Strategic planning for implementation of the health-related articles of the Minamata Convention on Mercury
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The guidance expressed in this publication was based in part on WHO’s experience supporting the Malaysia Ministry of Health to develop a conceptual framework for implementation of the health-related articles of the Minamata Convention on Mercury. An initial draft of a guidance document on strategic planning was built upon that experience, was pilot tested by the Ministries of Health of Lao People’s Democratic Republic and Sri Lanka, and was revised and finalized based on lessons learned through the pilot tests. WHO is grateful to the Ministries of Health of Lao People’s Democratic Republic, Malaysia, and Sri Lanka for their collaboration.

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Definitions

artisanal and small-scale gold mining (ASGM) – gold mining conducted by individual miners or small enterprises with limited capital investment and production.

bioaccumulation – occurs within an organism, where a concentration of a substance builds up in the tissues and is absorbed faster than it is removed. Bioaccumulation often occurs in two ways, simultaneously: by eating contaminated food, and by absorption directly from water. This second case is specifically referred to as bioconcentration.

mercury – in the Minamata Convention means elemental mercury (Hg(0), CAS No. 7439-97-6). In this document, the term “mercury” encompasses the various forms of mercury, elemental mercury and mercury compounds, unless otherwise stated.

mercury-added product – means a product or product component that contains mercury or mercury compound that was intentionally added.

mercury compound – in the Minamata Convention means any substance consisting of atoms of mercury and one or more atoms of other chemical elements that can be separated into different components only by chemical reactions. In Article 3 of the Minamata Convention, this means mercury (I) chloride (known also as calomel), mercury (II) oxide, mercury (II) sulfate, mercury (II) nitrate, cinnabar and mercury sulfide.

Party – a State or regional economic integration organization that has consented to be bound by this Convention and for which the Convention is in force.

persistent organic pollutants (POPs) – chemicals of global concern due to their potential for long-range transport, persistence in the environment, ability to bioaccumulate in ecosystems, as well as their significant effects on human health and the environment.

Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASGM</td>
<td>artisanal and small-scale gold mining</td>
</tr>
<tr>
<td>COP</td>
<td>Conference of the Parties</td>
</tr>
<tr>
<td>GEF</td>
<td>Global Environment Facility</td>
</tr>
<tr>
<td>MIA</td>
<td>Minamata Initial Assessment</td>
</tr>
<tr>
<td>MoH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>SDG</td>
<td>Sustainable Development Goal</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>UNITAR</td>
<td>United Nations Institute for Training and Research</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>

1 The definitions are based on the text of the Minamata Convention and from the website and/or documents of the World Health Organization.
1. Introduction

The Minamata Convention on Mercury – a global legally binding instrument to protect human health and environment from the adverse effects of mercury – entered into force on 16 August 2017 (UNEP, 2019). Countries\(^2\) that are Parties to the Convention are now legally bound to fulfil a range of mandatory measures such as banning new mercury mines; phasing out mercury-added products, including thermometers, batteries, light bulbs, etc.; and regulating the use of mercury in artisanal and small-scale gold mining (ASGM).

The Convention outlines a life-cycle approach to the supply, trade, use, emission, release, handling and disposal of mercury. It also includes articles that are related to the exchange of scientific, technical, economic and legal information concerning mercury and mercury compounds, as well as measures to evaluate its effectiveness. Some provisions of the Convention are obligatory (using the term “shall”) while others are voluntary (using terms such as “may”). For example, Article 16 on “Health Aspects” encourages Parties to implement voluntary measures, taking into account their respective circumstances and capabilities, without imposing legal obligation.\(^3\) Other Convention articles cover its objective, definitions and administrative matters (Selin et al., 2018).

With the Convention’s core objective “to protect human health and environment from anthropogenic emissions and releases of mercury and mercury compounds,” it could be said that all of the Convention’s 35 articles are “health-related articles.” In this publication, the term “health-related articles” is used to denote those articles of the Convention in which health ministries play a leading role in implementation (see Table 1). In response to the health-related issues or activities and articles of the Convention, the Sixty-seventh World Health Assembly adopted and approved resolution WHA67.11 (2014): Public health impacts of exposure to mercury and mercury compounds: the role of World Health Organization (WHO) and ministries of public health in the implementation of the Minamata Convention (Annex 1 of this document). The resolution calls on Member States to address the public health aspects of mercury and mercury compounds in the context of the health sector by identifying measures and preparatory actions to be taken by their health ministries for implementation of the health-related articles of the Convention. The resolution also calls upon the WHO Secretariat to create tools, offer guidance, and provide training materials to support Member States in managing the public health impacts of mercury and mercury compounds (WHO, 2014a).

1.1 OBJECTIVE OF THIS GUIDANCE DOCUMENT

This publication was developed to guide health ministries\(^4\) in planning measures to implement the health-related articles of the Minamata Convention and to protect public health from exposure to mercury. It will guide health ministries to plan not only obligatory measures under the Convention but voluntary measures as

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\(^2\) Updated information on countries that have ratified the Convention can be found at http://www.mercuryconvention.org.

\(^3\) To learn more about the articles of the Convention, refer to the United Nations Environment Programme document Overview of key operational articles of the Minamata Convention at http://cwm.unitar.org/cwmplatformscms/site/assets/files/1337/overview_key_control_measures_under_the_minamata_convention_05_16-1.pdf.

\(^4\) A general guide was developed by the Natural Resources Defense Council on mercury obligations that may require new legal authorities. This Guide to checklist of Minamata Convention on mercury obligations which may require new legal authority may be accessed at https://www.nrdc.org/sites/default/files/guide-checklist-minamata-obligations.pdf.
well. The approach taken in any country will need to be adapted to that country’s particular needs and circumstances. Therefore, the measures suggested here are not prescriptive but are intended to inform health ministries and partners about key considerations to be taken into account while developing plans in relation to the Convention.

Table 1. Health-related articles of the Minamata Convention in which health ministries play a leading role in implementation

<table>
<thead>
<tr>
<th>Article</th>
<th>Content</th>
<th>Brief description of the article^</th>
<th>Obligatory (o) or voluntary (v)</th>
<th>Time frame/phase-out date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>ASGM</td>
<td>In particular, the development of public health strategies and strategies to prevent the exposure of vulnerable populations, under Annex C of the Minamata Convention.</td>
<td>o</td>
<td>Yes^</td>
</tr>
<tr>
<td>11</td>
<td>Mercury wastes</td>
<td>Each Party shall take appropriate measures so that mercury wastes are managed in an environmentally sound manner taking into account the guidelines developed under the Basel Convention and in accordance with requirements that the Conference of the Parties (COP) may adopt in the future.</td>
<td>o</td>
<td>None</td>
</tr>
<tr>
<td>12</td>
<td>Contaminated sites</td>
<td>Conduct assessments of risk for populations in contaminated sites and contribute to any strategies for their management. Contribute to the work of the COP on health-related aspects of guidance.</td>
<td>v</td>
<td>None</td>
</tr>
</tbody>
</table>

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5 See Annex 4 of this document for full text of health-related Articles.
### Article Content Brief description of the article

<table>
<thead>
<tr>
<th>Article</th>
<th>Content</th>
<th>Brief description of the article</th>
<th>Obligatory (o) or voluntary (v)</th>
<th>Time frame/phase-out date</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Health aspects</td>
<td>Broad provisions relating to identification and protection of populations at risk from mercury exposure, including occupational exposure and health care (see Annex 4 of this document for details).</td>
<td>v</td>
<td>None</td>
</tr>
<tr>
<td>17</td>
<td>Information exchange</td>
<td>Health information exchange, including epidemiological information, in close cooperation with the World Health Organization.</td>
<td>v</td>
<td>None</td>
</tr>
<tr>
<td>18</td>
<td>Public information, awareness and education</td>
<td>Includes providing health information to the public, and education and awareness on health effects.</td>
<td>v</td>
<td>None</td>
</tr>
<tr>
<td>19</td>
<td>Research, development and monitoring</td>
<td>Includes monitoring vulnerable populations and assessments of health impacts and related harmonized methodologies, building on existing monitoring networks and research programmes where appropriate. Monitoring will also contribute to Article 22 on Effectiveness Evaluation regarding trends in vulnerable populations.</td>
<td>v</td>
<td>None</td>
</tr>
<tr>
<td>21</td>
<td>Reporting</td>
<td>Although health ministries are not expected to play the lead role in coordinating the required report to the COP, health ministries will need to contribute the expected information relevant to measures on which they are playing a lead role.</td>
<td>o</td>
<td>Yes, in accordance with decision MC-1/8</td>
</tr>
</tbody>
</table>

*Source: Adapted from the report Health sector involvement in the implementation of the Minamata Convention: mercury exposure assessment and prevention (WHO Regional Office for Europe, 2016).*

*If a Party determines that ASGM in its territory is more than insignificant, the Party shall: (a) develop and implement a national action plan on ASGM; (b) submit its national action plan to the Convention Secretariat no later than three years after entry into force of the Convention or three years after the notification to the Secretariat, whichever is later; and (c) thereafter, provide a review every three years of the progress made in meeting its obligations under this article.*

### 1.2 HEALTH EFFECTS OF MERCURY

Mercury (chemical symbol Hg) is a naturally occurring element. It can be released into the environment not only from natural sources and phenomena – such as weathering of mercury-containing rocks, forest fires, volcanic eruptions or geothermal activities – but also as a result of human activities. Of the estimated 5500 to 8900 tons of mercury currently emitted and re-emitted each year into the atmosphere, only about 10% is attributed to natural sources (UNEP, 2018). Mercury’s behaviour in the environment and degree of toxicity depend heavily on its state and form (see Box 1). It is considered to be a persistent toxic substance and cannot be broken.
down or degraded into harmless substances. This means that once mercury has been brought into circulation in the biosphere, whether by human activity or natural phenomenon, it does not “disappear” again in the time span comparable to a human lifetime and will need to be managed (stored or disposed) for the longer term (UNEP, 2018; WHO, 2018a).

The factors that determine whether health effects occur and, if so, the extent of severity, include: (i) type of mercury; (ii) dose of exposure; (iii) age or developmental stage of the exposed individual; (iv) duration of exposure; and (v) route of exposure (inhalation, ingestion or dermal contact). The most sensitive developmental stage is the fetal stage; methylmercury exposure in the womb can result from a woman’s consumption of mercury-contaminated fish and shellfish and can adversely affect a fetus’s growing brain and nervous system. The primary health effect of methylmercury is impaired neurological development. Therefore, cognitive thinking, memory, attention, language, and fine motor and visual spatial skills may be affected in children who were exposed to methylmercury as fetuses. Another vulnerable group is people who are regularly exposed (i.e. chronically exposed) to high levels of mercury, such as those who are occupationally exposed (for example, miners in ASGM) (WHO, 2017a).

Based on the 2008 World Health Organization (WHO) report on assessing the environmental burden of disease at national and local levels from mercury exposure (Poulin and Gibbs, 2008), the incidence rate for mild intellectual disability is estimated to be as high as 17.37 per 1000 infants born among a subsistence fishing population in the Amazon, resulting in a loss of 202.8 disability-adjusted life years per 1000 infants. However, due to the lack of exposure data from representative populations in the various regions throughout the world, the global burden of disease could not be estimated.

A study commissioned by WHO of mercury biomarkers in human populations between 2000 and 2018 suggests that all populations worldwide are exposed to some amount of mercury and there is great variability in exposures within and across countries and regions. The study identified four populations of concern for exposures above general population levels: Arctic populations that consume fish and marine mammals; tropical riverine communities (especially Amazonian) that consume fish and in some cases may be exposed to mining; coastal and/or small-island communities that substantially depend on seafood; and individuals who either work or reside in ASGM sites. However, the review found limited data for many geographic regions and subpopulations (Basu et al., 2018).

The effects of acute exposure to mercury as a result of accidental contact with high amounts of mercury following isolated accidents are well documented and understood. The best known of these incidents were in Japan and Iraq (see Box 2).
Box 1. Forms of mercury

The three forms of mercury are: (i) elemental or metallic; (ii) inorganic mercury compounds; and (iii) organic mercury compounds.

(i) **Elemental mercury** is liquid at room temperature. It is used in thermometers, dental amalgams, fluorescent light bulbs, some electrical switches, ASGM, and some industrial processes. It is released into the air when coal and other fossil fuels are burned. People may be exposed when they breathe air containing elemental mercury vapours. Vapours may be present in such workplaces as dental offices that prepare their own amalgam, smelting operations, and locations where mercury has been spilled or released (e.g. in the case of broken thermometers and poorly maintained sphygmomanometers). In the body, elemental mercury can be converted to inorganic mercury.

- Inhalation of mercury vapour can produce harmful effects on the nervous, digestive and immune systems, and may be fatal.
- The human health effects from exposure to levels of mercury in the general environment are unknown.

(ii) **Inorganic mercury compounds** are formed when mercury combines with other elements, such as sulfur or oxygen, to form compounds or salts. Inorganic compounds can occur naturally or are used in some industrial processes such as vinyl chloride monomer production. Some skin-lightening products contain inorganic mercury. People may also be exposed if they work in locations where inorganic mercury compounds are used.

- When eaten in large amounts, some inorganic mercury compounds can be very irritating and corrosive to the skin, eyes and gastrointestinal tract, and may induce kidney toxicity if ingested.
- The main concern with skin-lightening products containing mercury is kidney damage. Furthermore, if repeatedly eaten or applied to the skin over extended periods of time, some inorganic mercury compounds can cause effects similar to what is seen with long-term mercury vapour exposure, including neurological disturbances, memory problems, skin rash and kidney abnormalities.

(iii) **Organic mercury** is formed when mercury combines with carbon. Microscopic organisms in water and soil can convert elemental and inorganic mercury into an organic mercury compound, methylmercury, which accumulates in the food chain (bioaccumulation). People may be exposed when they eat fish or shellfish contaminated with methylmercury. Methylmercury can pass through the placenta, exposing the developing fetus.

- Significant amounts of methylmercury eaten over weeks to months have caused damage to the nervous system.
- Infants born to women who were poisoned with methylmercury had developmental abnormalities and cerebral palsy.

Sources:
Box 2. Incidents of mercury exposure

**Japan.** Between 1932 and 1968, a Japanese factory released industrial waste containing high levels of methylmercury into local waterways, resulting in widespread pollution of Minamata Bay and the contamination of fish and shellfish species in the region. In the 1950s, local residents became alarmed by the strange behaviours of animals and an increase in the incidence of developmental disorders in newborns. In 1959, epidemiological studies revealed that communities living near Minamata Bay that traditionally depended on fish and shellfish for their diet had been unknowingly exposed to high levels of methylmercury. The devastating health effects subsequently became known as Minamata disease – a developmental condition at high dose characterized by infantile cerebral palsy, congenital abnormalities, ataxia, paralysis, hearing and vision loss, and other symptoms related to acute methylmercury exposure.

*The Minamata Convention was named after the incident in Minamata Bay, Japan.*

**Iraq.** Between 1971 and 1972 in Iraq, widespread consumption of grain coated with an organic mercurial fungicide caused the largest mercury-poisoning epidemic ever recorded. A total of 6530 individuals were diagnosed with mercury intoxication and hospitalized, of which 459 died; it is believed that this figure is severely underestimated. Infants exposed in utero by mothers who consumed the contaminated grain demonstrated developmental disorders similar to Minamata disease. Children exposed at lower doses experienced delays in neurocognitive development and ataxia.

_Sources_

2. The role of WHO and ministries of health in the implementation of the Minamata Convention on Mercury

2.1 THE ROLE OF WHO

The role of WHO in implementing the Minamata Convention is concisely articulated (see Box 3) in the WHO Secretariat’s report to the 134th Session of the WHO Executive Board.

Box 3. The role of WHO in implementing the Minamata Convention
(excerpts from the Secretariat’s Report to the 134th Session of the WHO Executive Board (WHO, 2014b)

10. The preamble to the Convention recognizes WHO’s activities in the protection of human health related to mercury. Article 16 (Health aspects) establishes that the Conference of the Parties, in considering health-related issues or activities, should consult and collaborate with WHO and promote cooperation and exchange of information with WHO. Resolution 3 of the Conference of Plenipotentiaries invites WHO to cooperate closely with the Conference of the Parties “to support the implementation of the Convention, particularly Article 16, and to provide information to the Conference of the Parties on the progress made in this regard.”

11. WHO’s range of established activities provides the basis for encouraging Parties to ratify and implement the Convention. WHO is pre-eminent in providing health-related evidence and raising public awareness about the health implications of mercury exposure through the publication of authoritative risk assessments, advocacy materials and other information. It sets guidelines for mercury exposure through air, drinking-water and food.

In implementing WHA67.11, WHO has reviewed, updated and developed new tools and guidance and has developed an annotated bibliography of key information available from WHO, cross-referenced to articles of the Convention.

For example, WHO creates tools, provides guidance and issues training materials as support to Member States in dealing with the public health impacts of artisanal and small-scale gold mining and has published guidance to support development of the public health strategies required as part of national action plans. Step-by-step guidance has been published on developing national strategies for phasing out mercury-containing thermometers and sphygmomanometers in health care.

15. WHO publishes training materials for health workers, issues guidance for identifying populations at risk from mercury exposure, and designs protocols for monitoring human exposure to mercury.

Materials can be accessed from the following website: http://www.who.int/ipcs/assessment/public_health/mercury/en/.
WHO guidance on mercury control

Box 4. Road map to enhance health sector engagement in the strategic approach to international chemicals management towards the 2020 goal and beyond

In May 2017, the Seventieth World Health Assembly approved WHO’s Road map to enhance health sector engagement in the Strategic Approach to International Chemicals Management towards the 2020 goal and beyond (WHO, 2017b). The road map identifies concrete actions for which the health sector has either a leading or important supporting role to play in the sound management of chemicals, while recognizing the need for multisectoral cooperation. The action areas are organized into four areas: risk reduction; knowledge and evidence; institutional capacity; and leadership and coordination. Specific actions related to the Convention are included in the health protection strategies and healthy health-care settings of the action area on risk reduction. The road map includes an activity specifically referencing Member State ratification and implementation of the Minamata Convention, and contains many activities that will lend further support.

In order to assist countries in implementing the road map, WHO developed a “Chemicals road map workbook.” The workbook is designed to assist health sector planners, coordinators and policy analysts from government, civil society, industry or other organizations to use the road map to identify priorities and plan activities around these priorities (WHO, 2018b). In addition to the present guidance, the workbook may additionally assist health ministries in planning work to implement the Convention.

2.2 ROLE OF THE MINISTRIES OF HEALTH

The success of the Minamata Convention in achieving its objectives depends upon health ministries to play leading roles, in collaboration with intersectoral partners, in implementing the health-related articles of the Convention as mentioned above. Under Article 16, in particular, Parties are encouraged to promote the development and implementation of strategies and programmes to identify and protect populations at risk from exposure to mercury and mercury compounds; to promote appropriate health-care services for populations affected by exposure to mercury or mercury compounds; and to establish and strengthen institutional and health professional capacities for the prevention, diagnosis, treatment and monitoring of health risks related to exposure to mercury and mercury compounds. WHO-convened regional workshops revealed that many common issues and challenges exist among countries, despite a broad range of cultural, economic, environmental, political and social conditions (see Box 5).

In relation to mercury-added products, a leading role for health ministries is envisaged in phasing down the use of dental amalgam and in phasing out manufacture, import and export of mercury-containing measuring devices (thermometers and sphygmomanometers) and antiseptics and skin-lightening cosmetics that contain mercury by 2020.6 Health ministries will also play a

6 Except where a Party has registered an exemption to 2025, or has been granted an exemption to 2030 by the COP under Article 6.
leading role in addressing the impacts of mercury use in ASGM (Article 7) and in health-risk assessment of contaminated sites (Article 12). Article 17 (information exchange) specifically mentions information on health impacts, while Article 18 (public information, awareness and education) mentions human health and Article 19 (research, development and monitoring) calls for monitoring of mercury and mercury compounds in vulnerable populations.

Box 5. WHO regional workshops on health sector involvement in the Minamata Convention on Mercury

WHO convened a series of regional workshops on health sector involvement in the implementation of the Minamata Convention in order to support awareness raising and networking among ministries of health to facilitate implementation of the Convention and the associated World Health Assembly resolution WHA67.11 (2014). Many ministries of health reported through the workshops encouraging progress towards planning and making preparations for the health sector to address the health-related articles of the Convention and to fulfil their obligations under resolution WHA67.11. Notwithstanding the progress that has been made and despite a very broad range of cultural, economic, environmental, political and social conditions among the many countries that participated in the workshops, the workshops revealed many commonalities among the regions in terms of issues and challenges (WHO, 2018a).

- The health sector’s role in implementation of the Minamata Convention is often narrowly seen as focused on relatively few issues, such as mercury-containing medical devices, dental amalgam, mercury-contaminated health-care waste, and ASGM in some countries.

- There is a need to raise awareness among policy-makers and health workers alike on a broader range of mercury issues within health-care settings, as well as to raise awareness on mercury-related health issues outside the health sector.

- A common need identified among the regions was the need for awareness raising and education about the health effects of mercury exposure, routes of exposure, protective measures and treatment.

- With regard to the phase-out of manufacture, import and export of mercury-containing medical measuring devices, workshop participants often stressed the need to effectively disseminate information on available alternatives, to address clinicians’ concerns on safety and cost-effectiveness of alternatives, and to develop and enforce adequate standards for the procurement and use of alternative devices.

- The concerns of workshop participants regarding the phase-out of mercury-containing medical measuring devices were echoed in their discussions on phasing down the use of dental amalgam.

- With regard to the issue of mercury-contaminated health-care waste, the need for infrastructure to safely transport, store and dispose of such wastes was identified by many workshop participants, in addition to the need for relevant training of health workers.

- Several challenges emerged from the workshops related to monitoring and surveillance. The need to establish health and environmental baseline data on mercury contamination was widely recognized. Many countries face challenges in terms of technical capacity and laboratory capacity firstly to establish baseline conditions and subsequently to conduct monitoring. Human biomonitoring was seen as an effective approach to identify and monitor vulnerable populations, but there is a need for assistance to implement it in many countries.
For planning purposes, it is useful to consider the health-related articles of the Convention in three categories: (i) articles that are obligatory upon the Parties and that impose clear time frames for compliance; (ii) articles that are obligatory upon Parties without time frames for compliance; and (iii) articles that are voluntary that encourage Parties to implement measures in good faith.

### 2.2.1 OBLIGATORY ARTICLES WITH SET TIME FRAMES FOR IMPLEMENTATION

<table>
<thead>
<tr>
<th>ARTICLE 4</th>
<th>MERCURY-ADDED PRODUCTS, PARAGRAPH 1</th>
<th>ARTICLE 7</th>
<th>ARTISANAL AND SMALL-SCALE GOLD MINING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MINAMATA CONVENTION ON MERCURY</strong></td>
<td></td>
<td><strong>HEALTH MINISTRIES</strong></td>
<td></td>
</tr>
<tr>
<td>■ The Article <strong>disallows the manufacture, import or export of mercury-added products</strong> listed in Part I of Annex A after the phase-out date specified for those products (Annex 2 of this document). The <strong>phase-out date for all such products is 2020</strong>, after which the manufacture, import or export of said products shall be disallowed. Note: The Convention does not require the removal from use of mercury-added products manufactured or imported prior to 2020. A Party can register an exemption to 2025 for manufacture and/or import or export and may be granted an exemption to 2030 by the Conference of the Parties. However, if the main manufacturers are withdrawing from the market, then Parties and non-Parties alike may experience difficulties sourcing the products in the market. Parties can ask the COP for a further exemption to 2030, but this would be a decision of the COP and the above point about procuring the products would still apply.</td>
<td>■ Paragraph 2 of the Article states that, Each Party that has artisanal and small-scale gold mining and processing subject to this Article within its territory shall take steps to reduce, and where feasible eliminate, the use of mercury and mercury compounds in, and the emissions and releases to the environment of mercury from, such mining and processing.</td>
<td>■ Of particular relevance to the ministries of health are the following products: <strong>cosmetics (with mercury content above 1 ppm)</strong>, including skin-lightening soaps and creams; topical antiseptics; and non-electronic measuring devices including, among others, thermometers and sphygmomanometers. Note: Not included are eye area cosmetics where mercury is used as a preservative and no effective and safe substitute preservatives are available. The intention is not to cover cosmetics, soaps or creams with trace contaminants of mercury.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>■ Health ministries should <strong>review the relevant regulations and consider whether there may be a need to revise</strong> them in order to disallow the manufacture, import or export of said products and implement programmes in phasing out these products by 2020.</td>
</tr>
</tbody>
</table>

2.2.2 OBLIGATORY ARTICLES WITHOUT SET TIME FRAMES FOR IMPLEMENTATION

<table>
<thead>
<tr>
<th>ARTICLE 4</th>
<th>MERCURY-ADDED PRODUCTS, PARA 3</th>
<th>ARTICLE 10</th>
<th>ENVIRONMENTALLY SOUND INTERIM STORAGE OF MERCURY, OTHER THAN WASTE MERCURY</th>
<th>ARTICLE 11</th>
<th>MERCURY WASTES</th>
<th>ARTICLE 12</th>
<th>CONTAMINATED SITES</th>
</tr>
</thead>
<tbody>
<tr>
<td>MINAMATA CONVENTION ON MERCURY</td>
<td></td>
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<tr>
<td>Each Party shall take measures to phase down the use of dental amalgam taking into account the Party’s domestic circumstances and relevant international guidance.</td>
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<tr>
<td>The Convention requires that each Party shall implement two or more of the measures listed in Part II, Annex A of the Minamata Convention (Annex 2 of this document).</td>
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<tr>
<td>Each Party shall take measures to ensure that interim storage is undertaken in an environmentally sound manner, taking into account Conference of the Parties (COP) guidelines* and any other future requirements adopted by the COP.</td>
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<tr>
<td>Each Party shall take appropriate measures to ensure that mercury wastes are managed in an environmentally sound manner, taking into account the guidelines developed under the Basel Convention and in accordance with the requirements that the COP* may adopt in the future.</td>
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<tr>
<td>Each Party shall endeavor to develop appropriate strategies for identifying and assessing sites contaminated by mercury or mercury compounds.</td>
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<tr>
<td>The Conference of the Parties shall adopt guidelines on managing contaminated sites.*</td>
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</tbody>
</table>

HEALTH MINISTRIES

| For dental amalgam, health ministries should provide guidance in phasing down the use of dental amalgam. |
| Health ministries may wish to review current policies and practices concerning any interim storage of non-waste mercury and mercury compounds (such as elemental mercury as a reference in a toxicology laboratory). |
| Health ministries may wish to review current policies and practices concerning the management of mercury wastes (such as thermometers and sphygmomanometers collected as an outcome of programmes implemented in relation to Article 4). |
| The health ministries’ role on this Article would focus on health risk assessment of identified sites. |

* For the latest information on COP guidelines, refer to the website: http://mercuryconvention.org/.
2.2.2 OBLIGATORY ARTICLES WITHOUT SET TIME FRAMES FOR IMPLEMENTATION (continuation)

<table>
<thead>
<tr>
<th>ARTICLE 17 INFORMATION EXCHANGE</th>
<th>ARTICLE 18 PUBLIC EDUCATION, AWARENESS AND INFORMATION</th>
<th>ARTICLE 19 RESEARCH DEVELOPMENT AND MONITORING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MINAMATA CONVENTION ON MERCURY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This Article requires Parties to <strong>facilitate the exchange of</strong>: scientific, technical, economic and legal information concerning mercury and mercury compounds; information on the reduction or elimination of the production, use, trade, emissions and releases of mercury and mercury compounds; and information on viable alternatives to mercury-added products, manufacturing processes using mercury or mercury compounds, and activities and processes that emit or release mercury or mercury compounds.</td>
<td></td>
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<tr>
<td>Information on health and environmental risks and economic and social costs and benefits of such alternatives are included in this context. The Article also requires Parties to facilitate the exchange of epidemiological information concerning health impacts associated with exposure to mercury and mercury compounds.</td>
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</tr>
<tr>
<td>Information provided to the public under this Article would include the health and environmental effects of mercury and mercury compounds, the topics identified in paragraph 1 of Article 17, all topics covered by Article 17, the results of a Party’s research, development and monitoring activities under Article 19, and activities taken by a Party to meet its obligations under the Convention.</td>
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</tr>
<tr>
<td>The Article states that each Party shall <strong>use existing mechanisms to inform and educate the public, or consider new mechanisms such as pollutant release and transfer registers</strong>.</td>
<td></td>
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</tr>
<tr>
<td>This Article calls upon each Party, <strong>within its capabilities</strong>, to promote and facilitate: (a) the provision to the public of available information, and (b) education, training and public awareness related to the health and environment effects of exposure to mercury and mercury compounds.</td>
<td></td>
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</tr>
<tr>
<td>Article 19 also calls upon the Parties to <strong>endeavour to cooperate to develop and improve</strong>, taking into account their respective circumstances and capabilities, a wide range of information emerging over time from the Parties’ research and monitoring activities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HEALTH MINISTRIES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilitate the exchange of epidemiological information concerning health impacts with exposure to mercury and mercury compounds.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health ministries may <strong>develop appropriate education and training programmes on mercury</strong>, addressing: current uses of mercury; routes of entry; uptake, absorption and distribution of mercury in the human body; preventive measures; vulnerable groups; symptoms of mercury poisoning; medical management of mercury poisoning.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Of particular relevance to health ministries are the monitoring of levels of mercury and mercury compounds in vulnerable populations, and assessments of the impact of mercury and mercury compounds on human health. This additionally contributes to work under Article 22 on Effectiveness evaluation.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2.2.3 VOLUNTARY ARTICLES THAT ENCOURAGE PARTIES TO IMPLEMENT MEASURES IN GOOD FAITH

**ARTICLE 16 HEALTH ASPECTS**

**MINAMATA CONVENTION ON MERCURY**

Article 16 of the Convention encourages the Parties to implement health measures, taking into account their respective circumstances and capabilities, without imposing legal obligations or time frames.

Under Article 16, Parties are encouraged to:

a) Promote the development and implementation of strategies and programmes to identify and protect populations at risk, particularly vulnerable populations, and which may include adopting science-based health guidelines relating to the exposure to mercury and mercury compounds, setting targets for mercury exposure reduction, where appropriate, and public education, with the participation of public health and other involved sectors;

b) Promote the development and implementation of science-based educational and preventive programmes on occupational exposure to mercury and mercury compounds;

c) Promote appropriate health-care services for prevention, treatment and care for populations affected by the exposure to mercury or mercury compounds; and

d) Establish and strengthen, as appropriate, the institutional and health professional capacities for the prevention, diagnosis, treatment and monitoring of health risks related to the exposure to mercury and mercury compounds.

**HEALTH MINISTRIES**

As mentioned, with health and environment as the core objectives of the Convention, it is expected that measures taken by Parties in relation to many other Articles of the convention will overlap with and contribute to the implementation of Article 16. Such measures may include, not only measures implemented by health ministries themselves, but also measures implemented by other units of government.

Consider the following example:

- measures undertaken by Article 4 (Mercury-added products) will contribute towards compliance with Article 16, items (a) and (b);
- measures undertaken by Article 7 (Artisanal and small-scale gold mining) will contribute towards compliance with all items of Article 16;
- measures undertaken by Articles 10-12 (Environmentally sound interim storage of mercury, other than waste mercury; Mercury wastes; Contaminated sites) will contribute towards compliance with Article 16, items (a) and (b); and
- measures undertaken by health ministries in relation to Article 18, paragraph 1 (education and training), Article 19, item (c) (health risk assessments) and others will contribute towards compliance with Article 16, item (a).

However, measures undertaken by other ministries may also contribute to compliance, for example, the identification of mercury supply sources under Article 3, the estimation of annual quantities of mercury released through human activities under Article 18, and others.

The role of WHO and ministries of health in the implementation of the Minamata Convention on Mercury
3. Multisectoral coordination

The Minamata Convention anticipates that "coordinated implementation of the obligations of the Convention will lead to an overall reduction of mercury levels in the environment over time." This is a clear indication that the Convention is an integrated multisectoral policy. Its implementation will require multisectoral coordination and action. The Convention takes a life-cycle approach covering the supply, trade, use, emission, release, handling and disposal of mercury. With that perspective and given the wide use of mercury in many diverse sectors of the economy, the cooperation of many sectors is indispensable at national and international levels. Synergies between global, regional and national structures will play a significant role in achieving the objectives of the Convention (WHO Regional Office for Europe, 2016).

3.1 COORDINATION AT THE NATIONAL LEVEL

Given the multisectoral nature of the Convention, Parties may find it convenient to establish a national focal point and an interministerial coordination mechanism. Depending on national circumstances and established practices, the national focal point may be the ministry of environment, or another ministry such as trade, science and technology, foreign affairs, or others. Parties may find it convenient for their national focal points to chair their interministerial coordination mechanisms. Whatever way a Party’s interministerial coordination mechanism is constituted, it is essential that the health and environment sectors collaborate effectively in order to realize the Convention’s full potential to protect health (WHO, 2014b). Health ministries should be actively involved in the identification of national requirements and needs for ratification and implementation of the Convention to ensure that programmes, measures and allocation of adequate human, financial and other resources on the health-related articles are included in the preparation of national development and implementation plans (including preparation of national action plans to reduce the health impacts of mercury in ASGM). Collaboration between health ministries and occupational health units may be particularly important as exposure to mercury is a critical issue for several occupations. In many instances, occupational health programmes may be tied with occupational safety and located in the ministry of labour or other ministries.

Coordination mechanisms – such as the establishment of a committee or a working group within a ministry of health – may be considered by the Party to oversee the implementation of the health-related articles of the Convention and to closely coordinate with the ministry of environment and other concerned agencies such as education, labour, finance, import and export, etc.

Intersectoral coordination at the national level is essential in the preparation of the Minamata Initial Assessment (MIA) report. A Party’s MIA aims to strengthen national decision-making towards ratification of the Minamata Convention and to build national capacity towards implementation on future obligations. The preparation of an MIA is eligible for funding by the Global Environment Facility (GEF). The development of an MIA provides an opportunity for a country to undertake a mercury inventory, determine and agree upon the measures it will take to implement the Convention, estimate associated costs, and communicate this information in a concise and clear manner. United Nations Development Programme (UNDP), in partnership with United Nations Institute for...
Training and Research (UNITAR) and with input from WHO and other United Nations organizations, has provided guidance on the structure and content of MIA reports (UNDP, 2017).

Based on the suggested outline and contents of the MIA report, Table 2 lists the sections of the report that include a discussion on health-related issues and/or the role of the health ministries.

Table 2. Health-related discussion in the MIA report

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Health-related discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Country Profile</td>
<td>■ Profile of the health sector that uses mercury-containing products.</td>
</tr>
<tr>
<td>2.0</td>
<td>Mercury Inventory and Identification of Emissions</td>
<td>■ Impacts of mercury on human health and the environment. It is noted in the report that it is not required to undertake health assessments as part of an MIA project.</td>
</tr>
<tr>
<td>3.0</td>
<td>Policy, Regulatory and Institutional Framework Assessment</td>
<td>■ The following should be evaluated for the provisions in Article 16:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ Policy and regulatory measures in place and remaining gaps.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ Existing national institutional capacity and remaining gaps.</td>
</tr>
<tr>
<td>4.0</td>
<td>Identification of Populations At Risk and Gender Dimensions</td>
<td>■ Preliminary review of potential population at risk and potential health risks.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ Assessment of potential gender dimensions related to the management of mercury.</td>
</tr>
<tr>
<td>5.0</td>
<td>Awareness/Understanding of Workers and the Public; and Existing Training and Education Opportunities of Target Groups and Professionals</td>
<td>■ Raise awareness on the risks of mercury.</td>
</tr>
<tr>
<td>6.0</td>
<td>Implementation Plan and Priorities for Action</td>
<td>■ Preparation of an Implementation Plan (optional inclusion in the report).</td>
</tr>
<tr>
<td>7.0</td>
<td>Mainstreaming of Mercury Priorities</td>
<td>■ This section only applies to UNDP-supported MIA projects. When identifying opportunities for the mainstreaming of mercury opportunities, it is encouraged to use the UNDP Guide for integrating the sound management of chemicals into development planning, Step 5: Mainstreaming Hg for achievement of the SDGs.</td>
</tr>
</tbody>
</table>

Active participation by health authorities in the preparation of a Party’s MIA is essential to ensuring that the country’s health situation with regard to mercury exposure is accurately analysed and that health sector needs and priorities are well reflected.
3.2 LINKS TO INTERNATIONAL CONVENTIONS AND THE SUSTAINABLE DEVELOPMENT GOALS

Synergies exist between the Minamata Convention, the International Health Regulations (2005) and the implementation strategies of other chemical conventions. It would be beneficial for future implementation efforts to take advantage of the overlapping needs of these conventions in order to enhance coordination of chemicals management efforts within the country (UNEP, 2013). Further, implementing measures of the Minamata Convention will contribute to countries’ achievement of the Sustainable Development Goals (SDGs).

The International Health Regulations (2005) bind Parties to maintain core capacities in preparation for and response to a range of public health events of international concern, including chemical events that may arise from technological incidents, natural disasters, deliberate events, and contaminated foods and products, among others. For chemical events, the Regulations require Parties to develop and maintain surveillance capacity – including policies, guidelines and systems for reporting actual or potential chemical events to a central authority – as well as guidance for assessing and taking action on these events. Compliance with the regulations also requires one or more poisons information centres and toxicological and environmental laboratories.

The Basel Convention and Rotterdam Convention both use the framework for life cycle or a “cradle–grave” management approach to chemicals and espouse the common objective “to protect human health and the environment” (UNEP, 2011). These conventions are stated in the preamble of the Minamata Convention along with reference to the activities of WHO in the protection of human health related to mercury. Guidelines under the Basel Convention shall be used for the environmentally sound management of mercury wastes (Article 11).

The Rotterdam Convention establishes a compulsory informed consent procedure, provides a mechanism for Parties to make informed decisions on future import of chemicals, and improves capacity to prevent unwanted imports and avoid future stockpiles of obsolete pesticides.

The Chemicals Convention, 1990 (No. 170) binds each Member to formulate, implement and periodically review a coherent policy on safety in the use of chemicals at work. Members to the Convention are required to establish chemical classification systems and systems to convey to employers and workers the hazardous properties of chemicals in all branches of economic activity where workers are employed. Suppliers of chemicals are responsible for classifying and labelling chemicals, and for providing information on hazards, safety precautions and emergency procedures. Under the Chemicals Convention, employers shall ensure that workers are not exposed to chemicals to an extent that exceeds exposure limits established by the competent authority. Employers shall assess the risks arising from the use of chemicals at work and shall protect workers against such risks by appropriate means, including provision of information to workers and training on practices and procedures to be followed for safety in the use of chemicals at work.

The Safety and Health in Mines Convention, 1995 (No. 176) binds each Member to formulate, carry out and periodically review a coherent policy on safety and health in mines and to prescribe by national laws and regulations the measures for ensuring application of this convention. Such national laws and regulations shall, among other aspects, provide for the supervision of safety and health in mines by the competent authority and shall empower the competent authority to suspend and restrict mining activities on safety and health grounds until hazardous conditions have been corrected. National laws and regulations shall also specify, among other things,
requirements for the safe storage, transportation and disposal of hazardous substances used in the mining process and waste produced at the mine. The Safety and Health in Mines Convention further requires that employers take preventive and protective measures. Where workers are exposed to physical, chemical or biological hazards, employers shall inform workers of such hazards, the health risks involved, and relevant preventive and protective measures, and shall take appropriate measures to eliminate or minimize the risks. Employers shall also provide workers with suitable protective equipment, adequate training on safety and health matters, and regular health surveillance.

With regard to the SDGs, implementation of the health-related articles of the Minamata Convention will support the following SDGs: (i) goal 1 – End poverty in all its forms everywhere; (ii) goal 3 – Ensure healthy lives and promote well-being for all at all ages; (iii) goal 6 – Ensure availability and sustainable management of water and sanitation for all; (iv) goal 8 – Promote sustained inclusive and sustainable economic growth, full and productive employment and decent work for all; (v) goal 12 – Ensure sustainable consumption and production patterns; and (vi) goal 14 – conserve and sustainably use the oceans, seas and marine resources for sustainable development.
4. Analysis and planning of health ministries’ measures

The approach taken by any health ministry to plan and prioritize measures in relation to the Minamata Convention will need to be adapted to its country’s particular needs and circumstances. Nonetheless, a general process may be considered as a guide. Such a process is summarized in Table 3.

Table 3.
General process for analysing and planning a health ministry’s measures under the Minamata Convention on Mercury

<table>
<thead>
<tr>
<th>Step</th>
<th>Desired outcome</th>
</tr>
</thead>
</table>
| 1. Establish coordination mechanism | - Designation of Ministry of Health (MoH) focal point.  
- Activation of in-house, inter-programmatic coordinating committee or working group (new or existing).  
- Effective channel of communication and coordination with national coordination mechanism. |
| 2. Take stock of mercury risk assessment and control programmes already ongoing or planned | - Identification of MoH’s current risk assessment and control measures addressing mercury.  
- Participatory, inter-programmatic review of MoH’s current risk assessment and control measures addressing mercury. |
| 3. Gap analysis | - Determination of the specific measures obliged of a health ministry under the relevant articles of the Minamata Convention, in light of the country’s specific circumstances.  
- Review of voluntary measures encouraged by the Minamata Convention.  
- Identification of gaps between obligatory and voluntary measures under the Minamata Convention versus the MoH’s current risk assessment and control measures addressing mercury.  
- Identification of additional measures needed to fully implement the health-related articles of the Minamata Convention and to adequately protect public health. |
| 4. Strategic planning and priority setting | - Consolidation of current and additional measures.  
- Determination of target dates for implementation of additional measures.  
- Assignment of responsibilities, at programmatic level, for implementation of additional measures.  
- Confirmation of responsibilities for continuation of current measures.  
- Consideration of priorities for implementation. |
| 5. Action planning and implementation | - Agreement on roles, responsibilities, timelines and budgets for continuation of current measures and implementation of additional measures.  
- Mobilization of resources.  
- Ongoing monitoring of implementation of measures.  
- Preparation of periodic reports on implementation, noting challenges, and recommendations (as may be needed) for adjustments of plans. |
4.1 ESTABLISH COORDINATION MECHANISM

It is recommended that a health ministry designate a ministry focal point and establish an internal coordination mechanism to plan measures to implement the health-related articles of the Minamata Convention. In some cases, this task may be assigned to an existing in-house committee or working group if an appropriate one is already established and active, such as a chemical safety or environmental health committee. It is important that the group be chaired by a senior health official with decision-making authority and that the group be inter-programmatic, involving all units of the ministry and allied health organizations that touch upon mercury risk assessment and control. This internal coordination mechanism will have two principal functions: firstly, to plan and lead the implementation of health-related articles of the Minamata Convention, and secondly, to serve as the official channel of communication and coordination with the national coordination mechanisms. In many countries, as mentioned earlier (see Section 3.1), another ministry such as the ministry of environment, trade, science and technology, foreign affairs, or other will have established a national interministerial coordination mechanism of which it chairs.

An example of a MoH in-house coordination mechanism is given in Box 6.
4.2 TAKING STOCK OF EXISTING MERCURY RISK ASSESSMENT AND CONTROL PROGRAMMES

Typically, many organizational units within a health ministry may have various risk assessment and control programmes ongoing or planned that directly or indirectly touch on exposure to mercury. It is important to review these and to determine to what extent they may contribute to the ministry’s compliance with requirements imposed by the Minamata Convention and, conversely, to what extent they may fall short and need to be strengthened. Such programmes may pre-date the ratification of the Minamata Convention. Health planners should take stock of these programmes when planning for a ministry’s implementation of the Convention. Consider some examples:

- Occupational health units may have active surveillance and control programmes addressing exposure to mercury among workers.
- The food safety unit may already play an active role in setting and enforcing standards for mercury content in food and water and for the content of methylmercury in fish and fish products. The unit may also have an active role in monitoring contaminants in food and water.
- Pharmacy services may be actively involved in setting and enforcing standards for mercury content in pharmaceutical products and non-prescription health and beauty aids such as cosmetic products and topical antiseptics. They may also be active in educating the public on health risks posed by exposure to mercury-added products.
- Dental services may already be actively implementing measures to promote alternatives to dental amalgam or to phase down its use.
- Health services at various levels may already have established protocols for diagnosis and treatment of mercury poisoning and for patient education.
- Health services at various levels may already have established protocols for safe handling of mercury-added products, for safe cleanup of mercury spills, and for safe storage of mercury waste.
- Medical and nursing curricula and curricula for other allied health services may already address mercury-related issues.
- Health research around mercury exposure may already be an area of active medical investigation.
- Health educators may already be actively informing the general public or specific vulnerable groups about the risks of exposure to mercury and appropriate risk control measures.

This list is not exhaustive. There may be many other ongoing programmes and activities embedded within the structure of the health ministry that directly or indirectly touch upon the issue of exposure to mercury.

Through working sessions or workshops, the members of the in-house committee or working group may share information on their mercury-related programmes or activities, such as nature and purpose of the programme; whether it is implemented in response to a particular policy, law or regulation; nature of mercury exposure; exposed or at-risk population; methods of risk assessment; control measures; resources committed to the programme; challenges faced in the programme, etc. In many cases it may be that the health ministry is already implementing measures that contribute to compliance with the requirements of the Minamata Convention; these contributions should not be overlooked by health planners.

4.3 GAP ANALYSIS

Table 1 summarized the health-related articles of the Minamata Convention. Compliance with certain articles, as shown in the table, is obligatory for Parties to the Convention. Compliance with other articles is voluntary.
Health planners may conduct a gap analysis to identify any shortfalls between the ministry’s actual measures currently being implemented and those that are needed to fully implement the health-related articles of the Convention.

The report of the country’s MIA may be a useful point of departure for a comprehensive gap analysis. The MIA may itself include a gap analysis for the health sector. If the health ministry or other highly competent health experts were actively engaged in the preparation of the MIA, its gap analysis may indeed provide useful insight. It should be cautioned, however, that the gap analysis could overstate a country’s preparedness in the health sector if it assumes that legislated measures are fully implemented. Conversely, a gap analysis could understate a country’s preparedness in the health sector if it assumes that the only mercury-related programmes that are implemented are ones that are legislated. In reality, there may be situations in which not all legislated measures are fully implemented while other measures are implemented simply on the basis of good public health practice, without a legislative mandate.

It is recommended that health planners base a gap analysis on a stock-taking of the actual mercury-related policies, programmes and activities that are currently implemented through the various organizational units of the ministry, as has been discussed above.

Worksheets are provided in Annex 4 of this document to assist in conducting a gap analysis. For each of the health-related articles of the Minamata Convention, two columns are shown with two horizontal fields below. The first column states the requirements of the article as articulated in the Minamata Convention itself. In the second column, users would enter a brief description of the ministry’s current policies, programmes and activities that relate to that article. Below the two columns, a horizontal field is provided where users may analyse any gaps between the requirements of the article as summarized in the first column and the actual policies, programmes and activities as summarized in the second column (see Worksheet 1).

Worksheet 1.

**Gap analysis worksheet**

<table>
<thead>
<tr>
<th>Article no. __: Title of the article is provided here.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirement of the Article: (Text of the Article is provided here.)</td>
</tr>
</tbody>
</table>

**Current MoH measures:** Describe the MoH’s current measures, if any, in relation to this Article.

<table>
<thead>
<tr>
<th>Analysis: Consider the following questions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What are the responsibilities of MoH under this Article?</td>
</tr>
<tr>
<td>2. Are MoH’s current measures adequate to fully implement its responsibilities under the Article?</td>
</tr>
<tr>
<td>3. Are MoH’s current measures adequate to protect public health?</td>
</tr>
</tbody>
</table>

| Recommendations: What additional measures, if any, are needed to fully implement MoH’s responsibilities under the Article and to adequately protect public health? |

| Next step: Transfer current MoH measures (above) and the additional measures listed here to the Strategic Planning Worksheet. |

Users may also consider whether implementation of the article is in itself adequate to protect public health or whether additional measures beyond the Convention’s legal requirements should be considered. For example, Article 4 requires a health ministry to cease procurement of mercury-containing
thermometers and sphygmomanometers, but a ministry may consider additional measures to be appropriate as well, such as retiring from service mercury-containing devices that are already in use in the health services. As another example, a health ministry may not be required by the Convention to develop a public health strategy to address ASGM if the Party does not make a declaration that ASGM in the country is more than insignificant; however, regardless of the absence of a legal requirement, a ministry may consider that it is in the interest of public health to do so.

While considering additional measures to be implemented by the health ministry, planners are encouraged to take a broad public health perspective and not necessarily focus only on mercury exposure. For example, ASGM communities often face multiple health hazards in addition to their exposure to mercury, such as poor housing, inadequate water supply and sanitation, risk of landslides and flooding, and others. Developing a strategy to address ASGM in the context of the Minamata Convention may present an opportunity to tackle a broader range of health issues affecting this vulnerable and marginalized population. As another example, any public awareness campaign to educate consumers on the health risks of mercury-added skin-lightening products should concurrently address other mercury-added products such as batteries, lamps, pesticides, electronic products, etc.

Based on the gap analysis, users may identify additional measures that the ministry should implement (a) to fully implement the health-related articles of the Convention and (b) to adequately protect public health. For each article, any additional measures being recommended may be entered into the lower horizontal field of the gap analysis worksheet.

4.4 STRATEGIC PLANNING AND PRIORITY SETTING

A worksheet has been provided in Annex 5 of this document to assist users in strategic planning for implementation of the health-related articles of the Convention. For each article, as listed in the worksheet, users may transcribe current measures and needed additional measures from the corresponding gap analysis worksheet. These may be entered in the first column of the strategic planning worksheet. Users may note in the second column whether measures are current or, if additional, whether they may be measures that are obligatory with a fixed time frame for implementation, obligatory without a time frame for implementation, or voluntary.

The third column of the strategic planning worksheet is for noting the time frame for implementation. For measures that are obligatory with a fixed time frame for implementation, the target date for implementation may be found in the text of the Minamata Convention and in any registered exemption under Article 6. Units responsible for implementation of additional measures should be consulted to determine target dates for implementation. The unit(s) of the ministry responsible for implementation of each measure may be noted in the fourth column of the worksheet.

The distribution of responsibilities for implementation of measures is likely to be spread across a number of programmatic units, for example:

- The medical devices programme may have lead responsibility for phasing out mercury-containing measuring devices, while health services units will participate in its implementation.
- The oral health programme will likely have responsibility for phasing down dental amalgam.
- Responsibility for identification of vulnerable groups may rest with the disease surveillance unit.
- Health services units will likely have responsibility for diagnosis and treatment of community-based vulnerable groups, while
occupational health units may bear the responsibility among exposed workers.

- The health education unit may have responsibility for public education.

These examples are not exhaustive.

A situation may arise in which a responsible unit must set priorities for implementation in case it becomes responsible for two or more measures. In such a situation, consideration should be given to the costs and benefits of the various measures assigned to the unit. In this context, the terms “costs” and “benefits” should be thought of broadly. The costs of implementing measures may be thought of not only in narrow financial terms but also broadly in the sense of overall social, economic, environmental and political costs. The benefits of implementing articles may be thought of broadly too, including the general public health benefit, with due consideration of the health benefit to marginal and vulnerable groups, and also other benefits in terms of quality of life, environmental and economic benefits, etc.

A simple approach to evaluating and prioritizing mercury risk assessment and control measures planned for implementation may be through the use of a colour-coded matrix, as illustrated in Table 4 below:

Table 4.
Implementation cost-benefit analysis matrix

<table>
<thead>
<tr>
<th>COSTS OF IMPLEMENTATION</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>BENEFITS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend:
- First priority for implementation
- Second priority for implementation
- Third priority for implementation

Measures judged to be high benefit/low cost may be considered to have first priority for implementation. Measures judged to be of low benefit/high cost would clearly have low priority for implementation. Priorities for those two categories are quite clear. However, discussions may be needed on measures judged to be of high benefit/high cost, and ways may be considered to mobilize needed resources or to reduce costs or spread costs over time through a phased approach. Similarly, discussions may be needed on measures judged to be of low public health benefit but also low cost, and might consider whether there may be ways to increase benefit while maintaining low cost, or whether these measures should really be deferred for some time and re-examined in the future.

4.5 ACTION PLANNING AND IMPLEMENTATION

Action planning for implementation of measures needed to implement the health-related articles of the Minamata Convention may flow from the strategic plan. Time frames for implementation of measures and identification of responsible units will have been identified in the strategic plan. More detailed action planning may identify specific activities or tasks needed at national, subnational
and facility levels in order to implement specific measures. Each specific activity or task may have its own timeline and may imply roles and responsibilities of collaborating units, which need to be clearly identified and agreed. The resources required for implementation, both human and financial, should be identified in the action plan. Box 7 describes the “SMART” (Specific, Measurable, Agreed, Realistic and Time-bound) model of action planning.

Box 7. “SMART” MODEL OF ACTION PLANNING

One approach to action planning is to use the “SMART” model, ensuring that activities and tasks are **Specific**, **Measurable**, **Agreed**, **Realistic** and **Time-bound**.

**Specific and Realistic.** This step may already be covered in the strategic planning step and may only need to be broken down into a sequence of specific and realistic activities. For example, if one measure to be implemented is the phase-out of mercury-added cosmetics in the market, the specific and realistic steps may include: (i) make an inventory of all mercury-added cosmetics in the market; (ii) develop and promulgate relevant regulations; (iii) prepare and implement public education programmes.

**Measurable and Time-bound.** These two components of the action model are related to the monitoring framework in order to track the progress and challenges of the identified activities. It is recommended that dates and times be set down for the specific activities and tasks. Some of the articles of the Convention have a clear time frame for implementation. For other articles, each Party can decide the time frame for implementation.

**Agreed.** Implementation of many health-related articles of the Convention may require collaboration among various stakeholders. Agreement among stakeholders on their respective roles and responsibilities will greatly support implementation.

In addition to the SMART model, human and financial resources are also important factors for the success of the action plan:

**Human resources.** The roles and responsibilities of the responsible health unit(s) should be clearly defined and the activities and tasks should be clearly delegated. This will help avoid overlapping of responsibilities and duplication of activities implemented. The human resource requirement for all activities and tasks should be taken into account. The need may be identified for building the capacity of staff and appropriate steps should be taken to build such capacity.

**Financial resources.** Estimates of financial costs should be included in the action plan and sources of funds should be identified.

A monitoring framework should be prepared in order to track progress over time towards the implementation of the action plan, to note challenges to implementation, and to develop recommendations (as may be needed) for adjustments of the action plan. Periodic monitoring reports should be prepared to evaluate the progress, lessons learned and challenges being met in implementation. A well-designed and well-implemented monitoring framework will also contribute valuable information towards a Party’s periodic reports to the Minamata Convention’s COP. Details on timing, structure and content of Parties’ reports to the COP can be found in Annex 1 of the report of the first meeting of the COP (UNEP, 2018).
References


Public health impacts of exposure to mercury and mercury compounds: the role of WHO and ministries of public health in the implementation of the Minamata Convention

The Sixty-seventh World Health Assembly,

Having considered the report on public health impacts of exposure to mercury and mercury compounds: the role of WHO and ministries of public health in the implementation of the Minamata Convention;¹

Recalling World Health Assembly resolutions WHA60.17 on oral health: action plan for promotion and integrated disease prevention, WHA63.25 on the improvement of health through safe and environmentally sound waste management, and WHA59.15 on the Strategic Approach to International Chemicals Management, as well as the strategy for strengthening the engagement of the health sector in the implementation of the strategic approach adopted by the International Conference on Chemicals Management at its third session;

Recognizing the importance of dealing effectively with the health aspects of the challenges that chemicals and wastes, including mercury, may pose, particularly to vulnerable populations, especially women, children, and, through them, future generations;

Recalling the renewed commitments on sustainable development set out in the United Nations Conference on Sustainable Development Rio+20 outcome document “The future we want”, of June 2012, as well as the Adelaide Statement on Health in All Policies of 2010, and the 8th Global Conference on Health Promotion, held in Helsinki in 2013, which promoted intersectoral collaboration across all sectors to achieve healthy populations;

Taking note that negotiations on the text of a new multilateral environmental agreement on mercury were concluded in October 2013 with the adoption of the Minamata Convention on Mercury, being the first time that a multilateral environmental agreement includes a specific article on health, as well as other relevant provisions, and that the Convention places certain obligations on Parties that will require action, as applicable, by the health sector, together with other competent sectors, including the progressive phase-out, resulting from banning the manufacture, import or export by 2020 of mercury thermometers and sphygmomanometers, of mercury-containing cosmetics, including skin-lightening
soaps and creams, and mercury-containing topical antiseptics, measures to be taken to phase down
mercury-added dental amalgam, and the development of public health strategies on the exposure to
mercury of artisanal and small-scale gold miners and their communities;

Recalling that the objective of the Minamata Convention on Mercury is to protect human health and the
environment from anthropogenic emissions and releases of mercury and mercury compounds;

Bearing in mind that the Minamata Convention on Mercury encourages Parties to: (a) promote the
development and implementation of strategies and programmes to identify and protect populations at
risk, particularly vulnerable populations, and which may include adopting science-based health
guidelines relating to the exposure to mercury and mercury compounds, setting targets for mercury
exposure reduction, where appropriate, and public education, with the participation of public health
and other involved sectors; (b) promote the development and implementation of science-based educational
and preventive programmes on occupational exposure to mercury and mercury compounds; (c)
promote appropriate health care services for prevention, treatment and care for populations affected by
the exposure to mercury or mercury compounds; and (d) establish and strengthen, as appropriate, the
institutional and health professional capacities for the prevention, diagnosis, treatment and monitoring
of health risks related to the exposure to mercury and mercury compounds;

Noting that the Minamata Convention on Mercury states that the Conference of the Parties, in
considering health-related activities, should consult, collaborate and promote cooperation and exchange
of information with WHO, ILO and other relevant intergovernmental organizations, as appropriate;

Thanking the Secretariat for its preparatory work, during the negotiations, analyzing different risks and
available substitutes, as well as analyzing and identifying areas requiring additional or new effort, under the
Minamata Convention, and encouraging further and continuous analysis and other efforts as may be needed,

1. WELCOMES the formal adoption by Parties of the Minamata Convention on Mercury in
   October 2013;

2. ENCOURAGES Member States:

   (1) to take the necessary domestic measures promptly to sign, ratify and implement the Minamata
       Convention on Mercury, which sets out internationally legally binding measures to address the
       risks of mercury and mercury compounds on human health and the environment;

   (2) to participate actively in national, regional and international efforts to implement the Minamata
       Convention on Mercury;

   (3) to address the health aspects of exposure to mercury and mercury compounds in the context of
       their health sector uses, and also the other negative health impacts that should be prevented or
       treated, by ensuring the sound management of mercury and mercury compounds throughout their
       life cycle;

   (4) to recognize the interrelation between the environment and public health in the context of the
       implementation of the Minamata Convention on Mercury and sustainable development;
(5) to promote appropriate health care services for prevention, treatment and care for populations affected by the exposure to mercury or mercury compounds, including effective risk communication strategies targeted at vulnerable groups, such as children and women of childbearing age, especially pregnant women;

(6) to ensure close cooperation between Ministries of Health and ministries of environment, as well as ministries of labour, industry, economy, agriculture and other ministries responsible for the implementation of aspects of the Minamata Convention on Mercury;

(7) to facilitate the exchange of epidemiological information concerning health impacts associated with exposure to mercury and mercury compounds, in close cooperation with WHO and other relevant organizations, as appropriate;

3. REQUESTS the Director-General:

(1) to facilitate WHO's efforts to provide advice and technical support to Member States to support the implementation of the Minamata Convention on Mercury in all health aspects related to mercury, consistent with WHO's programme of work, in order to promote and protect human health;

(2) to provide support to Member States in developing and implementing strategies and programmes to identify and protect populations at risk, particularly vulnerable populations, which may include adopting science-based health guidelines relating to exposure to mercury and mercury compounds, setting targets for mercury exposure reduction, where appropriate, and public education, with the participation of health and other involved sectors;

(3) to cooperate closely with the Minamata Convention Intergovernmental Negotiating Committee, the Conference of the Parties and other international organizations and bodies, mainly UNEP, to fully support the implementation of the health-related aspects of the Minamata Convention on Mercury and to provide information to the Committee and Conference of the Parties on the progress made in this regard;

(4) to report to the Seventieth World Health Assembly in 2017 on progress in the implementation of this resolution.

Ninth plenary meeting, 24 May 2014 A67/VR/9

Mercury-added products

The following products are excluded from this Annex:
(a) Products essential for civil protection and military uses;
(b) Products for research, calibration of instrumentation, for use as reference standard;
(c) Where no feasible mercury-free alternative for replacement is available, switches and relays, cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for electronic displays, and measuring devices;
(d) Products used in traditional or religious practices; and
(e) Vaccines containing thiomersal as preservatives.

Part I:
Products subject to Article 4, paragraph 1

<table>
<thead>
<tr>
<th>Mercury-added products</th>
<th>Date after which the manufacture, import or export of the product shall not be allowed (phase-out date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batteries, except for button zinc silver oxide batteries with a mercury content &lt; 2% and button zinc air batteries with a mercury content &lt; 2%</td>
<td>2020</td>
</tr>
<tr>
<td>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</td>
<td>2020</td>
</tr>
<tr>
<td>Compact fluorescent lamps (CFLs) for general lighting purposes that are ≤ 30 watts with a mercury content exceeding 5 mg per lamp burner</td>
<td>2020</td>
</tr>
<tr>
<td>Linear fluorescent lamps (LFLs) for general lighting purposes:</td>
<td></td>
</tr>
<tr>
<td>(a) Triband phosphor &lt; 60 watts with a mercury content exceeding 5 mg per lamp</td>
<td>2020</td>
</tr>
<tr>
<td>(b) Halophosphate phosphor ≤ 40 watts with a mercury content exceeding 10 mg per lamp</td>
<td></td>
</tr>
<tr>
<td>High pressure mercury vapour lamps (HPMV) for general lighting purposes</td>
<td>2020</td>
</tr>
<tr>
<td>Mercury-added products</td>
<td>Date after which the manufacture, import or export of the product shall not be allowed (phase-out date)</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for electronic displays:</td>
<td>2020</td>
</tr>
<tr>
<td>(a) short length (≤ 500 mm) with mercury content exceeding 3.5 mg per lamp</td>
<td></td>
</tr>
<tr>
<td>(b) medium length (&gt; 500 mm and ≤ 1500 mm) with mercury content exceeding 5 mg per lamp</td>
<td></td>
</tr>
<tr>
<td>(c) long length (&gt; 1500 mm) with mercury content exceeding 13 mg per lamp</td>
<td></td>
</tr>
<tr>
<td>Cosmetics (with mercury content above 1ppm), including skin lightening soaps and creams, and not including eye area cosmetics where mercury is used as a preservative and no effective and safe substitute preservatives are available¹</td>
<td>2020</td>
</tr>
<tr>
<td>Pesticides, biocides and topical antiseptics</td>
<td>2020</td>
</tr>
<tr>
<td>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:</td>
<td>2020</td>
</tr>
<tr>
<td>(a) barometers;</td>
<td></td>
</tr>
<tr>
<td>(b) hygrometers;</td>
<td></td>
</tr>
<tr>
<td>(c) manometers;</td>
<td></td>
</tr>
<tr>
<td>(d) thermometers;</td>
<td></td>
</tr>
<tr>
<td>(e) sphygmomanometers.</td>
<td></td>
</tr>
</tbody>
</table>

¹ The intention is not to cover cosmetics, soaps or creams with trace contaminants of mercury.
Part II:
Products subject to Article 4, paragraph 3

<table>
<thead>
<tr>
<th>Mercury-added products</th>
<th>Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental amalgam</td>
<td>Measures to be taken by a Party to phase down the use of dental amalgam shall take into account the Party’s domestic circumstances and relevant international guidance and shall include two or more of the measures from the following list:</td>
</tr>
<tr>
<td></td>
<td>(i) Setting national objectives aiming at dental caries prevention and health promotion, thereby minimizing the need for dental restoration;</td>
</tr>
<tr>
<td></td>
<td>(ii) Setting national objectives aiming at minimizing its use;</td>
</tr>
<tr>
<td></td>
<td>(iii) Promoting the use of cost-effective and clinically effective mercury-free alternatives for dental restoration;</td>
</tr>
<tr>
<td></td>
<td>(iv) Promoting research and development of quality mercury-free materials for dental restoration;</td>
</tr>
<tr>
<td></td>
<td>(v) Encouraging representative professional organizations and dental schools to educate and train dental professionals and students on the use of mercury-free dental restoration alternatives and on promoting best management practices;</td>
</tr>
<tr>
<td></td>
<td>(vi) Discouraging insurance policies and programmes that favour dental amalgam use over mercury-free dental restoration;</td>
</tr>
<tr>
<td></td>
<td>(vii) Encouraging insurance policies and programmes that favour the use of quality alternatives to dental amalgam for dental restoration;</td>
</tr>
<tr>
<td></td>
<td>(viii) Restricting the use of dental amalgam to its encapsulated form;</td>
</tr>
<tr>
<td></td>
<td>(ix) Promoting the use of best environmental practices in dental facilities to reduce releases of mercury and mercury compounds to water and land.</td>
</tr>
</tbody>
</table>
Annex 3: National action plan on artisanal and small-scale gold mining (Annex C of the Minamata Convention on Mercury)

Artisanal and small-scale gold mining

National action plans

1. Each Party that is subject to the provisions of paragraph 3 of Article 7 shall include in its national action plan:
   (a) National objectives and reduction targets;
   (b) Actions to eliminate:
      (i) Whole ore amalgamation;
      (ii) Open burning of amalgam or processed amalgam;
      (iii) Burning of amalgam in residential areas; and
      (iv) Cyanide leaching in sediment, ore or tailings to which mercury has been added without first removing the mercury;
   (c) Steps to facilitate the formalization or regulation of the artisanal and small-scale gold mining sector;
   (d) Baseline estimates of the quantities of mercury used and the practices employed in artisanal and small-scale gold mining and processing within its territory;
   (e) Strategies for promoting the reduction of emissions and releases of, and exposure to, mercury in artisanal and small-scale gold mining and processing, including mercury-free methods;
   (f) Strategies for managing trade and preventing the diversion of mercury and mercury compounds from both foreign and domestic sources to use in artisanal and small scale gold mining and processing;
   (g) Strategies for involving stakeholders in the implementation and continuing development of the national action plan;
   (h) A public health strategy on the exposure of artisanal and small-scale gold miners and their communities to mercury. Such a strategy should include, inter alia, the gathering of health data, training for healthcare workers and awareness-raising through health facilities;
   (i) Strategies to prevent the exposure of vulnerable populations, particularly children and women of child-bearing age, especially pregnant women, to mercury used in artisanal and small-scale gold mining;
   (j) Strategies for providing information to artisanal and small-scale gold miners and affected communities; and
   (k) A schedule for the implementation of the national action plan.

2. Each Party may include in its national action plan additional strategies to achieve its objectives, including the use or introduction of standards for mercury-free artisanal and small-scale gold mining and market-based mechanisms or marketing tools.
### Article 4: Mercury-added products

#### Requirement of the Article

1. Each Party shall not allow, by taking appropriate measures, the manufacture, import or export of mercury-added products listed in Part I of Annex A* after the phase-out date specified for those products, except where an exclusion is specified in Annex A or the Party has a registered exemption pursuant to Article 6.
2. A Party may, as an alternative to paragraph 1, indicate at the time of ratification or upon entry into force of an amendment to Annex A for it, that it will implement different measures or strategies to address products listed in Part I of Annex A. A Party may only choose this alternative if it can demonstrate that it has already reduced to a de minimis level the manufacture, import, and export of the large majority of the products listed in Part I of Annex A and that it has implemented measures or strategies to reduce the use of mercury in additional products not listed in Part I of Annex A at the time it notifies the Secretariat of its decision to use this alternative. In addition, a Party choosing this alternative shall:
   - (a) Report at the first opportunity to the Conference of the Parties a description of the measures or strategies implemented, including a quantification of the reductions achieved;
   - (b) Implement measures or strategies to reduce the use of mercury in any products listed in Part I of Annex A for which a de minimis value has not yet been obtained;

#### Current MoH measures

*Describe the MoH’s current measures, if any, in relation to this Article (Please also refer to Annex A Parts I and II containing the lists of products).*

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* Annex referred to in the worksheet pertains to the Annex of the full text of the Minamata Convention on Mercury.
### Article 4: Mercury-added products

| (c) Consider additional measures to achieve further reductions; and |
| (d) Not be eligible to claim exemptions pursuant to Article 6 for any product category for which this alternative is chosen. |

No later than five years after the date of entry into force of the Convention, the Conference of the Parties shall, as part of the review process under paragraph 8, review the progress and the effectiveness of the measures taken under this paragraph.

3. Each Party shall take measures for the mercury-added products listed in Part II of Annex A in accordance with the provisions set out therein.

4. The Secretariat shall, on the basis of information provided by Parties, collect and maintain information on mercury-added products and their alternatives, and shall make such information publicly available. The Secretariat shall also make publicly available any other relevant information submitted by Parties.

5. 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 it under this Article.

6. Each Party shall discourage the manufacture and the distribution in commerce of mercury-added products not covered by any known use of mercury-added products prior to the date of entry into force of the Convention for it, unless an assessment of the risks and benefits of the product demonstrates environmental or human health benefits. A Party shall provide to the Secretariat, as appropriate, information on any such product, including any information on the environmental and human health risks and benefits of the product. The Secretariat shall make such information publicly available.
Article 4: Mercury-added products

7. Any Party may submit a proposal to the Secretariat for listing a mercury-added product in Annex A, which shall include information related to the availability, technical and economic feasibility and environmental and health risks and benefits of the non-mercury alternatives to the product, taking into account information pursuant to paragraph 4.

8. No later than five years after the date of entry into force of the Convention, the Conference of the Parties shall review Annex A and may consider amendments to that Annex in accordance with Article 27.

9. In reviewing Annex A pursuant to paragraph 8, the Conference of the Parties shall take into account at least:
   (a) Any proposal submitted under paragraph 7;
   (b) The information made available pursuant to paragraph 4; and
   (c) The availability to the Parties of mercury-free alternatives that are technically and economically feasible, taking into account the environmental and human health risks and benefits.

Analysis: Consider the following questions.
1. What are the responsibilities of MoH under this Article?
2. Are MoH’s current measures adequate to fully implement its responsibilities under the Article?
3. Are MoH’s current measures adequate to protect public health?

Recommendations: What additional measures, if any, are needed to fully implement MoH’s responsibilities under the Article and to adequately protect public health?

Next step: Transfer current MoH measures (above) and the additional measures listed here to the Strategic Planning Worksheet.
Article 7: Artisanal and small-scale gold mining

**Requirement of the Article**

1. The measures in this Article and in Annex C shall apply to artisanal and small-scale gold mining and processing in which mercury amalgamation is used to extract gold from ore.

2. Each Party that has artisanal and small-scale gold mining and processing subject to this Article within its territory shall take steps to reduce, and where feasible eliminate, the use of mercury and mercury compounds in, and the emissions and releases to the environment of mercury from, such mining and processing.

3. Each Party shall notify the Secretariat if at any time the Party determines that artisanal and small-scale gold mining and processing in its territory is more than insignificant. If it so determines the Party shall:
   (a) Develop and implement a national action plan in accordance with Annex C;
   (b) Submit its national action plan to the Secretariat no later than three years after entry into force of the Convention for it or three years after the notification to the Secretariat, whichever is later; and
   (c) Thereafter, provide a review every three years of the progress made in meeting its obligations under this Article and include such reviews in its reports submitted pursuant to Article 21.

4. Parties may cooperate with each other and with relevant intergovernmental organizations and other entities, as appropriate, to achieve the objectives of this Article. Such cooperation may include:
   (a) Development of strategies to prevent the diversion of mercury or mercury compounds for use in artisanal and small-scale gold mining and processing;
   (b) Education, outreach and capacity-building initiatives;
   (c) Promotion of research into sustainable non-mercury alternative practices;
   (d) Provision of technical and financial assistance;

**Current MoH measures** Describe the MoH’s current measures, if any, in relation to artisanal and small-scale gold mining. (Please also refer to Annex C for the requirements for National Action Plans).
## Article 7: Artisanal and small-scale gold mining

(e) Partnerships to assist in the implementation of their commitments under this Article; and
(f) Use of existing information exchange mechanisms to promote knowledge, best environmental practices and alternative technologies that are environmentally, technically, socially and economically viable.

### Analysis:
**Consider the following questions.**

1. **What are the responsibilities of MoH under this Article?**
2. **Has the Party notified the Secretariat of the Convention that artisanal and small-scale gold mining and processing in its territory is more than insignificant?**
3. **If the answer to 2 is “yes,” are MoH’s current measures adequate to fully implement its responsibilities under the Article and to protect public health?**
4. **If the answer to 2 is “no,” are MoH’s current measures adequate to protect public health?**

### Recommendations:
**What additional measures, if any, are needed to fully implement MoH’s responsibilities under the Article?**

### Next step:
*Transfer current MoH measures (above) and the additional measures listed here to the Strategic Planning Worksheet.*
Article 11: Mercury wastes

Requirement of the Article

1. The relevant definitions of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal shall apply to wastes covered under this Convention for Parties to the Basel Convention. Parties to this Convention that are not Parties to the Basel Convention shall use those definitions as guidance as applied to wastes covered under this Convention.

2. For the purposes of this 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 Conference of the Parties, in collaboration with the relevant bodies of the Basel Convention in a harmonized manner, that are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law or this Convention. This definition excludes overburden, waste rock and tailings from mining, except from primary mercury mining, unless they contain mercury or mercury compounds above thresholds defined by the Conference of the Parties.

3. Each Party shall take appropriate measures so that mercury waste is:
   (a) Managed in an environmentally sound manner, taking into account the guidelines developed under the Basel Convention and in accordance with requirements that the Conference of the Parties shall adopt in an additional annex in accordance with Article 27. In developing requirements, the Conference of the Parties shall take into account Parties’ waste management regulations and programmes;
   (b) Only recovered, recycled, reclaimed or directly re-used for a use allowed to a Party under this Convention or for environmentally sound disposal pursuant to paragraph 3 (a);

Current MoH measures Describe the MoH’s current measures, if any, in relation to this Article.
Article 11: Mercury wastes

(c) For Parties to the Basel Convention, not transported across international boundaries except for the purpose of environmentally sound disposal in conformity with this Article and with that 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 relevant international rules, standards, and guidelines.

4. The Conference of the Parties shall seek to cooperate closely with the relevant bodies of the Basel Convention in the review and update, as appropriate, of the guidelines referred to in paragraph 3 (a).

5. Parties are encouraged to cooperate with each other and with relevant intergovernmental organizations and other entities, as appropriate, to develop and maintain global, regional and national capacity for the management of mercury wastes in an environmentally sound manner.

Analysis: Consider the following questions.
1. What are the responsibilities of MoH under this Article?
2. Are MoH’s current measures adequate to fully implement its responsibilities under the Article?
3. Are MoH’s current measures adequate to protect public health?

Recommendations: What additional measures, if any, are needed to fully implement MoH’s responsibilities under the Article and to adequately protect public health?

Next step: Transfer current MoH measures (above) and the additional measures listed here to the Strategic Planning Worksheet.
Article 12: Contaminated sites

**Requirement of the Article**

1. Each Party shall endeavour to develop appropriate strategies for identifying and assessing sites contaminated by mercury or mercury compounds.
2. Any actions to reduce the risks posed by such sites shall be performed in an environmentally sound manner incorporating, where appropriate, an assessment of the risks to human health and the environment from the mercury or mercury compounds they contain.
3. The Conference of the Parties shall adopt guidance on managing contaminated sites that may include methods and approaches for:
   (a) Site identification and characterization;
   (b) Engaging the public;
   (c) Human health and environmental risk assessments;
   (d) Options for managing the risks posed by contaminated sites;
   (e) Evaluation of benefits and costs; and
   (f) Validation of outcomes.
4. Parties are encouraged to cooperate in developing strategies and implementing activities for identifying, assessing, prioritizing, managing and, as appropriate, remediating contaminated sites.

**Current MoH measures** Describe the MoH’s current measures, if any, in relation to this Article.

**Analysis:** Consider the following questions.

1. What are the responsibilities of MoH under this Article?
2. Are MoH’s current measures adequate to fully implement its responsibilities under the Article?
3. Are MoH’s current measures adequate to protect public health?

**Recommendations:** What additional measures, if any, are needed to fully implement MoH’s responsibilities under the Article and to adequately protect public health?

**Next step:** Transfer current MoH measures (above) and the additional measures listed here to the Strategic Planning Worksheet.
**Article 16: Health aspects**

**Requirement of the Article**

1. Parties are encouraged to:
   (a) Promote the development and implementation of strategies and programmes to identify and protect populations at risk, particularly vulnerable populations, and which may include adopting science-based health guidelines relating to the exposure to mercury and mercury compounds, setting targets for mercury exposure reduction, where appropriate, and public education, with the participation of public health and other involved sectors;
   (b) Promote the development and implementation of science-based educational and preventive programmes on occupational exposure to mercury and mercury compounds;
   (c) Promote appropriate health-care services for prevention, treatment and care for populations affected by the exposure to mercury or mercury compounds; and
   (d) Establish and strengthen, as appropriate, the institutional and health professional capacities for the prevention, diagnosis, treatment and monitoring of health risks related to the exposure to mercury and mercury compounds.

2. The Conference of the Parties, in considering health-related issues or activities, should:
   (a) Consult and collaborate with the World Health Organization, the International Labour Organization and other relevant intergovernmental organizations, as appropriate; and
   (b) Promote cooperation and exchange of information with the World Health Organization, the International Labour Organization and other relevant intergovernmental organizations, as appropriate.

**Current MoH measures** Describe the MoH’s current measures, if any, in relation to this Article. (Note: If any current measure under this Article also contributes to the implementation of another Article, write the number of the other Article in parentheses after the description.)
Article 16: Health aspects

**Analysis:** Answer the following questions.
1. What are the responsibilities of MoH under this Article?
2. Are MoH’s current measures adequate to fully implement its responsibilities under the Article?
3. Are MoH’s current measures adequate to protect public health?

**Recommendations:** What additional measures, if any, are needed to fully implement MoH’s responsibilities under the Article and to adequately protect public health? (Note: If any recommended measure under this Article would also contribute to the implementation of another Article, write the number of the other Article in parentheses after the description of the measure.)

**Next step:** Transfer current MoH measures (above) and the additional measures listed here to the Strategic Planning Worksheet.
Article 17: Information exchange

Requirement of the Article

1. Each Party shall facilitate the exchange of:
   (a) Scientific, technical, economic and legal information concerning mercury and mercury compounds, including toxicological, ecotoxicological and safety information;
   (b) Information on the reduction or elimination of the production, use, trade, emissions and releases of mercury and mercury compounds;
   (c) Information on technically and economically viable alternatives to:
      (i) Mercury-added products;
      (ii) Manufacturing processes in which mercury or mercury compounds are used; and
      (iii) Activities and processes that emit or release mercury or mercury compounds; including information on the health and environmental risks and economic and social costs and benefits of such alternatives; and
   (d) Epidemiological information concerning health impacts associated with exposure to mercury and mercury compounds, in close cooperation with the World Health Organization and other relevant organizations, as appropriate.

2. Parties may exchange the information referred to in paragraph 1 directly, through the Secretariat, or in cooperation with other relevant organizations, including the secretariats of chemicals and wastes conventions, as appropriate.

3. The Secretariat shall facilitate cooperation in the exchange of information referred to in this Article, as well as with relevant organizations, including the secretariats of multilateral environmental agreements and other international initiatives. In addition to information from Parties, this information shall include information from intergovernmental and non-governmental organizations with expertise in the area of mercury, and from national and international institutions with such expertise.

Current MoH measures

Describe the MoH’s current measures, if any, in relation to this Article. (Note: If any current measure under this Article also contributes to the implementation of another Article, write the number of the other Article in parentheses after the description.)
Article 17: Information exchange

4. Each Party shall designate a national focal point for the exchange of information under this Convention, including with regard to the consent of importing Parties under Article 3.
5. For the purposes of this Convention, information on the health and safety of humans and the environment shall not be regarded as confidential. Parties that exchange other information pursuant to this Convention shall protect any confidential information as mutually agreed.

Analysis: Answer the following questions.
1. What are the responsibilities of MoH under this Article?
2. Are MoH’s current measures adequate to fully implement its responsibilities under the Article?
3. Are MoH’s current measures adequate to protect public health?

Recommendations: What additional measures, if any, are needed to fully implement MoH’s responsibilities under the Article and to adequately protect public health?

Next step: Transfer current MoH measures (above) and the additional measures listed here to the Strategic Planning Worksheet.
Article 18: Public awareness, information and education

**Requirement of the Article**

1. Each Party shall, within its capabilities, promote and facilitate:
   (a) Provision to the public of available information on:
      (i) The health and environmental effects of mercury and mercury compounds;
      (ii) Alternatives to mercury and mercury compounds;
      (iii) The topics identified in paragraph 1 of Article 17;
      (iv) The results of its research, development and monitoring activities under Article 19; and
      (v) Activities to meet its obligations under this Convention;
   (b) Education, training and public awareness related to the effects of exposure to mercury and mercury compounds on human health and the environment in collaboration with relevant intergovernmental and nongovernmental organizations and vulnerable populations, as appropriate.

2. Each Party shall use existing mechanisms or give consideration to the development of mechanisms, such as pollutant release and transfer registers where applicable, for the collection and dissemination of information on estimates of its annual quantities of mercury and mercury compounds that are emitted, released or disposed of through human activities.

**Current MoH measures** Describe the MoH’s current measures, if any, in relation to this Article.

---

**Analysis:** Answer the following questions.

1. What are the responsibilities of MoH under this Article?
2. Are MoH’s current measures adequate to fully implement its responsibilities under the Article?
3. Are MoH’s current measures adequate to protect public health?

**Recommendations:** What additional measures, if any, are needed to fully implement MoH’s responsibilities under the Article and to adequately protect public health?

**Next step:** Transfer current MoH measures (above) and the additional measures listed here to the Strategic Planning Worksheet.
### Article 19: Research, development and monitoring

#### Requirement of the Article

1. Parties shall endeavour to cooperate to develop and improve, taking into account their respective circumstances and capabilities:
   - (a) Inventories of use, consumption, and anthropogenic emissions to air and releases to water and land of mercury and mercury compounds;
   - (b) Modelling and geographically representative monitoring of levels of mercury and mercury compounds in vulnerable populations and in environmental media, including biotic media such as fish, marine mammals, sea turtles and birds, as well as collaboration in the collection and exchange of relevant and appropriate samples;
   - (c) Assessments of the impact of mercury and mercury compounds on human health and the environment, in addition to social, economic and cultural impacts, particularly in respect of vulnerable populations;
   - (d) Harmonized methodologies for the activities undertaken under subparagraphs (a), (b) and (c);
   - (e) Information on the environmental cycle, transport (including long-range transport and deposition), transformation and fate of mercury and mercury compounds in a range of ecosystems, taking appropriate account of the distinction between anthropogenic and natural emissions and releases of mercury and of remobilization of mercury from historic deposition;
   - (f) Information on commerce and trade in mercury and mercury compounds and mercury added products; and
   - (g) Information and research on the technical and economic availability of mercury-free products and processes and on best available techniques and best environmental practices to reduce and monitor emissions and releases of mercury and mercury compounds.

#### Current MoH measures

Describe the MoH’s current measures, if any, in relation to this Article.
## Article 19: Research, development and monitoring

2. Parties should, where appropriate, build on existing monitoring networks and research programmes in undertaking the activities identified in paragraph 1.

### Analysis:
Consider the following questions.
1. What are the responsibilities of MoH under this Article?
2. Are MoH’s current measures adequate to fully implement its responsibilities under the Article?
3. Are MoH’s current measures adequate to protect public health?

### Recommendations:
What additional measures, if any, are needed to fully implement MoH’s responsibilities under the Article and to adequately protect public health?

### Next step:
Transfer current MoH measures (above) and the additional measures listed here to the Strategic Planning Worksheet.
Other (please include here any other provisions of the Convention that MoH is responsible for, or contributing to, in your country).

<table>
<thead>
<tr>
<th>Requirement of the Article(s)</th>
<th>Current MoH measures</th>
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<tbody>
<tr>
<td>Please include the Article reference(s) and relevant text.</td>
<td>Describe the MoH's current measures, if any, in relation to this Article.</td>
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</table>

**Analysis:** Consider the following questions.
1. What are the responsibilities of MoH under this Article?
2. Are MoH’s current measures adequate to fully implement its responsibilities under the Article?
3. Are MoH’s current measures adequate to protect public health?

**Recommendations:** What additional measures, if any, are needed to fully implement MoH’s responsibilities under the Article and to adequately protect public health?

**Next step:** Transfer current MoH measures (above) and the additional measures listed here to the Strategic Planning Worksheet.
## Annex 5: Strategic planning worksheet

<table>
<thead>
<tr>
<th>Short description of measures (current and planned) from gap analysis worksheets (insert additional rows if needed)</th>
<th>C – Current measures</th>
<th>OT – Obligatory/ time limited</th>
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<td><strong>ARTICLE 4: MERCURY-ADDED PRODUCTS, Annex A Part I</strong></td>
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**ARTICLE 12, CONTAMINATED SITES**

**ARTICLE 16, HEALTH ASPECTS**
Paragraph ‘a’: Promote the development and implementation of strategies and programmes to identify and protect populations at risk...

**ARTICLE 16, HEALTH ASPECTS**
Paragraph ‘b’: Promote the development and implementation of science-based educational and preventive programmes on occupational exposure...

**ARTICLE 16, HEALTH ASPECTS**
Paragraph ‘c’: Promote appropriate health-care services for prevention, treatment and care...

**ARTICLE 16, HEALTH ASPECTS**
Paragraph ‘d’: Establish and strengthen, as appropriate, the institutional and health professional capacities for the prevention, diagnosis, treatment and monitoring of health risks...
### Article 17, Information Exchange

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### Article 19, Research, Development and Monitoring

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