

# 2025 FULL REPORTS OF THE MINAMATA CONVENTION ON MERCURY

Report submitted on 24 December 2025



## REPORTING PERIOD:

1 January 2021 to 31 December 2024

Attachments can be found on the website

### ▼ INFORMATION ON THE PARTY

#### 1. Information on the party

**Name of party**

Canada

**Date on which its instrument of ratification, accession, approval or acceptance was deposited**

7 April 2017

**Date of entry into force of the Convention for the party**

16 August 2017

#### 2. Information on the national focal point

**Full name of the institution**

Environment and Climate Change Canada

**Title of Contact Officer**

Ms.

**Name of Contact Officer**

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#### 3. Information about the contact officer submitting the reporting format if different from the above

**Focal Point is submitting the national report**

- Information is submitted by the national focal point
- Information is submitted through the national focal point by the contact officer

#### a3\_subsection

**Full name of the institution**

Environment and Climate Change Canada

**Title of contact officer**

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**▼ ART. 3: MERCURY SUPPLY SOURCES AND TRADE****3.1: Does the party have any primary mercury mines that were operating within its territory at the date of entry into force of the Convention for the party?**

- Yes – primary mercury mining with available data
- Yes – primary mercury mining with no available data
- No

**3.2: Does the party have any primary mercury mines that are now in operation that were not in operation at the time of entry into force of the Convention for the party?**

- Yes – primary mercury mining with available data
- Yes – primary mercury mining with no available data
- No

**3.3: (A) Has the party endeavoured to identify individual stocks of mercury or mercury compounds exceeding 50 metric tons that are located within its territory?**

3.3: (A) Has the party endeavoured to identify individual stocks of mercury or mercury compounds exceeding 50 metric tons that are located within its territory?

- Yes – with new data\* (also to be selected by parties reporting for the first time)
- Yes – endeavoured and indicates same stocks as reported in the previous report
- No

**ba33a\_subsection**

i. Please attach the results of your endeavour or indicate where it is available on the Internet;

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i. Please attach the results of your endeavour or indicate where it is available on the Internet;

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ii. Supplemental: Please provide any related information – for example, on the use or disposal of mercury from such stocks.

Article 3 Supplemental file

**Introduction**

Canada has endeavoured to identify stocks of mercury or mercury compounds exceeding 50 metric tonnes, using the "Guidance on the identification of individual stocks of mercury or mercury compounds exceeding 50 metric tons (tonnes) and source of mercury supply generating stocks exceeding 10 metric tons per year" (the Guidance).

Part A: Summary of Canada's efforts to identify stocks of mercury or mercury compounds exceeding 50 metric tonnes.

Canada's comprehensive efforts to identify such mercury stocks within its territory have produced the following findings:

**Mercury Traders**

A comprehensive review of mercury import and export data was conducted using the Canadian International Merchandise Trade Database. This analysis revealed four potential exports and three imports of mercury during the reporting period, each below 3 tonnes. The potential exports are presumed to be waste exports; however, they are currently under investigation to identify their sources. Canada continues to monitor our trade database and conducts routine inspections of exports.

## Primary Mercury Mine

Canada does not have any primary mercury mines operating within its borders.

## National Government

The Government of Canada does not hold stocks of mercury or mercury compounds exceeding 50 metric tonnes.

Canada's legislative framework, including the Canadian Environmental Protection Act, 1999 (CEPA), plays a pivotal role in safeguarding the environment and the health of its citizens from harmful substances and pollutants. Under CEPA, the "Products Containing Mercury Regulations", which were enacted in 2014 and came into force in 2015, regulate the import and manufacture of products containing mercury. These regulations prohibit most products containing mercury, with some exemptions for products listed in the Schedule to the Regulations. Additionally, they set specific limits on the total quantity of mercury allowed for certain product categories.

Amendments to the Products Containing Mercury Regulations (<https://laws-lois.justice.gc.ca/eng/regulations/SOR-2014-254/index.html>) were published on June 19, 2024, with the objective of aligning Canada's efforts with the Minamata Convention on Mercury and to further strengthen existing measures.

The Products Containing Mercury Regulations mandate that importers and manufacturers of mercury-containing products report on the quantity of mercury-containing products that they import, manufacture and export in Canada every three years. An analysis of data from 2022 indicates that products imported or manufactured in Canada contained an estimated total of 0.509 metric tonnes of mercury. Dental amalgam comprised the majority, accounting for 74% (0.376 metric tonnes) of imported and manufactured mercury-containing products in Canada in 2022. Mercury-containing lamps represented approximately 16% (0.084 metric tonnes), while other products constituted the remaining 10% (0.049 metric tonnes) of imported and manufactured mercury-containing products. In addition, polyurethane production facilities have proactively ceased the use of mercury in their catalysts ahead of December 31, 2025, its scheduled phase-out date. Given the relatively small quantities of mercury used in these products in Canada, it is highly improbable that any facilities within the country possess quantities of mercury exceeding 50 metric tonnes. The next reporting year is 2026, for 2025 data.

## Other Facilities or Activities

Within Canada, authorized facilities are responsible for the recovery of mercury from end-of-life products and other waste materials. These facilities operate under the jurisdiction of provincial and territorial authorities and are bound by stringent compliance with applicable provincial and federal laws and regulations. While the precise quantity of mercury recovered remains unknown at this time, given the relatively low volumes of mercury-containing products imported and manufactured in Canada, it is expected that these recovery facilities generate minimal quantities of mercury and mercury compounds. Consequently, they do not accumulate or permit the possession of mercury or mercury compounds exceeding 50 metric tonnes.

### **3.3: (B) Has the party endeavoured to identify individual sources of mercury-supply-generating stocks exceeding 10 metric tons per year that are located within its territory?**

**3.3:(B) Has the party endeavoured to identify individual sources of mercury-supply-generating stocks exceeding 10 metric tons per year that are located within its territory?**

- Yes – with new data\* (also to be selected by parties reporting for the first time)
- Yes – endeavoured and indicates same stocks as reported in the previous report
- No

## **ba33b\_subsection**

**i. Please attach the results of your endeavour or indicate where it is available on the Internet;**

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**ii. Supplemental: Please provide any related information – for example, on the use or disposal of mercury from such stocks.**

Article 3 Supplemental file

## Introduction

Canada has endeavoured to identify sources of mercury supply generating stocks exceeding 10 metric tonnes per year, using the "Guidance on the identification of individual stocks of mercury or mercury compounds exceeding 50 metric tons (tonnes) and source of mercury supply generating stocks exceeding 10 metric tons per year" (the Guidance).

Part B: Summary of Canada's efforts to identify sources of mercury supply generating stocks exceeding 10 metric tonnes per year.

Canada's comprehensive efforts to identify such mercury stocks and sources of supply within its territory have produced the following findings:

#### Primary Mercury Mine

Canada does not have any primary mercury mines operating within its borders.

#### Storage for Production Facilities for Mercury-added Products

As noted previously, relatively small quantities of mercury are used in the import or manufacture of products containing mercury in Canada. It is therefore very unlikely that there are any facilities within Canada that store quantities of mercury in excess of 10 metric tonnes prior to its use.

#### Recycling or recovery activities that may produce mercury

As noted above, Canada has authorized facilities who recover mercury from end-of-life products and other wastes. Given the low quantities of mercury-containing products imported and manufactured in Canada, it is expected that these recovery facilities generate very small quantities of mercury and mercury compounds and would not be in possession of stocks of mercury or mercury compounds exceeding 10 metric tonnes. Any recovered mercury is treated as waste, not a stock.

#### Proposed decommissioning of facilities with manufacturing processes in which mercury or mercury compounds are used

Canada does not have any chlor-alkali plants or vinyl chloride monomer plants using mercury, and polyurethane production facilities have ceased using mercury as a catalyst, as identified in the Key results from the 2022 reports under the Products Containing Mercury Regulations (<https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/publications/key-results-2022-products-containing-mercury-regulations.html>). There are no other facilities in Canada with manufacturing processes in which mercury or mercury compounds are used that are proposed for decommissioning.

Therefore, decommissioning activities associated with manufacturing processes in which mercury or mercury compounds are used are not a source of mercury supply generating stocks greater than 10 tonnes in Canada.

### **3.4: Has the party determined that it has excess mercury available from the decommissioning of chlor-alkali facilities?**

- Yes
- No - has determined it has no excess mercury
- No - has not made a determination

### **3.5: \*Has the party received consent, or relied on a general notification of consent, in accordance with article 3, including any required certification from importing non-parties, for all exports of mercury from the party's territory in the reporting period?**

- Yes - exports to parties
- Yes - exports to non-parties
- No - no export took place
- No - consent was not given

#### **ba35\_subsection**

If the party answered yes,(a) and the party has submitted copies of the consent forms to the secretariat, then no further information is needed.If the party has not previously provided such copies, it is recommended that it do so.

**(a) and the party has submitted copies of the consent forms to the secretariat, then no further information is needed.**  
{Empty}

**Otherwise, please provide other suitable information showing that the relevant requirements of paragraph 6 of article 3 have been met.**

The Party has relied on a general notification of consent in accordance with Article 3 of the Minamata Convention for all exports of mercury from its territory in the reporting period.

In 2017, Canada introduced comprehensive restrictions on the export of mercury by only allowing export of mixtures that contain elemental mercury at a concentration of 95% or more by weight that:

is, or is contained in, a hazardous waste or hazardous recyclable material regulated by the Cross-border Movement of Hazardous Waste and Hazardous Recyclable Material Regulations;

is exported for use in a laboratory for analysis, in scientific research or as a laboratory analytical standard, if the total quantity exported by the exporter during the calendar year in question does not exceed 10 kg; or

is contained in a manufactured item that during manufacture is formed into a specific physical shape or design and has for its final use a function or functions wholly or partly dependent on its shape or design.

All other exports are not allowed. These comprehensive restrictions on mercury export have been enacted by amending Schedule 3 (Export Control List) of the Canadian Environmental Protection Act, 1999, and the Export of Substances on the Export Control List Regulations.

Four potential exports from Canada to the US may have taken place during the reporting period, as indicated by Canada's latest update of its trade database. The total amount potentially exported was 6.2 tonnes of mercury.

In 2021, Canada potentially exported 1.049 tonnes.

In 2022, Canada potentially exported 2.098 tonnes.

In 2023, Canada potentially exported 1.409 tonnes.

In 2024, Canada potentially exported 1.643 tonnes.

The relevant terms and conditions in the general notification related to use include:

The U.S. government does not object to the import of mercury as defined in Article 3 of the Convention.

Import must conform to requirements under the Toxic Substances Control Act, 15 U.S.C. § 2601, and other applicable U.S. laws.

The potential exports, due to their quantities, are presumed to be incorrectly reported mercury wastes and have been referred to enforcement for review and action, as appropriate.

Canada will continue to monitor our trade database and conduct routine inspections of exports.

**Supplemental: please provide information on the use of the exported mercury.**

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**Kindly attach all relevant information**

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**(b) If exports were based on a general notification in accordance with article 3, paragraph 7, please indicate, if available, the total amount exported and any relevant terms or conditions in the general notification related to use.**

{Empty}

**Relevant terms or conditions in the general notification related to use**

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### **3.6: Has the party allowed the import of mercury from a non-party?**

No

Yes

The importing party has relied on paragraph 7 of article 3

### **Part E – Additional comments on this article**

[Note: para 8 of article 3 doesn't apply to Canada because we have a general notification of consent to receive mercury imports]

Supplemental for question 3.6 – Information the quantities and countries of origin of mercury imports

In 2023, Canada received imports of mercury from Austria (0.019 tonnes).

In 2021 and 2023, imports were received from India with 0.143 tonnes and less than 0.001 tonnes respectively

No imports were received in 2022 nor 2024

▼ ART. 4: MERCURY-ADDED PRODUCTS

**4.1. Has the party taken any appropriate measures to not allow the manufacture, import or export of mercury-added products listed in Part I of Annex A of the Convention after the phase-out date specified for those products?**

- Yes  
 No  
 Yes (implementing paragraph 2 of article 4)

**If yes, please provide information on the measures.**

Appropriate Measures Taken

Most mercury-added products listed in part I of annex A to the Convention are subject to Canada's Products Containing Mercury Regulations. These regulations are under the authority of the Canadian Environmental Protection Act (1999), were enacted in 2014 and came into force in 2015. They prohibit the manufacture and import of all products containing mercury, with some exemptions for products for which there are no viable mercury free alternatives. In 2024, the Products Containing Mercury Regulations were amended to further reduce and prohibit mercury use in products and to align with the requirements of the Minamata Convention. The amendments brought Canada in line with the original text of the Convention, on time for the end of its five-year exemption for three specific lamp categories. In addition, these amendments will enable Canada to meet all the Convention's newly adopted phase out dates, subject to ratification, except for three that will come into force in Canada a year later.

Regarding the export of mercury-added products listed in part I of annex A to the Convention, the amendments to Canada's Products Containing Mercury Regulations made it mandatory for importers and manufacturers to report on their export activities every three years. This measure, which was voluntary until 2025, will enable Canada to gain a better understanding of which mercury-added products are manufactured or imported to be exported.

For further regulatory certainty and to ensure Canada's continued compliance with the Minamata Convention, a public consultation was initiated at the end of 2024, on proposed amendments to the Export of Substances on the Export Control List Regulations, to expand export controls on mercury-added products, in line with the obligations under the Minamata Convention. Results from this consultation will guide Canada in taking additional measures to control the export of mercury-added products.

The other categories of mercury-added products listed in part I of annex A to the Convention, including cosmetics, natural health products, pesticides (including biocides), topical antiseptics and consumer products, are covered by other measures undertaken by the Canadian federal government:

Cosmetics are regulated under the authorities of the Food & Drugs Act (1981) and the Cosmetic Regulations (2024). The Guidance on Heavy Metal Impurities in Cosmetics (2016) was aligned with the Convention to indicate a mercury limit of 1 ppm.

Natural health products are regulated under the authorities of the Food & Drugs Act (1981) and the Natural Health Products Regulations (2003). The Quality of Natural Health Products Guide (2015), currently under review, includes a limit of 1 ppm for total mercury in topical products.<sup>1</sup>

Pesticides (including biocides) are regulated under the Pest Control Products Regulations (2006), under the authority of the Pest Control Products Act (PCPA), which prohibits the manufacturing, importation, distribution or use of unregistered / unauthorized pest control products. Pesticide formulations containing mercury as an active ingredient have not been registered for use in Canada since 1998. There are no mercury-added pesticides registered in Canada, and the PCPA contains provisions that would allow Canada to prevent their reintroduction into the Canadian market. Furthermore, the 2024 amendments to the Products Containing Mercury Regulations (PCMR) clarified that "treated articles" used as pest control products are subject to the PCMR and also that pest control product devices containing mercury-containing bulbs, (e.g., UV lamps), are subject to the PCMR.

Drugs (including topical antiseptics) are regulated under the Food & Drug Regulations. These regulations prohibit the manufacture and import of drugs for human use that contain mercury or a salt or derivative thereof unless the mercury is present as part of a preservative and the manufacturer or importer has submitted evidence to the Minister demonstrating that the only satisfactory way to maintain the sterility or stability of the drug is to use that preservative.

In addition, the Canadian federal government has taken measures to restrict or prohibit mercury in certain products not listed in part I of annex A to the Convention, including surface coating materials, toys and additional types of lamps containing mercury. These measures therefore go beyond the Convention's requirements:

The 2024 amendments to the Products Containing Mercury Regulations included additional restrictions on the import and manufacture of lamps containing mercury. The import and manufacture of high-pressure sodium vapour lamps and metal halide lamps used for general lighting purposes in new fixtures will be prohibited on December 31, 2028. However, considering that not all existing fixtures have direct mercury-free replacements yet, the Regulations

include an exemption for replacement lamps to be used in existing fixtures, with no end date. This approach aims to promote the use of mercury-free LED lighting in new installations, while allowing for the continued use of existing high intensity discharge fixtures. This phase-down also recognizes that no other jurisdiction is prohibiting these lamps at this time. In addition, the import and manufacture of bulbs for automobile headlamps containing mercury are prohibited in Canada under the Regulations as of December 31st, 2025, with an exemption for replacement bulbs, with no end date.

The Surface Coating Materials Regulations (2016) limit the total mercury content to 10 mg/kg in surface coating materials (such as consumer paints) manufactured, imported, advertised or sold in Canada.

The Toys Regulations (2011), the Cribs, Cradles and Bassinets Regulations (2016), Expansion Gates and Expandable Enclosures Regulations (2016), the Playpens Regulations (2018) and the Carriages and Strollers Regulations (2023) include a requirement that a sticker, film or other similar material that can be removed, or a surface coating material that is applied to an accessible part of a consumer product in scope of these regulations must not contain more than 10 mg/kg total mercury.

**If yes, has the party registered for an exemption pursuant to article 6?**

- Yes  
 No

**If yes, for which products (please list)?**

- Linear fluorescent lamps (LFLs) for general lighting purposes: (a) Triband phosphor < 60 watts with a mercury content exceeding 5 mg per lamp; (b) Halophosphate phosphor ≤ 40 watts with a mercury content exceeding 10 mg per lamp
- Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for electronic displays: (a) Short length (≤ 500 mm) with mercury content exceeding 3.5 mg per lamp; (b) Medium length (> 500 mm and ≤ 1,500 mm) with mercury content exceeding 5 mg per lamp; (c) Long length (> 1,500 mm) with mercury content exceeding 13 mg per lamp

**4.3: (A) Has the party taken two or more measures listed in subparagraphs (i) to (ix) of part II of annex A for the mercury-added products listed in part II of annex A in accordance with the provisions set out therein?**

4.3:(A) Has the party taken two or more measures listed in subparagraphs (i) to (ix) of part II of annex A for the mercury-added products listed in part II of annex A in accordance with the provisions set out therein?

- Yes  
 No

**If yes, please provide information on the measures.**

Part A

Canada has implemented four of the measures listed in Part II of Annex A: measure (i) setting national objectives aiming at dental caries prevention and health promotion, thereby minimizing the need for dental restoration; measure (ix) promoting the use of best environmental practices in dental facilities to reduce releases of mercury and mercury compounds to water and land; measure (viii) restricting the use of dental amalgam to its encapsulated form; and measure (iv) promoting research and development of quality mercury free materials for dental restoration. Additional details are available in Canada's report on the progress it has made to phase down dental amalgam found in part E.

**4.3: (B) If the amendment to annex A adopted in decision MC-4/3 has entered into force for the party, has the party (please check the appropriate box below) taken relevant measures:**

4.3:(B) If the amendment to annex A adopted in decision MC-4/3 has entered into force for the party, has the party (please check the appropriate box below) taken relevant measures:

- Yes  
 No  
 Not applicable

**4.4: Has the party taken measures to prevent the incorporation into assembled products of mercury-added products whose manufacture, import and export are not allowed for it under article 4?**

- Yes  
 No  
 No – not applicable (do not have facilities assembling products using mercury-added products)

**If yes, please provide information on the measures.**

Canada's Products Containing Mercury Regulations, which were published in 2014 and came into force in 2015, prohibit the manufacture and import of all products containing mercury, with limited exemptions for mercury-added products with no viable alternatives. Amendments published in 2024 further tightened these regulations, prohibiting additional mercury-containing products and strengthening existing measures. These measures aim to align with the Minamata Convention's original text and the recently adopted amendments. These regulations continue to ensure that prohibited mercury-added products are not incorporated into assembled products.

#### **4.5: Has the party discouraged the manufacture and the distribution in commerce of mercury-added products not covered by any known use in accordance with article 4, paragraph 6?**

Yes

No - no action taken

No - an assessment of the risks and benefits of the product demonstrates benefits to human health or the environment

##### **If yes, please provide information on the measures.**

Canada's Products Containing Mercury Regulations, published in 2014, in effect in 2015 and amended in 2024, prohibit the manufacture and import of all products containing mercury, with limited exemptions for mercury-added products with no viable alternatives. These regulations also include a strict and temporary permitting regime to assess new mercury-added products not covered by any known use at the time of publication. This ensures that no new product enters the Canadian market unless the product demonstrates benefits to human health or the environment. There are no permits for mercury-added products registered under these Regulations in Canada and only one was temporarily allowed since 2014.

#### **Part E – Additional comments on this article**

Response to question 4.3 Part B

While Canada has not yet formally ratified the amendment to Annex A as indicated in article 30(5), it already aligns with the requirements. As indicated above, Canada has taken measures to restrict the use of mercury to its encapsulated form, and prohibited the import and manufacture of bulk amalgam as of June 19th, 2025. The ministry of health also recommends against the use of amalgam in vulnerable populations through its position statement.

Annex to Article 4 (CAN\_Annex-to-Article-4.docx)

Canada's exemptions to Article 4

Canada had an exemption until 2025 for three sub-categories of lamps containing mercury listed in Part I of Annex A:

Linear fluorescent lamps (CFLs) for general lighting purposes: (a)-(b).

Manufacture, import and export of:

triband phosphor < 60 watts with a mercury content exceeding 5 mg per lamp

Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for electronic displays: (a)-(c).

Manufacture, import and export of CCFLs and EEFLs:

short length ( $\leq 500$  mm) with mercury content exceeding 3.5 mg per lamp

medium length ( $> 500$  mm and  $\leq 1\ 500$  mm) with mercury content exceeding 5 mg per lamp

Summary of the 2024 amendments to Canada's Products Containing Mercury Regulations

Amendments published in 2024 further tightened these regulations, setting stricter limits on mercury content, and phasing out the manufacture and import of additional common mercury-containing products in 2025. These measures aim to align with the Minamata Convention's goals and ensure mercury-added products are not manufactured or imported where prohibited.

Upon the Amendments coming into force in June 2025, the Amendments lowered the mercury content limit currently allowed for certain straight fluorescent lamps for general lighting purposes. For example, the mercury content limit for triband phosphor T12 lamps that are less than 60 watts will be lowered from 10 mg or 15 mg per lamp to 5 mg per lamp. This was an obligation under the original text of the Minamata Convention, for which Canada had a five-year exemption.

In June 2025, the import or manufacture of CCFLs and EEFLs were also prohibited, except for lamps used as a replacement part in electronic displays if, and only if, no viable mercury-free alternative is available. This was also an

obligation under the original text of the Minamata Convention, for which Canada also had a five-year exemption.

In addition, on December 31, 2025, the Amendments prohibited the import and manufacture of the following lamps for general lighting purposes, which are the most common types of lamps containing mercury in Canada:

Screw-base compact fluorescent lamps (or with integrated ballast)

Pin-base compact fluorescent lamps (or with non-integrated ballast)

Straight (or linear) fluorescent lamps

Non-linear fluorescent lamps

For transitional purposes, the Amendments will allow replacement lamps to continue to be imported or manufactured for pin-base CFLs, straight fluorescent lamps and non-linear fluorescent lamps for a two-year period ending on December 31, 2027. As a result, these replacement lamps will only be allowed to be imported or manufactured until December 31, 2027, and only to replace lamps that are already in use in existing lamp fixtures (in 2025). With this December 31, 2027, phase out date, Canada will be able to meet all the Convention's newly adopted phase out dates for lamps, except for three that will come into force in Canada a year after the Convention's deadlines. Furthermore, in order to avoid issues of stockpiling in Canada while allowing retailers to sell their stock, the sale of these replacement lamps will be prohibited in Canada on December 31, 2029.

In addition, the Amendments included additional restrictions on the import and manufacture of other categories of lamps containing mercury not currently prohibited under the Convention. The import and manufacture of high-pressure sodium vapour lamps and metal halide lamps used for general lighting purposes in new fixtures will be prohibited on December 31, 2028. However, considering that not all existing fixtures have direct mercury-free replacements yet, the Regulations include an exemption for replacement lamps to be used in existing fixtures, with no end date. This approach aims to promote the use of mercury-free LED lighting in new installations, while allowing for the continued use of existing high intensity discharge fixtures. This phase-down also recognizes that no other jurisdiction is prohibiting these lamps at this time. Finally, the import and manufacture of bulbs for automobile headlamps containing mercury are prohibited under the Regulations as of December 31st, 2025 in Canada, with an exemption for replacement bulbs, with no end date.

#### Submission on Implementation of Dental Amalgam Phase-Down Measures

Although Canada has not yet ratified the amendments made in UNEP/MC/COP.5/Dec.4, Canada has included the following information to report on progress it has made to phase down dental amalgam.

Measures taken to phase down dental amalgam and respective progress for each measure includes:

Measure (i) setting national objectives aiming at dental caries prevention and health promotion, thereby minimizing the need for dental restoration

Canada has implemented measure (i) through the implementation of the Canadian Oral Health Framework 2013–2018 and the Canadian Oral Health Strategy 2005–2010. In addition, since 2004, Canada has implemented the community-based Children's Oral Health Initiative for First Nations and Inuit, which focused on the prevention of dental disease and the promotion of good oral health practices among children, their parents/caregivers, and pregnant women. Together, the strategy, framework and initiative work to minimize the need for dental restorations by setting out our national objectives.

From 2007–2020 data collected regionally for First Nations and Inuit communities show that the average level of dental decay has not risen, and the burden of untreated dental decay has declined by 10% over the years among children having access to these preventive services. Additionally, in the communities where Children's Oral Health Initiative (COHI) services are offered data show consistent access to primary preventative treatments for caries such as fluoride varnish and sealants.

The introduction of Silver Diamine Fluoride (SDF) as a primary and secondary caries prevention treatment within COHI services will assist in the prevention of deep lesions requiring extensive restorations. SDF arrests decay and if applied to early lesions found in enamel, the client may not require any further treatment. SDF was added to COHI treatment services in 2020.

In addition to these targeted initiatives, in December 2023 Canada launched the Canadian Dental Care Plan (CDCP), a federal program designed to improve access to oral health services for uninsured Canadians with adjusted family income below CAD 90,000. By the end of 2024, the CDCP was active for priority groups including seniors, children under 18, and persons with disabilities. The plan includes coverage for preventive, diagnostic, and restorative services, including mercury-free alternatives such as composite fillings. While the CDCP does not explicitly reference mercury or amalgam, its design supports national objectives for caries prevention and health promotion by increasing access to basic dental services and reducing the financial burden on vulnerable populations. The

expanded use of mercury-free restorative materials under this plan also supports the gradual shift away from amalgam use. The full rollout of the CDCP to all eligible uninsured adults is expected in 2025.

Measure (ix) promoting the use of best environmental practices in dental facilities to reduce releases of mercury and mercury compounds to water and land

Canada implements measure (ix) through the Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Mercury Releases from Dental Amalgam Waste, which was published in 2010. This Notice requires dental facilities to prepare and implement a pollution prevention plan if they have not already implemented best management practices for dental amalgam waste.

The Notice on dental amalgam waste was intended to encourage a 95% national reduction of mercury releases to the environment from dental amalgam waste from a base year of 2000 (1,879 kg), a target that was originally established under the Canada-wide Standard on Mercury for Dental Amalgam Waste.

In 2012 and 2024, surveys of dental clinics across Canada were conducted on behalf of ECCC to better understand the uptake of the Notice's best management practices. The survey results indicate that familiarity with the Notice amongst dental practitioners in Canada has grown over time, and that the uptake of best management practices is higher in 2024 than in 2012.

Installing dental amalgam separators is considered the most important practice. These allow the capture of at least 95% of dental amalgam waste<sup>2</sup> and, as such, are a key factor in determining if mercury is prevented from being released into wastewaters and ending up in the environment. Based on the survey results, as well as on national surveys conducted in 2004<sup>3</sup> and 2007<sup>4</sup>, the use of dental amalgam separators has grown significantly over the past two decades and seems to have now reached a plateau (see table below). In 2024, nearly all (98%) of dental clinics surveyed reported having installed ISO certified amalgam particle separators. Similarly, the percentage of dental clinics reporting using disposable chair-side traps and vacuum pump filters, which are other key best management practices, has also increased significantly, growing from 70% in 2012 to 91% in 2024.

Data on the annual quantity of mercury used in dental amalgam was not available, which prevented the calculation of the estimated quantities of mercury released to the environment. That being said, given the high percentage of dental facilities using ISO-certified dental amalgam separators, it can be inferred that the risk management objective of 95% national reduction in mercury releases into the environment from dental amalgam waste, from a base year of 2000, has been achieved.

National surveys of dental facilities conducted in 2003, 2007, 2012, and 2024 show a steady increase in the adoption of ISO-certified dental amalgam separators and a corresponding decrease in mercury released to the environment from dental amalgam waste. Using the year 2000 as a base year, the use of ISO-certified separators was considered negligible, while mercury releases were estimated at 1,879 kg. By 2003, 27% of dental facilities were using ISO-certified separators, reducing mercury releases to 1,046 kg. Adoption increased substantially to 70% in 2007 and 97% in 2012, with mercury releases declining to 452 kg and 75 kg, respectively. In 2024, 98% of dental facilities reported using ISO-certified separators, although data on mercury releases were not available. Each survey included over 3,000 dentists in 2003, 2007, and 2012, with 984, 1,185, and 1,250 respondents, respectively; the 2024 survey had a lower response rate with 240 respondents. The mercury release figures were estimated using the best available data at the time, and some uncertainty existed in earlier surveys due to the ISO 11143 standard being newly introduced and not always clearly specified by respondents, although ISO-certified equipment later became standard in the market.

Aside from the Notice, the latest data received under Canada's Products Containing Mercury Regulations show a significant decline of the use of dental amalgam in the past few years. Dental amalgam is not manufactured in Canada. In 2022, 0.7 million dental amalgam capsules were imported to Canada, down from 1.5 million in 2016. This change is equivalent to 53% fewer capsules. In terms of mercury, the quantities went down to 376 kg in 2022, from 632 kg in 2016. It means that 40% less mercury entered Canada in the form of dental amalgam in 2022 compared to 2016. As a result of less dental amalgam entering Canada, plus the high percentage of separators, further reductions of releases of mercury and mercury compounds to water and land are expected. The next reporting cycle under the regulations will cover data from the calendar year 2025 and are due by 31 March 2026. An updated report on progress made to phase down dental amalgam will be submitted as part of Canada's national report once additional data become available.

Measure (viii) restricting the use of dental amalgam to its encapsulated form

Following decision MC-3/2, Canada undertook a review of the available safety information (<https://dhpp.hpfb-dgpsa.ca/review-documents/resource/SSR00263>) for dental amalgam and concluded that there is no clear link between mercury in dental amalgam and negative health effects. Although pre-measured dental amalgam capsules are considered safe, bulk dental amalgam powders, which have to be mixed with liquid mercury by hand, are known to pose an unnecessary risk of mercury exposure for the dental healthcare professional.

In Canada, dental amalgam is considered to be a medical device under the Medical Device Regulations of the Food and Drugs Act and its sale for use is controlled through the issuance of medical device licenses by Health Canada. At

the time of the 2020 review, some dental amalgam products containing bulk metal powder were authorized for sale. However, these products were no longer being used in Canada. Following its safety review, Health Canada worked with manufacturers to discontinue the licenses of bulk dental amalgam powders. In addition, the 2024 amendments to Canada's Products Containing Mercury Regulations restricted the import and manufacture of dental amalgam to its encapsulated form as of June 19th, 2025.

Measure (iv) promoting research and development of quality mercury free materials for dental restoration

In 2023, the Office of the Chief Dental Officer of Canada (OCDOC) proposed the Network for Canadian Oral Health Research (NCOHR) to form a national collaboration of Canada's oral biomaterials researchers to find a viable replacement for dental amalgam that satisfies the following parameters: a) clinical performance properties similar to or beyond those of dental amalgam; b) readily manipulated by the average Canadian clinician in a general practice setting; c) reasonable cost, not exceeding that of dental composite; and d) risk to human health and to the environment are limited or non-existent and fall within national guidelines. In response, in November 2023, NCOHR formed an NCOHR Biomaterials Advisory Group, which deliberated nationally to determine procedural and funding approaches for this novel national collaboration. The Canadian Institutes of Health Research-Institute of Musculoskeletal Health and Arthritis (CIHR-IMHA) supports such collaboration, and aims to catalyze responses from researchers in Canada's ten dental schools so that the researchers can submit superior grants. To this end, the CIHR-IMHA is hosting the 2025 Canadian Biomaterials Initiative Meetings to facilitate such collaborative discussions and focused conversations on the development of a clinical biomaterial to replace dental amalgam; the first such meeting was held on 04-05 March 2025 in Montreal.

▼ ART. 5: MANUFACTURING PROCESSES IN WHICH MERCURY OR MERCURY COMPOUNDS ARE USED

**5.1: Are there facilities within the territory of the party that use mercury or mercury compounds for the processes listed in Annex B of the Minamata Convention in accordance with paragraph 5 of article 5 of the Convention?**

- Yes
- No
- Do not know

**5.2: Are measures in place to not allow the use of mercury or mercury compounds in manufacturing processes listed in Part I of Annex B after the phase-out date specified in that Annex for the individual process?**

**CHLOR-ALKALI PRODUCTION**

- Yes
- No
- Not applicable (do not have these facilities)

**ACETALDEHYDE PRODUCTION IN WHICH MERCURY OR MERCURY COMPOUNDS ARE USED AS A CATALYST**

- Yes
- No
- Not applicable (do not have these facilities)

**5.3: Are measures in place to restrict the use of mercury or mercury compounds in the processes listed in Part II of Annex B in accordance with the provisions set out therein?**

**VINYL CHLORIDE MONOMER PRODUCTION**

- Yes
- No

Not applicable (do not have these facilities)

## SODIUM OR POTASSIUM METHYLATE OR ETHYLATE

Yes

No

Not applicable (do not have these facilities)

## PRODUCTION OF POLYURETHANE USING MERCURY-CONTAINING CATALYSTS

Yes

No

Not applicable (do not have these facilities)

**5.4: Is there any use of mercury or mercury compounds in a facility using the manufacturing processes listed in Annex B that did not exist prior to the date of entry into force of the Convention for the party?**

Yes

No

**5.5: Has the party discouraged the development of any facility using any other manufacturing process in which mercury or mercury compounds are intentionally used that did not exist prior to the date of entry into force of the Convention?**

Yes

No – no action taken

No – the party demonstrated to the Conference of the Parties the significant environmental and health benefits of the manufacturing process and that there are no technically and economically feasible mercury-free alternatives available providing such benefits.

**If yes, please provide information on the measures taken.**

Canada has and will continue to discourage the development of any facilities that would use mercury or mercury compounds in their processes. This includes engagement with provincial and territorial governments who are the responsible authorities for issuing construction and operating permits. Provincial and territorial governments are prepared to use measures, including setting conditions through construction and operating permits, if and when required, to not allow the use of mercury or mercury compounds in new facilities.

## Part E – Additional comments on this article

Additional Information to question 5.1:

Canada's Products Containing Mercury Regulations requires manufacturers and importers to report triennially on the quantities of mercury catalysts for use in polyurethane production. In 2022, there were no reports of import or manufacture of mercury catalyst used in the manufacturing of polyurethane. Under the recent amendments to the Products Containing Mercury Regulations, the manufacture and import of mercury catalyst for use in polyurethane production will be prohibited by December 31st, 2025. Since reporting is done on a triennial basis, no data is available for the years 2021, 2023 and 2024. The next reporting period will be in 2026 and cover the calendar year 2025.

Canada does not have any facilities using the processes listed in the first two entries of Part II of Annex B.

Additional Information to question 5.3:

In Canada, there are no current manufacturing processes that use mercury. The last reported use was in polyurethane production operations; however, as of 2022, no facility has indicated plans to continue these practices. Under the recent amendments to the Products Containing Mercury Regulations, the manufacture and import of mercury catalyst for use in polyurethane production will be fully prohibited by December 31, 2025.

## ▼ ART. 7: ARTISANAL AND SMALL-SCALE GOLD MINING

**7.1: Have steps been taken 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, artisanal and small-scale gold mining and processing subject to article 7 within your territory?**

Yes

No

There is no artisanal and small-scale gold mining and processing subject to article 7 in which mercury amalgamation is used in the territory

**7.2: Has the party determined, and notified the secretariat, that artisanal and small-scale gold mining and processing within its territory is more than insignificant?**

Yes

No

**7.5: Supplemental: Has the party cooperated with other countries or relevant intergovernmental organizations or other entities to achieve the objective of this article?**

Yes

No

**Please provide information**

Canada has regularly provided developing countries and countries with economies in transition with assistance in the implementation of the Convention through bilateral, regional, and multilateral channels. See response to question 13.3 for additional information.

**Please provide information**

{Empty}

**Part E – Additional comments on this article**

{Empty}

▼ **ART. 8: EMISSIONS**

**8.1: Identify any Annex D source categories for which there are new sources of emissions of mercury or mercury compounds as defined in paragraph 2 (c) of article 8.**

For each of those source categories describe the measures in place, including the effectiveness of such measures, to implement the requirements of paragraph 4 of article 8.

Coal-fired power plants

Coal-fired industrial boilers

Smelting and roasting processes used in the production of non-ferrous metals

Waste incineration facilities

Cement clinker production facilities

**Has the party required the use of best available techniques or best environmental practices (BAT/BEP) to control and where feasible reduce emissions for new sources no later than 5 years after the date of entry into force of the Convention for the party?**

Yes

No (please explain)

**No (please explain)**

Canada does not have any new sources of emissions in Annex D source categories. Should there be any in the future, existing regulations and permitting regimes for BAT/BEP noted in question 8.2 below would apply.

**8.2: Identify any Annex D source categories for which there are existing sources of emissions of mercury or mercury compounds as defined in paragraph 2 (e) of article 8.**

For each of those source categories, select and provide details on the measures implemented under paragraph 5 of article 8 and explain the progress that these applied measures have achieved in reducing emissions over time in your territory:

## ▼ COAL-FIRED POWER PLANTS

- A quantified goal for controlling and, where feasible, reducing emissions from relevant sources
- Emission limit values for controlling and, where feasible, reducing emissions from relevant sources
- Use of BAT/BEP to control emissions from relevant sources
- Multi-pollutant control strategy that would deliver co-benefits for control of mercury emissions
- Alternative measures to reduce emissions from relevant sources

### Measures

Specific measures for Coal-fired power plants

Canada-wide Standard for Mercury Emissions from Coal-Fired Electrical Power Generation Plants, 2006

Mercury Emissions from Coal-fired Power Plants Regulation, 2006 (Alberta)

Reduction of Carbon Dioxide from Coal-Fired Electric Power Plant Regulations, 2012

Air Quality Regulations, 2014 (Nova Scotia)

An Act to amend the Environmental Protection Act to require the cessation of coal use to generate electricity at generation facilities, 2015 (Ontario)

Regulations Amending the Reduction of Carbon Dioxide Emissions from Coal-fired Generation of Electricity Regulations, 2018. These regulations amend the 2012 regulations to accelerate the phase-out of unabated coal-fired electricity by 2030.

Clean Electricity Regulations, 2024. These regulations set a stringent annual emissions limit on any electricity unit operating in or after 2035, targeting a net-zero emissions electricity sector by 2050.

Measures that apply to all source categories

Manitoba Environment Act, 1988

Air Quality Regulation, 1997 (New Brunswick)

Environmental Management Act, 2003 (British Columbia)

Air Pollution Control Regulations, 2004 (Newfoundland and Labrador)

E09-02-Environmental Protection Act Air Quality Regulations, 2004 (Prince Edward Island)

Air Quality Regulations, 2005 (Nova Scotia)

Substance Release Regulations, 2006 (Alberta)

The Environmental Management and Protection (Saskatchewan Environmental Code Adoption) Regulations, 2010

Reg. 419/05 (Air Pollution - Local Air Quality, Ontario), Amended 2011

Environmental Guideline for Ambient Air Quality, 2011 (Nunavut)

Guideline for Ambient Air Quality Standards in the Northwest Territories, 2014

Yukon Ambient Air Quality Standards, 2019

### Progress

Emissions from coal fired power plant emissions decreased by 17% (0.080 tonnes) between 2020 and 2023, with reported values of 0.48 tonnes in 2020, 0.47 tonnes in 2021, 0.47 metric tonnes in 2022 and 0.40 metric tonnes in 2023.

## ▼ COAL-FIRED INDUSTRIAL BOILERS

- A quantified goal for controlling and, where feasible, reducing emissions from relevant sources
- Emission limit values for controlling and, where feasible, reducing emissions from relevant sources

- Use of BAT/BEP to control emissions from relevant sources
- Multi-pollutant control strategy that would deliver co-benefits for control of mercury emissions
- Alternative measures to reduce emissions from relevant sources

**Measures**

{Empty}

**Progress**

{Empty}

**▼ SMELTING AND ROASTING PROCESSES USED IN THE PRODUCTION OF NON-FERROUS METALS**

- A quantified goal for controlling and, where feasible, reducing emissions from relevant sources
- Emission limit values for controlling and, where feasible, reducing emissions from relevant sources
- Use of BAT/BEP to control emissions from relevant sources
- Multi-pollutant control strategy that would deliver co-benefits for control of mercury emissions
- Alternative measures to reduce emissions from relevant sources

**Measures**

Specific measures for smelting and roasting processes used in the production of non-ferrous metals

Canada-wide Standard for Mercury Emissions – for Base Metal Smelting, 2000

Environmental Code of Practice for Base Metal Smelting & Refineries, 2006

Pollution prevention plan in respect of specified toxic substances released from base metal smelting and refineries and zinc plants, 2006

Règlement sur les attestations d'assainissement en milieu industriel, 2016 (Quebec)

Environmental Performance Agreements for Base Metals Smelters, 2018

Measures that apply to all source categories

Manitoba Environment Act, 1988

Air Quality Regulation, 1997 (New Brunswick)

Environmental Management Act, 2003 (British Columbia)

Air Pollution Control Regulations, 2004 (Newfoundland and Labrador)

E09-02-Environmental Protection Act Air Quality Regulations, 2004 (Prince Edward Island)

Air Quality Regulations, 2005 (Nova Scotia)

Substance Release Regulations, 2006 (Alberta)

The Environmental Management and Protection (Saskatchewan Environmental Code Adoption) Regulations, 2010

Reg. 419/05 (Air Pollution – Local Air Quality, Ontario), Amended 2011

Environmental Guideline for Ambient Air Quality, 2011 (Nunavut)

Guideline for Ambient Air Quality Standards in the Northwest Territories, 2014

Yukon Ambient Air Quality Standards, 2019

**Progress**

Smelting and roasting processes of non-ferrous metals emissions increased by 108% (0.17 tonnes) between 2020 and 2023 with reported values of 0.16 tonnes in 2020, 0.19 tonnes in 2021, 0.09 metric tonnes in 2022 and 0.33 metric tonnes in 2023.

#### ▼ WASTE INCINERATION FACILITIES

- A quantified goal for controlling and, where feasible, reducing emissions from relevant sources
- Emission limit values for controlling and, where feasible, reducing emissions from relevant sources
- Use of BAT/BEP to control emissions from relevant sources
- Multi-pollutant control strategy that would deliver co-benefits for control of mercury emissions
- Alternative measures to reduce emissions from relevant sources

##### Measures

Specific measures for Waste incineration facilities  
Incinerators Regulations, 1988 (Manitoba)

Canada-wide Standards (CWS) for Mercury Emissions, 2000

Règlement sur l'enfouissement et l'incinération de matières résiduelles (Regulation respecting the landfill and incineration of residual materials), 2005 (Quebec)

Technical Document for Batch Waste Incineration, 2010

Measures that apply to all source categories

Manitoba Environment Act, 1988

Air Quality Regulation, 1997 (New Brunswick)

Environmental Management Act, 2003 (British Columbia)

Air Pollution Control Regulations, 2004 (Newfoundland and Labrador)

E09-02-Environmental Protection Act Air Quality Regulations, 2004 (Prince Edward Island)

Air Quality Regulations, 2005 (Nova Scotia)

Substance Release Regulations, 2006 (Alberta)

The Environmental Management and Protection (Saskatchewan Environmental Code Adoption) Regulations, 2010

Reg. 419/05 (Air Pollution – Local Air Quality, Ontario), Amended 2011

Environmental Guideline for Ambient Air Quality, 2011 (Nunavut)

Guideline for Ambient Air Quality Standards in the Northwest Territories, 2014

Yukon Ambient Air Quality Standards, 2019

##### Progress

Incineration emissions have increased by 12% (0.011 tonnes) between 2020 and 2023, with reported values of 0.091 metric tonnes in 2020, 0.133 metric tonnes in 2021, 0.092 metric tonnes in 2022 and 0.10 in 2023\*.

#### ▼ CEMENT CLINKER PRODUCTION FACILITIES

- A quantified goal for controlling and, where feasible, reducing emissions from relevant sources
- Emission limit values for controlling and, where feasible, reducing emissions from relevant sources
- Use of BAT/BEP to control emissions from relevant sources
- Multi-pollutant control strategy that would deliver co-benefits for control of mercury emissions
- Alternative measures to reduce emissions from relevant sources

##### Measures

Specific measures for Cement clinker production facilities

National Guidelines for the Use of Hazardous and Non-hazardous Wastes as Supplementary Fuels in Cement Kilns (1996)

National Emission Guideline for Cement Kilns (1998)

Measures that apply to all source categories

Manitoba Environment Act, 1988

Air Quality Regulation, 1997 (New Brunswick)

Environmental Management Act, 2003 (British Columbia)

Air Pollution Control Regulations, 2004 (Newfoundland and Labrador)

E09-02-Environmental Protection Act Air Quality Regulations, 2004 (Prince Edward Island)

Air Quality Regulations, 2005 (Nova Scotia)

Substance Release Regulations, 2006 (Alberta)

The Environmental Management and Protection (Saskatchewan Environmental Code Adoption) Regulations, 2010

Reg. 419/05 (Air Pollution – Local Air Quality, Ontario), Amended 2011

Environmental Guideline for Ambient Air Quality, 2011 (Nunavut)

Guideline for Ambient Air Quality Standards in the Northwest Territories, 2014

Yukon Ambient Air Quality Standards, 2019

#### **Progress**

Cement clinker production emissions have decreased by 34% (0.10 metric tonnes) between 2020 and 2023, with reported values of 0.29 tonnes in 2020, 0.35 tonnes in 2021, 0.23 tonnes in 2022 and 0.19 tonnes in 2023.

**Have the measures for existing sources under paragraph 5 of article 8 been implemented no later than 10 years after the date of entry into force of the Convention for the party?**

Yes

No

**8.3: Has the party prepared an inventory of emissions from relevant sources within 5 years of entry into force of the Convention for it?**

Yes

No

Have not been a party for 5 years

**If yes, when was the inventory last updated?**

31 December 2023

**Please indicate where this inventory is available**

Canada maintains a comprehensive inventory of mercury emissions, including from all industrial sources. Under the authority of the Canadian Environmental Protection Act, 1999 owners or operators of relevant facilities that meet specified reporting requirements must report mercury emissions to the National Pollutant Release Inventory (NPRI) on an annual basis since 1994. Additionally, Canada's Air Pollutant Emissions Inventory (APEI) is compiled from many different data sources. Emission data reported by individual facilities through NPRI and, to a lesser extent, data provided directly by the provinces are supplemented with well-documented, science-based estimation tools and methodologies to quantify total emissions. Together, these data sources provide a comprehensive coverage of air pollutant emissions across Canada.

APEI is available online at: <https://www.canada.ca/en/environment-climate-change/services/pollutants/air-emissions-inventory-overview.html>

NPRI is available at: <https://www.canada.ca/en/services/environment/pollution-waste-management/national-pollutant-release-inventory.html>

**Attach**

{Empty}

**8.4: Has the party chosen to establish criteria to identify relevant sources covered within a source category?**

Yes

No

**8.5: Has the party chosen to prepare a national plan setting out the measures to be taken to control emissions from relevant sources and its expected targets, goals and outcomes?**

Yes

No

**Part E – Additional comments on this article**

Additional information for question 8.2

Mercury and its compounds are listed on Schedule 1 (the List of Toxic Substances) of the Canadian Environmental Protection Act (CEPA). Over the past 40 years, Canada has put in place various measures to reduce and mitigate the potential risk of exposure to mercury emissions.

Canada has four of the five relevant sources as listed in Annex D: coal fired power plants, smelting and roasting processes used in the production of non-ferrous metals, waste incineration facilities, and cement clinker production facilities. Measures to control emissions from new and existing sources are implemented through a combination of federal, provincial and territorial efforts. In parallel with federal, provincial and territorial regulations, provinces and territories exercise their authority by setting conditions within their permitting or approvals systems for the construction and operation of industrial facilities, which include requirements to control air emissions in their commercial activities. In addition to specific mercury emission requirements, measures to address air and climate pollutants also provide a co-benefit to reduce mercury emissions from these sources.

Through these regulations and permits, new facilities are required to use best available techniques and best environmental practices to control mercury emissions or comply with emission limit values that can achieve mercury emission reductions that would be consistent with the application of best available techniques.

According to the 2025 publication of Canada's Air Pollutant Emissions Inventory Report, between 1990 and 2023, mercury emissions decreased by 91% (30 tonnes). This decrease in emissions is mainly due to a large drop in emissions from the Non-Ferrous Refining and Smelting Industry sector (25 tonnes). Reductions in mercury emissions coincide with the closure of outdated smelters, the implementation of pollution prevention plans, achieving Base Level Industrial Emissions Requirements for particulate matter through Environmental Performance Agreements, increased emission control measures, such as changing feedstocks, improved particulate matter emission controls, and fuel switching.

Emission reductions from coal-fired electricity generation facilities over the 1990 to 2023 period (1.5 tonnes) are largely due to facility closures and from the addition of mercury controls to plants. For the waste incineration facilities, decreases in emissions resulted from a reduction of mercury in products, such as automotive switches and mercury-containing lamps, going into the waste stream through initiatives such as takeback programs and other recycling measures.

The majority of the mercury emissions reductions in Canada occurred before the Minamata Convention entered into force as the majority of measures were put in place in the late 1990s and early 2000s. Nonetheless, the APEI has continued to report emissions for each source D category for mercury between January 1, 2020, and December 31, 2023\*:

**▼ ART. 9: RELEASES**

**9.1: Are there, within the party's territory, relevant sources of releases as defined in paragraph 2 (b) of article 9?**

Yes

No

Do not know (please explain)

**9.2: Has the party established an inventory of releases from relevant sources within 5 years of entry into force of the convention for it?**

Yes

Relevant sources do not exist in the territory

Have not been a party for 5 years

No (please explain)

## Part E – Additional comments on this article

Response to Questions 9.2:

In Canada, the Canadian Environmental Protection Act, 1999 authorizes Environment and Climate Change Canada to require facilities to report releases of mercury and mercury compounds to land and water to the National Pollutant Release Inventory (NPRI). Based on a review of data contained in this inventory, Canada does not have any relevant sources of releases.

NPRI is available at: <https://www.canada.ca/en/services/environment/pollution-waste-management/national-pollutant-release-inventory.html>

### ▼ ART. 10: ENVIRONMENTALLY SOUND INTERIM STORAGE OF MERCURY, OTHER THAN WASTE MERCURY

#### 10.1: Has the party taken measures to ensure that the interim storage of non-waste mercury and mercury compounds intended for a use allowed to a party under the Convention is undertaken in an environmentally sound manner?

Yes

No (please explain)

Do not know (please explain)

**If yes, please indicate the measures taken to ensure that such interim storage is undertaken in an environmentally sound manner, and the effectiveness of those measures.**

In Canada, environmentally sound management of non-waste mercury and mercury compounds is undertaken by the federal, provincial and territorial governments. Measures to ensure environmentally sound interim storage of mercury are implemented through both environmental measures and occupational health and safety measures at various levels of government.

All provinces and territories have overarching environmental protection acts, which limit releases of harmful substances to the environment, including mercury. In each jurisdiction, regulations typically are not prescriptive of the storage measures required for hazardous substances; rather they focus on the prevention and management of spills as well as emergency response planning. Each jurisdiction also has building codes that must be followed to ensure appropriate ventilation, plumbing, leak detection and other safety measures. Guidance is available for chemical and waste storage facilities in some jurisdictions; for example, Ontario has issued Guidelines for environmental protection measures at chemical and waste storage facilities (<https://www.ontario.ca/page/guidelines-environmental-protection-measures-chemical-and-waste-storage-facilities>). Other provinces may take appropriate measures through industrial approvals and permitting.

The federal Environmental Emergency Regulations (E2R) aim to enhance protection of the environment and human life/health during environmental emergencies, by promoting the prevention of accidental releases of hazardous substances, and ensuring industry is prepared to respond when accidents occur. The E2R lists 249 substances, including mercury. Mercury is regulated under the E2R when total quantity onsite is equal to or more than 1 tonne. The E2R may require reporting of quantities and container capacities on site and may also require the development and implementation of an environmental emergency plan. The plan must include elements such as identification of environmental emergency scenarios and their potential consequences, mitigation practices to prevent or to diminish potential consequences and require public communication before, during and after an environmental emergency. The plan must also be exercised regularly, and any environmental emergency must be reported. Since the latest amendments to E2 regulations came into force in August 2019, no mercury spills have been reported. Data on mercury spills were not readily available prior to August 2019.

The federal Transportation of Dangerous Goods Regulations set requirements and safety standards for the handling, offering for transport and transportation of dangerous goods in Canada, including requirements on quantity limits for mercury and mercury compounds. Every province and territory has a Dangerous Goods Handling and Transportation Act, and/or accompanying Regulations.

The Workplace Hazardous Materials Information System (WHMIS) is Canada's national hazard communication standard and is implemented through coordinated federal, provincial and territorial legislation. At the federal level,

the Hazardous Products Act, and the Hazardous Products Regulations set the requirements, including hazard information on product labels and Safety Data Sheets (SDS), for suppliers who sell or import hazardous products intended for use, handling or storage in Canadian workplaces. Federal agencies, provinces, and territories responsible for the regulation of occupational health and safety have established employer WHMIS requirements within their respective jurisdictions. Employers are responsible for implementing the workplace standards set out by the federal, provincial and territorial governments, which include, among other requirements, ensuring hazardous products are appropriately labeled, workers have access to SDSs, appropriate control measures are in place, and other education and training needs for the safe use of hazardous products.

## Part E – Additional comments on this article

{Empty}

### ▼ ART. 11: MERCURY WASTES

#### 11.1: Have measures outlined in article 11, paragraph 3, been implemented for the party's mercury waste?

Yes

No

Yes – the party has taken measures so that mercury waste is managed in an environmentally sound manner

**Please describe measure and effectiveness of measures**

{Empty}

Yes – the party has taken measures so that mercury waste is recovered, recycled, reclaimed or directly re-used for a use allowed to a party under the Convention or for environmentally sound disposal pursuant to paragraph 3 (a)

**Please describe measure and effectiveness of measures**

{Empty}

Yes – the party has taken measures so that mercury waste is not transported across international boundaries except for the purpose of environmentally sound disposal

**Please describe measure and effectiveness of measures**

{Empty}

**If the party answered yes to any measures above, please describe the measures implemented pursuant to paragraph 3, and please also describe the effectiveness of those measures.**

The management of hazardous wastes and hazardous recyclable materials in Canada, including mercury waste, is a shared responsibility between the federal, provincial, territorial and municipal governments.

The federal government regulates international and interprovincial movements of hazardous waste, including mercury waste, and manages waste on federal lands. As a Party to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Canada has legislation and regulations to implement requirements for the notification of transboundary movements, prior informed consent, movement tracking, and environmentally sound management of hazardous wastes including mercury waste. Transboundary movements of mercury waste subject to Canadian regulations may only occur once a permit from Environment and Climate Change Canada (ECCC) is issued. For exports, permits are authorized when, in accordance with Basel Convention obligations, the consent of the import and transit countries, as applicable, is received. In assessing a notification for imports of mercury waste subject to Canadian regulations, Canada's competent authority for the Basel Convention (ECCC) collaborates with officials in provinces and territories to ensure that the imported waste will be managed in an environmentally sound manner. Furthermore, movements of mercury waste within Canada across provincial or territorial boundaries may also be subject to domestic regulations.

Measures implemented include:

Canadian Environmental Protection Act (1999)

Cross-border Movement of Hazardous Waste and Hazardous Recyclable Material Regulations (2021)

Disposal at Sea Regulations (2001)

In addition to regulating international and interprovincial movements of hazardous wastes, the federal government also develops and implements a national reporting inventory, guidance documents, and pollution prevention notices on a variety of waste streams, such as mercury. Nationwide, the federal government works alongside provincial and territorial counterparts to develop Canada-wide action plans on various environmental issues, including mercury waste.

Measures\* implemented include:

Canada-wide Action Plan for Extended Producer Responsibility (2009)

Canada-wide Standard on Mercury for Dental Amalgam Waste (2001)

Canada-wide Standards for Mercury Emissions (2000)

Code of Practice for the Environmentally Sound Management of End-of-Life Lamps Containing Mercury (2017)

National Strategy for the Safe and Environmentally Sound Disposal of Lamps Containing Mercury Act (2017)

Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Mercury Releases from Dental Amalgam Waste (2010)

Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Mercury Releases from Mercury Switches in End-Of-Life Vehicles Processed by Steel Mills (2007- completed on December 31, 2017)

National Pollutant Release Inventory (1993)

Provincial and territorial governments regulate and monitor waste management facilities and activities via legislative measures including facility approvals, which set criteria and conditions for facility operations and ensuring mercury waste is managed in an environmentally sound manner. Municipal governments collect and manage waste for recycling and final disposal. Many provinces have extended producer responsibility (EPR) programs in place for a variety of products containing mercury (e.g. lamps, batteries, thermostats), which establishes that the end-of-life management of specific products, is the responsibility of the producers or first importers and may include retail take-back programs. Through the Canada-wide Action Plan for Extended Producer Responsibility, Canada supports the expansion of EPR programs. In addition to EPR programs, municipalities may operate designated collection points for end-of-life products containing mercury at municipal facilities or at targeted take-back facilities. Provincial and territorial governments can also implement Canadian Council of Ministers of Environment action plans, standards and guidance which support sound management approaches for hazardous waste, including mercury waste.

Measures\* implemented include:

Environmental Protection Act (Ontario, 1990)

Regulation 347 General - Waste Management (Ontario, 1990)

Environment Quality Act (Quebec, 1972)

Regulation respecting hazardous materials (Quebec, 1997)

Recycling Regulation (British Columbia, 2004)

The Waste Reduction and Prevent Act (Manitoba, 1990)

In Canada, mercury is only recovered, recycled, reclaimed or directly re-used for a use allowed to a Party under the Convention, for a claimed exemption, or disposed of in an environmentally sound manner. The measures Canada has taken to control the use of mercury apply regardless of whether the mercury has been recovered, recycled, reclaimed or directly re-used. As discussed in detail in the information provided in the responses for reporting questions under Articles 4 and 5, the Products Containing Mercury Regulations prohibit the use of mercury for all domestic and imported products and manufacturing processes unless they are specifically exempted from the regulations because there are no feasible mercury-free alternatives available.

Measures\* implemented include:

Cosmetic Regulations (2004)

Food & Drug Act (1985)

Food & Drug Regulations

Guidance on Heavy Metal Impurities in Cosmetics (2016)

Natural Health Products Regulations (2003)

Pest Control Products Act (2002)

Quality of Natural Health Products Guide (2013)

\*Note that some acts and regulations cited above have been updated or amended as required since the initial date of publication.

**11.2: \*Are there facilities for final disposal of waste consisting of mercury or mercury compounds in the party's territory?**

- Yes
- No
- Do not know (please explain)

**If the party answered yes to any measures above, please select from the following**

- Yes – there are facilities in the party's territory
- Yes – there are facilities outside the party's territory accessible to the party (in accordance with paragraph 5 of article 11)

**If there are facilities in the party's territory and if the information is available, how much waste consisting of mercury or mercury compounds has been subject to final disposal under the reporting period? Please specify the method of the final disposal operation/operations. If the party does not have specific data on waste consisting of mercury or mercury compounds, the party may report on the data including other mercury waste, with an explanatory note.**

From 2021–2024, a total of 711.65 tonnes of mercury waste was disposed of through physiochemical treatment (D9) followed by specially engineered landfill (D5), or a combination of both operations.

From 2021–2024, a total of 5.83 tonnes of mercury waste was disposed of through incineration on land (D10).

Totals for years 2021–2024 (January 1 to December 31) are as follows:

- 2021: 106.62 tonnes
- 2022: 176.79 tonnes
- 2023: 272.37 tonnes
- 2024: 161.71 tonnes.

Note: These totals are based on definitions in Canada of waste consisting of mercury and mercury compounds as set out by domestic regulations. However, information was not available for all facilities.

**Kindly attach any additional relevant information**

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**Part E – Additional comments on this article**

Submission of Information on Targeted Mercury Waste Management Measures (Article 11)

The Conference of the Parties, in its decision on the establishment of mercury waste thresholds under Article 11 of the Minamata Convention, requested that any Party choosing not to apply the COP-adopted mercury waste threshold for wastes contaminated with mercury submit to the Secretariat information on the targeted waste management measures it uses to protect human health and the environment. This request is set out in decision UNEP/MC/COP.5/Dec.10, paragraphs 2 to 4 and requires such information to be made publicly available through a register maintained by the Secretariat.

Canada previously submitted information to the Secretariat describing its approach to identifying and managing mercury waste. This submission, entitled “Thresholds for Mercury in Waste in Canada” (July 2022), outlines Canada’s use of hazardous-waste classification and leachate-based criteria rather than a single total mercury concentration threshold, and is available on the Convention’s website at [https://minamataconvention.org/sites/default/files/documents/submission\\_from\\_government/Canada\\_Waste.pdf](https://minamataconvention.org/sites/default/files/documents/submission_from_government/Canada_Waste.pdf). This information was previously provided in response to earlier requests from the Conference of the Parties during the intersessional work leading up to COP-5.

## 12.1: Has the party endeavoured to develop strategies for identifying and assessing sites contaminated by mercury or mercury compounds in its territory?

Yes

No

### Please elaborate

The federal, provincial and territorial governments of Canada have various legislation, regulations, guidelines and/or programs in place to identify, assess, remediate and risk manage contaminated sites, including those contaminated by mercury or mercury compounds.

The environment ministers from the federal, provincial and territorial governments participate in the Canadian Council of Ministers of the Environment (CCME), setting the strategic direction and broad outcomes for the Council. Deputy ministers and senior officials establish working groups of experts from the federal, provincial, and territorial environmental ministries to work collaboratively to accomplish specific goals. CCME has published several resources on contaminated sites (<https://ccme.ca/en/resources>) including guidance documents on site characterization, ecological risk assessment, and site classification. The CCME also develops Canadian Environmental Quality Guidelines (CEQG) (<https://ccme.ca/en/current-activities/canadian-environmental-quality-guidelines>) for the protection of environmental and human health. The CCME has water quality guidelines, sediment quality guidelines, and soil quality guidelines for inorganic mercury, as well as tissue residue quality guidelines for methylmercury.

The Government of Canada makes use of the CCME guidance and guidelines to identify and assess contaminated sites, including those contaminated by mercury or mercury compounds. In addition, Canada has developed the Federal Contaminated Sites Inventory (FCSI) (<http://www.tbs-sct.gc.ca/fcsi-rscf/home-accueil-eng.aspx>), published a 10-step process for contaminated sites management in A Federal Approach to Contaminated Sites (<https://www.canada.ca/content/dam/eccc/migration/fcs-scf/8DF3AC07-5A7D-483F-B263-6DE03104319A/fa-af-eng.pdf>), and established the Federal Contaminated Sites Action Plan (FSCAP) (<https://www.canada.ca/en/environment-climate-change/services/federal-contaminated-sites/action-plan.html>), all of which focus on the identification and management of federal contaminated sites. Provinces have their own strategies and inventories for contaminated sites within their jurisdiction.

Between 2000 and 2002, the Treasury Board of Canada approved a policy framework for the management of federal contaminated sites. The framework was a collection of policies and best practices to guide federal organizations (custodians) in the management of federal contaminated sites and was accompanied by the public release of the FCSI. The FCSI includes information on all known federal contaminated sites under the custodianship of departments, agencies and consolidated Crown corporations, as well as those that are being or have been investigated to determine whether they have contamination arising from past use that could pose a risk to human health or the environment. The inventory also includes non-federal contaminated sites for which the Government of Canada has accepted some or all financial responsibility. It does not include sites where contamination has been caused by, and which are under the control of, enterprise Crown corporations, private individuals, firms or other levels of government.

The FCSI contains, for each site, information such as the location of the site, the severity of contamination, the contaminated medium, the nature of the contaminant, progress made to date in identifying and addressing contamination, and how much liquid and solid-based media have been treated. The FCSI offers a variety of search criteria, such as site name, province or territory, Census Metropolitan Area, Federal Electoral District, and contaminants; the results can be displayed as a table or on an interactive map. Please note that mercury and mercury compounds would be included in the "metal, metalloid, and organometallic" contaminant category in the FCSI.

The 10-step process used to identify, assess, classify, and remediate or risk manage federal contaminated sites was published in 2000. The Federal contaminated sites decision-making framework ([https://publications.gc.ca/collections/collection\\_2017/eccc/En14-89-2016-eng.pdf](https://publications.gc.ca/collections/collection_2017/eccc/En14-89-2016-eng.pdf)) was later developed to assist custodians and their consultants in making the most informed decisions at each step of the 10-step process. Briefly, Step 1 involves identifying suspected contaminated sites. Steps 2, 3, and 5 correspond to Phase I, II, and III environmental site assessments, as described by the Canadian Standards Association (<https://www.csagroup.org/store/>). Steps 4 and 6 correspond to classification and prioritization using the National Classification System for Contaminated Sites (NCSCS) ([https://ccme.ca/en/res/ncscs\\_guidance\\_e.pdf](https://ccme.ca/en/res/ncscs_guidance_e.pdf)) developed by the Canadian Council of Ministers of the Environment (CCME) or the Aquatic Site Classification System (ASCS) (<https://www.dfo-mpo.gc.ca/pnw-ppe/fcsap-pascf/4-eng.htm>) developed by FCSAP. Using the NCSCS and ASCS, sites are classified as high (with a score of 70 – 100), medium (with a score of 50 – 69.9), or low priority for action (with a score of 37 – 49.9), according to their known or potential adverse impacts to human health and/or the environment. Steps 7 and 8 correspond to the development and implementation of a remediation / risk management strategy. Step 9 involves confirmatory sampling and final reporting. Step 10 corresponds to long-term monitoring, if required.

FCSAP was established in 2005 as a 15-year program with funding of \$3.67 billion USD from the Government of Canada. The program was renewed for another 15 years (2020 to 2034) with \$940 million USD announced in the 2019 federal budget for the first five years (Phase IV, 2020 to 2024). The objective of FCSAP is to reduce environmental and human health risks from known federal contaminated sites and associated federal financial liabilities, while focusing on the highest priority sites. Identification of the highest priority sites is accomplished, in part, through the site classification approaches described above. Since the establishment of the FCSAP program (i.e.

2005–06 to 2021–23), assessment activities have been conducted at close to 11,000 federal contaminated sites and completed at approximately 7,770 of those sites. Similarly, remediation activities have been conducted at 2,200 federal contaminated sites and completed at almost 1,100 of those sites, during that same time period.

## Part E – Additional comments on this article

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### ▼ ART. 13: FINANCIAL RESOURCES AND MECHANISM

#### 13.1: Has the party undertaken to provide, within its capabilities, resources in respect of those national activities that are intended to implement the Convention in accordance with its national policies, priorities, plans and programmes?

Yes

No

##### Please specify

Canada has provided resources for national activities to implement the Convention through the implementation of programs, policies, plans, and regulations. The Government of Canada makes regulations and develops guidelines and objectives that apply across the country. Provincial and territorial governments also apply their own environmental protection policies, guidelines and regulations. The implementing government provides financial resources for each activity (including salary and capital costs) and in the case of regulations or obligatory measures, resources may include efforts for compliance promotion and enforcement. At the federal level, resources are also provided to evaluate the success of programs, policies, plans, and regulations to ensure that the measures taken to implement the Convention are working to reduce the risks of mercury to Canadians and their environment.

Due to the large number of national activities with work that touches on mercury, as well as the complexities of aggregating information on the financial resources allocated only to the Convention implementation, it is not possible to provide an estimate of the direct costs for implementation. Resources are provided by the Government of Canada and provincial and territorial governments to implement each of the programs and regulations mentioned throughout this report, as well as those mentioned in Canada's submission for Article 30.4 which was provided upon ratification.

#### 13.2: Supplemental: Has the party, within its capabilities, contributed to the mechanism referred to in paragraph 5 of article 13?

Yes

No

##### Please provide comments, if any.

Canada makes significant contributions to the Global Environment Facility (GEF). During the GEF-8 replenishment cycle (2022–2026), Canada provided \$241.8 million to the GEF Trust Fund. This funding contributed to the investments made towards the Chemicals and Waste Focal Area (15% of the US\$5.3 billion replenishment, or US\$795 million), including to the Minamata Convention. During this period \$265 million was provided to support implementation of the Minamata Convention, representing an increase of 30% from GEF-7 (2018–2022). While the data is not yet available on the impact of this funding to mercury as the GEF-8 is still underway, during the GEF-7 period, projects that supported the Minamata Convention implementation were estimated to reduce 1,163 metric tons of mercury. In addition, the GEF-7 Impact Programs on Food, Land Use, and Restoration, Sustainable Cities, and Sustainable Forest Management delivered global environmental benefits by reducing the harmful effects of chemicals and waste, including mercury.

Canada made significant contributions of a total of \$241.8 million CAD (\$156.08 million USD) for the four-year-period (July 1, 2022 to June 30, 2026) of the eighth replenishment of the Global Environment Facility (GEF-8). To date, 8% of the funds utilized have supported mercury related initiatives. Notable projects include the Global Elimination of Mercury in Non-Ferrous Metals Initiative (GEMINI), which targets mercury phase-out in industrial processes across countries such as Mexico, Chile, India, and South Africa. Another regional initiative focuses on eliminating mercury-added skin lightening products across 13 African countries, aiming to remove these products from both retail and online markets. Additionally, the Philippines is leading a project to reduce mercury emissions in the cement and construction sector by promoting sustainable, circular-economy practices.

#### 13.3: Supplemental: Has the party provided financial resources to assist developing-country parties and/or parties with economies in transition in the implementation of the Convention through other bilateral, regional and multilateral sources or channels?

Yes

No

##### Please specify

Canada has regularly provided developing countries and countries with economies in transition with assistance in the implementation of the Convention through bilateral, regional, and multilateral channels. Funds are provided primarily by Global Affairs Canada (GAC) and are mainly targeted to support capacity building and technical assistance for activities related to the implementation of Article 7. Some of these projects are described below. The total support for the implementation of these projects provided by the Government of Canada is \$78.69m USD. Information on each of these projects and their results can be found on International assistance projects funded by Global Affairs Canada (<https://w05.international.gc.ca/projectbrowser-banqueprojets/filter-filtre>)

#### Improving Environmental Management of Mining and Energy Activities in Peru

This project aims to streamline how the Peruvian Government handles environmental impact assessments for mining and energy projects while strengthening the rigour and analysis of these assessments. Specifically, the project intends to consolidate the leadership role of the Ministry of the Environment over environmental issues related to large mining and energy projects and strengthen the capacity of regional governments responsible for handling the environmental impact assessments of small and medium-scale mining projects. (2013–2022, \$13.25m USD)

#### Women and Children of Artisanal Mining Communities

This project aims to improve the economic empowerment and well-being of women and children in artisanal mining communities in the Keniéba circle in Mali. Project activities include: 1) creating and structuring local associations and savings groups that will be supporting approximately 1,400 women and 200 men working in the artisanal mines of Keniéba; 2) training approximately 1,400 women and adolescent girls in modern, safe and environmentally friendly mining techniques and alternative sectors; 3) establishing four incubation centers for micro, small and medium-sized enterprises (MSMEs) and support the creation, management and formalization of MSMEs by women and adolescent girls; 4) developing and carrying out awareness campaigns on the rights of children and women working in the artisanal mining sector 5) strengthening the capacity of village protection and alert committees to identify and respond to cases of child labor in artisanal mines and support them in the implementation of programs for the reschooling of approximately 480 children between the ages of 8 and 13, including 240 girls; and 6) providing technical assistance to the Ministry of Mines in integrating measures to reduce child labour and promote respect for women's rights into regulatory and legal reforms related to the artisanal mining sector. The project will directly benefit approximately 1,700 women, 400 men, and over 500 children (at least 50% of whom are girls) involved in the artisanal mining sector in the Keniéba Circle in the Kayes region. The project will indirectly benefit the entire population of women and children in these communities, which is approximately 33,300 adult women (18 years and older) and 78,000 children (0–17 years), and their households. (2022–2026, \$8.78m USD).

#### IMPACT: Just Gold

While the primary purpose of IMPACT's Just Gold project is to promote the participation of ASGM communities in legal and 'conflict-free' trade of artisanal gold, the project also includes an environmental component focused on mercury reduction. As part of its activities, IMPACT has raised awareness on the effects of mercury on health and community through sensitization campaigns. IMPACT has provided mercury reduction training to ASGM miners and introduced equipment to enable miners to process gold without the use of mercury. As part of the Just Gold project in the Democratic Republic of the Congo, IMPACT has tested a mercury-free processing plant that allows miners to process their gold without using mercury. Now that the plant has been tested, it can be replicated in other project sites in similar mine sites. On a global scale, IMPACT is part of the UNEP Global Mercury Partnership, which shares field expertise and lessons learned on mercury reduction, elimination and alternative technologies. These initiatives are funded by GAC for the Building Responsible Mineral Supply Chains in the Great Lakes Region of Africa project. (2014–2021, \$12.63m USD).

#### IMPACT: Foundations for Peace in the Artisanal Gold Mining Sector in Burkina Faso

This two-year project aims to enhance the ability of women and men in the ASGM sector of Burkina Faso to integrate into the legal gold trade, thereby better contributing to the stability and security of their communities. This project will increase the financial autonomy and economic resilience of women and men in artisanal mining communities. It will reduce their vulnerability to extortion by those who provide exploitative loans or investments in exchange for gold sales with conditions that are exploitative. This work will be combined with capacity building for authorities, the private sector and civil society linked to proven techniques to incentivize legal trade, while improving their enforcement strategies to hinder and marginalize the worst offenders of illicit trade. (2021–2023, \$809,320 USD).

#### IMPACT: Digging for Equality

This project aims to improve security, gender equality, and women's empowerment in the artisanal mining sectors across three countries—Democratic Republic of the Congo, Uganda, and Zimbabwe. The project will support women working in the ASGM sector to reduce the barriers that they face and support their efforts towards gender equality. (2020–2023, \$1.62 million USD).

#### Natural Resources for Development Program

This project supports central and subnational governments in Indonesia to better coordinate, formulate and implement sustainable policy reforms in the extractive sector to improve extractive sector governance. The project also strives to increase the benefits received by women and men from extractive sector revenues and reduce

negative environmental impacts. Included as part of the project activities is a one-time baseline study carried out to identify mercury exposure in five ASGM areas with recommendations on policy and investment priorities to inform Indonesia's National Action Plan on the ASGM sector. The project also conducted research on gender mainstreaming in the ASGM sector as well as the broader extractive sector and hosted workshops with government representatives. (2015–2021, \$10.42 million USD).

#### Mongolia – Enhancing Resource Management

The MERIT project strengthens the capacity of public institutions and local communities to manage natural resources effectively, responsibly and sustainably. Technical Advisors (TAs) and the MERIT team in Mongolia combine the skills and knowledge to provide strategic support through volunteer assignments to effectively implement best practices, tools and systems adapted to local needs. This project applies to the extractive sector as a whole, including ASGM operations. The project is implemented through a partnership between two Canadian non-profit organizations: CESO (Canadian Executive Service Organization) and WUSC (World University Service of Canada). MERIT is an eight-year project (2016–2024) funded by GAC with a maximum contribution of \$14.94 million USD.

#### Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF) ASGM Guidance Document

Canada is providing financial support to the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development, part of which supported the IGF's development and implementation of guidance for governments on managing ASGM. The IGF undertook global consultations on best practices in the management and governance of artisanal mining and provides ongoing technical assistance and advice to member states to support efforts for the elimination of mercury use in artisanal mining and compliance with the Minamata Convention. IGF member states that undergo a mining policy framework assessment with the IGF Secretariat receive specific recommendations on improving mercury abatement within the context of their national regulatory and legislative regimes (2015–2023, \$16.24 million USD).

**Please provide comments, if any.**

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#### **Part E – Additional comments on this article**

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#### ▼ ART. 14: CAPACITY-BUILDING, TECHNICAL ASSISTANCE AND TECHNOLOGY TRANSFER

##### **14.1: Has the party cooperated to provide capacity-building or technical assistance, pursuant to article 14, to another party to the Convention?**

Yes

No

##### **Please specify**

Canada has regularly provided bilateral and multilateral mercury-related capacity building and technical assistance to developing countries and countries with economies in transition, and expects to continue to assist them in future.

The Government of Canada, through the department of Global Affairs Canada (GAC), provides funding to projects fostering a feminist and human rights-based approach to natural resource governance. This includes funding for projects piloting new approaches to managing artisanal and small-scale gold mining (ASGM) to promote the inclusion and economic empowerment of women and traditionally marginalized groups. In the past, GAC has also funded projects managing ASGM with particular attention to addressing conflict risks, providing technical assistance, and promoting local revenue management and formalization. Some of these projects are listed below (for complete project descriptions see the supplemental information provided for article 13):

Improving Environmental Management of Mining and Energy Activities in Peru (2013–2022)

IMPACT: Just Gold (2014–2021)

Natural Resources for Development Program (2015–2021)

IMPACT: Foundations for Peace in the Artisanal Gold Mining Sector in Burkina Faso (2012–2023)

IMPACT: Digging for Equality (2020–2023)

Sustainable development of artisanal and small-scale gold mining in Indonesia (2015–2023)

Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF) ASGM Guidance Document (2015–2023)

Mongolia – Enhancing Resource Management (2016–2024)

Providing technical assistance for atmospheric mercury monitoring

In addition to the financial support provided for capacity building, Canada provides technical assistance to researchers in other countries to measure mercury in the atmosphere through the department of Environment and Climate Change Canada's Air Quality Research Program. The work of this program has contributed to the development of a novel passive mercury air sampler that is simple and inexpensive, and which works in many different climates and environments. Through the program, samplers are mailed to participating researchers in various countries where they are deployed for a set amount of time, before being returned to Canada by pre-paid mail for laboratory analysis. Data collected from the samplers are provided to the participants and are publicly available on Environment and Climate Change Canada's data portal. Since 2019, the mercury passive samplers have been deployed in 47 locations in 26 countries, 14 of which are considered developing.

This technical assistance supports developing countries to collect their own data on atmospheric mercury concentrations in their jurisdiction. The work also helps to enable countries and regions to build up the technical capacity required to participate in regional monitoring networks.

#### 14.2: Supplemental: Has the party received capacity-building or technical assistance pursuant to article 14?

- Yes  
 No

**Please specify**

Canada has not requested any capacity-building or technical assistance.

**Please provide comments, if any.**

{Empty}

#### 14.3: Has the party promoted and facilitated the development, transfer and diffusion of and access to, up-to-date environmentally sound alternative technologies?

- Yes  
 No  
 Other

**Please specify**

As mentioned in question 14.1 and in Article 13 supplemental materials, Canada has provided funding for several projects piloting new approaches to managing artisanal and small-scale gold mining (ASGM). These projects include:

IMPACT: Just Gold (2014–2021)

Sustainable development of artisanal and small-scale gold mining in Indonesia (2015–2023)

Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF) ASGM Guidance Document (2015–2023)

#### Part E – Additional comments on this article

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#### ▼ ART. 16: HEALTH ASPECTS

#### 16.1: Have measures been taken to provide information to the public on exposure to mercury in accordance with paragraph 1 of article 16?

- Yes  
 No

**Supplemental: If yes, describe the measures that have been taken.**

Health Canada's webpage Mercury and Human Health (<https://www.canada.ca/en/health-canada/services/healthy-living/your-health/environment/mercury-human-health.html>) provides information on the sources of exposure to mercury, the health effects of mercury, measures that the government has implemented regarding mercury, as well as steps which can be taken to reduce mercury exposure.

In December 2021, Health Canada released a fact sheet on Mercury in Canadians (<https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/environmental-contaminants/human->

biomonitoring-resources/mercury-canadians.html). The fact sheet provides information on human biomonitoring of mercury in Canada with results from the Canadian Health Measures Survey (CHMS) (<https://health-infobase.canada.ca/biomonitoring/about.html#a5>). The fact sheet also provides analyses of mercury exposures in Canadians by age and sex groups as well as comparisons with vulnerable sub-populations in Canada. Mercury levels in the general population of Canada as measured in the CHMS have also been made available to the data users and public through Government of Canada's Canadian Biomonitoring Dashboard (<https://health-infobase.canada.ca/biomonitoring/>), an interactive data exploration tool.

As well, as part of its engagement under the Arctic Council Arctic Contaminants Action Program (ACAP), Environment and Climate Change Canada participates on the Expert Group on Persistent Organic Pollutants and Mercury. This Expert Group is currently producing a Fact Sheet on Mercury, which will be made publicly available on the Arctic Council website. The purpose of this fact sheet is to provide high-level information on how mercury is released, as well as its potential health impacts. This product targets northern residents, particularly Indigenous Peoples, who are exposed to elevated levels of contaminants in fish and wildlife species that are important to their traditional diets.

The main source of exposure to mercury for most Canadians is eating fish. Health Canada has assessed the risks and benefits of fish consumption (<https://www.canada.ca/en/health-canada/services/food-nutrition/reports-publications/human-health-risk-assessment-mercury-fish-health-benefits-fish-consumption.html>) and has issued consumption advice (<https://www.canada.ca/en/health-canada/services/food-nutrition/food-safety/chemical-contaminants/environmental-contaminants/mercury/mercury-fish.html>) that aims to minimize exposure to mercury from certain retail fish species that contain higher levels of mercury. This consumption advice is provided for the general population, women and people who are/may become pregnant or who are breastfeeding, and children. Health Canada also advises Canadians to follow any federal, provincial/territorial or municipal advisories related to fish caught in local waters for recreational or subsistence purposes.

In addition to programs delivered by Health Canada for the general Canadian population, the federal government provides a suite of health programs, services and strategies specifically for First Nations and Inuit communities through the First Nations and Inuit Health Branch of Indigenous Services Canada. The First Nations and Inuit Health Branch supports community-based biomonitoring for mercury (conducted upon request) for selected First Nations communities around the English-Wabigoon river system in Ontario. The biomonitoring results are always communicated back to participants and accompanied by personalised letters explaining the meaning of results as well as a risk communication pamphlet providing regionally specific advice on ways of decreasing mercury exposure, while continuing consumption of local fish.

## 16.2: Have any measures been taken to protect human health in accordance with article 16 beyond the provision of information to the public on exposure to mercury (referred to in question 16.1)?

Yes

No

### Supplemental: If yes, describe the measures that have been taken.

The administration and delivery of public health and health care services in Canada is the responsibility of each province and territory, guided by the provisions of the federal Canada Health Act. Through Health Canada and Indigenous Services Canada, the Government of Canada provides programs and services to protect the health of all Canadians.

The Workplace Hazardous Materials Information System (WHMIS) is Canada's national hazard communication standard. WHMIS, which is implemented through coordinated federal, provincial and territorial legislation, focuses on proper labelling of hazardous products, the provision of Safety Data Sheets, and worker education and training programs, thereby ensuring that workers have the necessary information, tools and training required to use, handle, and store hazardous products containing mercury and mercury compounds.

Health Canada has developed Guidelines for Canadian Drinking Water Quality (<http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/mercury-mercure/index-eng.php>) which establishes a maximum acceptable concentration of 0.001 mg/L for mercury in drinking water.

Health Canada has established methyl mercury health-based guidance values of 2 ppm ( $\mu\text{g/g}$ ) in hair and 8  $\mu\text{g/L}$  in blood (both measured as total mercury) for women of childbearing age, infants and children (<https://pubmed.ncbi.nlm.nih.gov/20364534/>) which corresponds to a Tolerable Daily Intake of 0.2  $\mu\text{g/kg-bw/day}$  methyl mercury in the diet (<https://www.canada.ca/en/health-canada/services/food-nutrition/reports-publications/human-health-risk-assessment-mercury-fish-health-benefits-fish-consumption.html#2>). These values represent levels of exposure to methylmercury which are not considered to be a concern for human health.

The main source of exposure to mercury for most Canadians is eating fish. Health Canada has set maximum levels (ML) for mercury in all retail fish (<https://www.canada.ca/en/health-canada/services/food-nutrition/food-safety/chemical-contaminants/maximum-levels-chemical-contaminants-foods.html>), which are based on mercury concentrations and consumption patterns of retail fish. These MLs are enforced by the Canadian Food Inspection

Agency. The Canadian Food Inspection Agency conducts ongoing testing of domestic and imported commercial fish, both freshwater and marine, to enforce the mercury guidelines. Health Canada and the Canadian Food Inspection Agency also monitor the levels of mercury in other foods sold in Canada. Surveillance results are assessed by Health Canada on a case-by-case basis. If the results indicate a potential concern, appropriate action is taken.

Provisions under the Canadian Environmental Assessment Act, 2012 (CEAA 2012) and the Impact Assessment Act, 2019 (IAA), require Health Canada (HC), to provide expert information or knowledge, to responsible authorities (e.g., the Impact Assessment Agency of Canada, review panels, provincial governments) in their assessment of the potential health impacts from major resource and infrastructure projects and in their subsequent recommendation on the fate of these projects. Risks to human health from methylmercury contamination of country/traditional foods (e.g., fish, shellfish, birds, marine mammals), with a focus on impacts to Indigenous health, has previously been evaluated by HC in the context of a number of major development projects. For example, HC will review and provide comments on human health risk assessment methodologies, the characterization of risks to human health, methylmercury monitoring of country/traditional foods and risk mitigation measures among others. HC may also serve on multi-stakeholder committees (which may include provincial and local governments, industry, Indigenous communities or local residents, etc.) that provide recommendations for and oversee methylmercury monitoring programs and provide health-related advice.

Blood mercury is measured in the general population by the Canadian Health Measures Survey (CHMS), (<https://health-infobase.canada.ca/biomonitoring/about.html#a5>), and in pregnant women and their children in the Maternal Infant Research on Environmental Chemicals (MIREC) (<https://www.mirec-canada.ca/en/the-mirec-study>) Research Platform. The biomonitoring data for mercury collected by the CHMS enables the assessment of changes in population exposures to mercury over time supporting the evaluation of effectiveness of risk management actions.

Canada supports a number of biomonitoring health surveys and studies assessing mercury exposure for First Nations, and ongoing annual First Nations community-based participatory research programs on environmental contaminants, including mercury. Canada's Northern Contaminants Program (NCP) (<https://science.gc.ca/site/science/en/northern-contaminants-program>) supports human biomonitoring and health research in the Canadian Arctic to assess the impacts of these environmental contaminants on Inuit, First Nations, and Métis communities. Blood mercury is measured among men, women and children living in northern Canada, and time trend data has been collected for pregnant women. These projects also provide data to health authorities as needed, and particularly if the concentrations exceed reference values, for risk assessments, and subsequent communications about contaminant levels in traditional/country foods are also coordinated with the health authorities. The Northern Contaminants Program also works with territorial and regional health authorities to develop public information and advice related to mercury in traditional foods, and how to reduce dietary exposure to mercury.

Between 2008 and 2018, Indigenous Services Canada supported the first regionally representative total diet study involving 93 First Nations, which resulted in the development of the regionally representative hair mercury levels in Canadian First Nations adults living on reserves south of the 60th parallel (Tikhonov C. et al, 2021; DOI: 10.17269/s41997-021-00508-5). The study was more than a 10-year collaboration between the principal investigators at the Assembly of First Nations, University of Ottawa and the University of Montreal. The results of the study are published in the Canadian Journal of Public Health, 2021, but are also available online at <https://www.fnfnes.ca>.

In 2020, Canada completed an Evaluation of the Effectiveness of Risk Management Measures for Mercury (<https://www.canada.ca/en/environment-climate-change/services/management-toxic-substances/evaluation-effectiveness-risk-management-measures-mercury/mercury-human-health.html>) which assessed the collective performance of the actions Canada has taken to reduce human exposure to mercury and its compounds. The results indicated that for the general population, mercury levels are low and relatively stable. Mercury levels tended to be higher in Indigenous communities than the general population, especially Indigenous communities in the north. Northern Inuit populations had higher levels of mercury than the general Canadian population, but their levels have been decreasing over time. This decline may be due to a decrease in consumption of certain traditional/country foods rather than a decrease in mercury concentrations in the food environment. The complete results of the evaluation for the human health component can be found in Chapter 4 of the report which is available online at: <https://www.canada.ca/en/environment-climate-change/services/management-toxic-substances/evaluation-effectiveness-risk-management-measures-mercury/mercury-human-health.html>.

## Part E – Additional comments on this article

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### ▼ ART. 17: INFORMATION EXCHANGE

#### 17.1: Has the party facilitated the exchange of information referred to in article 17, paragraph 1?

Yes

No

If yes, the Party may wish to indicate in the space provided below the exchange of information it has facilitated, such as:

Scientific, technical, economic and legal information concerning mercury and mercury compounds, including toxicological, ecotoxicological and safety information

**Scientific, technical, economic and legal information concerning mercury and mercury compounds, including toxicological, ecotoxicological and safety information**

Canada has adopted a Directive on Open Government. The objective of the directive is to maximize the release of government information and data of business value to support transparency, accountability, citizen engagement, and socio-economic benefits through reuse, subject to applicable restrictions associated with privacy, confidentiality, and security. Under this directive, the Open Data Portal (<https://open.canada.ca/en/open-data>) was established and provides public access to data collected and managed by the federal government. Examples of datasets that are available on the Open Data Portal and other information sharing platforms are listed below:

National atmospheric mercury data, including data from the Canadian Air and Precipitation Monitoring Network (CAPMoN) (<https://www.canada.ca/en/environment-climate-change/services/air-pollution/monitoring-networks-data/canadian-air-precipitation.html>), the Northern Contaminants Program and the old CAMNet network is available through the Environment and Climate Change Canada Data Catalogue on the Open Data Portal. In addition, Canada provides funding for the Polar Data Catalogue (<https://www.polardata.ca/>), a database of metadata that describes research in the Arctic, including mercury research and monitoring by the Northern Contaminants Program (NCP). Canada also collaborates with other national networks collecting mercury data, where data and information are exchanged.

Canada's Department of Environment (Environment and Climate Change Canada – ECCC) uses the eggs of colonial waterbirds as indicators of mercury pollution, given the bioaccumulation of mercury through the marine and freshwater food webs. Mercury levels measured in eggs as part of ECCC's colonial waterbird monitoring programs from the Atlantic region, Quebec, Ontario, the Prairies, Pacific and the Arctic are available on ECCC's Data Catalogue within the Open Data Portal. Reports on mercury in colonial waterbirds in the St. Lawrence can be found on the St. Lawrence River Action Plan (<https://www.planstlaurent.qc.ca/en/>) website, and data can also be found on the Open Data Portal. Canada reports on mercury levels in colonial waterbird eggs from the Great Lakes through the State of the Great Lakes (SOGL) reports (<https://binational.net/category/a10/sogl-edgl/>), which are publicly available and are generally released biannually. Mercury data in colonial waterbirds from Lake Melville from the Muskrat Falls hydroelectric reservoir project is also available.

ECCC monitors freshwater quality and aquatic ecosystem health on federal lands, in transboundary watersheds, and in in-land waters of federal interest. While mercury in water is not routinely sampled across the national freshwater quality monitoring network, it is monitored within this network as part of ecosystem initiatives in the St. Lawrence River and select tributaries, in the Great Lakes, and in British Columbia. In addition, surficial sediments are monitored for mercury in the Great Lakes, St. Lawrence River, the Fraser and Columbia River basins, and at select sites under the national Chemicals Management Plan (CMP). Mercury is monitored in whole fish from sites across Canada including the Great Lakes. Results are shared with partners and stakeholders and available to the public via the following links on the Open Data Portal: <https://www.canada.ca/en/environment-climate-change/services/freshwater-quality-monitoring/online-data.html>; <https://data-donnees.az.ec.gc.ca/data/substances/monitor/chemicals-management-plan-sediment-monitoring-program?lang=en>; <https://data-donnees.az.ec.gc.ca/data/substances/monitor/great-lakes-fish-contaminants-monitoring-and-surveillance-data/?lang=en>.

The Oil Sands Monitoring (OSM) program tracks mercury levels in air, water, sediment, invertebrates, fish and wildlife, related to oil sands development. Data on the levels of mercury in the environment and in wildlife, and the effects of mercury can be found on ECCC's Data Catalogue, the Government of Canada's OSM Portal (<https://www.canada.ca/en/environment-climate-change/services/oil-sands-monitoring.html>), and is also being launched on the Government of Alberta's OSM Portal. A list of publications and presentations from research and monitoring from the oil sands region is updated annually, with external links to the publications.

The Northwest Territories Cumulative Impact Monitoring Program (NWT CIMP) publishes datasets, maps and research summaries, including those related to mercury levels in water, fish, and caribou, through a fully searchable and interactive interface in the NWT Discovery Portal (<https://nwtDiscoveryportal.enr.gov.nt.ca/geoportal/catalog/main/home.page>). The interface allows for researchers to be directly contacted regarding the monitoring and research programs. Further details of ECCC's activities regarding mercury through CIMP can be found on the Government of the Northwest Territories Department of Environment and Natural Resources (<https://www.enr.gov.nt.ca/en/services/nwt-cumulative-impact-monitoring-program-nwt-cimp>) website, as well as on the publicly available Mackenzie DataStream web portal (<https://mackenziedatastream.ca/>). Lastly, the results are regularly published in peer reviewed journals and public reports, including the Northern Environmental Research Bulletin.

For over 30 years, Canada, through the Northern Contaminants Program (NCP) (led by Crown and Indigenous Relations and Northern Affairs Canada-CIRNAC) has contributed mercury-related data and information to the Arctic Council's Arctic Monitoring and Assessment Programme (AMAP). Canada's contribution includes information on levels of mercury in air, water, fish, (terrestrial and marine) wildlife and humans, and research on environmental processes as well as biological and human health effects, all of which are included in reports which AMAP publishes

on its website (<https://www.amap.no/publications>). For example, two significant AMAP Assessments were released in 2021 as updates to earlier reports. The AMAP Assessment 2021: Mercury in the Arctic (<https://www.amap.no/documents/doc/amap-assessment-2021-mercury-in-the-arctic/3581>) builds upon the 2011 assessment, providing updated information on mercury levels in the Arctic environment, wildlife, and human populations. Similarly, the AMAP Assessment 2021: Human Health in the Arctic (<https://www.amap.no/documents/doc/amap-assessment-2021-human-health-in-the-arctic/3593>) updates the 2015 human health report, examining the health impacts of environmental contaminants, including mercury, on Arctic populations. The results of both of these assessments have been further disseminated through publication in special issues of scientific journals, such as “AMAP Assessment 2021: Mercury Assessment in the Arctic” in *Science of the Total Environment* and “AMAP 2021 Human Health in the Arctic” in the *International Journal of Circumpolar Health*. Results from NCP monitoring, research, and communication projects are reported annually in the Synopsis of Research Report Series ([https://science.gc.ca/eic/site/063.nsf/eng/h\\_97659.html](https://science.gc.ca/eic/site/063.nsf/eng/h_97659.html)), and most NCP-related publications (including journal articles) are catalogued and linked in the NCP Publications Database (<https://arctic.ucalgary.ca/data-collections>) hosted by the Arctic Institute of North America. Syntheses and summaries of past and current research findings are also available in the Canadian Arctic Contaminant Assessment Report Series ([https://science.gc.ca/eic/site/063.nsf/eng/h\\_97658.html](https://science.gc.ca/eic/site/063.nsf/eng/h_97658.html)). Metadata and data on NCP-funded mercury research are catalogued in the open-access Polar Data Catalogue. The NCP also hosts a biennial workshop to communicate results with participants, northerners and program partners, share technical and scientific information, share and build capacity, and effectively engage with participants and observers in the work of the NCP, including scientists and Northern rights-holders across Canada and internationally.

The Government of Canada operates Networks of Centres of Excellence of Canada including the research program ArcticNet. ArcticNet has been ongoing since 2003 and brings together researchers and northern communities and Indigenous organizations studying human health, natural and social sciences in the Arctic. Through this program, mercury continues to be a focus of many researchers and community members.

Health Canada’s National Biomonitoring Program has measured concentrations of total mercury, methylmercury and inorganic mercury in a nationally representative sample of the Canadian population as part of the Canadian Health Measures Survey (CHMS) (<https://health-infobase.canada.ca/biomonitoring/about.html#a5>) since 2007. Levels of mercury, by sampling years for the total population, as well as separated by sex and age groups have been made available to data users and the public through the Canadian Biomonitoring Dashboard (<https://health-infobase.canada.ca/biomonitoring/index.html>), an interactive data exploration tool. In December 2021, Health Canada released a fact sheet on mercury (<https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/environmental-contaminants/human-biomonitoring-resources/mercury-canadians.html>) that provides an analysis of mercury exposures in the Canadian population over time (temporal trends), and by age and sex groups as well as comparisons with vulnerable sub-populations in Canada. The fact sheet also provides information on sources of exposure to mercury, its potential health effects and measures taken by the Government of Canada to lower population exposures to mercury. The nationally representative data have also been integrated into the European Commission’s Information Platform for Chemical Monitoring (IPCHEM, (<https://ipchem.jrc.ec.europa.eu/#showmetadata/CHMS>)) database facilitating comparison of the Canadian (CHMS) and international datasets by policy and research communities. Temporal trends in hair mercury levels and the health effects of mercury exposure during pregnancy and early life have been studied using the Maternal-Infant Research on Environmental Chemicals (MIREC) Research Platform (<https://www.canada.ca/en/health-canada/services/environmental-workplace-health/environmental-contaminants/human-biomonitoring-environmental-chemicals/maternal-infant-research-environmental-chemicals-mirec-study/research.html>).

Health Canada’s Human Health Risk Assessment of Mercury in Fish and Health Benefits of Fish Consumption (<https://www.canada.ca/en/health-canada/services/food-nutrition/reports-publications/human-health-risk-assessment-mercury-fish-health-benefits-fish-consumption.html>) is available on its webpage. This document supports existing risk management measures (<https://www.canada.ca/en/health-canada/services/food-nutrition/reports-publications/updating-existing-management-strategy-mercury-fish.html>) related to mercury in fish in Canada.

The Government of Canada’s Open Data Portal provides mercury data from specific programs, including surveillance of mercury in commercial foods, consumer products, animals, and the environment, human biomonitoring, and data on sources of environmental contamination. Surveillance data on mercury in foods is also exchanged between federal, provincial and territorial food safety authorities through the Canadian Food Safety Information Network (<https://inspection.canada.ca/science-and-research/cfsin/eng/1525378586176/1525378959647>).

Canada responds to calls for technical information from the Minamata Convention Secretariat, who makes the information available on the Minamata Convention website. For example, Canada has provided technical documents relevant to best available techniques and best environmental practices for the reduction of mercury emissions, releases, mercury-added products and processes, mercury waste thresholds, and environmental monitoring and modelling. Canada also participates in the UNEP Global Mercury Partnership.

More informally, Canadian scientists present their mercury research at national and international conferences, including the International Conference on Mercury as a Global Pollutant, and publish their work in peer reviewed journals. For a list of recent publications please see the supplemental information provided for this article.

Lastly, Canada engages in bilateral work in order to exchange information and assist other countries. For example:

In 2021, Slovakia was provided with the National Classification System for Contaminated Sites (NCS) ([https://ccme.ca/en/res/ncscs\\_guidance\\_e.pdf](https://ccme.ca/en/res/ncscs_guidance_e.pdf)) developed by the Canadian Council of Ministers of the Environment (CCME) and the Federal Contaminated Sites Action Plan (FCSAP) Decision-Making Framework (DMF), as well as the FCSAP Ecological Risk Assessment Guidance.

Also in 2021, Canada provided Brazil with information on existing Canadian studies and research related to mercury exposure to help inform and support their domestic working group activities on research for Minamata Convention implementation

Most recently, in November 2023 Canada facilitated informal knowledge exchange between Arctic and South American mercury monitoring initiatives during a dedicated session held alongside Minamata COP-5. Led by Canadian researchers and government representatives, the session highlighted approaches developed under the Northern Contaminants Program and Arctic Monitoring and Assessment Programme, with a focus on community-based monitoring, Indigenous engagement, and policy-relevant data collection—offering practical insights for South American countries developing similar capacities.

More formally, Canada collaborates with the United States and the province of Ontario to monitor, assess, report, and manage the risks of mercury in the Great Lakes area. Mercury is both a Chemical of Mutual Concern under Annex 3, Chemicals of Mutual Concern of the Great Lakes Water Quality Agreement (GLWQA) and is a Chemical of Concern under Annex 2, Chemicals of Concern of the Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health (COA). Reports and other information have been published with respect to risk assessment and management of mercury under these two agreements. Reports under the GLWQA include the Binational Summary Report: Mercury (<https://binational.net/wp-content/uploads/2015/05/EN-Mercury-Binational-Summary-Report-Final-Draft.pdf>) and the Great Lakes Binational Strategy for Mercury Risk Management (<https://binational.net/2021/06/28/cmc-mercury-pcspm-mercure/>). Reports under the GLWQA include the Binational Summary Report: Mercury (<https://binational.net/wp-content/uploads/2015/05/EN-Mercury-Binational-Summary-Report-Final-Draft.pdf>) and the Great Lakes Binational Strategy for Mercury Risk Management (<https://binational.net/2021/06/28/cmc-mercury-pcspm-mercure/>). Under the COA, there is the Water Quality in Ontario 2014 report (<https://www.ontario.ca/page/water-quality-ontario-2014-report>). These reports also outline past research and monitoring that is specific to the Great Lakes Basin for both Canada and the United States.

Canada participates in international food safety liaison groups that share scientific and technical information on contaminants in food. Canada also actively participates annually in the Codex Committee on Contaminants in Food (<http://www.fao.org/fao-who-codexalimentarius/committees/committee/en/?committee=CCCF>) which develops international food safety standards and codes of practice for contaminants in foods, including mercury in fish. Health Canada subject experts have previously contributed to scientific evaluations by the Joint WHO/FAO Expert Committee on Food Additives (JECFA) (<http://www.fao.org/food-safety/scientific-advice/jecfa/en/>) including reviews of the toxicological and safety information related to methylmercury and inorganic mercury in the diet. Furthermore, Health Canada continuously reviews research on the health effects of dietary exposure to methylmercury and is conducting a systemic review focused on the neurodevelopmental effects in children associated with prenatal dietary exposure to methylmercury. The findings will be published and used to inform risk assessment and risk management of mercury in foods in Canada.

As a World Health Organization (WHO) Collaborating Centre on Environmental Health, Health Canada works to support the WHO in strengthening research, evidence synthesis and guidance on air quality, air pollution and health. With respect to mercury, a review chapter was authored by HC and published in January 2024 as a part of the WHO expert consultation on selected air pollutants (WHO-EURO-2023-8983-48755-72523-eng.pdf), outlining health and exposure information regarding mercury in ambient air.

In the fall of 2021, Health Canada also facilitated discussions between the WHO and a network of Canadian researchers within academia to explore areas for potential collaboration in the context of mercury-related health research.

Information on the reduction or elimination of the production, use, trade, emissions and releases of mercury and mercury compounds

#### **Information on the reduction or elimination of the production, use, trade, emissions and releases of mercury and mercury compounds**

Canada engages in bilateral and trilateral work in order to exchange information and assist other countries in relation to mercury management and trade. This occurs through joint projects as well as via general discussions between governments, including delegation visits to Canada. For example, Canada, Mexico and the United States work together under the Commission for Environmental Cooperation (CEC).

As part of its engagement under the Arctic Council Arctic Contaminants Action Program (ACAP), Environment and Climate Change Canada participates on the Expert Group on Persistent Organic Pollutants and Mercury. This Expert Group is currently producing a Fact Sheet on Mercury, which will be made publicly available on the Arctic Council website. The purpose of this fact sheet is to provide high-level information on how mercury is released, as well as its potential health impacts. This product targets northern residents, particularly Indigenous Peoples, who are exposed to elevated levels of contaminants in fish and wildlife species that are important to their traditional diets.

The Arctic Council Arctic Contaminants Action Program Persistent Organic Pollutants and Mercury Expert Group is currently in the second phase of implementing the Canadian cluster of the ARCRISK – Mercury Risk Evaluation, Risk Management, and Risk Reduction Measures in the Arctic project (<https://arctic-council.org/projects/arcrisk-mercury-risk-evaluation-risk-management-and-risk-reduction-measures-in-the-arctic/>). In phase one of this project (now completed), models were developed to identify the point and non-point mercury sources driving mercury accumulation in freshwater and five freshwater fish species, and to estimate the risk of mercury exposure to individuals in the Mackenzie River Basin. Phase two will build on this work, expanding the existing model to integrate stressors derived from various climate change scenarios, to compare potential risk-reduction management strategies, and to include engagement with Indigenous communities, the territorial government and industry. A model is being developed to predict how climate change scenarios, such as changes in temperature, precipitation intensity, vegetation density, land-use type will impact mercury levels in Arctic ecosystems. This project will include engagement with Indigenous communities to incorporate traditional knowledge and local knowledge into the models and the resulting predictions.

The National Pollutant Release Inventory (NPRI) is Canada's legislated, publicly accessible inventory of pollutant releases (to air, water and land), disposals and transfers for recycling, and includes mercury. Some of the features of the NPRI include detailed facility-reported information on mercury emissions, releases, and transfers from industrial and non-industrial sources since 1993 and mapping functions. NPRI data is collected and published annually. Canada also shares information on mercury industrial emissions through the Air Pollutant Emission Inventory (APEI) which provides a comprehensive overview of mercury and other pollutant emissions at the national and provincial/territorial levels. It includes estimates from all sources, including those not captured in NPRI (e.g., residential heating, transportation). Both of these inventories also have published detailed methodologies for how to calculate emissions and releases of mercury and other pollutants.

Canada's Products Containing Mercury Regulations, which came into force in 2015, require importers and manufacturers of products containing mercury to report on the quantity of mercury-containing products that they import, manufacture or export every three years. The analysis of these triennial reports provides valuable information on the current trends in products containing mercury in Canada. The key results are published online, and are available for the years 2016, 2019 and 2022. In addition, amendments to these Regulations were published in 2024, along with a Regulatory Impact Analysis Statement (<https://canadagazette.gc.ca/rp-pr/p2/2024/2024-06-19/html/sor-dors109-eng.html>). This statement summarises the economic, environmental and social analysis of reducing the use of mercury in products in Canada for the period 2026 to 2035.

The Government of Canada aims to reduce the risks posed by toxic substances to Canadians and their environment through risk management actions under the Chemicals Management Plan, such as: regulations, release guidelines, pollution prevention planning notices, recalls and safety alerts or substances described on Canada's cosmetic ingredient hotlist (<https://www.canada.ca/en/health-canada/services/consumer-product-safety/cosmetics/cosmetic-ingredient-hotlist-prohibited-restricted-ingredients.html>). These actions result from risk management strategies implemented by the Government of Canada to help protect Canadians and their environment from the risks posed by certain toxic substances.

Performance measurement evaluation is an important part of the overall chemicals management process under the Chemicals Management Plan. Following risk assessment and risk management implementation phases, performance measurement helps to ensure that Canadians can have confidence that their health and the environment are being protected from harmful substances. Providing results to Canadians on how well risk management strategies and tools have performed will enable stakeholders and the public to better understand how effectively their health and the environment are protected from toxic substances. Environment and Climate Change Canada and Health Canada undertook a performance measurement evaluation for mercury that was published in 2020 (<https://www.canada.ca/en/environment-climate-change/services/management-toxic-substances/evaluation-effectiveness-risk-management-measures-mercury.html>). This report included information on mercury levels and trends in biota and humans, sources of emissions and releases, and the success of risk management instruments.

Information on technically and economically viable alternatives to:

#### **Mercury-added products**

In 2024, as part of the amendments of the Products Containing Mercury Regulations, Canada published a Regulatory Impact Analysis Statement (<https://canadagazette.gc.ca/rp-pr/p2/2024/2024-06-19/html/sor-dors109-eng.html>). This document assessed the availability on the Canadian market of alternatives to products containing mercury, with a focus on mercury-free LED lamps. Some lamp types have readily available mercury-free alternatives, such as screw-base compact fluorescent lamps (CFLs), while other lamp types only have limited alternatives available, such as high intensity discharge lamps (HIDs).

Canada also contributed to the Secretariat's call for information in support of the review of Annexes A&B by providing information on mercury products and their alternatives ([https://www.mercuryconvention.org/sites/default/files/documents/submission\\_from\\_government/Canada\\_AnnexAB.pdf](https://www.mercuryconvention.org/sites/default/files/documents/submission_from_government/Canada_AnnexAB.pdf)), including information on the risks and benefits and their technical and economic feasibility.

#### **Manufacturing processes in which mercury or mercury compounds are used**

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## Activities and processes that emit or release mercury or mercury compounds

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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. (Art. 17.1 (a)–(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. (Art. 17.1 (a)–(d))**

Mercury biomonitoring and dietary exposure data collected directly by the Government of Canada or through projects partially funded by the Canadian government have contributed to epidemiological research to help characterize exposure and health effects of mercury in the general population of Canadians as well as vulnerable subgroups, including pregnant women and children, and higher exposed groups such as northern populations.

For example, general population levels of blood mercury and factors associated with mercury exposure have been characterized using data from the Canadian Health Measures Survey (CHMS) (<https://health-infobase.canada.ca/biomonitoring/about.html#a5>), a bi-annual cross-sectional study led by Statistics Canada, in partnership with Health Canada and the Public Health Agency of Canada. The Maternal-Infant Research on Environmental Chemicals (MIREC) Research Platform (<https://www.canada.ca/en/health-canada/services/environmental-workplace-health/environmental-contaminants/human-biomonitoring-environmental-chemicals/maternal-infant-research-environmental-chemicals-mirec-study.html>), funded in part by Health Canada, is a prospective birth-cohort of pregnant women and their offspring recruited from 10 Canadian cities. Publications based on MIREC data have characterized prenatal exposure to mercury (<https://doi.org/10.1016/j.chemosphere.2016.08.023>) and investigated potential health effects on birth outcomes, and effects in children. Another prospective Canadian birth-cohort study, the Nunavik Child Development Study (NCDS) ([https://nrhss.ca/sites/default/files/3.4.4\\_NNHC%20Summary%20of%20study%20results\\_Version%20oct%202011\\_VA.pdf](https://nrhss.ca/sites/default/files/3.4.4_NNHC%20Summary%20of%20study%20results_Version%20oct%202011_VA.pdf)), is partially funded by the Northern Contaminants Program (NCP) and has investigated mercury exposure and potential health effects in a higher-exposed northern Canadian population. Historic biomonitoring survey data of First Nation communities across Canada (<https://doi.org/10.1007/BF01189647>) has been used in collaboration between academia and First Nations groups to investigate chronic effects of high mercury exposure. For a sample list of epidemiological publications using the above data sources, please see the supplemental information provided for this article.

Health Canada has also been involved in review of epidemiological evidence related to the health effects of mercury. The Department has previously contributed to reviews of the epidemiology data related to the health effects of dietary methylmercury ([https://iris.who.int/bitstream/handle/10665/43645/9789241660587\\_eng.pdf?sequence=1](https://iris.who.int/bitstream/handle/10665/43645/9789241660587_eng.pdf?sequence=1)) through involvement in scientific evaluations of the Joint WHO/FAO Expert Committee on Food Additives (<http://www.fao.org/food-safety/scientific-advice/jecfa/en/>) (JECFA) and is currently conducting a systematic review focused on the neurodevelopmental effects in children associated with prenatal dietary exposure to methylmercury. In addition, in 2020 Health Canada re-evaluated the epidemiological evidence related to health effects of mercury exposure from dental amalgam (<https://hpr-rps.hres.ca/reg-content/summary-safety-review-detail.php?lang=en&linkID=SSR00263>).

## Part E – Additional comments on this article

Recent journal publications from Canada published in 2021–2024 that are relevant to scientific, technical, economic and legal information concerning mercury and mercury compounds, including toxicological, ecotoxicological and safety information:

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## ▼ ART. 18: PUBLIC INFORMATION, AWARENESS AND EDUCATION

### 18.1: Have measures been taken to promote and facilitate the provision to the public of the kinds of information listed in article 18, paragraph 1?

Yes

No

If yes, the party may wish to indicate in the space provided below, the measures it has taken to promote and facilitate information to the public, such as:

(a) Provision to the public of available information on:

The effects of mercury and mercury compounds on human health and the environment

#### The effects of mercury and mercury compounds on human health and the environment

Information on efforts to communicate on health aspects have been noted under reporting for Article 16. These include publication of information on the health risks and exposure pathways for mercury, effects of mercury on human health, consumption advice for certain retail fish, occupational health and safety information, and information on safe handling procedures for the disposal of mercury-added products such as compact fluorescent lamps. Health Canada also provides guidance to provincial and territorial agencies, water treatment facility operators, and the Canadian public on the occurrence, treatment technology, health considerations, and maximum acceptable concentrations of mercury in drinking water (<https://www.canada.ca/en/health-canada/services/publications/healthy-living/guidelines-canadian-drinking-water-quality-guideline-technical-document-mercury.html>).

In addition to the publicly available information noted under reporting for Article 17, information on mercury in the environment is communicated on Environment and Climate Change Canada's (ECCC) web pages (<https://canada-preview.adobecqms.net/en/environment-climate-change/services/pollutants/mercury-environment.html>). These pages provide plain-language information to the public on federal actions on mercury, mercury cycling in the environment, sources of mercury in the environment, and mercury containing products and their disposal.

Information on the results of mercury monitoring activities were included as part of the 2020 Evaluation of the Effectiveness of Risk Management Measures for Mercury (<https://www.canada.ca/en/environment-climate-change/services/management-toxic-substances/evaluation-effectiveness-risk-management-measures-mercury.html>) report. The report built on the results of the 2016 Canadian Mercury Science Assessment (<https://publications.gc.ca/site/eng/9.810484/publication.html>) to provide updated information on the results of monitoring in humans and key environmental media.

Alternatives to mercury and mercury compounds

#### Alternatives to mercury and mercury compounds

In 2024, as part of the amendments of the Products Containing Mercury Regulations, Canada published a Regulatory Impact Analysis Statement (<https://canadagazette.gc.ca/rp-pr/p2/2024/2024-06-19/html/sor-dors109-eng.html>). This document assessed the availability on the Canadian market of alternatives to products containing mercury, with a focus on mercury-free LED lamps. Some lamp types have readily available mercury-free alternatives, such as screw-base compact fluorescent lamps (CFLs), while other lamp types only have limited alternatives available, such as high intensity discharge lamps (HIDs).

The topics identified in paragraph 1 of article 17

#### The topics identified in paragraph 1 of article 17

In addition to the information that is publicly available and mentioned in the response to question 17.1 and supplemental information provided for that question, Canada has taken the following additional measures to communicate with the public:

ECCC has collected emissions and release data on over 300 pollutants since 1993 under the National Pollutant Release Inventory. The inventory is publicly available on the website Explore data – Canada.ca (<https://www.canada.ca/en/environment-climate-change/services/national-pollutant-release-inventory/tools-resources-data/exploredata.html>). The public can use a data search tool to look up pollutant releases in their neighbourhood by using their postal codes, or more globally via Google Earth.

Using NPRI data, ECCC has also developed Factsheets and Sector Overviews (<https://www.canada.ca/en/environment-climate-change/services/national-pollutant-release-inventory/tools-resources-data.html>) on specific topics to highlight how the NPRI data can be used to show improvements or trends in the Canadian environment. The mercury substance overview explores releases, disposals and transfers of mercury that are reported to the NPRI by industries in Canada. It also summarizes what facilities do to mitigate their environmental impacts.

The National Pollutant Release Inventory Indigenous Series: Cree Nation of Eeyou Istchee (<https://www.canada.ca/en/environment-climate-change/services/national-pollutant-release-inventory/tools-resources-data/cree.html#toc8>) serves as an informational overview, within the scope of the NPRI and the substances it tracks. This specific overview examines facilities located near Cree communities in Québec and the pollutants they report to the NPRI. It also examines sectors of interest to Cree communities and the actions taken by facilities to mitigate environmental impacts. It was developed with input from representatives at the Cree Nation Government (CNG), the Cree Board of Health and Social Services of James Bay, and the James Bay Advisory Committee on the Environment (JBACE).

Two research articles also guide data users in navigating NPRI transfers and disposals data, including mercury: Berthiaume, A. (2024). Unveiling under-utilized public data on Canadian industrial pollutant transfers and disposals. *Journal of Air & Waste Management Association*, 74 (9): 664–684. (<https://doi.org/10.1080/10962247.2024.2377327>), and Tracking progress toward Sustainable Development Goal 12 using Canadian industrial pollutants in waste. *Environmental and Sustainability Indicators*, 24: 100491. (<https://doi.org/10.1016/j.indic.2024.100491>)

The Canadian Environmental Sustainability Indicators (CESI) program provides data and information to track Canada's performance on key environmental sustainability issues including climate change and air quality, water quality and availability, and protecting nature. The environmental indicators are based on objective and comprehensive information and convey environmental trends in a straightforward and transparent manner.

The indicators are prepared by Environment and Climate Change Canada with the support of other federal government departments, such as Health Canada, Statistics Canada, Natural Resources Canada, Agriculture and Agri-Food Canada, as well as provincial and territorial government departments. Designed to be relevant to the Government's policy, the indicators are built on rigorous methodology and high quality, regularly available data from surveys and monitoring networks.

The CESI website ensures that national, regional, local and international trends are readily accessible and transparently presented to all Canadians through the use of graphics, explanatory text, interactive maps and downloadable data. Indicator results are linked to their key social and economic drivers and information is provided on how the issues are influenced by consumers, businesses and governments. Each indicator is accompanied by a technical explanation of its calculation.

CESI is the prime instrument to measure progress of the Federal Sustainable Development Strategy and responds to Environment and Climate Change Canada's commitments under the Canadian Environmental Protection Act and the Department of the Environment Act to report to Canadians on the state of the environment.

For mercury specifically, the CESI program prepares annual reports on releases of harmful substances to:

Air (<https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/emissions-harmful-substances-air.html>), and;

Water (<https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/releases-harmful-substances-water.html>).

The results of its research, development and monitoring activities under article 19

#### **The results of its research, development and monitoring activities under article 19**

In addition to the publications mentioned in the supplemental for article 17, the results of research, development, and monitoring activities under article 19 are also communicated publicly via the following:

The key results from the analysis of the triennial reports under Canada's Products Containing Mercury Regulations

are published online in a format accessible to the public. They provide valuable information on the trends in using mercury in products in Canada. They are available for the years:

2016 (<https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/products-mercury-regulations-2016-summary-key-results.html>),

2019 (<https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/key-results-2019-reports-products-containing-mercury-regulations.html>) and

2022 (<https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/publications/key-results-2022-products-containing-mercury-regulations.html>).

Mercury is both a Chemical of Mutual Concern under Annex 3, Chemicals of Mutual Concern of the Great Lakes Water Quality Agreement (GLWQA) and is a Chemical of Concern under Annex 2, Chemicals of Concern of the Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health (COA). Reports and other information have been published with respect to risk assessment and management of mercury under these two agreements. Reports under the GLWQA include the Binational Summary Report: Mercury (<https://binational.net/wp-content/uploads/2015/05/EN-Mercury-Binational-Summary-Report-Final-Draft.pdf>) and the Great Lakes Binational Strategy for Mercury Risk Management (<https://binational.net/2021/06/28/cmc-mercury-pcspm-mercure/>). ECCC contributes to reporting of mercury in fish, wildlife and abiotic indicators in technical reports through the State of the Great Lakes (<https://binational.net/category/a10/sogl-edgl/>) reports. Public reports including mercury data are produced on a biannual basis, and report both on spatial and temporal trends in mercury in the Great Lakes in both Canada and the United States of America in joint publications. Under the COA, there is the Water Quality in Ontario 2014 report (<https://www.ontario.ca/page/water-quality-ontario-2014-report>). These reports also outline past and research and monitoring that is specific to the Great Lakes Basin for both Canada and the United States. ECCC also provides information to the public on the levels of mercury in wildlife in the Great Lakes Region through public meetings with stakeholders.

The Oil Sands Monitoring (OSM) program tracks mercury levels in wildlife and abiotic matrices to assess the cumulative effects of contaminants, including mercury, related to oil sands development to wildlife. Summary reports of the ongoing activities and results were provided to collaborating Indigenous communities and other stakeholders. Information provided includes levels of mercury in the environment and body burdens in wildlife, and an assessment of the effects of mercury on wildlife. Data from the monitoring activities have been used to inform consumption advisories of gull and tern eggs in northern Alberta. Further, a data source geared towards Indigenous land-users, trappers and hunters, on the effects of pollutants including mercury can be found on the Kotowan Portal (<http://www.kotowanportal.ca/>), released Sept 15th, 2021.

Northwest Territories Cumulative Impact Monitoring Program (NWT CIMP) reports the results of research and monitoring of mercury in the NWT and supports work that evaluates how mercury in the environment is affected by changes in land use, natural environmental processes, and anthropogenic activities. Researchers present the results of mercury monitoring to communities in the NWT near where the research or monitoring is occurring, as is required by the NWT CIMP and communities are often involved as partners in research activities.

In Northern Canada, risk communication messaging and public health information related to mercury in the environment, particularly as it relates to human health, is shared by territorial and regional health authorities in conjunction with Health Canada, Environment and Climate Change Canada and Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC). Under CIRNAC, the Northern Contaminants Program (NCP) supports monitoring and research activities related to mercury and other contaminants in the Canadian Arctic and releases annual "Synopsis of Research" ([https://science.gc.ca/eic/site/063.nsf/eng/h\\_97659.html](https://science.gc.ca/eic/site/063.nsf/eng/h_97659.html)) reports which provide both technical and plain language information and summaries of ongoing mercury research in Canada's Arctic. NCP provides an annual synopsis of research reports on mercury research in Canada's Arctic to communities in the north. Plain language summaries of the work are produced. Communities are engaged in the development and consulted on the progress of the research programs. Recipients of NCP project funding are also required to deliver results and information to the relevant northern communities and regions in technical and plain language formats.

As noted in Canada's response for Article 17, the AMAP Assessment 2021: Mercury in the Arctic (<https://www.amap.no/documents/doc/amap-assessment-2021-mercury-in-the-arctic/3581>) and the AMAP Assessment 2021: Human Health in the Arctic (<https://www.amap.no/documents/doc/amap-assessment-2021-human-health-in-the-arctic/3593>) were released in 2021. Canada contributed heavily to these AMAP reports, which provide an up to date compilation of mercury in the environment and in humans the Arctic.

Through the development of the Canadian Biomonitoring Dashboard (<https://health-infobase.canada.ca/biomonitoring/index.html>), an interactive data exploration tool, the Government of Canada has significantly advanced the ability of stakeholders and data users to access the human biomonitoring data for several priority chemicals including mercury from the Canadian Health Measures Survey (CHMS, <https://health-infobase.canada.ca/biomonitoring/about.html#a5>). Canadian national biomonitoring data have also been integrated into the European Commission's Information Platform for Chemical Monitoring (<https://ipchem.jrc.ec.europa.eu/#showmetadata/CHMS>) database. This greatly increases the access to CHMS data among international stakeholders and allows users to readily compare CHMS data with international datasets. The nationally representative biomonitoring data for mercury from the CHMS have also contributed to the development of the Canadian Environmental Sustainability (CESI) Indicators for human exposure to harmful substances (<https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/human-exposure-harmful-substances.html>). In addition to providing a snapshot of exposures to mercury and time trends in the Canadian population, the indicators also support the measurement of progress towards Canada's sustainable development goals under the 2022 to 2026 Federal Sustainable Development Strategy and the Sustainable Development Goals of the 2030 Agenda for Sustainable Development.

Activities to meet its obligations under the Convention

#### **Activities to meet its obligations under the Convention**

Environment and Climate Change Canada leads the domestic implementation of the Convention. ECCC provided information on the activities taken to meet its obligations in its Article 30.4 notice, which is publicly available on the Convention website. Prior to and following each COP meeting, ECCC consults with and updates stakeholder groups on technical matters for consideration by the COP.

Additionally, the Government of Canada maintains a publicly available compendium of information for the international agreements to which it is a party. Information on the Minamata Convention (<https://www.canada.ca/en/environment-climate-change/corporate/international-affairs/partnerships-organizations/mercury-minamata-convention.html>) includes a plain language summary, overview of the convention, expected results, efforts to implement the convention, and progress to date.

Canada promoted its activities related to meeting its obligations for products containing mercury through a Factsheet (<https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/importing-manufacturing-products-containing-mercury.html>) published in 2024 and a Compliance Guide (<https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/publications/compliance-guide-products-containing-mercury-regulations.html>) that was published in 2025, in English and French. These documents provide a summary in plain language of the phase out of products containing mercury under Canada's Products Containing Mercury Regulations.

**(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 non-governmental organizations and vulnerable populations, as appropriate.**

#### **Activities to meet its obligations under the Convention**

Environment and Climate Change Canada scientists provide lectures on mercury research in Canada to students in northern colleges including the Arctic College in Iqaluit, Inuvik and Pond Inlet and the Yukon University. In working with the Northern Contaminants Program, researchers have been welcomed by high school schools in many communities in and around the Canadian north to discuss the transport, transformation and deposition of mercury in the Arctic.

The Northern Contaminants Program (NCP) supports capacity building in Northern Canada through its "Communications, Capacity and Outreach" subprogram. This includes workshops that provide both information and hands-on training to Northerners in practical field and laboratory skills in association with northern post-secondary institutions. The NCP has also supported training, capacity building and technology transfer through funding for the purchase of modern equipment for communities in the North (e.g., a direct mercury analyser for Yukon University), and through funding for regional contaminants committees and Inuit Research Advisor positions, which provide social-cultural and technical assistance for research and monitoring activities. A biennial NCP Results Workshop which brings together project leaders, participants and rights-holders from across Canada serves an important role in knowledge transfer and public awareness.

The NCP Results Workshop is held biennially and is a venue for Canadian scientists, Northerners and policy-makers to meet and focus attention on the breadth of issues related to contaminants from long-range sources in Canada's North, to learn about and discuss the latest results, current state of knowledge and policy implications, and to plan for future contaminants-related initiatives. Mercury monitoring and research, including on the effects of exposure to mercury and mercury compounds on human health and the environment are an important part of the workshop due

to international, national and local interest in levels of mercury in the environment, wildlife and people. Human biomonitoring projects funded through the Human Health subprogram of the NCP also regularly hold public engagement events and consultations before, during and after projects are completed with results communicated in conjunction with appropriate public health authorities.

For NCP-supported work on mercury and other contaminants in polar bears, researchers give presentations in Nunavut and elsewhere, e.g. at Arctic College in Iqaluit and at high schools and hunters and trappers associations for partner communities in Arviat, Whale Cove, Rankin Inlet, Sanikiluaq, Pond Inlet and Clyde River.

(Art. 18 (1) (a) and (b))

## Part E – Additional comments on this article

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### ▼ ART. 19: RESEARCH, DEVELOPMENT AND MONITORING

#### 19.1: Has the party undertaken any research, development and monitoring in accordance with paragraph 1 of article 19?

Yes

No

If yes, the party may wish to indicate in the space provided below, the research, development and monitoring it has undertaken, such as:

Inventories of use, consumption, anthropogenic emissions to air and releases to water and land of mercury and mercury compounds

#### **Inventories of use, consumption, anthropogenic emissions to air and releases to water and land of mercury and mercury compounds**

Canada has many research and monitoring programs that contribute to its implementation of Article 19. These are organized below according to subparagraphs (a) through (g) of paragraph 1 of Article 19. Additional research has been published in scientific journals with citations available in the supplemental annex provided for reporting questions under Article 17. Canada's response to the reporting questions for Article 18 also contain relevant information on research, development, and monitoring activities as well as information on how the results of these endeavours were made available to the public.

(a) Inventories of use, consumption, and anthropogenic emissions to air and releases to water and land of mercury and mercury compounds

Canada maintains a comprehensive inventory of mercury emissions, including from all industrial sources. Under the authority of the Canadian Environmental Protection Act, 1999 owners or operators of relevant facilities that meet species reporting requirements must report mercury emissions to the National Pollutant Release Inventory (NPRI) on an annual basis. Additionally, Canada's Air Pollutant Emissions Inventory (APEI) is compiled from many different data sources. Emission data reported by individual facilities through the NPRI and, to a lesser extent, data provided directly by the provinces are supplemented with well-documented, science-based estimation tools and methodologies to quantify total emissions. Together, these data sources provide a comprehensive coverage of air pollutant emissions across Canada.

APEI is available online at: <https://www.canada.ca/en/environment-climate-change/services/pollutants/air-emissions-inventory-overview.html>

NPRI is available at: <https://www.canada.ca/en/services/environment/pollution-waste-management/national-pollutant-release-inventory.html>

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

**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**

Freshwater Quality Monitoring and Surveillance (FWQMS) program

ECCC monitors freshwater quality and aquatic ecosystem health on federal lands, in transboundary watersheds, and in in-land waters of federal interest. While mercury in water is not routinely sampled across the national freshwater quality monitoring network, it is monitored within this network as part of ecosystem initiatives in the St. Lawrence River and select tributaries, in the Great Lakes, and in British Columbia. Results are shared with partners and stakeholders and are available to the public on the Open Data Portal (<https://www.canada.ca/en/environment-climate-change/services/freshwater-quality-monitoring/online-data.html>). In addition, surficial sediments are monitored for mercury in the Great Lakes, St. Lawrence River, the Fraser and Columbia River basins, and at select sites under the national Chemicals Management Plan (CMP). Mercury has been monitored in fish whole body homogenates from 22 sites across Canada starting in 2008. Mercury in fish in the Great Lakes has been measured since the late 1970s. Data for sediments and fish can be found on Canada's Open Data Portal (<https://data-donnees.az.ec.gc.ca/data/substances/monitor/chemicals-management-plan-sediment-monitoring-program?lang=en>) (<https://data-donnees.az.ec.gc.ca/data/substances/monitor/great-lakes-fish-contaminants-monitoring-and-surveillance-data/?lang=en>).

Atmospheric Mercury Measurement program

Mercury is monitored in air at five active monitoring sites across Canada. Combining several programs, the Environment and Climate Change Canada Atmospheric Mercury Measurement (ECCC-AMM) Network provides long term mercury monitoring data. This network works with other international networks such as the National Atmospheric Deposition Network (NADP) and the Asia Pacific Mercury Monitoring Network (APMMN) to provide data, standard operating procedures and work together to ensure comparable data. In addition to mercury in air, measured as total gaseous mercury (TGM), the ECCC-AMM program measures mercury speciation at one monitoring location and wet mercury deposition at five locations. Mercury monitoring also takes place at nine sites in the Arctic through a network of passive samplers in coordination with the Northern Contaminants Program. Through this program, a peer reviewed quality assurance/quality control program for atmospheric mercury was developed and implemented and can be used as a path forward for ensuring data consistency between sites/countries and programs.

Canada is working with UNEP for the development of the Global Chemicals Monitoring Program (GCMP). Expert advice and information have been provided to the team, including on standard operating procedures (SOPs), costing etc for the implementation of additional passive air monitoring in 52 countries.

Canada is leading the air media team for the first cycle of the effectiveness evaluation process. All the submitted air data has been added to an ECCC database for fulsome analysis. Canada leads the air media team and has helped produce all the products required in the Open-ended Science Group (OESG) mandate.

Atmospheric Mercury Modelling

A global process-based atmospheric mercury model (Global Environmental Multiscale – Modelling Air quality and Chemistry–Mercury, GEM-MACH–Mercury) representing primary and legacy mercury emissions of anthropogenic and geogenic origin, meteorological processes, chemistry, and deposition processes was developed. The ECCC mercury model is applied to develop: mercury transport and deposition pathways; spatial distributions and mass budgets of mercury concentrations in air and deposition over land and oceans; source apportionment (linking mercury deposition to regional and extra-regional emission sources); and impacts of emission reduction scenarios. ECCC mercury model results were provided to inform international mercury assessments (such as those undertaken by the Arctic Monitoring and Assessment Program (AMAP) and UNEP Global Mercury Partnership). The ECCC mercury model results were combined with results from other international mercury models to develop robust ensemble mean modelling products, reported in the international mercury assessments. The ECCC mercury model was applied to develop source apportionment of mercury deposition in Canada to inform domestic mercury assessments undertaken by the Northern Contaminants Program (NCP) and the Canadian Mercury Science Program, and the Evaluation of the Effectiveness of Risk Management Measures for Mercury report (2020). Impacts of Athabasca oil sands and wildfire mercury emissions on mercury levels in Canada were demonstrated using the model. In addition, the ECCC atmospheric model was coupled to terrestrial, aquatic and bioaccumulation models, and impacts of mercury emission reductions on future fish mercury concentrations in five ecosystems across Canada were demonstrated.

Canada, through the Long range hemispheric transport of atmospheric pollution group (LR-HTAP), is leading the Multi-Compartment Hg Modeling and Analysis Project (MCHgMAP) – International multi-model initiative to perform coordinated air-land-ocean Hg modelling simulations to advance the understanding of past, present and future Hg cycling and to inform policy.

Through this work Canada has led the establishment of the MCHgMAP with a long-term vision to support mercury policy, analyzed drivers for the changes in global mercury levels, and quantified missing emissions sources that could explain observed trends, leading to further refinement of emissions inventories and observations, and constructed mass balance of contemporary environmental mercury cycling.

#### Whales Initiative Science and Contaminants Monitoring

The Whales Initiative (<https://www.canada.ca/en/environment-climate-change/services/wildlife-habitat/conservation-funding-success-stories/reducing-contaminants-threat-southern-resident-killer-whales/accomplishment-highlights.html>) is conducting scientific research and monitoring of contaminants of concern, including mercury, in different media (i.e. air, freshwater, sediment, landfill leachate, wastewater influent, effluent, and biosolids, and biota) that are affecting Southern Resident Killer Whales and St. Lawrence Estuary Belugas as well as their prey. The eight-year program started in 2018 and aims to support the recovery and survival of the two iconic endangered species from numerous anthropogenic threats, including exposure to contaminants.

#### Oil Sands Monitoring (OSM) Program

The Oil Sands Monitoring (OSM) Program funds and undertakes ambient environmental monitoring to improve the characterization of the condition of the environment and enhance the understanding of cumulative effects related to oil sands development. The Program is collectively managed by the Governments of Canada and Alberta, together with representatives from Indigenous communities and industry.

Under a multi-stakeholder Oversight Committee of the OSM Program, which represents Indigenous communities, industry and government, an annual work planning process and monitoring plan is coordinated and approved. The monitoring plan is comprised of a series of work plans focused towards understanding environmental impacts of oil sands development across key thematic areas. Under such work plans, the monitoring of key variables such as mercury and other metals in key environmental media is considered and included. One goal of the program is to determine if mercury levels in the environment in northern Alberta are rising to levels that are likely to cause adverse human and/or environmental health effects as a result of oil sands industrial operations.

ECCC is monitoring mercury levels annually or near annually (since as early as 2009 to present) in gull and tern eggs, amphibians, semi-aquatic mammals, along with air, snow, water and sediment. Further, activities in OSM are tracking both mercury sources and environmental fate, and how development of the Oil Sands changes the release and distribution of mercury. Data on the levels of mercury in the environment and in wildlife, and the effects of mercury can be found on ECCC's Data Catalogue, the Government of Canada's OSM Portal (<https://www.canada.ca/en/environment-climate-change/services/oil-sands-monitoring.html>) and the Government of Alberta's OSM Portal (<https://www.alberta.ca/oil-sands-monitoring-program-scientific-papers-and-data>).

#### Freshwater and Marine Colonial Waterbird Contaminant Monitoring Programs

The Great Lakes Herring Gull Contaminant Monitoring Program, as well as related programs in the Atlantic, St. Lawrence, and Pacific has provided long term data concerning levels of environmental contaminants in colonial waterbird eggs, including mercury. These waterbird monitoring programs have been used to track mercury annually in the Great Lakes, St. Lawrence, and east and west coasts since the mid-1970s. Further, information on the diet and trophic level of colonial waterbirds is also used to assess how changes in the food web affect the dynamics of mercury in fish-eating birds. The Great Lakes Herring Gull Contaminant Monitoring Program has also been used to assess Great Lakes Areas of Concerns, where mercury levels may be elevated due to human activities. Information on these programs can be found on the Open Data Portal (<https://open.canada.ca/en/open-data>).

#### Global Compilation of Natural Archives Data

ECCC scientists and collaborators are compiling and analyzing recently published global mercury data from environmental archives (sediment, peat and ice cores as well as mosses, tree leaves and tree rings), to inform modelling efforts for the first Effectiveness Evaluation being carried out by the Open-Ended Science Group.

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

## **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**

### **The Northern Contaminants Program**

The Northern Contaminants Program ([https://science.gc.ca/eic/site/063.nsf/eng/h\\_7A463DBA.html](https://science.gc.ca/eic/site/063.nsf/eng/h_7A463DBA.html)) (NCP) led by Crown-Indigenous Relations and Northern Affairs Canada engages Northerners and scientists in the research and monitoring of long-range contaminants such as persistent organic pollutants (POPs) - linked to the Stockholm Convention on POPs - and mercury in Northern Canada. Human biomonitoring studies have measured mercury in blood and hair from populations across the Canadian Arctic and sub-Arctic, including among pregnant women, children and adults. In addition to human biomonitoring, the core monitoring program of the NCP includes long-term temporal trend assessments of contaminants in the air and water as well as key/sentinel fish and terrestrial and marine wildlife species that are harvested as traditional food sources by Northern Indigenous Peoples. For example, contaminants in the tissues of polar bears, ringed seals, beluga, caribou, seabird eggs, lake fish (Arctic char, trout, burbot) and sea-run Arctic char are routinely monitored. Monitoring under the NCP is also a key source of information that is provided to the Arctic Monitoring and Assessment Program (AMAP), a working group of the Arctic Council.

The NCP also coordinates an AMAP-wide inter-laboratory Quality Assurance/Quality Control (QA/QC) program for mercury, methylmercury and other contaminants to ensure accuracy and consistency across Arctic monitoring programs. Through AMAP, Canada collaborates regularly with other Arctic Council member states regarding ongoing monitoring of mercury in various media.

### **NWT Cumulative Impact Monitoring Program**

The Northwest Territories Cumulative Impact Monitoring Program (<https://www.enr.gov.nt.ca/en/services/nwt-cumulative-impact-monitoring-program-nwt-cimp>) (NWT CIMP) is a source of environmental monitoring and research in the Northwest Territories. Although a territorial program, NWT CIMP funds support research and monitoring of mercury by ECCC scientists who evaluate the effects of landscape-level environmental change, such as forest fires and mining, on wetland and terrestrial ecosystems. Monitoring projects include the tracking of mercury in water, sediment and invertebrates, and projects to assess the role of aerial deposition on the long-distance transport and environmental fate of mercury. Data will be used to track the effectiveness of remedial measures and regulatory decisions.

### **Chemicals Management Plan Monitoring and Surveillance Program**

This national program (<https://www.canada.ca/en/environment-climate-change/services/science-technology/programs/monitoring-surveillance-chemicals-management.html>) builds off the environmental monitoring programs previously mentioned to support monitoring of chemicals, including mercury, in various environmental media (air, water, wastewater influent, effluent, and biosolids, sediment, fish and wildlife). The program assesses both spatial and temporal trends in mercury levels in biotic and abiotic matrices, as well as determines if the mitigation of mercury releases by ongoing management and regulations are sufficient for reducing mercury contamination or emissions in Canada. Further, this program will help determine the importance of specific anthropogenic activities as sources of mercury to the environment.

### **Research-related Activities to Improve Health Canada's Risk Assessment of Methylmercury in Country Foods in Impact Assessment**

Health Canada's Environmental Impact Assessment (EIA) Division is undertaking, through the Impact Assessment Research Fund and in collaboration with external researchers, two research projects to examine and challenge some of the standard assumptions that Health Canada applies in its assessment of the health risks associated with exposure to mercury and methylmercury through the consumption of country (i.e., traditional) foods, particularly among Indigenous populations in Canada. The overall goal is to improve Health Canada's approach and reduce uncertainty, when assessing the risks to human health as an expert department. The projects include: (1) the creation of a master database of mercury and methylmercury levels in country food items contributing most to mercury exposure among Indigenous communities; and (2) a study of the effects of country food preparation on concentrations and bioaccessibility of mercury and associated metals used in vitro digestion experiments. The EIA Division also created the Methylmercury Impact Assessment Resource Group to help guide the EIA Division in advancing the department's expertise in the risk assessment of methylmercury in country (i.e., traditional) foods based on the most recent scientific findings. Resource Group membership includes Canadian academics who are subject-matter experts, Indigenous organization representatives, and Health Canada employees.

## Monitoring of Food

The Canadian Food Inspection Agency (CFIA) conducts ongoing testing of domestic and imported commercial fish to ensure compliance with the maximum levels for mercury in retail fish established by Health Canada. The levels of mercury in fish and a wide variety of other foods sold in Canada are also monitored through on-going targeted surveys conducted by the Government of Canada, including surveys such as the CFIA's Children's Food Project and the National Chemical Residue Monitoring Program. Reports for these surveys are available on the CFIA web page About the Canadian Biomonitoring Dashboard – Public Health Agency of Canada – Canada.ca (<https://health-infobase.canada.ca/biomonitoring/about.html#a5>).

## Canadian Health Measures Survey

Biomarkers of mercury exposure in the general Canadian population aged 3–79 are measured on an ongoing basis as part of the nationally-representative Canadian Health Measures Survey (CHMS). This survey began in 2007 and is led by Statistics Canada in partnership with Health Canada and the Public Health Agency of Canada. The survey includes assessment of blood, urine, and hair collected from survey participants for a wide variety of environmental chemicals. Total mercury in whole blood has been measured in each CHMS cycle since 2007 and select CHMS cycles have additionally measured inorganic mercury in blood and urine, methylmercury in blood, and total mercury in hair. Summary statistics of mercury biomarkers for the whole population, and by age and sex subgroups are published for each CHMS cycle as the data are released and

are made available to the data users and public through Government of Canada's Canadian Biomonitoring Dashboard (<https://health-infobase.canada.ca/biomonitoring/>), an interactive data exploration tool.

## Maternal-Infant Research on Environmental Chemicals (MIREC)

Mercury was measured in maternal blood, cord blood, meconium, hair, human milk and child blood (22 months – 5 years), as part of the MIREC Research Platform. These data were collected between 2007 and 2013 from approximately 2000 participants. Mercury was also measured in blood samples collected at follow-up between 2017 and 2021 from over 200 MIREC children (aged 7–11 years) and mothers. Researchers continue to use these data to investigate health effects associated with early life mercury exposures. More information about MIREC is available here: <https://www.mirec-canada.ca/en/>

Harmonized methodologies for the activities undertaken under subparagraphs (a), (b) and (c) of paragraph 1 of article 19

### **Harmonized methodologies for the activities undertaken under subparagraphs (a), (b) and (c) of paragraph 1 of article 19**

#### Research and Development of Mercury Passive Sampler

In collaboration with Environment and Climate Change Canada, the University of Toronto Scarborough developed a passive air sampler for gaseous mercury. This sampling device has been fully characterized and is now in commercial production by Tekran Instrument Corporation and is sold under the MerPAS® name. The Government of Canada has committed to funding a 2-year pilot study to investigate applying this passive air sampler globally. The intent of this study is to assess the feasibility of a globally implemented monitoring program using the MerPAS to establish a baseline concentration in remote locations. This will serve in conjunction with currently deployed active and passive mercury sampling investigations by other research/monitoring groups.

Canada has led since 2019, the Global Hg Passive (GHgP) Network to measure atmospheric mercury in all continents. Through existing networks and collaborations this network has collected mercury from 104 sites around the world. The proof of concept is complete, and the network is functioning and producing unique and valuable data. With the COVID-19 global pandemic, the program was extended because it was not possible to deploy or receive samplers for most of 2020. As of January 2021, data collection restarted at 47 sites around the world with the goal to increase the number of sites in areas where there are little data including South America, Africa, parts of Asia, Russia and the South Pacific.

This is currently the only truly global mercury for air network in existence. The hope is that this monitoring will be collectively taken on by various regions and through the UNEP-led Global Chemicals Monitoring Programme (GCMP).

In addition, sediment cores are also assessed for mercury isotopes to evaluate long-term trends and changes in mercury sources. Monitoring of mercury in mosses is also considered a type of passive sampling, although its relevance may vary depending on context. Journal articles comparing the various passive samplers, including the

MerPAS® are listed in the supplemental information provided in Canada's response to reporting questions under Article 17.

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

**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**

Aquatic Contaminants Research

This program evaluates the long-range transport and deposition through time of mercury in the environment across Canada. Seasonal and annual biomonitoring of moss and lichens, air, precipitation, water (e.g., lake, stream, groundwater) and sediment provide spatial resolution of mercury atmospheric deposition as well as mercury speciation measurements. Current and historical mercury and multielement deposition at both near field and remote sites across Canada are also assessed using dated lake sediment cores. Relationships to permafrost melting related to climate change are being investigated. The work includes collaboration with atmospheric deposition and climate modellers.

Information on commerce and trade in mercury and mercury compounds and mercury-added products

**Information on commerce and trade in mercury and mercury compounds and mercury-added products**

The Canada Border Services Agency (CBSA) provides clearance, control and examination services, on behalf of other government departments and agencies, for travellers, importers and exporters at close to 1,200 points of entry. Information on commerce and trade in mercury, mercury compounds, and mercury-added products is provided from the CBSA to Statistics Canada who is mandated to produce and manage statistics on the Canadian population, resources, economy, society and culture, including trade statistics. Statistics Canada organizes this information and has developed the Canadian International Merchandise Trade (CIMT) online database (<https://www150.statcan.gc.ca/n1/pub/71-607-x/71-607-x2021004-eng.htm>). This database offers detailed trade data using the Harmonized System (HS) classification of goods, based on the 6-digit commodity level (e.g., country, province, state, year, month, or frequency). The database is updated monthly and trade in mercury and mercury compounds and mercury-added products is monitored regularly.

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

**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**

Monitoring through the Products Containing Mercury Regulations

Canada's Products Containing Mercury Regulations, which came into force in 2015 and were amended in 2024, require importers and manufacturers of products containing mercury to report on the quantity of mercury-containing products that they import, manufacture and export in Canada every three years. These reports enable the Canadian federal government to monitor the reduction of total mercury in products in Canada, and to identify trends and gaps where awareness activities are needed or where potential reduction in mercury in products could be achieved.

(Art. 19 (1) (a)-(g))

## Part E – Additional comments on this article

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### ▼ COMMENTS REGARDING POSSIBLE CHALLENGES IN MEETING THE OBJECTIVES OF THE CONVENTION

## Part C: Comments regarding possible challenges in meeting the objectives of the Convention

{Empty}

### ▼ COMMENTS REGARDING THE REPORTING FORMAT AND POSSIBLE IMPROVEMENTS, IF ANY

## Comments regarding the reporting format and possible improvements, if any

Formatting of the online reporting portal: it is unfortunate that it is not possible to insert hyperlinks or table into the textboxes. Additional abilities to format with bold, underline, or italics could also help to make the text a bit easier to read.

Articles 17 and 18: It was challenging to divide information between questions 17.1 and 18.1. We interpreted that question 17.1 was intended to cover information exchange for more technical audiences such as other parties or academia whereas question 18.1 was intended to refer to information shared with the public. However, the majority of the information provided under question 17.1 is also publicly available and paragraph 1(a)(iii) of article 18 refers to the topics identified in paragraph 1 of article 17. To avoid duplicative responses for these two questions we recommend that the reporting guidance be strengthened to clarify the information requested for each article.