

MINAMATA CONVENTION ON MERCURY 2021



* Question 11.2 amended by Sweden on 10 June 2022

REPORTING PERIOD:

16 August 2017 to 31 December 2020

▼ INFORMATION ON THE PARTY

1. Information on the party

Name of party

Sweden

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

18 May 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

Ministry of the Environment

Title of National Focal Point

Ms.

Name of National Focal Point

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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

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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
☒ No

Additional information on this question if needed
{Empty}

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
☒ No

3.3. Has the party endeavoured to identify individual stocks of mercury or mercury compounds exceeding 50 metric tons and sources of mercury supply generating stocks exceeding 10 metric tons per year that are located within its territory?

- ☒ Yes
☐ No

ba34_subsection

*If the party answered Yes to Question 3 above:

i. Please attach the results of your endeavor or indicate where it is available on the internet, unless unchanged from a previous reporting round.
No stocks of mercury or mercury compounds exceeding 50 metric tons or sources of mercury supply generating stocks exceeding 10 metric tons per year were found.

i. Please attach the results of your endeavor or indicate where it is available on the internet, unless unchanged from a previous reporting round.
{Empty}

ii. Supplemental: Please provide any related information, for example on the use or disposal of mercury from such stocks and sources.
{Empty}

3.4. Does the party have excess mercury available from the decommissioning of chlor-alkali facilities?

- ☐ Yes
☒ No

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

Additional information if needed

{Empty}

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 the article in free text if the party chooses to do so

During 2019–2020 a total of 144 metric tons were extracted from the cells of the last mercury–cell chloralkali plant in Sweden and transported to Germany for stabilisation and final storage in salt mines. A few more metric tons have been/will be collected from the cleaning–up of buildings and equipment and will be transported to Germany for stabilisation and final storage in salt mines.

As there is no legal use of mercury in Sweden and export is banned the mercury from decommissioned chlor–alkali plants is regarded as waste.

▼ 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.

Most mercury containing products were banned from being manufactured or sold in 1991 which led to a substantial reductions in the amount of mercury used in products. Between 1992 and 2003, approximately 95 per cent of sold amounts of mercury was phased out. In 1997 an export ban on mercury and compounds containing mercury took effect. In 2009 a general ban on mercury came into force.

4.3. Has the party taken two or more measures 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.

In 1995, the state and county councils signed an agreement to phase out the use of dental amalgam from children's dentistry, and since 1999 there has been no financial support for amalgam fillings from the Swedish dental insurance. General ban on mercury since 2009. In 2017 dental amalgam was used once for restoration. In 2018 there were no restorations with dental amalgam. Dental facilities have been required to have amalgam separators installed since 1985.

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 under article 4?

- ☒ Yes
- ☐ No

If yes, please provide information on the measures.

General ban on mercury since 2009.

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

If yes, please provide information on the measures.

General ban on mercury since 2009.

Part E – Additional comments on the article in free text if the party chooses to do so

The general ban on mercury (Ordinance 1998:944) came into force 1 June 2009. According to this ban, mercury and articles containing mercury may not be placed on the Swedish market or be professionally transferred out of Sweden. In addition, mercury as a substance, compound, and mixture may not be used. There are time-limited exemptions for some applications and the possibility to apply for a dispensation.

▼ 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
- ☐ I 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)

If yes, please provide information on these measures.

Mercury use in chlor-alkali production is included in the general ban of mercury from 2009 but has had exemptions till 2018 when the last mercury-cell chlor-alkali facility was closed.

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

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

If yes, please provide information on these measures.

General ban on mercury since 2009.

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. Is there any facility that has been developed 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

Part E – Additional comments on the article in free text if the party chooses to do so

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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

Part E – Additional comments on the article in free text if the party chooses to do so

{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 new sources.

Attach relevant documentation

{Empty}

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

{Empty}

Progress

{Empty}

▼ 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

All large installations need a permit with specified limit values and and maximum amount of emitted pollutants per year since 1969 when the Environmental Protection Act was adopted. In 1998 the Environmental Protection Act was replaced with the Environmental Code (1998:808). Measures include requirements to reduce sulphur dioxide, nitrogen oxides and particulate matter which also reduce emissions of mercury and other pollutants. Specific mercury measures include the Boliden Norzink Process (calomel scrubber), activated carbon and selenium filter.

Progress

We do not have any comparable figures dating from before 1985, but emissions were much higher during the 1960s and –70s. Mercury emissions from Swedish point sources has decreased from about 5.5 metric tons in 1985 to 0.4 metric tons today (mercury emissions from point sources has been around 0.4 metric tons per year since 2014).

▼ 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

All large installations need a permit with specified limit values and and maximum amount of emitted pollutants per year since 1969 when the Environmental Protection Act was adopted. In 1998 the Environmental Protection Act was replaced with the Environmental Code (1998:808). Measures include requirements to reduce sulphur dioxide, nitrogen oxides and particulate matter which also reduce emissions of mercury and

other pollutants. Specific mercury measures include activated carbon filters.

The use of mercury has been greatly reduced due to the ban on mercury in products 1992 which means that mercury content in incinerated waste also has been reduced.

Progress

Since 1990 mercury emissions from waste incineration has been reduced from about 200 kg per year to about 30 kg per year.

▼ 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

All large installations need a permit with specified limit values and and maximum amount of emitted pollutants per year since 1969 when the Environmental Protection Act was adopted. In 1998 the Environmental Protection Act was replaced with the Environmental Code (1998:808). Measures include requirements to reduce sulphur dioxide, nitrogen oxides and particulate matter which also reduce emissions of mercury and other pollutants. Specific mercury measures include good control of raw materials and fuels.

Progress

Swedish limestone has very low content of mercury and the permit require control of raw materials and fuels which leads to measurements of mercury mostly being below the detection limit.

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?

Wed, 06/30/2021 – 00:00

Please indicate where this inventory is available

All installations are required to report their emissions every year and it can be found at <https://utslappisiffror.naturvardsverket.se/sv/Sok/> or <https://nationellaemissionsdatabasen.smhi.se/>.

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 the article in free text if the party chooses to do so

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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
- ☐ I do not know

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

Part E – Additional comments on the article in free text if the party chooses to do so

All installations are required to report their releases every year and it can be found at <https://utslappisiffror.naturvardsverket.se/sv/Sok/>.

▼ 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
- ☐ I do not know

Part E – Additional comments on the article in free text if the party chooses to do so

No interim storage of non-waste mercury.

▼ ART. 11: MERCURY WASTES

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

- ☒ Yes
- ☐ No

Please describe the measures implemented pursuant to paragraph 3, and please also describe the effectiveness of those measures.

In 2003, the Swedish Parliament decided that waste containing mercury was to be permanently stored deep underground. This decision was taken after many years of studies and research, which concluded that deep underground storage is the best solution to protect the environment in the long term, i.e. through the next ice age or for at least ten thousand years.

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

- ☐ Yes
- ☒ No
- ☐ I do not know

If yes, if the information is available, how much waste consisting of mercury or mercury compounds has been subjected to final disposal under the reporting period? Please specify the method of the final disposal operation/operations.

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Part E – Additional comments on the article in free text if the party chooses to do so

One non-ferrous metals production plant has built a deep underground disposal in bedrock for its hazardous waste, including mercury containing waste. The disposal is planned to begin in 2021. The environmental report to be submitted in 2022 will have information on how much mercury containing waste that has been deposited. There will not be any disposal of waste consisting of mercury or mercury compounds in the underground final disposal facility.

The process waste containing mercury that will be disposed of in the facility are dust, sludges and activated carbon from the different cleaning techniques to reduce emissions to air and releases to water. The content of mercury in the waste range from <0,01 to 7 %.

The start of disposing of hazardous process waste in the underground final disposal facility has been delayed till 2022.

▼ 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

Sweden has a national plan for treatment of contaminated sites, where areas with the largest risk are treated. An inventory of contaminated sites in the whole country has taken place during many years. To remediate contaminated sites where no one can be held accountable, approximately 900 million SEK is available yearly. Usually a number of contaminants can be found within the same site, common contaminants are mercury and other heavy metals, PCB, dioxines, oil spills and polyaromatic hydrocarbons.

Part E – Additional comments on the article in free text if the party chooses to do so

In order to identify contaminated sites in Sweden, the County Administrative Boards have, with the support of the Swedish EPA, carried out an extensive inventory of sites which previously had, or currently have, operations that may cause contamination of soil, sediment, surface water and groundwater. Examples of such activities are chemical industries, dry cleaners, mines or sawmills. The inventory was conducted between 1999 and 2015 and resulted in the identification of approximately 85 000 potentially contaminated sites in Sweden, of which around 26 000 are classified according to potential risk. About 1 200 of these sites are classified as risk class 1 and may constitute a "Very high risk to human health and the environment", and around 8 000 sites are classified as risk class 2, "High risk to human health and the environment". Sites in class 1 and 2 are prioritized to receive funding from the Swedish EPA to be investigated and, if needed, remediated. Today, approximately 128 of the most severely contaminated sites in Sweden have been remediated with funding from the Swedish EPA.

▼ 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

Complete mercury ban since 2009.

Monitoring in environment and humans; Remediation of contaminated sites; Enforcement on national, regional and local level

Please provide comments, if any.

Examples on programmes and funding (national level):

Swedish environmental monitoring of mercury

Metals in air and precipitation – includes mercury and ten other metals, annual cost 1 860 000 SEK (2020).

Metals in moss – metal measurements in moss have been carried out in Sweden every five years since 1975. The 2020 moss survey included mercury and fourteen other metals and the cost was 2 000 000 SEK.

Metals in marine biota – analysis of mercury and ten other metals in marine biota, annual cost 310 000 SEK (2020)

Metals in fresh water fish – includes mercury and twelve other metals, annual cost 570 000 SEK (2020)

Metals in marine sediment – includes mercury and 35 other elements at sixteen locations every sixth year – cost 3 500 000 SEK (2020)

Monitoring of mercury levels in humans

Mercury in hair of first-time mothers – about 30 women every year, annual cost 100 000 SEK (2020)

Mercury in blood of ten year old children – about 100 children every two years, biannual cost 450 000 SEK (2019)

Other health related studies including mercury are done at irregular intervals and are not mentioned.

Contaminated sites (mercury and other contaminants, also see art. 12, approximate numbers):

2017: 850 million SEK

2018: 850 million SEK

2019: 850 million SEK

2020: 900 million SEK

Enforcement

The Swedish Chemicals Agency inspect companies that manufacture, import and sell chemical products and articles that contain or have been treated with chemical substances. As part of the control, the agency perform screening analysis with XRF and send some products for chemical analyses to verify that the products meet the requirements of the legislation. Mercury is controlled alongside other substances with legal restrictions, i.e. figures below includes enforcement of several legislations and substances.

2019 Control of electrical products and batteries. 1.43 million SEK

2020 Control of internet sales. Control of articles (including toys, jewellery and electrical products), biocides, chemical products, and plant protection products. Among the 449 investigated products, 174 jewellery items were checked for hazardous metals. The total cost for the project was about 1.8 million SEK.

2020 Control of fireworks for mercury and HCB. 0.8 million SEK

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

☒ Yes

☐ No

Please specify

So far Sweden has contributed yearly 2017–2020 to the Secretariat and/or SiP. In 2020 the contribution was 2 million SEK.

Contributions to GEF on a yearly basis. 2020 GEF total (i.e. not only Minamata) 300 million SEK

Please provide comments, if any.

Travel support (to developing countries and countries with economies in transition), implementation, ratification and further development of the convention etc.

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

Special Programme, Sweden has so far contributed yearly 2017–2020 to SP.

Please provide comments, if any.

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Part E – Additional comments on the article in free text if the party chooses to do so

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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

The Swedish Chemicals Agency has during 2020 and 2021 provided focused Technical Assistance to the Ministry of Environment and Forestry in Indonesia, for the development of a "Local action plan for mercury reduction and elimination for the Central Kalimantan Province"

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

☐ Yes

☒ No

Please specify

Sweden is not a developing country or country with economy in transition

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

• Since 2013 the Swedish Chemicals Agency, cooperates bilaterally on activities related to the development of legal framework and institutional set-up for chemicals management. Within the same programme the Swedish EPA cooperates bilaterally with focus on capacity building of the public environmental management, pollution prevention and control of industries and waste management. Examples of countries for the bilateral cooperation is Zambia, Serbia, Albania, Brazil, Argentina, Vietnam, Taiwan, Indonesia, South Africa and South Korea. These cooperations normally focus on capacity building and not in alternative technologies.

Part E – Additional comments on the article in free text if the party chooses to do so

- The Swedish Chemicals Agency supports development of national chemicals control in other countries in different ways, i.e. the agency has since 2007 arranged International Training Programmes (ITP) in "Strategies for chemicals management" that supports the development of chemicals management capacities including the aims of the Minamata Convention. The programme is designed for relevant governmental officials, in order to assist their administration in developing national strategies for chemicals management and sustainable development. To date 498 persons from 46 developing countries or countries with economies in transition have participated.
- Swedish Chemicals Agency has supported UNEP in the development of the LIRA-Guidance on legal and institutional infrastructures for the sound management of chemicals and measures for recovering costs of national administration (published 2015), including mercury management. As a follow up to the LIRA-Guidance the Swedish Chemicals Agency has also supported UNEP in developing four additional documents on chemicals control published 2019.

▼ 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.

- The Swedish Food Agency inform on their website about the risks with mercury and how the population can be exposed. They give recommendations about fish consumption for different groups of the population. <https://www.livsmedelsverket.se/livsmedel-och-innehall/oonskade-amnen/metaller1/kvicksilver>
- The Swedish Food Agency also give special advices to pregnant as well as breastfeeding women about food and which fishes that should not be consumed more than 2–3 times per year due to high content of mercury. This information can be found as brochures both in swedish and english on the webpage of the Swedish Food Agency but they are also distributed at maternity care centres.: <https://www.livsmedelsverket.se/en/food-habits-health-and-environment/dietary-guidelines/food-for-you-who-are-pregnant>
<https://www.livsmedelsverket.se/en/food-habits-health-and-environment/dietary-guidelines/food-for-you-who-are-breastfeeding>
- The Institute of Environmental medicine provides information on their website about monitoring of mercury in hair from women who are having their first child as well as in childrens blood. <https://ki.se/imm/halsorelaterad-miljoovervakning>

16.2. Have any other measures been taken to protect human health in accordance with article 16?

- ☒ Yes
☐ No

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

Mercury and mercury added products have been banned in legislation since 2009

Part E – Additional comments on the article in free text if the party chooses to do so

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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

Please provide more information, if any

- The Swedish Chemicals Agency (KemI) published in 2019 the report "National plan of Dental amalgam phase out – Swedish experiences". The report can be found on KemI's web-page: <https://www.kemi.se/publikationer/pm/2019/pm-3-19-national-plan-of-dental-amalgam-phase-out>
- The Swedish Chemicals Agency has information on its web-page about the mercury ban, what to do if a mercury containing lamp or a thermometer break as well as information about effects on the health <https://www.kemi.se/en/chemicals-in-our-everyday-lives/advice-on-chemical-smart-choices/materials-and-substances/metals/mercury>
- The Swedish Energy Agency has information on its webpage about collecting and recycling of mercury in lamps, and information on alternatives to mercury-based fluorescent lamps. (energimyndigheten.se)
- The Swedish EPA and the Swedish Chemicals Agency produced a booklet in 2013 that summarises Swedish experiences of mercury control and management, "Mercury management in Sweden : Swedish experiences of mercury control and management" (http://naturvardsverket.diva-portal.org/smash/record.jsf?aq2=%5B%5B%5D%5D&c=1&af=%5B%5D&searchType=SIMPLE&sortOrder2=title_sort_asc&query=8691-6&language=sv&pid=diva2%3A1617050&aq=%5B%5B%5D%5D&aqe=%5B%5D&sortOrder=author_sort_asc&onlyFullText=false&noOfRows=50&swid=-2652)

Part E – Additional comments on the article in free text if the party chooses to do so

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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, please indicate the measures that have been taken and the effectiveness of those measures

- The Institute of Environmental Medicine informs about exposure and effects of mercury on its web-page. The information is in Swedish <https://ki.se/imm/kvicksilver>
- The Swedish Chemicals Agency has information on its webpage on legislation regulating release, import and export as well as the spread and effects of mercury and exposure of mercury to humans. <https://www.kemi.se/kemiska-amnen-och-material/kvicksilver#h-Effekteravkvicksilver>
- The Swedish Energy Agency has information on its webpage about collecting and recycling of mercury in lamps, and information on alternatives to mercury-based fluorescent lamps. (energimyndigheten.se)

Part E – Additional comments on the article in free text if the party chooses to do so

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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, please describe these actions

Sweden is a party to the EMEP-protocol under the UNECE Air Convention (CLRTAP) and have four EMEP monitoring sites where mercury is measured in air and precipitation. Data is shared and used for modelling of transport and deposition, calculations of critical loads and other environmental research.

Examples on monitoring (national level):

Swedish environmental monitoring of mercury

Metals in air and precipitation – includes mercury and ten other metals, annual cost.

Metals in moss – metal measurements in moss have been carried out in Sweden every five years since 1975. The 2020 moss survey included mercury and fourteen other metals.

Metals in marine biota – analysis of mercury and ten other metals in marine biota.

Metals in fresh water fish – includes mercury and twelve other metals.

Metals in marine sediment – includes mercury and 35 other elements at sixteen locations every sixth year.

Monitoring of mercury levels in humans

Mercury in hair of first-time mothers – about 30 women every year.

Mercury in blood of ten year old children – about 100 children every two years.

Other health related studies including mercury are done at irregular intervals and are not mentioned.

National inventory of contaminated sites

Part E – Additional comments on the article in free text if the party chooses to do so

{Empty}

▼ COMMENTS

Part C: Comments regarding possible challenges in meeting the objectives of the Convention (Art. 21, para. 1)

{Empty}

▼ SUPPLEMENTAL – ADDITIONAL COMMENTS

Supplemental: Part D: Comments regarding the reporting format and possible improvements, if any

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