MINAMATA ONLINE

SEASON 2 - 2021 2022

INFORMATION SESSION ON THE PROPOSALS TO AMEND ANNEXES A AND B OF THE CONVENTION

MINAMATA CONVENTION ON MERCURY

COP-4 BRIEFING

Article 26 sets out the provisions for amending the Convention, and Article 27 provides for the adoption and amendment of annexes to the Convention. The Secretariat received three proposals for amendments to the Convention in time for COP-4, and communicated these to the Parties on 30 April 2021. This information session will be an opportunity to be informed of the process of amendment of the Convention, the current Annexes A and B, and specifically the three proposals received, namely from the European Union, the Africa region, and from Canada and Switzerland. Please send specific questions you may have on the proposals in advance to MEA-MinamataSecretariat@un.org.

SPEAKERS

Monika Stankiewicz
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Secretariat of the Minamata Convention on Mercury

WEDNESDAY, 01 SEPT 2021
13h00-14h30 CEDT

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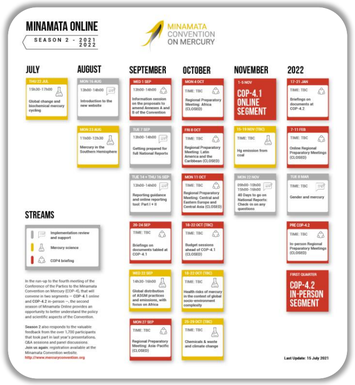

Today’s programme

- Opening of the session
- Presentation 1: Proposal by the European Union
- Presentation 2: Proposal by Botswana, Burkina Faso and Madagascar, on behalf of the Africa region
- Presentation 3: Proposal by Canada and Switzerland
- Questions and Answer session

Amendments to the Minamata Convention

Article 26
Amendments to the Convention

1. Amendments to this Convention may be proposed by any Party.

2. Amendments to this Convention shall be adopted at a meeting of the Conference of the Parties. The text of any proposed amendment shall be communicated to the Parties by the Secretariat at least six months before the meeting at which it is proposed for adoption. The Secretariat shall also communicate the proposed amendment to the signatories to this Convention and, for information, to the Depositary.

Article 27
Adoption and amendment of annexes

1. Annexes to this Convention shall form an integral part thereof and, unless expressly provided otherwise, a reference to this Convention constitutes at the same time a reference to any annexes thereto.

2. Any additional annexes adopted after the entry into force of this Convention shall be restricted to procedural, scientific, technical or administrative matters.

The Secretariat received three proposals for amendments to annexes A and B:

- The European Union
- Botswana, Burkina Faso and Madagascar, on behalf of the Africa region
- Canada and Switzerland

The proposals were communicated to all Parties on 30 April 2021.

Review of annexes A and B

Article 4
Mercury-added products

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

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

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

9. In reviewing Annex A pursuant to paragraph 8, the Conference of the Parties shall take into account at least:

(a) Any proposal submitted under paragraph 7;

(b) The information made available pursuant to paragraph 4; and

(c) The availability to the Parties of mercury-free alternatives that are technically and economically feasible, taking into account the environmental and human health risks and benefits.

Article 5
Manufacturing processes in which mercury or mercury compounds are used

4. The Secretariat shall, on the basis of information provided by Parties, collect and maintain information on processes that use mercury or mercury compounds and their alternatives, and shall make such information publicly available. Other relevant information may also be submitted by Parties and shall be made publicly available by the Secretariat.

9. Any Party may submit a proposal to amend Annex B in order to list a manufacturing process in which mercury or mercury compounds are used. It shall include information related to the availability, technical and economic feasibility and environmental and health risks and benefits of the non-mercury alternatives to the process.

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

11. In any review of Annex B pursuant to paragraph 10, the Conference of the Parties shall take into account at least:

(a) Any proposal submitted under paragraph 9;

(b) The information made available under paragraph 4; and

(c) The availability for the Parties of mercury-free alternatives which are technically and economically feasible taking into account the environmental and health risks and benefits.

Annex A

- Exclusions
- Part I: Products of which manufacture, import and export are to be phased out by 2020 – batteries, switches, lamps, cosmetics, pesticides, measuring devices
- Part II: Measures to be taken to phase down dental amalgam

Annex A

Mercury-added products

The following products are excluded from this Annex:

(a) Products essential for civil protection and military uses;

(b) Products for research, calibration of instrumentation, for use as reference standard;

(c) Where no feasible mercury-free alternative for replacement is available, switches and relays, cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for electronic displays, and measuring devices;

(d) Products used in traditional or religious practices; and

(e) Vaccines containing thiomersal as preservatives.

Part I: Products subject to Article 4, paragraph 1

Mercury-added products	Date after which the manufacture, import or export of the product shall not be allowed (phase-out date)
Batteries, except for button zinc silver oxide batteries with a mercury content < 2% and button zinc air batteries with a mercury content < 2%	2020
Switches and relays, except very high accuracy capacitance and loss measurement bridges and high frequency radio frequency switches and relays in monitoring and control instruments with a maximum mercury content of 20 mg per bridge, switch or relay	2020
Compact fluorescent lamps (CFLs) for general lighting purposes that a mercury content exceed	

Part II: Products subject to Article 4, paragraph 3

Mercury-added products	Provisions
Dental amalgam	Measures to be taken by a Party to phase down the use of dental amalgam shall take into account the Party's domestic circumstances and relevant international guidance and shall include two or more of the measures from the following list: (i) Setting national objectives aiming at dental caries prevention and health promotion, thereby minimizing the need for dental restoration; (ii) Setting national objectives aiming at minimizing its use;

Annex B

Part I: Processes to be phased out

- Chlor Alkali (by 2025), Acetaldehyde(by 2018)

Part II: Measures to restrict the use of mercury or mercury compounds

- Vinyl chloride monomer, sodium or potassium methylate or ethylate, polyurethane

Annex B

Manufacturing processes in which mercury or mercury compounds are used

Part I: Processes subject to Article 5, paragraph 2

Manufacturing processes using mercury or mercury compounds	Phase-out date
Chlor-alkali production	2025
Acetaldehyde production in which mercury or mercury compounds are used as a catalyst	2018

Part II: Processes subject to Article 5, paragraph 3

Mercury using process	Provisions
Vinyl chloride monomer production	Measures to be taken by the Parties shall include but not be limited to: (i) Reduce the use of mercury in terms of per unit production by 50 per cent by the year 2020 against 2010 use; (ii) Promoting measures to reduce the reliance on mercury from primary mining;
Sodium or Potassium Methylate or Ethylate	Measures to be taken by the Parties shall include but not be limited to: (i) Measures to reduce the use of mercury aiming at the phase out of this use as fast as possible and within 10 years of the entry into force of the Convention; (ii) Reduce emissions and releases in terms of per unit production by 50 per cent by 2020 compared to 2010;
Production of polyurethane using mercury containing catalysts	Measures to be taken by the Parties shall include but not be limited to: (i) Taking measures to reduce the use of mercury, aiming at the phase out of this use as fast as possible, within 10 years of the entry into force of the Convention; (ii) Taking measures to reduce the reliance on mercury from primary mercury mining;

Intersessional work on the review of annexes A and B

COP decision MC-3/1:

- Established an **ad hoc group of experts** on Review of Annexes A and B.
- Called for **submissions** from Parties and others of information on
  - the use of mercury in products and processes,
  - the availability, technical and economic feasibility and environmental and health risks and benefits to non-mercury alternatives.
- Requested the ad hoc group to **enhance and organize** the submitted information
- Requested the Secretariat to prepare a **report** on the work of the ad hoc group by 30 April 2021.
  - Report and compilation tables available on website
  - Submitted as COP-4 document

Report on the work of the ad hoc group of experts on the review of Annexes A and B

I. Introduction

1. The Conference of the Parties to the Minamata Convention on Mercury adopted decision MC-3/1 on the review of annexes A and B. In that decision, the Conference requested the Secretariat to call for submissions from Parties, including information on mercury-added products, processes that use mercury or mercury compounds, and availability, technical and economic feasibility, and environmental and health risks and benefits of their non-mercury alternatives. The Conference also decided to establish an ad hoc group of experts to prepare a document in which it will enhance and organize the information for each use submitted by Parties, taking into account further information available to the experts, and in which it will clearly identify the sources of information.

2. The ad hoc group of experts was established consisting of 18 experts nominated by parties. The group elected two co-chairs and identified eight experts from non-governmental organizations and the scientific community as observers. The group also invited the United Nations Environment Programme (UNEP) and the World Health Organization (WHO) to its meetings.

3. Decision MC-3/1 provided that the group will have one face-to-face meeting subject to the availability of resources. However, a meeting could not be convened due to the COVID-19 pandemic. The group agreed on an alternative arrangement for enhancing and organizing the information, involving online meetings of the group and a series of group calls inviting Parties that submitted information as well as experts who have specialized technical knowledge on the specific categories of products and processes.

4. In response to the Secretariat's call for information, Argentina, Canada, Colombia, the European Union, Montenegro, Norway, Japan, Uganda and the United States of America submitted information. Nepal, seven non-governmental organizations and one individual expert submitted additional information. Further information was collected from the members and the observers of the group, the Parties and other stakeholders who had submitted information, and other experts identified by the group.

5. This report summarizes the outcome of the work of the group. The submitted and supplemented information, organized in a tabular format indicating the sources of information, is presented in the "compilation document" attached as an appendix to this report. As of 30 April 2021, by which the report on the work of the group was due, some additional information on mercury added products, particularly on lamps, was still to be provided by experts or to be incorporated into the compilation document. The group will further work to organize such additional information into the compilation document by 30 June 2021, which will be made available to the Conference of the Parties as an information document.

II. Information on products

6. Part I of Annex A to the Convention lists nine categories of mercury-added products subject to the general lo
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Batteries

Information

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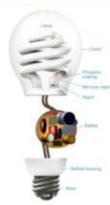
Lamps

Information from the African Region, Canada, EU, Japan, Norway, USA and other stakeholders (CLASP, JLMA, ZMWG, Lighting Europe)

Compact Fluorescent Lamps (CFL)

1. Category of mercury-added product	**Lamps**
2. Further description of the product	**Compact fluorescent lamps (CFL)**
3. Information on the use of the product	Compact fluorescent lamps (CFLs) are energy-saving lamps, available in a wide range of wattages, types and sizes. In CFLs, the ballast can either be integrated into the lamp (CFL with ballast (CFL.i) or separated from the lamp (CFL without ballast (CFL.ni)) (Gensch, et al., 2016). CFLs are regularly used for both commercial (i.e. retail, office, hospitality and leisure premises) and residential use, as energy-saving alternatives to incandescent lights (Gensch, et al., 2016). CFL.is are screw-based lamps which can be directly connected to 230V and 110V lightbulb sockets (e.g. E27). CFL.nis can only operate as spare parts in a luminaire, which contain a specific electronic driver or ballast. A small amount of mercury is present in all CFLs, as it is necessary for the low-pressure gas discharge (Gensch, et al., 2019). In CFLs, ultraviolet light is generated by driving an electric current through a tube, which contains argon and mercury. This stimulates the phosphor coating to produce visible light. CFLs initially require more energy when they are first turned on compared to alternative lamps, but they tend to use 70% less energy than incandescent bulbs on average. The ballast provides sufficient voltage to initially power the CFL, then regulates the current (US EPA, 2019a). Mercury is considered vital to the conversion of electricity into ultraviolet light, which is then converted into visible light (Gensch, et al., 2019). Lighting Europe suggests that although alternatives to mercury in CFLs, such as noble gases, were considered, they did not provide the same level of lamp performance in regard to lifetime, output or energy consumption (Lighting Europe, 2016).



General composition of a CFL.i lamp (US EPA, 2019a)

Proposal by the European Union

For Annex A: Part I Five entries are proposed for inclusion

For Annex A: Part II Additional text is proposed for inclusion

For Annex B: Part I One entry is proposed for inclusion

Proposal by the European Union to amend Annex A: Part I to the Minamata Convention on Mercury

The European Union proposes adding the following entries to Part I of Annex A[1]:

Mercury-added products	Date after which the manufacture, import or export of the product shall not be allowed (phase-out date)
Button zinc silver oxide batteries with a mercury content < 2% and button zinc air batteries with a mercury content < 2%	2023
Halophosphate phosphor linear fluorescent lamps (LFLs) for general lighting purposes	2023
The following non-electronic measuring devices: (a) strain gauges to be used in plethysmographs; (b) tensiometers	2023
The following electrical and electronic measuring devices: (a) melt pressure transducers, transmitters and sensors; (b) mercury vacuum pumps	2023
Polyurethane, including canisters for the application of polyurethane	2023

Proposal by the European Union to amend Annex A: Part II to the Minamata Convention on Mercury

The European Union proposes adding the following text to Part II of Annex A:

By 1 January 2024, Parties shall:

(i) Provide that dental amalgam is only used in pre-dosed encapsulated form[1];

(ii) Prohibit the use of mercury in bulk form by dental practitioners;

(iii) Ensure that operators of dental facilities in which dental amalgam is used or dental amalgam fillings or teeth containing such fillings are removed, equip their facilities with amalgam separators with a retention efficiency level of 95%[2], for the retention and collection of amalgam particles, including those contained in used water;

(iv) No longer allow the use of dental amalgam for the 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 based on the specific medical needs of the patient.

[1] ***Amalgam capsules such as those described in international standards ISO 13897:2018 and 24234:2015 are considered suitable for use by dental practitioners.***
[2] ***Compliance of amalgam separators shall be based on relevant international standards, including ISO 11143:2008.***

Proposal by the European Union to amend Annex B: Part I to the Minamata Convention on Mercury

The European Union proposes adding the following entry to Part I of Annex B:

Manufacturing processes using mercury or mercury compounds	Phase-out date
Production of polyurethane using mercury-containing catalysts	2023

Proposal by Botswana, Burkina Faso and Madagascar, on behalf of the Africa region

For Annex A: Part I Three entries are proposed for inclusion

For Annex A: Part II Alternative text is proposed for current text

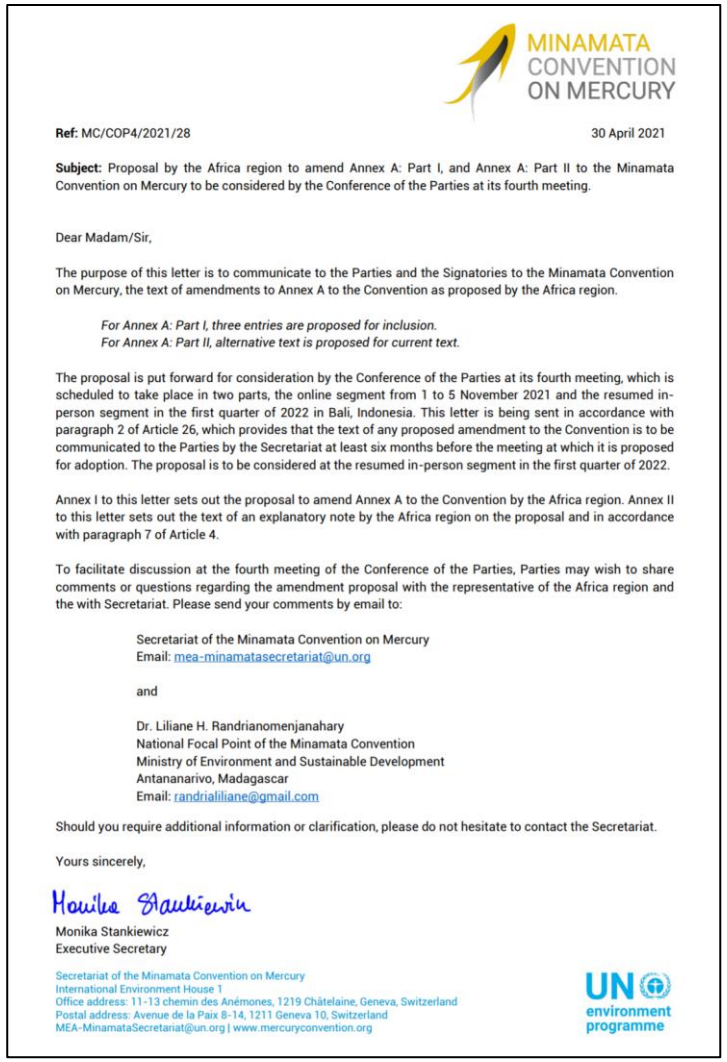
African Region Amendments to Annex A of the Minamata Convention on Mercury

Mrs. Hanitriniaina Liliane RANDRIANOMENJANAHARY
Technical assistant, General Direction of Sustainable Development
National focal point of Minamata Convention
Ministry of Environment and Sustainable Development Madagascar

Minamata Online Season 2: Information session on the proposals to amend Annexes A and B of the Convention

September 1, 2021

African Region (37 Parties) Proposal for Annex A



MINAMATA CONVENTION ON MERCURY

Ref: MC/COP4/2021/28 30 April 2021

Subject: Proposal by the Africa region to amend Annex A: Part I, and Annex A: Part II to the Minamata Convention on Mercury to be considered by the Conference of the Parties at its fourth meeting.

Dear Madam/Sir,

The purpose of this letter is to communicate to the Parties and the Signatories to the Minamata Convention on Mercury, the text of amendments to Annex A to the Convention as proposed by the Africa region.

For Annex A: Part I, three entries are proposed for inclusion.
For Annex A: Part II, alternative text is proposed for current text.

The proposal is put forward for consideration by the Conference of the Parties at its fourth meeting, which is scheduled to take place in two parts, the online segment from 1 to 5 November 2021 and the resumed in-person segment in the first quarter of 2022 in Bali, Indonesia. This letter is being sent in accordance with paragraph 2 of Article 26, which provides that the text of any proposed amendment to the Convention is to be communicated to the Parties by the Secretariat at least six months before the meeting at which it is proposed for adoption. The proposal is to be considered at the resumed in-person segment in the first quarter of 2022.

Annex I to this letter sets out the proposal to amend Annex A to the Convention by the Africa region. Annex II to this letter sets out the text of an explanatory note by the Africa region on the proposal and in accordance with paragraph 7 of Article 4.

To facilitate discussion at the fourth meeting of the Conference of the Parties, Parties may wish to share comments or questions regarding the amendment proposal with the representative of the Africa region and the with Secretariat. Please send your comments by email to:

Secretariat of the Minamata Convention on Mercury
Email: mea-minamatasecretariat@un.org

and

Dr. Liliane H. Randrianomenjanahary
National Focal Point of the Minamata Convention
Ministry of Environment and Sustainable Development
Antananarivo, Madagascar
Email: randrialiliane@gmail.com

Should you require additional information or clarification, please do not hesitate to contact the Secretariat.

Yours sincerely,

Monika Stankiewicz
Executive Secretary

Secretariat of the Minamata Convention on Mercury
International Environment House 1
Office address: 11-13 chemin des Anémones, 1219 Châtelaine, Geneva, Switzerland
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UN environment programme

Two Parts to African Amendment:

- **Lighting** – for Annex A,
  Part I: three entries are proposed

- **Dental Amalgam** – for Annex A,
  Part II: alternative text is proposed

Link: https://www.mercuryconvention.org/en/documents/proposal-africa-region-amend-annex-part-i-and-annex-part-ii-minamata-convention-mercury

Amendment proposal to Annex A part I: Lighting

Fluorescent Lighting Covered in Annex A

Three categories of **fluorescent lamps** in **Annex A of the Minamata Convention:**

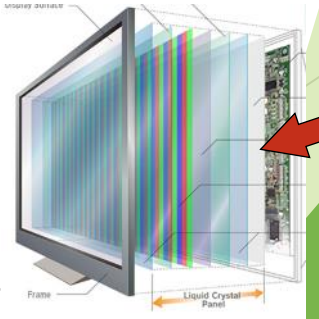
Compact Fluorescent Lamps

CFL.i – **i**ntegral ballast (screw or bayonet base)

CFL.ni – **n**on-**i**ntegral ballast (pin-based)

Linear Fluorescent Lamps

Cold Cathode and External Electrode Fluorescent Lamps (CCFL and EEFL)



Back Light Unit – used to be CCFL/EEFL, but now all new TV's and monitors are LED back-lit

African Lighting Amendment Proposal

The African Amendment proposes to *phase-out* fluorescent lamps:

- Integrally ballasted CFLs (**CFL.i**) by the end of **2024**
- Linear fluorescent lamps (**LFL**) by the end of **2025**
- **CCFL and EEFL** by the end of **2024**

Part I: Products subject to Article 4, paragraph 1

Mercury-added products	**Date after which the manufacture, import or export of the product shall not be allowed (phase-out date)**
Compact fluorescent lamps with an integrated ballast (CFL.i) for general lighting purposes that are ≤ 30 watts	2024
Linear fluorescent lamps (LFLs) for general lighting purposes, (a) Triband phosphor ≤ 60 watts; (b) Halophosphate phosphor ≤ 40 watts	2025
Cold cathode fluorescent lamps (CCFL) and external electrode fluorescent lamps (EEFL) for electronic displays of all lengths.	2024

Link: https://www.mercuryconvention.org/en/documents/proposal-africa-region-amend-annex-part-i-and-annex-part-ii-minamata-convention-mercury

African Government Policy Alignment

- Many governments across Africa are moving to phase-out CFLs and LFLs through energy-efficiency policy measures
- 22 countries in UNIDO's Energy Efficient Lighting and Appliances, harmonised lighting performance standards for SADC and EAC;
  - Phase-out CFLs and LFLs through minimum efficacy (lumen/Watt)
  - SADCSTAN adopted SADC HT-109:2021 in June 2021 [1]
- South Africa, Ivory Coast and Kenya are all updating national lighting regulations, phasing out CFL and transitioning mercury-free LED
- Burkina Faso, Gabon and many others have strategies to support energy-efficiency measures under their national energy policies
- Internationally, UNEP's United for Efficiency (U4E) published model lighting regulations in February 2021 that propose to **phase-out all CFLs** by January 2023 and **all LFLs** by January 2025
- Phasing out fluorescent lighting aligns with several UN Sustainable Development Goals

[1] Link to a press release about SADCSTAN approving the regionally harmonised lighting regulation SADC HT-109:2021

African LED Market Readiness

- Africa imports all fluorescent lighting (no domestic manufacturing)
- Africa have to deal with *toxic* mercury fluorescent lamps at the end of life, a hazardous waste problem
- Africa is moving toward LED lighting because it is highly cost-effective, **payback periods of 5-11 months**
- LED lamp assembly and manufacturing already in Africa; new businesses investing in product lines for LED lamps and luminaires:
  - Savenda Electrical in Zambia
  - Sahasra Electronics in Rwanda
  - Tempest LED Lighting in Mozambique
  - Many LED businesses in South Africa, and more.
- An excellent opportunity for local business and entrepreneurs to accelerate the market and invest in manufacturing of LED lighting products

LED improves livelihoods in rural areas

- Today, **all** portable solar lanterns are based on LED lighting technology
- High efficiency and durability of LED technology allows for better quality light that lasts longer and is less expensive
- Advances in LED technology makes energy more affordable for low-income consumers and enabling multiple energy services to run simultaneously with a solar home system
- LED lamps are highly cost-effective for on-grid households too; and *in many cases LED is now less expensive than CFL*

Equity and Anti-dumping

- African countries are at risk of becoming dumping grounds for mercury-containing fluorescent lamps that no longer have viable markets in the OECD
  - *Today*, 1 Sept 2021, the EU-27 phased-out CFL.i lamps and all T12 LFLs
- End-of-life hazardous lamp management remains a major concern in Africa, including waste separation and collection, transport, mercury recovery and disposal
- Cost-effective, mercury-free, energy-efficient alternatives exist now – its time to act
- Last week, **Eric Rondolat**, the CEO of Philips Lighting (Signify) made a strong statement about pollution from fluorescent lighting; he objects to the slow pace of policy makers
  - *Adopting the African Lighting Amendment at COP4 is the ideal response*

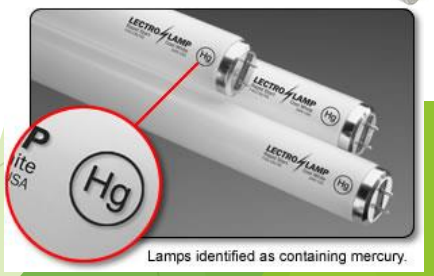
Global Benefits of the African Amendment

The Clean Lighting Coalition calculated the benefits of the African Lighting Amendment at COP4:

- **Eliminate 232 tonnes of mercury pollution** from the environment, both from the bulbs themselves and from avoided mercury emissions from coal power plants
- **Reduce global electricity use by 3%**
- **Avoid 3.5 gigatonnes of CO_2 emissions** cumulatively between 2025-2050; equivalent to getting all passenger cars (globally) off the road for a whole year.

Reasons to phase out CFL and LFL

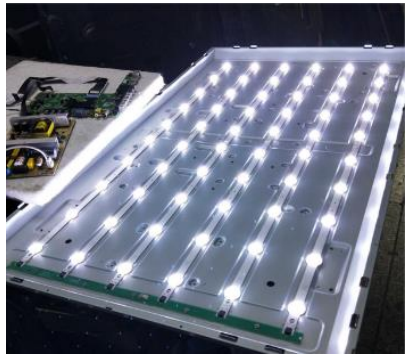
- **Overview**: CFL and LFL both contain mercury, are inefficient and are more expensive on a life-cycle cost basis compared to LED
- **Choice**: Mercury-free LED retrofits are available with a full catalogue of levels of light output levels, sizes, lengths, diameters, light colours, etc.
- **Economic**: LED retrofits are highly cost-effective: for general service LED, they are often less expensive than CFLs; for LED tubes, payback is 5-11 months
- **Policy**: Many African countries are phasing out fluorescent technology based on energy savings and cost
- **Business**: Africa has many new local manufacturing companies producing LED lamps; there is no manufacturing of fluorescent on the continent
- **Waste**: most fluorescent bulbs are not disposed of safely at end of life, creating hazardous electronic waste; LEDs are e-waste, but not hazardous
- **Equity**: Risk that suppliers will dump more mercury lighting in Africa as fluorescent lamps are phased-out in the OECD
- **Technology**: LED continues to improve, getting less expensive and more efficient each year



Reasons to phase out CCFL and EEFL

- **Overview**: CCFL and EEFL are an old, outdated technology that was used for back-lighting LCD electronic displays 10-20 years ago
- **Market**: CCFL and EEFL were replaced by LED backlit displays starting in 2008
- **Technology**: today, LED backlight units have completely replaced CCFL/EEFL; no new displays are being made with this old technology anymore
- **Waste**: the clause allowing for replacement parts in Annex A will enable end-users to continue using old monitors, but is to be a very small / non-existent market (and LED replacements for CCFL and EEFL exist today: example)

CCFL backlight unit for a TV **(Old technology)**



LED backlight unit for a TV **(Modern technology)**

Amendment proposal for Annex A part II: Dental Amalgam

African Dental Amalgam Amendment Proposal

The African Amendment proposes to *phase-down* mercury-containing dental amalgam in four steps between 2023 to 2029:

- 2023: Communication domestically on non-mercury dental fillings
- 2025: National plan to phase-out published and shared
- 2027: Manufacture and import mercury amalgam shall cease
- 2029: Domestic sales and all use of mercury amalgam ceases

Proposal by the Africa region to amend Annex A: Part II to the Minamata Convention on Mercury

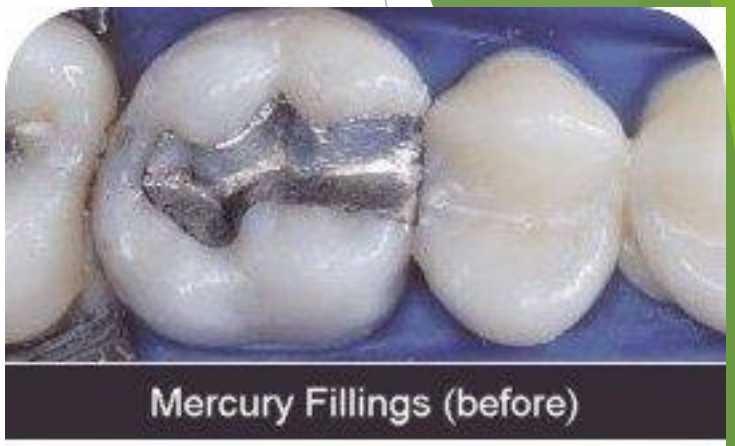
The Africa region proposes to delete the heading and current text in the second column of the Annex A: Part II and replace the text as follows:

Part II: Products subject to Article 4, Paragraph 3 Mercury-added products	Road map for actions by Parties to phase down dental amalgam: 2021-2029/ Measures to be taken by a Party to phase down the use of dental amalgam towards a phase out in 2029
Dental amalgam	1. By 1 January 2023, each Party to the Minamata Convention on Mercury shall issue a communication recommending that only non-mercury dental filling materials be used in children and in women of childbearing age. 2. By 1 January 2025, each Party to the Minamata Convention on Mercury shall set out a national plan concerning the measures it intends to implement to phase out the use of dental amalgam. Parties shall make their national plans publicly available on the internet and shall transmit them to the Secretariat. 3. By 1 January 2027, the manufacture and import of amalgam shall cease. To account for exceptions and accommodate the transition to mercury-free dentistry, Parties may permit domestic sales inside their country for two more years. 4. By 1 January 2029, domestic sales of amalgam inside countries, as stipulated in point 3 above shall also cease.

Link: https://www.mercuryconvention.org/en/documents/proposal-africa-region-amend-annex-part-i-and-annex-part-ii-minamata-convention-mercury

Rationale behind Dental Amalgam proposal

- **Flexibility**: measures are introduced over years, allowing for gradual transition
- **Awareness**: high percentage of dentists know how to use alternatives, and are practicing Minimal Invasive Dentistry
- **Affordability**: mercury-free alternatives have become much less expensive, and are a cost-effective alternative now for patients compared to dental amalgam
- **Waste**: African countries want to reduce mercury waste, including from the dental sector as there is a crucial lack of facilities to treat mercury wastes


Mercury Fillings (before)


Composite Fillings (after)

Act on Dental Amalgam at COP4

- **New Dental Paradigm** – there is a change in many African countries where people are going for prevention via yearly control so to detect and treat early dental caries and avoid the need for fillings completely

- **Alternatives** – significant awareness has been raised on the availability of mercury-free alternatives like Glass Ionomer Cement which as bacteriostatic power through fluoride release to prevent dental caries

Summary of Annex A & B review

- **Information on products**

Types of Products	Information on use	Availability of Hg-free alternatives	Feasibility of alternatives	Environmental and health risks of alternatives
Batteries	✓	✓	✓	
Switches and relays	✓			
Lamps	✓	✓	✓	✓
Non-electric measuring devices	✓	✓	✓	
Others electric devices	✓	✓	✓	
Cosmetics	✓	✓	✓	
Pesticides, biocides and topical antiseptics	No information submitted on the continued use of mercury in these product categories			
Satellite propulsion	✓	✓	✓	

Summary of Annex A & B review

- **Information on processes**

Types of Products	Information on use	Availability of Hg-free processes	Feasibility of Hg-free processes	Environmental and health risks of Hg-free processes
Chlor-alkali production	✓	✓		
Other processes using mercury as electrodes	✓	✓	✓	
Vinyl Chloride Monomer (VCM) production	✓	✓	✓	
Production of Polyurethane	✓	✓	✓	
Other processes using mercury-containing catalysts	✓	✓	✓	
Other processes (gold plating)	✓	✓	✓	

Allée de BAOBAB Morondava MADAGASCAR

THANK YOU VERY MUCH FOR YOUR ATTENTION

MERCI BEAUCOUP POUR VOTRE AIMABLE ATTENTION

Proposal by Canada and Switzerland

For Annex A: Part I Three entries are proposed for inclusion, and one existing exemption is proposed to be removed

Environment and Climate Change Canada | Environnement et Changement climatique Canada

Canada-Switzerland proposal to amend Annex A: Part I

Minamata Online: Information session on the proposals to amend Annexes A and B of the Convention

September 1, 2021

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Environment and Climate Change Canada's 50th anniversary
50e anniversaire d'Environnement et Changement climatique Canada
Meteorological Service of Canada's 150th anniversary
150e anniversaire du Service météorologique du Canada

Canada

Rationale for proposed amendments

- Technically and economically feasible alternatives are available
- Products proposed for listing are not widely used
- The chapeau to part I of Annex A provides exclusions for essential uses
- Considerations:
  - Experience in prohibitions and mandatory reporting under Canada's *Products Containing Mercury Regulations*
  - Information compiled by intersessional expert group on products and processes
  - Timing: the list was last negotiated in 2013 and a review is required by the Convention text

Proposal for new entries into Part I: Products subject to Article 4, paragraph 1

Mercury-added products	Date after which the manufacture, import of export of the product shall not be allowed (phase-out date)
Counter balancing devices including tire balancers and wheel weights	2025
Photographic film and paper	2025
Propellant for satellites and spacecraft	2025
Very high accuracy capacitance and loss measurement bridges and high frequency radio frequency switches and relays in monitoring and control instruments with a maximum mercury content of 20 mg per bridge switch or relay	2025

Counter balancing devices including tire balancers and wheel weights

- The purpose of a tire balancer is to eliminate uneven tire wear to extend the useful life of the tire
- It is estimated that each mercury-containing balancer contains 99.2 g of mercury

Photo credit: balancemasters.com

Counter balancing devices including tire balancers and wheel weights

- Alternatives perform as well or better and include bolt-on centrifugal liquid rings, compounds that are added into the tire, and adhesive or clip-on weights

Photo credits: centramatic.com (top left); plombco.com (others)

Photographic film and paper

- Specialized silver halide photographic papers and motion picture and X-ray films may contain trace amounts of added mercury in order to reduce the formation of an unwanted background image during processing

Photo credits: Bhphotovideo.com (left); alamy.com (middle); photographycourse.net (right)

Photographic film and paper

- Alternatives are widely available and appear to have been available since the 1970s
- Mercury has now been replaced in silver halide photographic papers and films which perform technically as well or better than those that contain mercury
- With the global adoption of digital photographic technology, chemical processing of photographic material has been limited to niche markets for artistic purposes

Photo credits: fujifilm.com (left); kodak.com (middle); lifewire.com (right)

Propellant for satellites and spacecraft

- Mercury was used by NASA as a propellant in the 1960s, but was abandoned in the 1970s due to health and safety concerns
- In recent years, there has been an increase in global interest to launch satellites and other spacecraft to improve communications, conduct research and surveillance, and for space tourism
- The launch of several hundreds of satellites within a few years could lead to a release of up to 20 tonnes of mercury per year

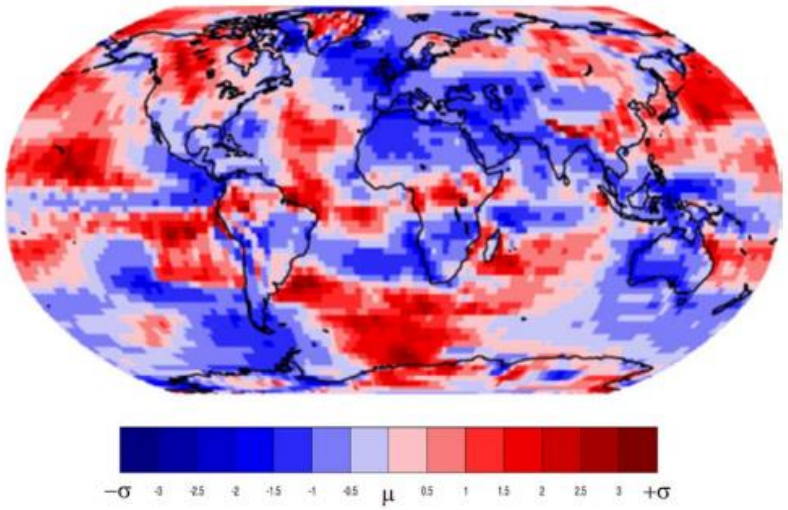

Figure 3. Geographical distribution of annual mercury deposition from satellite emissions (20 Mg yr^{-1}) shown as the probability density function obtained from the ensemble of simulations. Deposition is illustrated in terms of the average ($\mu = 0.03\ \mu gm^{-2}\ yr^{-1}$) and standard deviation ($\sigma = 0.02\ \mu gm^{-2}\ yr^{-1}$) of the ensemble.

Photo credits: Fourie et al, 2019 (left); Qz.com (right)

Propellant for satellites and spacecraft

- Non-mercury alternatives are widely available and have been used for many years by the aerospace industry. These include Xenon, Krypton, Argon, Neon Helium, Hydrogen, Iodine, and more
- The high price of Xenon has renewed interest in low-cost propellants such as mercury

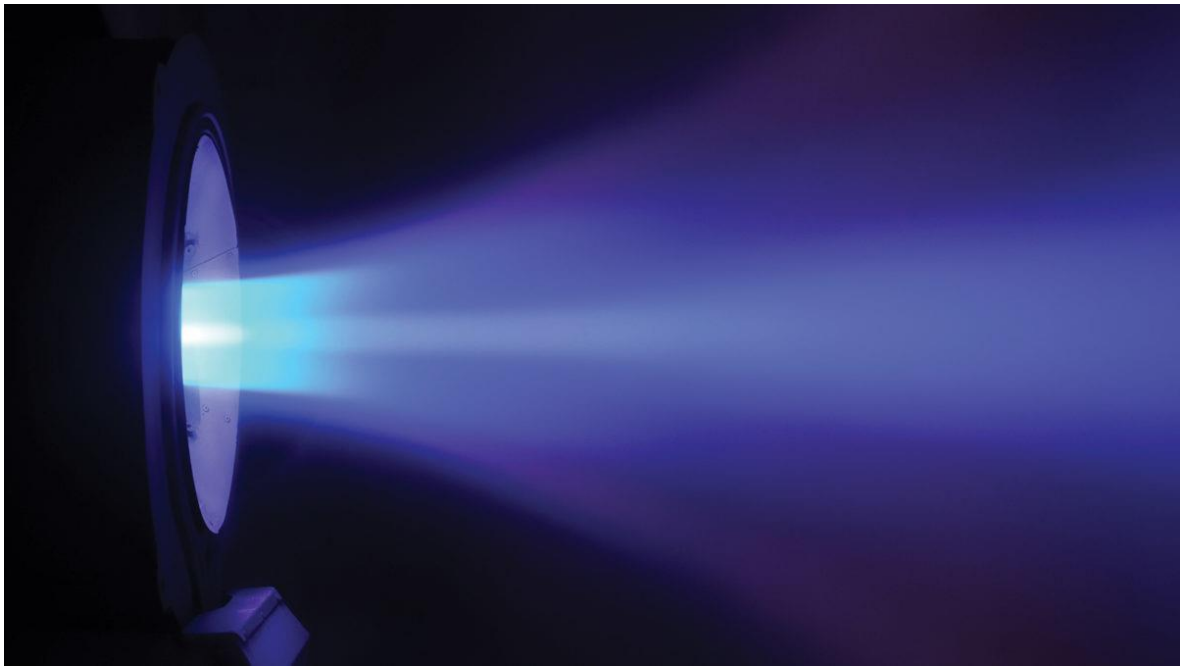

Photo credit: University of Stuttgart

Very high accuracy capacitance and loss measurement bridges and high frequency radio frequency switches and relays in monitoring and control instruments with a maximum mercury content of 20 mg per bridge switch or relay

- Annex A to the Convention already requires Parties to phase out switches and relays with an exemption for these specialized products
- Our proposal is to remove this exemption for the remaining category switches and relays

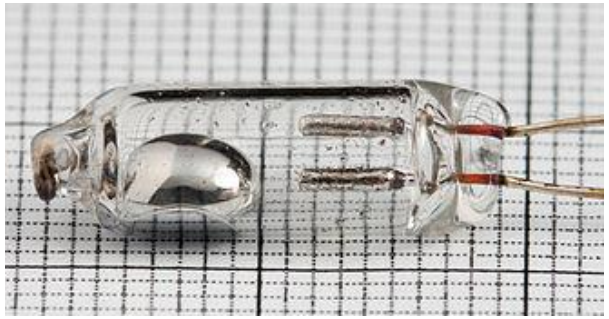

Photo credits: Wikipedia.org

Very high accuracy capacitance and loss measurement bridges and high frequency radio frequency switches and relays in monitoring and control instruments with a maximum mercury content of 20 mg per bridge switch or relay

- There were no reports for these products in Canada since 2016
- Information compiled by the ad-hoc expert group indicates the use of these switches and relays elsewhere is limited
- Should there still be a need for highly specialized uses of these switches and relays, where mercury-free alternatives are not available, it is expected that these specialized uses would still be allowed as they would fall under the exclusions in paragraph (c) of the chapeau of Annex A.

Photo credits: Wikipedia.org (left and center-left); mrcy.com (center-right and right)

QUESTIONS?

Proposal for new entries into Part I: Products subject to Article 4, paragraph 1

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