will be an important source of information on identifying the parties' needs and delivering support based on the needs identified. The first short national reporting by 31 December 2019 included a question on possible challenges in meeting the objectives of the Convention. Although a response to this question was not mandatory, responses from even some parties will also be useful in considering effective support to parties. As shown in

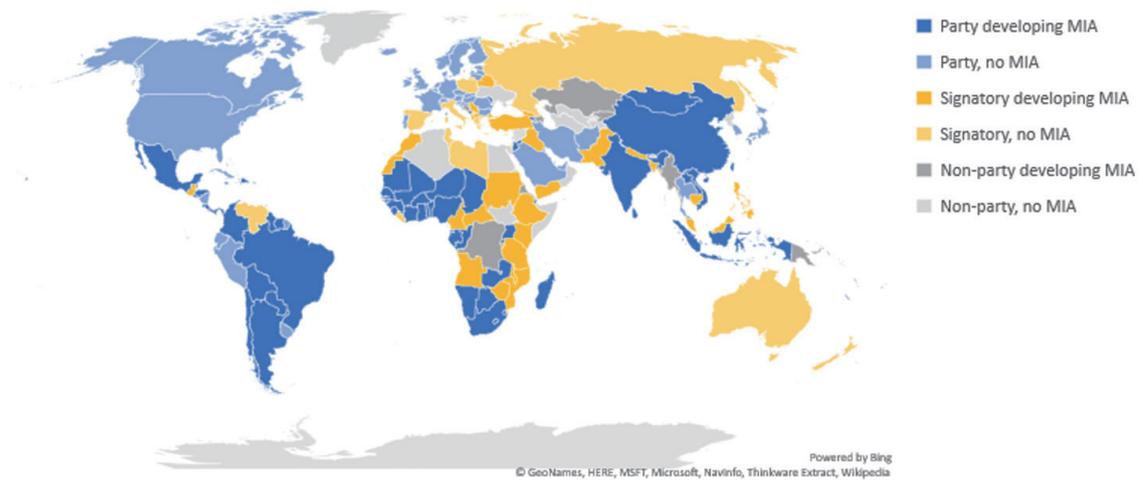


Fig. 2 Minamata Convention Parties.

As of November 2019. Although the European Union is a party to the Convention, EU member states are colored according to whether the state is a party.

Fig. 2, some countries, especially non-parties in Central and West Asia and North Africa, have not started MIA projects, and these countries may need support for becoming parties to the Convention.

ASGM is the largest source of emissions and releases of mercury to the environment. Under Article 7, all Parties that have ASGM in their territory have an obligation to reduce, or eliminate where feasible, the use of mercury in ASGM. Those Parties with more than insignificant ASGM are required to develop a NAP. GEF has supported 35 countries in developing NAPs. By the end of 2019, two plans had been submitted to the secretariat, and many others were expected to be available soon. Parties have an obligation to implement the plan, and review in progress every three years. COP-3 specifically requested the secretariat, in cooperation with the UNEP Global Mercury Partnership, to develop guidance on the management of ASGM tailings in the NAP guidance document adopted at COP-1. There may be a need for revisiting other parts of the guidance in view of the three-yearly review of progress on NAP.

Mercury use in ASGM is closely related to controlling mercury trade. The Convention does not allow the use of primary-mined mercury and excess mercury from the decommissioning of chlor-alkali plants in ASGM. However, illegal and illicit trade in mercury may compromise this restriction. Capacity-building in the control of mercury trade is a priority.

The second largest source of mercury emissions is coal combustion, followed by non-ferrous metal production and cement production. In terms of the global consumption of mercury, ASGM is followed by mercury-added products, vinyl chloride monomer production and chlor-alkali production (UNEP, 2017). GEF has provided resources for technical assistance targeted to these sectors, and is expected to continue to do so, as well as

other funding sources. The effectiveness of these support measures will be evaluated in the effectiveness evaluation under Article 22.

Mercury-added products and waste management are recognized as priority areas in most of the MIA reports reviewed so far. SIP supports several projects in these areas: out of 15 projects approved for SIP, Article 4 (mercury-added products) and Article 11 (mercury waste) are included in the scope of nine and eight projects respectively. The outcomes of these projects are expected to be disseminated and replicated by other parties.

3.2 Effectiveness Evaluation

The Minamata Convention has a mechanism for evaluating its effectiveness embedded in its text. Article 22 requires COP to evaluate the effectiveness of the Convention beginning no later than six years after its entry into force, and to initiate the establishment of arrangements for using comparable monitoring data for this purpose. COP-1 established an ad hoc group of experts consisting of members nominated by parties and observers to discuss an effectiveness evaluation framework and monitoring arrangements. The group considered these issues, learning from the experience of the Stockholm Convention on POPs which has a similar provision, and submitted a report to COP-2. COP gave the group a further mandate to elaborate an effectiveness evaluation framework, methodology, schedule and use of monitoring data. The group submitted a report to COP-3.

The report proposed the following four policy questions as a basis for evaluating effectiveness:

- Have the parties taken actions to implement the Convention?
- Have the actions taken resulted in changes in mercury supply, use, emissions or releases into the environment?
- Have those changes resulted in changes in levels of

mercury in the environment, biotic media or vulnerable populations that can be attributed to the Convention?

- To what extent are existing measures under the Convention meeting the objective of protecting human health and the environment from mercury?

Sources of information were identified for addressing these questions, methodologies for compiling, synthesizing and integrating such information were described, and a list of indicators for evaluating individual provisions of the Convention was proposed.

COP-3 reviewed the report of the group and discussed the evaluation framework extensively. In spite of the week-long discussion at COP, no agreement could be reached on the full details of the evaluation framework such as terms of reference for the Effectiveness Evaluation Committee or global monitoring arrangements. It was concluded that a further exchange of views was needed on the evaluation indicators, and that a guidance document on monitoring needed to be developed. The COP-3 decision included a schematic effectiveness evaluation framework depicting information flow (Fig. 3) and mentioning five reports to be prepared in the process: a synthesized report on national reporting; a trade, supply and demand report; an emissions and releases report; a monitoring report; and a modelling report. However, COP only agreed to request the secretariat to work on the first two reports by COP-4.

3.3 Policy Making Based on Sound Science

The history of the Minamata Convention started with shared scientific knowledge on the global nature of mercury pollution. The work of COP to support implementation of the Convention, including the work of the ad hoc group of experts on evaluating effectiveness, has been carried out on the basis of scientific and

technical expertise provided by experts, including the four Global Mercury Assessment reports.

At its first three meetings, COP adopted guidance on implementing the control measures under the Convention, with the support of technical experts nominated by parties and observers (Fig. 1). These documents need to be continuously reviewed and updated in view of the progress in scientific and technical knowledge. COP-3 agreed on intersessional work towards COP-4 in five areas: (1) review of annexes A (mercury-added products) and B (manufacturing processes using mercury); (2) use of customs codes for identifying mercury-added products; (3) dental amalgam and its alternatives; (4) methodologies for developing inventories of mercury releases to land and water; and (5) establishment of thresholds for mercury waste. The expert groups and partnerships are expected to continue to provide scientific and technical input to this process. It should also be noted that the work on the environmentally sound management of mercury waste is undertaken in close collaboration with the Basel Convention, since the Minamata Convention requires the parties to manage mercury waste taking into account the guidelines developed under the Basel Convention. The intersessional work on evaluating effectiveness described above also needs to be based on sound science.

The International Conference on Mercury as a Global Pollutant (ICMGP) is an important avenue for scientific-policy interface in relation to the Convention. Established in 1990, ICMGP has worked as a primary forum to advance mercury science such as environmental and health assessment, the global mercury cycle and control technology. The 13th ICMGP meeting in July 2017 included a series of sessions on understanding implications of the Minamata Convention and the role of

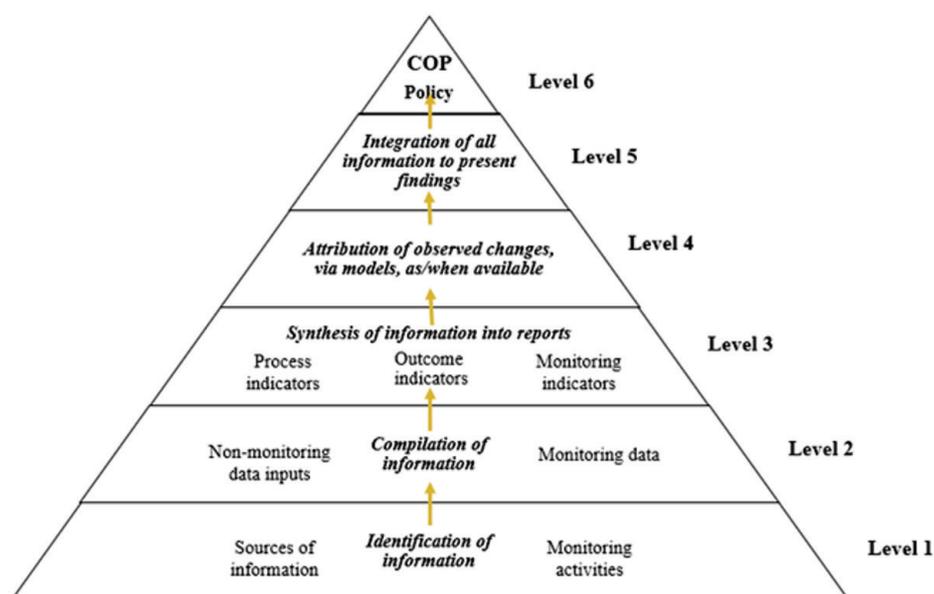


Fig. 3 Framework for evaluating the effectiveness of the Minamata Convention.

scientific assessments in informing the implementation of the Convention. Selin *et al.* (2018) provide an overview of the discussion on mercury science-policy interface in *Ambio* (and other articles in the same edition of *Ambio* summarize the sessions on science-policy interface at ICMGP 2017). Chen *et al.* (2018) review the contribution of ICMGP to international mercury policy. COP-3 included a special lunchtime session on mercury science, inviting co-chairs of the 14th and 15th ICGMP meetings held in 2019 and to be held in 2021 respectively. The panelists of the session proposed to establish a scientific advisory panel consisting of the top mercury scholars worldwide, linked with ICMGP. Innovative ideas may be needed for creating such mechanisms without excessive formalities, conflicts of interest or regional, disciplinary or gender bias.

3.4 Linking with Broader Agendas

The Minamata Convention has an important role in the broader agenda of chemicals management, environmental protection and sustainable development. Agenda 21, adopted at the United Nations Conference on Environment and Development in 1992, outlined measures to be taken by governments to reduce environmental and health risks of toxic chemicals. It observed that concerted activities by governments could encompass both regulatory and non-regulatory measures, such as promoting the use of cleaner products and technologies; emission inventories; product labelling; use limitations; economic incentives; and the phasing out or banning of toxic chemicals that pose an unreasonable and otherwise unmanageable risk to the environment or human health and those that are toxic, persistent and bio-accumulative and whose use cannot be adequately controlled. The Minamata Convention is consistent with this overall approach in chemical management, and constitutes a building block of the global efforts towards sustainable development.

The coming years towards 2022 are expected to be a pivotal period for protecting the global environment and achieving sustainable development, celebrating 50 years after the UN Conference on Human Environment and 30 years after the Rio summit. The 5th International Conference on Chemicals Management, originally planned for 2020 but postponed until 2021, is expected to agree on arrangements for chemical and waste management, building on the Strategic Approach to International Chemicals Management, which had 2020 as its target year. Biodiversity COP-15, which was also postponed, is expected to adopt its post-2020 biodiversity framework. The Paris Agreement will govern the post-2020 climate regime. In addition to pursuing specific linkages between the Minamata Convention and these broader agendas, such as the biodiversity and land-use implications of ASGM and co-benefits of reduced dependence on coal, UNEP is committed to promoting

cooperation, coherence and synergies among multilateral environmental agreements, not only in responding to environmental challenges but preserving human well-being, healthy ecosystems and food security (Andersen, 2019).

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