2025 FULL REPORTS OF THE MINAMATA CONVENTION ON MERCURY

Report submitted on 31 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
Pakistan

Date on which its instrument of ratification, accession, approval or acceptance was deposited
16 December 2020

Date of entry into force of the Convention for the party
16 March 2021

2. Information on the national focal point

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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

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▼ ART. 3: MERCURY SUPPLY SOURCES AND TRADE

3.1: Does the party have any primary mercury mines that were operating within its territory at the date of entry into force of the Convention for the party?

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

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

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

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

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

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

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

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

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

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

Pakistan has endeavoured to identify individual stocks of mercury. However, there is no evidence of such stocks having been reported through mining, geological and other sources. Pakistan does not have industries that can store large mercury quantities, and mercury is not naturally found in the country. This information is based on extensive consultation with relevant national and sub-national departments, including Geological Survey of Pakistan, Pakistan Mineral Development Corporation, Provincial Environmental Protection Agencies, Ministry of Commerce, and Pakistan Chemical Manufacturing Association.

▼ 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.
Pakistan has taken the following measures to not allow the manufacture, import or export of mercury-added products listed in Part-I of Annex of the Convention:

Manufacturing-related measures:
• Pakistan does not allow use of mercury in any manufacturing concerns listed in Part-I of Annex A by restricting its import.
• National Energy Efficiency and Conservation Authority (NEECA) has recently prohibited the manufacture, sale and import of incandescent lamps and compact fluorescent lamps (CFLs) w.e.f. the 1st day of July, 2023 vide S. R. O. 547(I)/2023.
• Pakistan's Department of Plant Protection (DPP) has banned pesticides containing mercury compounds in alignment with Minamata Convention vide S.R.O 930(I)/1994.
• Pakistan Standards and Quality Control Authority (PSQCA) has adopted Standard PS: 3228-2017,

which limits the mercury content in skin creams to a maximum of 1 ppm.
• The Pakistan Environmental protection Agency has issued guidelines for the safe and sound management and disposal of fluorescent light bulbs.

Import-related measures:
• Pakistan allows only restricted import under strict conditions for research/scientific purposes (as per permissible under the Annex-A of Minamata Convention). The import of mercury and mercury compounds is regulated through the Import Policy Order (IPO 2022), subject to approval of MoCC&EC on recommendation of concerned Environmental Protection Agencies (EPAs).

Export related measures:
• Pakistan does not export mercury.

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.
The Ministry of National Health Services, Regulation and Coordination has issued an advisory note (F. No. 2-1/2018- Director (Inst) on September 27, 2018) directing all the health departments in four provinces and Azad Jammu and Kashmir (AJK) and Gilgit-Baltistan, directing them to restrict or avoid dental mercury amalgam fillings for children under 15 years and pregnant or breastfeeding women. This specific directive focuses on the restriction of mercury dental amalgam in clinical practice due to its hazardous effects on human health and the environment, in line with Part-II of Annex-A and decision MC-4/3.

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.
Pakistan's Ministry of National Health Services, Regulation and Coordination has issued an advisory regarding restriction of mercury dental amalgam, which is widely implemented across the country. The advisory recommends against the use of dental amalgam in patients under 15 years and

pregnant and breastfeeding women in alignment with decision MC-4/3.

In addition to the above, the following measures to discourage use of mercury in dental amalgam:
• According to different studies, dentists in Pakistan are reducing their use of dental amalgam in accordance with the guidelines of the Minamata Convention.As per now there is a gradual reduction in use of mercury dental amalgam due to awareness among the general public about hazardous effects of mercury and its products.
• While there is a national-level commitment to the Minamata Convention and official advisories exist for vulnerable populations, the consistent, widespread implementation of mercury-free practices and proper waste management across all private and public dental clinics is still a work in progress.
• Efforts are underway to revise the dental curriculum through the Higher Education Commission and the Pakistan Medical and Dental Council to align with amalgam phase-out strategies, in line with findings of advocacy groups (as reported in a study on Ban or restrict mercury dental amalgam use to safe guard children's health in Pakistan).

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

◉ Yes

○ No

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

If yes, please provide information on the measures.
• As previously stated, mercury and mercury-based products are subject to strict regulatory controls in Pakistan.
• In accordance with the Import Policy Order, 2022, the import of mercury and mercury compounds is permitted exclusively for industrial consumers holding valid environmental approval from the Ministry of Climate Change & Environmental Coordination (MoCC&EC), issued on the recommendation of the relevant Federal or Provincial Environmental Protection Agency and Department.
• The approval process is rigorous and multi-tiered. It initially requires obtaining recommendations from the concerned Environmental Protection Agencies, which conduct detailed evaluations based on a prescribed checklist aligned with the Standard Operating Procedures (SOPs issued by MoCC&EC).
• This evaluation entails a comprehensive assessment of the industrial facility, including its operational capacity, technical capability, and infrastructure for the safe handling, storage, and use of hazardous chemicals.
• Following successful completion of this process and issuance of the requisite recommendations, the Ministry of Climate Change & Environmental Coordination grants a No Objection Certificate (NOC) authorizing import for a specified quantity and a defined validity period
• Aligned with the restriction in use of mercury are the regulations dealing with hazardous waste generated during the manufacturing.
• National Hazardous Waste Management Policy, 2022 (NHWMP) aligns its guidelines for safe disposal of mercury waste during the production/manufacturing process.
• Under NHWMP, Technical guidelines on the environmentally sound management of mercury wastes will be developed, in line with decision BC-12/4 of the Conference of the Parties to the Basel Convention
• The Draft Hazardous Substances Rules (2024) of Pakistan Environmental Protection Agency under the Pakistan Environmental Protection Act, 1997 aim to regulate the handling of hazardous substances. These rules control the manufacture, import, storage, transport, use, and disposal of hazardous chemicals to protect human health and the environment. They require proper labeling, safe packaging, trained handling, and emergency response plans for accidents or spills. The rules also give authority to the Environmental Protection Agency to monitor, restrict, or ban hazardous substances that pose serious risks. The mercury and the mercury products are handled under these rules across Pakistan.

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.
• The Competition Commission of Pakistan (CCP) has launched a nationwide probe against companies involved in making, marketing, and selling mercury-laden skin whitening creams. The move aims to protect consumers from serious health risks and to ensure fair competition in the cosmetics market.
• Under Section 10 of the Competition Act, 2010, false or deceptive marketing is prohibited and can lead to penalties of up to PKR 75 million or 10% of annual turnover.
• The country has seen a significant, market-driven shift towards mercury-free LED lighting, effectively phasing out mercury-containing lamps, supported by government incentives like reduced tariffs on LEDs.
• The Pakistan Standards and Quality Control Authority (PSQCA) has adopted Standard PS: 3228-2017, which limits the mercury content in skin creams to a maximum of 1 ppm.
• Pakistan's Department of Plant Protection (DPP) has banned pesticides containing mercury compounds in alignment with Minamata Convention vide S.R.O 930(I)/1994.

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)

If yes, please provide information on these measures.
For chlor-alkali production, manufacturing processes in Pakistan do not use mercury or mercury compounds.

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.

For acetaldehyde production, manufacturing processes in Pakistan do not use mercury or mercury compounds as catalysts.

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)

If yes, please provide information on these measures.
Mercury is not being used in Vinyl chloride monomer production in Pakistan.

SODIUM OR POTASSIUM METHYLATE OR ETHYLATE

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

If yes, please provide information on these measures.
Mercury is not being used in Sodium or potassium methylate or ethylate in Pakistan.

PRODUCTION OF POLYURETHANE USING MERCURY-CONTAINING CATALYSTS

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

If yes, please provide information on these measures.
Mercury-containing catalyst is not being used in polyurethan production.

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.
Pakistan has discouraged the development of new facilities listed in Annex-B that rely on mercury for industrial processes. Additionally, the government encourages mercury-free alternatives across various sectors through

• Regulatory Framework Development: MoCC&EC has held meetings with stakeholders to create an effective regulatory framework for implementing the Minamata Convention.
• Encouraging Alternatives: The government encourages and promotes industries that produce mercury-free products, such as LED lights and non-mercury medical apparatus (thermometers, blood pressure monitors).
• Import Restrictions: The import of mercury and mercury compounds is restricted, requiring a valid license issued by MoCC&EC on recommendation of federal/provincial Environmental Protection Agencies for industrial consumers, which acts as a control mechanism.
• Industry Engagement: The government actively engages with manufacturers, particularly Pakistan Chemical Manufacturers Association (PCMA), to transition away from mercury use in their products.

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

If yes, please provide information on the steps.
Pakistan's Peshawar High Court in mid-2025 has issued orders to halt the use of mercury in gold mining, particularly in areas like Kohat, due to severe environmental and health concerns, with judges banning the practice after petitions highlighted poisoning of water and illegal operations.

In addition, MoCC&EC has recently secured a project for the establishment of National Action Plan for artisanal and small-scale gold mining sector in Pakistan. The project aims to establish a baseline inventory on mercury in the ASGM sector and will help draft and submit Pakistan's NAP to the Minamata Secretariat, based on stakeholder engagement and consultation.

Since ASGM is concentrated in small pockets (including Gilgit Baltistan), MoCC&EC carried out field visits and community awareness campaigns in small-scale gold mining sites in collaboration with Gilgit-Baltistan Environmental Protection Agency (GB-EPA). GB EPA strictly regulates prohibits the use of mercury in amalgamation processes and instead promotes the adoption of eco-friendly techniques for gold separation, for which a No Objection Certificates (NOCs) is issued.

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

7.3: Has the party developed and implemented a national action plan and submitted it to the secretariat?

○ Yes

◉ No

○ In progress

7.4: Attach your most recent review that must be completed under paragraph 3 (c) of article 7, unless it is not yet due

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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
With support of GEF Enabling Activity (through UNEP & UNDP Pakistan), MoCC&EC plans to submit a National Action Plan for ASGM sector as part of a recently-secured project on artisanal and small-scale gold mining sector in Pakistan. The project aims to develop a baseline inventory on mercury in the ASGM sector and a NAP, which will be submitted to Minamata Secretariat after stakeholder engagement and provincial consultation.

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

Coal-fired industrial boilers
Overall, Pakistan's environmental legislation, including the Pakistan Environmental Protection Act (PEPA) 1997 and emission standards, establish requirements for air pollutant controls as part of environmental permitting and review processes under the National Environmental Quality Standards (NEQS) for gaseous emissions and effluents. Permissible limits for Mercury emissions from coal-fired industrial boilers are restricted to 10mg/Nm3 under NEQS (2010). Additionally, Environmental Impact Assessments (EIA) for new industrial facilities are required under PEPA's EIA/IEE Regulations, requiring industries to report consideration of hazardous air pollutants, with conditions for adopting appropriate control technologies. For all new industrial boilers, requirements for installation of pollution-abatement technology is integrated into permit conditions where technically feasible. While national and local governments strive to implement the above-mentioned measures, challenges remain due to constrained means of implementing the Minamata Convention (i.e. technical and financial resource limitations).

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

☑ Waste incineration facilities

Waste incineration facilities
Overall, the National Hazardous Waste Management Policy, 2022 supports the control of mercury sources by reinforcing institutional roles in hazardous emissions monitoring and compliance enforcement for industrial installations. Additionally, the following measures are implemented to control mercury emissions from new sources:

• Upgrading incinerators with activated carbon injection and high-efficiency particulate air (HEPA) filters to capture mercury and other heavy metals.
• Source segregation and diversion programs to reduce mercury-containing wastes entering incinerators.
• Source segregation efforts and improved flue gas treatment systems for lowering releases of mercury and other toxic metals from incineration.

However, it is important to note that the waste in Pakistan is largely non-segregated due to resource constraints (both financial and technical). While national and local governments strive to implement the above-mentioned measures, challenges remain due to constrained means of implementing the Minamata Convention.

☑ Cement clinker production facilities

Cement clinker production facilities
For Pakistan's cement clinker production facilities, Pakistan Environmental Protection Act (PEPA) 1997 and emission standards, establish requirements for air pollutant controls as part of environmental permitting and review processes under the National Environmental Quality Standards (NEQS) for gaseous emissions and effluents. Permissible limits for Mercury emissions from cement clinker production facilities are restricted to 10mg/Nm3 under NEQS (2010). Additionally, Environmental Impact Assessments (EIA) for new cement facilities are required under federal and provincial EIA/IEE Regulations, requiring industries to report consideration of hazardous air pollutants, with conditions for adopting appropriate control technologies.
In Pakistan's cement industry, modern kiln designs with improved combustion controls and air pollution control devices have been incorporated, consistent with technological practices aligned with BAT/BEP principles. Additionally, Pakistan's cement plants are well equipped with pollution control devices, such as baghouse filters and high-efficiency particulate air (HEPA) filters). Electrostatic precipitators (ESPs) and flue gas desulfurization (FGD) systems are also integrated into permit conditions of cement industry, where technically feasible. These systems reduce mercury emissions as co-benefits of controlling particulate matter and other pollutants.

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
Pakistan's adoption of BAT/BEP approaches has resulted in improved emissions control performance at newly commissioned industrial facilities (notably in particulate and co-pollutant reductions, which indirectly reduce mercury release). For all new cement plants, requirements for installation of high-efficiency particulate air (HEPA) filters, and electrostatic precipitators (ESPs), and flue gas desulfurization (FGD) systems are integrated into permit conditions where technically feasible. Where specific mercury measurements are not routinely monitored, surrogate indicators (such as total particulate emissions) are used to infer reduction trends consistent with BAT/BEP implementation. Progress in achieving further mercury-specific measurement capacity is ongoing. While national and local governments strive to implement the above-mentioned measures, challenges remain due to constrained means of implementing the Minamata Convention, given the high cost of abatement and resource limitations (technical and financial).

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
Pakistan's power generation mix includes several existing coal-fired power plants commissioned before 16 March 2021. These facilities combust coal, a known source of mercury emissions.

At the legislative level, National and provincial Environmental Quality Standards (NEQS) are enforced by Federal and Provincial environmental protection agencies for air emission limits for industrial pollutants under NEQS, which indirectly control mercury emissions through limits on particulate matter (PM), sulfur oxides (SOx) and other air pollutants. Additionally, EPAs require through Environmental Impact Assessment (EIA) Regulations all existing sources' to submit Initial Environmental Examination (IEE) and EIAs reports that include assessment of hazardous air pollutants, including mercury when relevant.

Progress
• Installation of improved particulate control systems across coal plants has led to measurable reductions in PM and associated mercury emissions.
• Continuous Emission Monitoring Systems (CEMS) in select facilities enable tracking of particulate and gaseous emissions, showing downward trends in co-pollutants that serve as proxies for mercury reduction.

▼ 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
At the legislative level, National and provincial Environmental Quality Standards (NEQS) are enforced by Federal and Provincial environmental protection agencies for air emission limits for industrial pollutants under NEQS, which indirectly control mercury emissions through limits on particulate matter (PM), sulfur oxides (SOx) and other air pollutants. Additionally, EPAs require through Environmental Impact Assessment (EIA) Regulations all existing sources' to submit Initial Environmental Examination (IEE) and EIAs reports that include assessment of hazardous air pollutants, including mercury when relevant.

Progress
• Retrofitting and maintenance of pollution-abatement devices (e.g. baghouses) have reduced visible emissions and particulate loads.
• Cleaner fuel switching (where feasible) to lower mercury content fuels has contributed to reduced emissions.

▼ 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
At the legislative level, National and provincial Environmental Quality Standards (NEQS) are enforced by Federal and Provincial environmental protection agencies for air emission limits for industrial pollutants under NEQS, which indirectly control mercury emissions through limits on particulate matter (PM), sulfur oxides (SOx) and other air pollutants. Additionally, EPAs require through Environmental Impact Assessment (EIA) Regulations all existing sources' to submit Initial Environmental Examination (IEE) and EIAs reports that include assessment of hazardous air pollutants, including mercury when relevant.

Progress
• Adoption of best practice capture systems has significantly reduced fugitive dust and stack emissions, indirectly reducing mercury emissions.

Continuous Emission Monitoring Systems (CEMS) in select facilities (e.g. in Islamabad) enable tracking of particulate and gaseous emissions, showing downward trends in co-pollutants that serve as proxies for mercury reduction.

▼ 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
• Upgrading incinerators with activated carbon injection and high-efficiency particulate air (HEPA) filters to capture mercury and other heavy metals.
• Source segregation and diversion programs to reduce mercury-containing wastes entering incinerators.

Hospital Waste Management Rules 2005 of Federal EPA under the Pakistan Environmental Protection Act 1997 require incineration of waste in controlled environment. Solid Waste Management Guidelines of Federal EPA further provide guidance on this.

Progress
• Source segregation efforts and improved flue gas treatment systems have lowered releases of mercury and other toxic metals from incineration.

However, Pakistan faces challenges in controlling emissions from this sector given the large-scale non-segregated waste collection and inadequate waste disposal facilities

▼ 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
Pakistan's cement plants are well equipped with pollution control devices, such as baghouse filters and high-efficiency particulate air (HEPA) filters). Electrostatic precipitators (ESPs) and flue gas desulfurization (FGD) systems are also integrated into permit conditions of cement industry, where technically feasible.

Implementation of dust collection systems (e.g., baghouses) to control particulate and mercury associated with particulate matter.
• Kiln process optimization to reduce residence time of mercury vapor.
Continuous Emission Monitoring Systems (CEMS) in select facilities enable tracking of particulate and gaseous emissions, (including monitoring of co-pollutants , heavy metals)

Progress
• Modernization of kiln plants and installation of ESP and baghouses have resulted in decreased particulate emissions, serving to reduce mercury emissions associated with particulate matter.

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

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

While Pakistan strives to control mercury emissions, from both new and old sources, it faces the following challenges: lack of baseline studies and research, lack of awareness, high cost of

abatement, lack of access to technology, technical resource and finances.

▼ ART. 9: RELEASES

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

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

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

- ○ Yes
- ○ Relevant sources do not exist in the territory
- ◉ Have not been a party for 5 years
- ○ No (please explain)

Part E - Additional comments on this article

Pakistan ratified the Convention in March 2021. The country conducted and initial inventory in 2019/20 as part of Minamata Initial Assessment Report, which was submitted to the Minamata Secretariat. During the reporting period (i.e. 2021-24), Pakistan has not established an inventory of releases from relevant sources, but it plans to update ASGM-specific inventory before the next reporting cycling as part of GEF/UNEP Enabling Activity on NAP.

▼ 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.
No dedicated interim storage facilities for non-waste mercury are known within the country.

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

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

Please describe measure and effectiveness of measures
National Hazardous Waste Management Policy 2022: contains explicit measures for controlling mercury waste. Key provisions include: (1) Explicitly listing mercury-containing waste as a priority waste stream requiring specific management. (2) Mandating the development of Extended Producer Responsibility (EPR) schemes for mercury-added products (e.g., lamps, switches). (3) Requiring the creation of specific technical guidelines for the environmentally sound management of mercury waste. (4) Aligning national definitions and controls with Pakistan's obligations under the Minamata Convention.

National Guidelines Infection Prevention and Control 2020: provide broad guidance on the collection and disposal of hazardous waste containing mercury.

Environmental Guidelines for Sound Disposal Management of Mercury in Compact Fluorescent Light Bulbs (CFLs), 2010: Handling of discarded CFLs (Section 3): The local area authorities carrying out municipal functions must install CFLs collection point so as to ensure that the CFLs are separated from the rest of household waste. These collections points should be installed in central locations such as local retail shops, post offices, bus stops etc so as to ensure that it is convenient for the consumers to return their expired CFLs.

☐ 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)

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

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.
While the measures have been introduced for sound management of mercury waste, challenges remain in its implementation, given national and local resource constraints related to technology, awareness, finances, human resource, etc.

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)

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
This activity was supposed to be completed under a GEF-funded project on "Development of Minamata Initial Assessment in three Asian countries including Pakistan". The report for identifying and assessing sites contaminated by mercury or mercury compounds could not be completed due to

shortage of time and funds.

More recently, MoCC&EC is developing National Action Plan specifically for the control of mercury in ASGM sector.

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 Hazardous Waste Management Policy, 2022, is designed to help Pakistan meet its obligations under relevant conventions, including the Minamata Convention. In addition, the province of Khyber Pakhtunkhwa has incorporated the convention's requirements into the Provincial Multilateral Environmental Agreements (MEAs) Implementation Action Plan.
• The Ministry of Climate Change & Environmental Coordination, with technical and financial assistance from the Global Environment Facility (GEF) and UNEP, has completed a "Minamata Initial Assessment" to establish baselines and national mercury inventories.
• Pakistan is developing a National Action Plan for the Artisanal and Small-Scale Gold Mining (ASGM) sector, a key requirement for countries with more than insignificant ASGM activities.
• The government is working with stakeholders to develop an effective regulatory framework, including creating a National Chemical Control Act and enforcing restrictions on mercury-added products such as skin whitening creams.
• The Khyber Pakhtunkhwa government specifically allocated a special budget to tackle climate change issues, which includes the implementation of MEAs like the Minamata Convention.

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.

Pakistan is a developing country and is not in a position to contribute to the mechanism referred to in paragraph 5 of article 13. However, it has received a recent GEF Enabling Activity for the development of National Action Plan to phase-out mercury in its ASGM sector.

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

Pakistan itself is a developing country and not in a position to provide financial support to other parties.

Please provide comments, if any.

Pakistan, as a developing country Party, requires significant resources to implement Minamata Convention at the national and sub-national levels. The public money is prioritized for national issues like economic development, poverty eradication, etc. With limited national budget allocation

for environment departments and MoCC&EC, Pakistan faces significant challenges in the implementation of Minamata Convention as it lacks the means of implementing it (i.e. technology, finance, capacity building). Assistance to developing country Parties like Pakistan in compliance of Article 13 and 14 would ensure effective implementation of the Convention at all levels.

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
Pakistan itself is a developing country and not in a position to provide financial support to other parties. No other party has approached Pakistan for capacity-building or technical assistance, pursuant to article 14.

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

- ○ Yes
- ◉ No

Please specify
Pakistan, being a developing country Party, has not received technical assistance and capacity building from other parties, pursuant to Article 14 paragraph (1).

Please provide comments, if any.
Pakistan, as a developing country Party, requires significant resources to implement Minamata Convention at the national and sub-national levels. The public money is prioritized for national issues like economic development, poverty eradication, etc. With limited national budget allocation for environment departments and MoCC&EC, Pakistan faces significant challenges in the implementation of Minamata Convention as it lacks the means of implementing it (i.e. technology, finance, capacity building). Assistance to developing country Parties like Pakistan in compliance of Article 13 and 14 would ensure effective implementation of the Convention at all levels.

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
Pakistan is in a phase of promoting and facilitating the development, transfer, and diffusion of and access to, up-to-date environmentally sound alternative technologies. However, as a Developed country Party, Pakistan has limited means of implementing the Convention (technology, capacity building and financial resources), due to which challenges remain in on-ground implementation of the Convention.

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.
Community awareness was carried out in limited areas (e.g. federal capital, Islamabad), as public awareness at national and sub-national levels requires significant resources.

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 Pakistan Standards and Quality Control Authority (PSQCA) has adopted Standard PS: 3228-2017, which limits the mercury content in skin creams to a maximum of 1 ppm.
• The Competition Commission of Pakistan (CCP) has launched a nationwide probe against companies involved in making, marketing, and selling mercury-laden skin whitening creams. The move aims to protect consumers from serious health risks and to ensure fair competition in the cosmetics market.
• Under Section 10 of the Competition Act, 2010, false or deceptive marketing is prohibited and can lead to penalties of up to PKR 75 million or 10% of annual turnover.
Pakistan's Ministry of National Health Services, Regulation and Coordination has issued an advisory regarding restriction of mercury dental amalgam, which is widely implemented across the country. The advisory recommends against the use of dental amalgam in patients under 15 years and pregnant and breastfeeding women in alignment with decision MC-4/3.

Part E - Additional comments on this article

Pakistan welcomes opportunities for collaboration with WHO, ILO, and other relevant organisations for the effective implementation of Article 16.

▼ ART. 17: INFORMATION EXCHANGE

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

○ Yes

◉ No

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:

☑ 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
Under the project titled "Minamata Initial Assessment in Pakistan", the following activities were carried out by MoCC&EC to raise the awareness among several stakeholders and public;
• Mercury awareness workshops in all provinces of Pakistan
• Conducted painting, essay writing, speech and quiz competitions among the students of schools, colleges and universities.
• Meeting with The Representatives of Electronics Industry, Representatives from Associations and Industries

☐ Alternatives to mercury and mercury compounds

☐ The topics identified in paragraph 1 of article 17

☐ 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
• Conducted researches on mercury-containing products in Pakistan and published a report on Skin Whitening Creams in collaboration with Sustainable Development Policy Institute (SDPI) Pakistan.
• Developed and distributed awareness materials brochures, leaflets, banners, stickers, keychains, wall clocks) through electronic and print media

(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

☐ 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

☐ 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 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

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

Various research studies have been carried out in Pakistan to identify, investigate and monitor mercury, mercury-added products and related compounds in the country across various sectors. In accordance with paragraph 1 of article 19, the following research was carried out:

• Developed an inventory on mercury emissions and releases
• Published a report on "Mercury Poisoning Associated with International and Local Skin Whitening Creams in Pakistan"
• Analysis of mercury contamination level in water and sediments of Hunza and Gilgit River basin, Pakistan
• Mercury content assessment in household batteries and their potential threat to the environment of Pakistan
• Mercury poisoning associated with international and local whitening creams using in Pakistan
• Investigation of non-gaseous and gaseous mercury fractions in unused fluorescent lamps focused on Lahore and Islamabad
• Assessment of mercury content in selected international and local skin whitening soaps using in Pakistan

(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

Pakistan faces several challenges related to the implementation of the Minamata Convention on Mercury. These include gaps related to data availability, inter-departmental coordination, budgetary constraints, insufficient and costly alternatives for industries, and lack of awareness about adverse impacts of mercury.

For the improved implementation of Minamata Convention, Pakistan has identified the following means of implementing of the Convention:

• Financial resources for the implementation of the Articles 4 and 5 of the Minamata Convention that deal with the phasing out of the mercury containing products and eliminating mercury in the manufacturing processes (pursuant to Article 13 and 14 .
• Transfer of technology by developed country Parties to developing country Parties that require assistance in the implementation of the Minamata Convention.
• Capacity Building and training of relevant officials of the implementing agencies at federal and provincial level (including environmental protection agencies, customs, industry, etc.)
• Development of a comprehensive regulatory framework specifically focused on mercury elimination/phasing out Introduction of safe and suitable alternatives specifically in ASMG process.

Additionally, as a developing country Party, Pakistan requires long-term institutional capacity building (including technical, financial, human resource), for the development of mercury

inventories, and introduction of cross-sectoral regulatory reform to fully meet international obligations under the Minamata Convention as well as Basel, Stockholm and Rotterdam Conventions.

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

Comments regarding the reporting format and possible improvements, if any

Minamata Convention Secretariat should continue the training of national focal points and contact officers for national reporting prior to the reporting period. Since national reports are based on data collected at the local/provincial levels, country-specific trainings may also be arranged for Parties preparing full national reports.