2025 FULL REPORTS OF THE MINAMATA CONVENTION ON MERCURY

Report submitted on 22 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
Finland

Date on which its instrument of ratification, accession, approval or acceptance was deposited
1 June 2017

Date of entry into force of the Convention for the party
30 August 2017

2. Information on the national focal point

Full name of the institution
Finnish Environment Institute

Title of Contact Officer
Ms.

Name of Contact Officer
Emma Nurmi

Mailing address
Latokartanonkaari 11
00790 Helsinki
Finland

Telephone number
+358 40 740 1687

Fax number
{Empty}

E-mail
finland@localhost.com

Second E-mail
emma.nurmi@syke.fi

Web page
{Empty}

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

▼ 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

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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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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.
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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

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

If yes, please explain the measures taken to ensure that the excess mercury was disposed of in accordance with the guidelines for environmentally sound management referred to in paragraph 3 (a) of article 11 using operations that did not lead to recovery, recycling, reclamation, direct re-use or alternative uses.

Chlor-alkali production in which mercury is used as an electrode has been prohibited in the EU from 11 December 2017 (Regulation (EU) 2017/852 on mercury, Article 7(1) and part I of Annex III). Mercury from chlor-alkali industry shall be considered to be waste and disposed of without endangering human health or harming the environment, and such disposal shall not lead to any form of reclamation of mercury (Regulation (EU) 2017/852 on mercury, Article 11).
In the beginning of the reporting period there was still a small amount of mercury left at the facility where mercury process had been shut down in December 2017. It was sent for disposal (stabilization followed by underground disposal) in Germany during the reporting period.

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
- [x] No - no export took place
- [ ] No - consent was not given

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

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▼ 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.
Article 5 of Regulation (EU) 2017/852 on mercury prohibits export, import and manufacturing of the mercury-added products set out in Annex II of the said Regulation. Products in Part I of Annex A of the Convention are covered by Annex II of the Regulation.

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

- ( ) Yes
- (•) No

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.

i) Setting national objectives aiming at dental caries prevention and health promotion, thereby minimizing the need for dental restoration:
In Finland, everyone is entitled to public oral health care. We have national guidelines on dental caries prevention and health promotion (https://www.kaypahoito.fi/hoi50127, last updated in January 2023). The DMF index (number of Decayed, Missing, and Filled Teeth) for 12-year-olds was 0.9 in 2024.
ii) Setting national objectives aiming at minimizing its use:
In Finland, the national target is to phase out the use of amalgam by 2030, with a steady decline in use in the 2020s. Amalgam fillings accounted for less than 3 % of the fillings made in 2012 and less than 1 % of the fillings made in 2019. In 2021, according to a survey conducted by the Ministry of Social Affairs and Health, 86 % of dental practices did not use amalgam at all. Most dental practices that still used amalgam used it very rarely. According to a population survey conducted in 2023, the proportion of amalgam fillings among all dental fillings was 59% among 55-64-year-olds and only 2% among 20-34-year-olds.
iii) Promoting the use of cost-effective and clinically effective mercury-free alternatives for dental restoration:
In Finland, a recommendation to restore severely damaged teeth with ceramic fillings and crowns was given by the Service Selection Board (Palko) in December 2021. The task of the board is to give recommendations on which services belong to the range of health care services financed by public funds.
iv) Promoting research and development of quality mercury-free materials for dental restoration:
Finland, together with the other Nordic countries, funds the Nordic Institute of Dental Materials (NIOM). NIOM´s main focus of research are biomaterials. Biomaterial research is done in collaboration with universities, institutes and public dental service in the Nordic countries.
v) Encouraging representative professional organizations and dental schools to educate and train dental professionals and students on the use of mercury-free dental restoration alternatives and on promoting best management practices:
According to information received by the Ministry of Social Affairs and Health, as of 2022, amalgam fillings will no longer be taught at any of the dental schools in Finland.
vi) Discouraging insurance policies and programmes that favour dental amalgam use over mercury-free dental restoration:
In Finland, there are no policies or programs that would favor dental amalgam use over mercury-free dental restoration.
vii) Encouraging insurance policies and programmes that favour the use of quality alternatives to dental amalgam for dental restoration:
In Finland, a composite restoration costs the patient the same as an amalgam restoration. Ceramic restorations are more expensive.
viii) Restricting the use of dental amalgam to its encapsulated form:
In Finland, dental amalgam has only been used in encapsulated form since January 2019.
ix) Promoting the use of best environmental practices in dental facilities to reduce releases of mercury and mercury compounds to water and land:
As of January 2021, all dental units in Finland must have amalgam separators with separation rate of at least 95 %. All dental amalgam waste is instructed to be separated from other waste and transported to a hazardous waste facility.

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

If the party answered yes please select from the bellow checkboxes

☑ Excluded or not allowed, by taking measures as appropriate, the use of mercury in bulk form by dental practitioners

☑ Excluded or not allowed, by taking measures as appropriate, or recommended against, the use of dental amalgam for the dental treatment of deciduous teeth of patients under 15 years of age and of pregnant and breastfeeding women, except when such use is considered necessary by the dental practitioner based on the needs of the patient

If the party answered yes to either option above, please provide information on the measures.
New measures after the amendment of Annex A were not necessary, because Regulation (EU) 2017/852 on mercury already included these measures. The use of mercury in bulk form by dental practitioners has been prohibited from 1 January 2019. The use of dental amalgam for dental treatment of deciduous teeth, of children under 15 years and of pregnant or breastfeeding women, except when deemed strictly necessary by the dental practitioner, has not been allowed as of 1 July 2018.

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)

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.
According to Article 8 of Regulation (EU) 2017/852 on mercury, economic operators shall not manufacture or place on the market mercury-added products that were not being manufactured prior to 1 January 2018 unless authorised to do so or allowed to do so under Directive 2011/65/EU ("RoHS directive"). The authorisation process according to Regulation (EU) 2017/852 on mercury includes assessment by both the Member State and the European Commission.
Finnish Safety and Chemicals Agency, which is the competent authority for this issue, has not received any application for a decision on authorisation.

Part E - Additional comments on this article

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▼ 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.
According to Article 8 of Regulation (EU) 2017/852 on mercury, economic operators shall not use manufacturing processes involving the use of mercury or mercury compounds that were not processes used prior to 1 January 2018 unless authorised to do so.
Finnish Safety and Chemicals Agency, which is the competent authority for this issue, has not received any application for a decision on authorisation.

Part E – Additional comments on this article

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▼ 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
Finland has cooperated within the GEF Council as a donor to the GEF to support the ASGM-related programmes and activities which support achieving the objective of this article.

Please provide information
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Part E – Additional comments on this article

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▼ 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
- [x] Waste incineration facilities

Waste incineration facilities
There are 5 new waste incineration facilities / boilers in Finland which have started their operation during the reporting period. All the facilities have environmental permits which include emission limit values also for mercury. Applying BAT is a key requirement for granting an environmental permit.

- [ ] 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)

If Yes, please explain
An environmental permit according to Finnish Environmental Protection Act (527/2014) is required for any new facility which is a relevant source listed in Annex D. Applying BAT is a key requirement for granting an environmental permit.

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

Measures
BAT reference document and BAT conclusions (Commission Implemention Decision (EU) 2021/2326) for large combustion plants can be found in https://eippcb.jrc.ec.europa.eu/reference/large-combustion-plants-0
In addition, the use of coal as a fuel for the production of electricity or heat will be prohibited in Finland from 1 May 2029. (Act 416/2019)

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▼ 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
BAT reference document and BAT conclusions (Commission Implemention Decision (EU) 2021/2326) for large combustion plants can be found in https://eippcb.jrc.ec.europa.eu/reference/large-combustion-plants-0

Progress
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▼ 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
BAT reference document and BAT conclusions (Commission Implemention Decision (EU) 2016/1032) for non□ferrous metal industries can be found in https://eippcb.jrc.ec.europa.eu/reference/non-ferrous-metals-industries-0

Progress
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▼ 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
BAT reference document and BAT conclusions (Commission Implemention Decision (EU) 2019/2010) for waste incineration can be found in https://eippcb.jrc.ec.europa.eu/reference/waste-incineration-0

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▼ 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
BAT reference document and BAT conclusions (Commission Implemention Decision 2013/163/EU) for production of cement, lime and magnesium oxide can be found in https://eippcb.jrc.ec.europa.eu/reference/production-cement-lime-and-magnesium-oxide

Progress
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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?
15 February 2025

Please indicate where this inventory is available
Finnish air pollutant emission inventory to the CLRTAP covers also mercury emissions. This inventory is published on the webpage https://cdr.eionet.europa.eu/fi/un/clrtap/inventories/.
The inventory to the CLRTAP covers mercury emissions also from other sources than those listed in Annex D. According to the latest emission inventory submission to the CLRTAP (15.2.2025), the total mercury emissions in Finland were:
- 0.519 t in 2021
- 0.501 t in 2022
- 0.493 t in 2023 (latest available year)

Attach

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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

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▼ 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)

Please indicate the measures taken to address releases from relevant sources and the effectiveness of those measures.
Point sources of releases to water have been identified in Finland based on Water Framework Directive (WFD) inventory of emissions, discharges and losses required by Article 5(6) of the Environmental Quality Standards Directive 2008/105/EC. The releases of mercury in Finland are nowadays quite small, so it could be questioned whether any of the sources is actually a relevant point source.
However, the identified point sources with highest releases belong to the following potentially relevant point source categories listed in "Guidance on the methodology for preparing inventories of releases pursuant to paragraph 7 of Article 9 of the Minamata Convention on Mercury":
5.2.1 Mining, mineral processing, smelting and roasting of non-ferrous metals other than mercury & ferrous-metal production
5.3.2 Pulp and paper production
5.9.5 Wastewater systems/treatment
Relevant point sources of releases to land have not been identified in Finland.
Measures taken to address releases include especially release limit values and use of best available techniques and best environmental practices.

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)

When was the inventory last updated?
31 March 2021

Please indicate where this inventory is available.
{Empty}

Please explain
https://www.ymparisto.fi/en/node/341

Part E - Additional comments on this article

Finland's EU Water Framework Directive (WFD) inventory of emissions, discharges and losses, which includes mercury release data from 2023, is currently under preparation and will be available in the above-mentioned website in spring 2026.

▼ 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.
According to Article 7 of Regulation (EU) 2017/852 on mercury, the interim storage of mercury and of mercury compounds and mixtures of mercury shall be carried out in an environmentally sound manner, in accordance with the thresholds and requirements set out in Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances and Directive 2010/75/EU on industrial emissions.
There are no known interim storages of non-waste mercury or mercury compounds in Finland.

Part E - Additional comments on this article

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▼ ART. 11: MERCURY WASTES

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

- (●) Yes
- ( ) No

[x] 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}

[x] 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}

[x] 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.

Finland has implemented all the requirements set in Article 11 para 3 of the Convention, partly by Regulation (EU) 2017/852 on Mercury and partly by Finnish national waste and environmental legislation.

According to the EU Regulation on Mercury, all mercury and mercury compounds originating from chlor-alkali industry, cleaning of natural gas, non-ferrous mining and smelting operations or extraction from cinnabar ore shall be disposed of without endangering human health or harming the environment. Any type of recovery of these wastes is not permitted and the disposal operation shall not lead to any form of reclamation of mercury. Metallic mercury shall be permanently disposed of in following permanent storage facilities licensed for disposal of hazardous waste:

- salt mines that are adapted for the permanent storage of mercury waste that underwent conversion, or deep underground hard rock formations providing a level of safety and confinement equivalent to or higher than that of such salt mines;
- above-ground facilities dedicated to and equipped for the permanent storage of mercury waste that underwent conversion and solidification and that provide a level of safety and confinement equivalent to or higher than the aforementioned salt mines or deep underground formations.

Metallic mercury may also be temporarily stored in liquid form provided that the specific requirements for the temporary storage of mercury waste set in EU Landfill Directive (1999/31/EC) are complied with. Temporary storage in liquid form is allowed only until 1 January 2026.

Besides aforementioned mercury wastes, the EU Regulation on Mercury covers also dental amalgam waste. The Regulation requires that dental practitioners ensure that their amalgam waste, including amalgam residues, particles and fillings, and teeth, or parts thereof, contaminated by dental amalgam, is handled and collected by an authorised waste management establishment or undertaking. Dental practitioners shall not release directly or indirectly such amalgam waste into the environment under any circumstances.

Those mercury wastes that are not covered by the EU Regulation on Mercury are regulated by other EU waste legislation as well as Finnish waste and environmental legislation. These include for example EU Waste Directive (2008/98/EU), EU Landfill Directive (1999/31/EY) and EU Integrated Emissions Directive (75/2010/EU) as well as Finnish Environmental Protection Act (527/2014) and Environmental Protection Decree (713/2014), Waste Act (646/2011) and Waste Decree (978/2021), Landfill Decree (331/2013) and Waste Incineration Decree (151/2013).

According to the Finnish Environmental Protection Act, environmental permit is in most cases needed for treatment of waste, including mercury waste, on a professional basis or at an installation. An environmental permit may be granted for an activity that meets the requirements of the Environmental Protection Act and the Waste Act and the decrees issued under them. The permit authority shall set to the operation such permit conditions that the operation does not cause health hazards or environmental damage or pollution of soil and groundwater. The treatment facility shall apply the principles of best available techniques and best environmental practices in its operation. The EU BAT reference documents (BREFs) shall be taken into account in the permit procedure. The Waste Incineration BREF (https://eippcb.jrc.ec.europa.eu/reference/waste-incineration-0) and Waste Treatment BREF (https://eippcb.jrc.ec.europa.eu/reference/waste-treatment-0) consider among other things techniques for limiting Hg emissions from various treatment processes for Hg containing wastes. Binding Hg emission limit values to air and waterbodies from waste incineration and certain waste treatment operations have been set partly in EU BAT-conclusions and partly in national waste legislation. Additionally, binding Hg leaching limit values have been set for landfilling of mercury containing waste (other than metallic mercury) and for using certain waste materials for earth construction.

The export and import of mercury wastes is in conformity with Article 11 of the Minamata Convention and the Basel Convention. The requirements of the Basel Convention have been implemented in Finland by EU Waste Shipment Regulation (EU No. 1013/2006 & 2024/1157). According to it, all shipments of waste for final disposal need a waste shipment permit. Shipments of waste for final disposal are only permitted to other EU countries, countries that belong to the European Economic Area (EEA) and countries that belong to European Free Trade Association (EFTA). The shipment of metallic mercury as well as all mercury and mercury compounds originating from chlor-alkali industry, cleaning of natural gas, non-ferrous mining and smelting operations or extraction from cinnabar ore are always considered as shipments for final disposal.

Shipments of waste for recycling or recovery also need a permit, except wastes listed to Annex IX of the Basel Convention (B-list) and other non-hazardous wastes listed in Annexes III, IIIA and IIIB. Additionally, also shipments of waste listed in in Annexes III, IIIA and IIIB may require a notification to non-OECD countries if the non-OECD country in question has requested a notification procedure.

Shipments of hazardous waste for recycling or recovery are only permitted to countries belonging to EU or OECD, in line with the Decisions II/2 and III/1 of the Basel Convention. These principles apply also to shipments of mercury wastes (other than metallic mercury and mercury and mercury compounds originating from chlor-alkali industry, cleaning of natural gas, non-ferrous mining and smelting operations or extraction from cinnabar ore).
Shipments to and from non-Basel countries are only allowed if Finland or EU has entered into a bilateral or multilateral agreement with that non-Basel country, and the bilateral or multilateral agreement is compatible with Community legislation and in accordance with Article 11 of the Basel Convention. Currently, the only bilateral or multilateral agreement in place between Finland and non-Basel countries and applicable to mercury wastes is the OECD Decision C(2001)107/Final of the OECD Council concerning the revision of Decision C(92)39/Final on control of transboundary movements of wastes destined for recovery operations. Shipments to and from OECD countries that are not parties to the Basel Convention for recovery operations follow the same rules as to other OECD countries, described above.

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

Kindly attach any additional relevant information
{Empty}

Part E - Additional comments on this article

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▼ ART. 12: CONTAMINATED SITES

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
In Finland, the regulatory policy on contaminated sites is based on national legislation, which sets generic provisions on the identification, investigation, assessment and remediation of contaminated sites, defining duties for both the liable parties and the authorities. In the legislation, a contaminated site refers to soil and groundwater that cause a harm or an unacceptable risk to human health or the environment. More specific provisions on the required duties are given in government decrees, which are further complemented by guidance documents, and a national risk management strategy for contaminated land (https://julkaisut.valtioneuvosto.fi/handle/10024/160375). The same national, risk-based regulatory approach applies to all sites and contaminants, including mercury. Hence, there is no specific strategy targeted only at mercury or mercury compounds. Finland has systematically identified, investigated and assessed potentially contaminated sites since 1989, and so far, over 7,000 sites have already been remediated. During this work, and based on additional recent surveys, mercury has not been identified as a significant contaminant in soil or groundwater. Instead, the biggest concern for environmental mercury is related to its elevated concentrations in fish of inland waters, and the consequent risks to human health due to fish consumption. Here, the historical

contamination of inland water sediments is one of the origins of the concentrations in fish, alongside several diffuse and natural sources. However, based on extensive national monitoring, mercury concentrations in fish have been declining continuously during the past 50 years, particularly due to the dramatic reduction of local mercury emissions. The health risks caused by the current mercury concentrations in fish are mostly managed by specific dietary recommendations on fish consumption issued by the Finnish Food Authority.

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
The national activities to implement the Convention are implemented as part of official duties in Ministry of the Environment, Ministry of Social Affairs and Health and several governmental institutions.
No information available on possible costs borne by the private sector in undertaking the required Convention obligations.

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.
Finland has contributed to the financial mechanism via its funding to the Global Environment Facility during the reporting period. Finland's total contribution to the GEF during GEF-7 (2018-2022) was 26 MEUR (1,16%) and during GEF-8 (2022-2026) 48 MEUR (1,26%).

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
Finland’s contribution to assist developing-country parties and/or parties with economies in transition in the implementation of the Convention is channelled mainly through the financial mechanism. In addition, Finland provides financial resources to assist developing-country parties and/or parties with economies in transition in the implementation of the Convention through the Special Programme which supports institutional strengthening at the national level for implementation of the Basel, Rotterdam and Stockholm Conventions, the Minamata convention and the Strategic Approach to International Chemicals Management (SAICM) (Finnish contribution 80,000 EUR/2022, EUR 15,000 EUR/2023, 34 000 EUR/2024).

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
Finland does not have bilateral cooperation to provide capacity-building and technical assistance to support the implementation of the Convention beyond of the support Finland has provided via the financial mechanism and the Special Programme.

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

- Yes
- (●) No

Please specify
Finland has not sought capacity-building or technical assistance from another party.

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
No plan to undertake these activities. No information available on the possible activities by private sector.

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.
Finnish Food Authority has issued consumption advice on fish, see https://www.ruokavirasto.fi/en/foodstuffs/instructions-for-consumers/safe-use-of-foodstuffs/safe-use-of-fish/
The advice was updated during the reporting period, and it takes into account contaminant levels (including mercury).

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 Ministry of Social Affairs and Health has confirmed a list of concentrations of impurities (including mercury and its inorganic compounds and alcyl compounds of mercury) in workplace air known to be harmful (HTP values) and a list of corresponding indicative limit values for biological exposure indicators. The values are intended to be taken into account when assessing the quality of workplace air, employees' exposure and the significance of measurement results.The lists are enclosed as Annexes 1 and 2 to the publication (in Finnish, abstract in English) https://julkaisut.valtioneuvosto.fi/handle/10024/162457
Employer has an obligation to take the limit values into account when assessing the exposure, and to perform measurements when necessary. If exposure to mercury occurs at the workplace, biomonitoring of mercury is part of occupational health monitoring performed by occupational health care, based on Occupational Health Care Act (1383/2001).

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
Several Finnish institutions participated in assessment of mercury in the Arctic under Arctic Monitoring & Assessment Program (AMAP), see https://www.amap.no/documents/doc/amap-assessment-2021-mercury-in-the-arctic/3581

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

☐ Information on technically and economically viable alternatives to:

☐ 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))

Part E - Additional comments on this article

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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:

[x] 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
Finnish Institute for Health and Welfare provides on its websites information to the public on for example health effects of mercury, mercury in the environment, exposure to mercury and ways to reduce exposure to mercury:
https://thl.fi/en/topics/environmental-health/environmental-pollutants
https://thl.fi/aiheet/ymparistoterveys/ymparistomyrkyt/elohopea (in Finnish only)

Finnish Food Authority provides information on mercury on their websites. There are for example guidance related to safe consumption of food products and information on how to avoid exposure to mercury (like recommendation on consumption of fish).
https://www.ruokavirasto.fi/en/foodstuffs/food-sector/contaminants-and-residues/contaminants/metals-in-foods/kvicksilver/

Webpages of environmental administration provide information on mercury (in Finnish) in the environment, for example on emissions and releases, see
https://www.ymparisto.fi/en/node/803

Information on emissions and releases at the facility level in Finland is also provided (in Finnish, Swedish and English) in
https://prtr.fi/
This data is retreived from PRTR (Pollutant Release and Transfer Register) maintained by the European Environment Agency. It should be noted that the coverage of this data is not as comprehensive as in the inventories due to application of thresholds.

[ ] Alternatives to mercury and mercury compounds

[x] The topics identified in paragraph 1 of article 17

The topics identified in paragraph 1 of article 17
Finnish Safety and Chemicals Agency provides information on mercury and related legislation:
https://tukes.fi/en/chemicals/mercury

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

[ ] Activities to meet its obligations under the Convention

(b) Education, training and public awareness related to the effects of exposure to mercury and mercury compounds on human health and the environment in collaboration with relevant intergovernmental and non-governmental organizations and vulnerable populations, as appropriate.

Activities to meet its obligations under the Convention
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(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

[x] 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

The occurrence of mercury and other contaminants in fish from Finland's marine areas and inland waters were determined and a risk-benefit assessment of the consumption of fish was performed. The sampling aimed to give a thorough view of the current occurrence levels in domestic fish. In addition, the state of Finland's marine and inland water environment and fish stocks were assessed. The report was published in Finnish and also published with an extended English abstract in Food Risk Assess Europe:
Suomi J, Rantakokko P, Airaksinen R, Raitaniemi J, Junttila V, Mikkelä A, Uusitalo L, Leskinen H, Pihlava J-M, Järvinen J, Jalava T, Kumar E, Koponen J, Ruuhijärvi J, Kulo K, Leinonen V, Ruokojärvi P, Mäkinen S, Keskinen T, Lampuoti J, Welling A, Tuominen P (2024). Kotimaista kalaa ravinnoksi monipuolisemmin ja turvallisemmin. EU-kalat IV. Valtioneuvoston selvitys- ja tutkimustoiminnan julkaisusarja 2024:29. ISBN 978-952-383-312-8. https://urn.fi/URN:ISBN:978-952-383-312-8 (Domestic fish for more versatile and safer consumption EU-fish IV)
https://doi.org/10.2903/fr.efsa.2024.FR-0043

Some master's theses related to mercury have been completed at Finnish universities during the reporting period:
Helene Laiho 2022: http://hdl.handle.net/10138/340810
Maija Norontaus 2022: http://hdl.handle.net/10138/355531
Maija Sujala 2023: https://jyx.jyu.fi/jyx/Record/jyx_123456789_92298
Aruna Deb 2024: https://helda.helsinki.fi/items/87634435-873a-43a2-b1a2-44dcd3774398

During the reporting period, Finnish researchers have published/participated in at least the following scientific publications:
Rask, M., Malinen, T., Nyberg, K., Olin, M., Kurkilahti, M., Blauberg, T-R., Vesala, S., Ruuhijärvi, J., Tiainen, J., Vuorenmaa, J., Lodenius, M., Arzel, C., Nummi, P., Kahilainen, K.K., Verta, M. & Arvola, L. 2024: Pike (Esox lucius) mercury in boreal headwater lakes during four decades: effects of regional and local environmental changes. Water Air and Soil Pollution 235:85.
https://doi.org/10.1007/s11270-024-06894-z

Kozak, N., Kahilainen, K.K., Pakkanen, H.K., Hayden, B., Østbye, K. & Taipale, S.J. 2023: Mercury and amino acid content relations in northern pike (Esox lucius) in subarctic lakes along a climate-productivity gradient. Environmental Research 233: 116511.
https://doi.org/10.1016/j.envres.2023.116511

Piro, A.J., Taipale, S.J., Laiho, H.M., Eerola, E.S., & Kahilainen, K.K. 2023: Fish muscle mercury concentration and bioaccumulation fluctuate year-round – Insights from cyprinid and percid fishes in a humic boreal lake. Environmental Research 231: 116187.
https://doi.org/10.1016/j.envres.2023.116187

Keva, O., Kiljunen, M., Hämäläinen, H., Jones, R.I., Kahilainen, K.K., Kankaala, P., Laine, B., Schilder, J., Strandberg, U., Vesterinen, J. & Taipale, S.J. 2022: Allochthony and the fatty acid and mercury contents of Eurasian perch (Perca fluviatilis) along boreal environmental gradients. Science of Total

Environment 838: 155982.

McKinney, M.A., Chételat, J., Burke, S.M., Elliott, K.H., Fernie, K.J., Houde, M., Kahilainen, K.K., Letcher, R.J., Morris, A.D., Muir, D.C.G., Routti, H. & Yurkowski, D.J. 2022: Climate change and mercury in the Arctic: Biotic interactions. Science of the Total Environment 834: 155221.

Chételat, J., McKinney, M.A., Amyot, M., Dastoor, A., Douglas, T.A., Heimbürger-Boavida, L-E., Kirk, J., Kahilainen, K.K., Outridge, P.M., Pelletier, N., Skov, H., St. Pierre, K., Vuorenmaa, J. & Wang, F. 2022: Climate change and mercury in the Arctic: Abiotic interactions. Science of the Total Environment 824: 153715.

Rask, M., Malinen, T., Olin, M., Nyberg, K., Ruuhijärvi, J., Kahilainen, K.K., Verta, M., Vuorenmaa, J., Blauberg, T-R., & Arvola, L. 2021: High mercury concentrations of European perch (Perca fluviatilis) in boreal headwater lakes with variable history of acidification and recovery. Water, Air and Soil Pollution 232: 382. https://doi.org/10.1007/s11270-021-05303-z

Kozak, N., Ahonen, S.A., Keva, O., Østbye, K., Taipale, S.J., Hayden, B. & Kahilainen. K.K. 2021: Environmental and biological factors are joint drivers of mercury biomagnification in subarctic food webs along climatic and productivity gradient. Science of Total Environment 779: 146261.

☐ 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

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

☑ 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
The Finnish Meteorological Institute continuously monitors mercury (concentrations in air and deposition) at four measuring stations.
https://en.ilmatieteenlaitos.fi/air-quality-monitoring

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

☐ 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

(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

{Empty}

Secretariat of the Minamata Convention on Mercury
International Environment House 1
Office address: 11-13 chemin des Anémones, 1219 Châtelaine, Geneva, Switzerland
Postal address: Avenue de la Paix 8-14, 1211 Geneva 10, Switzerland
MEA-MinamataSecretariat@un.org | www.minamataconvention.org

UN environment programme