9th July 2020

INFORMATION FROM NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY IN UGANDA TO SUPPORT THE REVIEW OF ANNEX A TO THE MINAMATA CONVENTION

Table 1.1 Batteries

1. Category of mercury-added product[1]	☒ Batteries ☐ Switches and relays ☐ Lamps ☐ Cosmetics	☐ Pesticides, biocides and topical antiseptics ☐ Non-electronic measuring devices ☐ Others *(Please specify:_____)*
2. Further description of the product (if any)	**<u>Specific description of batteries</u>** ✓ Zn-AgO and Zn-Air with ≥ 2% Hg ✓ Mercuric oxide ✓ Many others with mercury **<u>General description of batteries</u>** Additional description of batteries was obtained in recent years (2013-2015) from COMTRADE database- Mercury Learn - HS codes," 2015 as follows: ✓ HS codes of: 850630 Cells and batteries; primary, mercuric oxide ✓ Cells and batteries (850660) ✓ Primary, air-zinc and 850640 Cells and batteries ✓ Primary, silver oxide ✓ Cells and batteries (850640); primary, silver oxide ✓ Other batteries with mercury (plain cylindrical alkaline, permanganate) include; 850610 - cells and batteries; primary, manganite dioxide and 850680 ✓ Cells and batteries; primary (other than manganese dioxide, mercury oxide, silver oxide, Lithium or air zinc) ✓ Cells and batteries (850610); primary, manganite dioxide ✓ Cells and batteries (850680); primary (other than manganese dioxide, mercury oxide, silver oxide, Lithium or air zinc)	

[1] Dental amalgam is subject to a separate intersessional process as specified in Decision MC-3/2.

3. Information on the use of the product	**<u>Estimated mercury input from batteries into the environment (MIAs report, 2018)</u>** -At disposal phase, batteries contribute to 4,045kg of Hg per year in Uganda. **<u>Product use</u>** ✓ There are mercury containing batteries in use in Uganda as revealed in the National Minamata Initial Assessments report, 2018. ✓ Batteries are used for a wide range of devices such as watches, clocks, cameras, remote controls, hearing aids, toys, calculators and other electronic appliances used by individuals, households, companies, offices, industries, etc. Some of these products (e.g., some button cell batteries) contain added mercury.
4. Information on the availability of mercury-free (or less-mercury) alternatives	**<u>Products with less mercury content</u>** ✓ Mercury-free Zn-AgO and Zn-Air ✓ Li-Ion (Lithium ion) ✓ Manganese (Alkaline) ✓ Zinc-carbon
5.(i) Information on the technical feasibility of alternatives	✓ There is limited knowledge by consumers on existence of alternatives ✓ There is limited policy restrictions on importation of listed Batteries ✓ There are no incentives on use/importation of alternatives ✓ There is an institutional framework for promoting adoption of alternatives
5.(ii) Information on the economic feasibility of alternatives	✓ The alternatives usually cost higher than the more toxic ones ✓ Alternatives are majorly imported hence transferring taxation costs to the consumer
6. Information on environmental and health risks and benefits of alternatives	This will require an assessment
7. If any, additional information being submitted on mercury-added products pursuant to Article 4.4 of the Convention not addressed above (e.g. manufacture,	None

general trade information, etc.)	
8. Other relevant information pursuant to Decision MC-3/1	None
9. References	✓ Developing National Strategies for Phasing Out Mercury Containing Thermometers and Sphygmomanometers in Health Care, Including in the Context of the Minamata Convention on Mercury, World Health Organization, 2015. Available at http://www.who.int/ipcs/assessment/public_health/WHOGuidanceReportonMercury2015.pdf?ua= ✓ UNEP (2013): Minamata Convention on Mercury. Available at http://www.mercuryconvention.org ✓ Minamata Initial Assessments report, 2018 ✓ Mercury Learn - HS codes (2015); COMTRADE database

Table 1.2 Switches and relays

1. Category of mercury-added product[2]	☐ Batteries ☒ Switches and relays ☐ Lamps ☐ Cosmetics	☐ Pesticides, biocides and topical antiseptics ☐ Non-electronic measuring devices ☐ Others *(Please specify:_____)*
2. Further description of the product (if any)	There are mercury containing electrical and electronic switches, contacts and relays in use in Uganda as revealed in the National Minamata Initial Assessments report, 2018.	
3. Information on the use of the product	**Estimated Mercury input in the environment (MIAs report, 2018)** At the disposal phase, electrical and electronic switches, contacts and relays with mercury batteries contribute to 439kg/Hg/Yr **Product uses** -Power devices may contain elemental mercury for making electrical contact in certain equipment, usually industrial applications.	

[2] Dental amalgam is subject to a separate intersessional process as specified in Decision MC-3/2.

4. Information on the availability of mercury-free (or less-mercury) alternatives	**Switches & Relays containing less mercury** Switches & Relays used in high accuracy instruments with<20mgHgperbridge **Mercury free Switches & Relays** Mercury-free relays include solid-state relays, electro-mechanical, dry magnetic reeds, etc. Mercury-free switches include mechanical, solid- state, dry magnetic reeds, optical, thermal, etc.
5.(i) Information on the technical feasibility of alternatives	✓ There is limited knowledge by consumers on existence of alternatives ✓ There is limited policy restrictions on importation of listed Switches and relays ✓ There are no incentives on use/importation of alternatives ✓ There is an institutional framework for promoting adoption of alternatives
5.(ii) Information on the economic feasibility of alternatives	✓ The alternatives usually cost higher than the more toxic ones ✓ Alternatives are majorly imported hence transferring taxation costs to the consumer
6. Information on environmental and health risks and benefits of alternatives	This will require an assessment
7. If any, additional information being submitted on mercury-added products pursuant to Article 4.4 of the Convention not addressed above (e.g. manufacture, general trade information, etc.)	None
8. Other relevant information pursuant to Decision MC-3/1	None
9. References	✓ Developing National Strategies for Phasing Out Mercury Containing Thermometers and Sphygmomanometers in Health Care, Including in the Context of the Minamata Convention on Mercury, World Health Organization, 2015. Available at http://www.who.int/ipcs/assessment/public_health/WHOGuidanceReportonMercury2015.pdf?ua= ✓ UNEP (2013): Minamata Convention on Mercury. Available at http://www.mercuryconvention.org

	✓ Minamata Initial Assessments report, 2018 ✓ Mercury Learn - HS codes (2015); COMTRADE database

Table 1.3 Lamps

1. Category of mercury-added product[3]	☐ Batteries ☐ Switches and relays ☒ Lamps ☐ Cosmetics	☐ Pesticides, biocides and topical antiseptics ☐ Non-electronic measuring devices ☐ Others *(Please specify:_____)*
2. Further description of the product (if any)	There are mercury containing light sources in use in Uganda as revealed in the National Minamata Initial Assessments report, 2018. **<u>Description of the product</u>** ✓ CFLs of power ≤ 30 W with ≥ 5 mg Hg ✓ LFLs with triband phosphor of power < 60W with > 5 mg Hg ✓ LFLs with halophosphate phosphor of power ≤ 40 W with > 10 mgHg ✓ CCFLs/EEFLs of length ≤ 500 mm with > 3.5mg Hg ✓ CCFLs/EEFLs of length between 500 and 1500 mm > 5 mg Hg ✓ CCFLs/EEFLs of length > 1500 mm with >13 mg Hg ✓ High pressure mercury vapor (HPMV) **<u>Additional information</u>** "light sources with Mercury" in Uganda include the following: ✓ HS codes : 853931 - Lamps; discharge, (excluding ultra-violet), fluorescent, hot cathode, ✓ HS codes : 853939 - Lamps; discharge, (excluding ultra-violet, excluding fluorescent, hot cathode) ✓ HS codes : 853949 - Lamps; ultra-violet or infra-red lamps, (excluding arc-lamps)	
3. Information on the use of the product	**<u>Estimated Mercury input in the environment (MIAs report, 2018)</u>** At the disposal phase, Light sources with mercury contribute to 149kg/Hg/Yr	

[3] Dental amalgam is subject to a separate intersessional process as specified in Decision MC-3/2.

	<u>Use of the product</u> Lamps are used for a wide variety of purposes such as in domestic lighting, street lighting, lighting for public places (e.g., parks or sports facilities), advertising panels and billboards, vehicle lights, medical and scientific instruments, maritime navigation systems, airport lights, police and military uses, etc.
4. Information on the availability of mercury-free (or less-mercury) alternatives	**<u>lamps less mercury</u>** ✓ CFLs of power ≤ 30 W with < 5 mg Hg ✓ LFLs with triband phosphor of power < 60 W with ≤ 5mg Hg ✓ LFLs with halophosphate phosphor power ≤ 40 W with ≤ 10 mg Hg ✓ CCFLs/EEFLs of length ≤ 500 mm with ≤ 3.5 mg Hg ✓ CCFLs/EEFLs of length between 500 and 1500 mm ≤5 mg Hg ✓ CCFLs/EEFLs of length > 1500 mm with ≤ 13 mg Hg **<u>Products with less mercury in High pressure mercury vapor (HPMV)</u>** ✓ Sodium vapor / High pressure sodium ✓ Light-emitting diode (LED) ✓ Halogen (metal halide)
5.(i) Information on the technical feasibility of alternatives	✓ There is limited knowledge by consumers on existence of alternatives ✓ There is limited policy restrictions on importation of listed Lamps ✓ There are no incentives on use/importation of alternatives ✓ There is an institutional framework for promoting adoption of alternatives
5.(ii) Information on the economic feasibility of alternatives	✓ The alternatives usually cost higher than the more toxic ones ✓ Alternatives are majorly imported hence transferring taxation costs to the consumer
6. Information on environmental and health risks and benefits of alternatives	This will require an assessment
7. If any, additional information being submitted on mercury-added products pursuant to Article 4.4 of the Convention not addressed	None

above (e.g. manufacture, general trade information, etc.)	
8. Other relevant information pursuant to Decision MC-3/1	None
9. References	✓ Developing National Strategies for Phasing Out Mercury Containing Thermometers and Sphygmomanometers in Health Care, Including in the Context of the Minamata Convention on Mercury, World Health Organization, 2015. Available at http://www.who.int/ipcs/assessment/public_health/WHOGuidanceReportonMercury2015.pdf?ua= ✓ UNEP (2013): Minamata Convention on Mercury. Available at http://www.mercuryconvention.org ✓ Minamata Initial Assessments report, 2018 ✓ Mercury Learn - HS codes (2015); COMTRADE database

Table 1.4 Cosmetics

1. Category of mercury-added product[4]	☐ Batteries ☐ Switches and relays ☐ Lamps ☒ Cosmetics	☐ Pesticides, biocides and topical antiseptics ☐ Non-electronic measuring devices ☐ Others *(Please specify:_____)*
2. Further description of the product (if any)	**Specific descriptions** ✓ Skin-lightening soaps > 1 ppm Hg ✓ Skin-lightening creams > 1 ppm Hg **Additional information** There are mercury containing cosmetics and related products in use in Uganda as revealed in the National Minamata Initial Assessments report, 2018.	
3. Information on the use of the product	**Estimated Mercury input in the environment (MIAs report, 2018)** - At use and disposal phase fused together, cosmetics and related products contribute to 104 kg/Hg/Yr	

[4] Dental amalgam is subject to a separate intersessional process as specified in Decision MC-3/2.

	<u>Use of the product</u> ✓ Available in various forms such as sprays, gels, lotions, creams, soaps, powders, etc., cosmetics cover a wide range of products intended for contact with the body. Of particular concern are skin-lightening (or fairness) creams and soaps exceeding that level.
4. Information on the availability of mercury-free (or less-mercury) alternatives	**<u>Existing less-mercury products</u>** -Cosmetics with trace levels of mercury (< 1ppm) -Beauty soaps and creams without mercury, e.g., cosmetic products based on natural products, vegetable oils, or essential oil formulations
5.(i) Information on the technical feasibility of alternatives	✓ There is limited knowledge by consumers on existence of alternatives ✓ There is limited policy restrictions on importation of listed Cosmetics ✓ There are no incentives on use/importation of alternatives ✓ There is an institutional framework for promoting adoption of alternatives
5.(ii) Information on the economic feasibility of alternatives	✓ The alternatives usually cost higher than the more toxic ones ✓ Alternatives are majorly imported hence transferring taxation costs to the consumer
6. Information on environmental and health risks and benefits of alternatives	This will require an assessment
7. If any, additional information being submitted on mercury-added products pursuant to Article 4.4 of the Convention not addressed above (e.g. manufacture, general trade information, etc.)	None
8. Other relevant information pursuant to Decision MC-3/1	None
9. References	✓ Developing National Strategies for Phasing Out Mercury Containing Thermometers and Sphygmomanometers in Health Care, Including in the Context of the Minamata Convention on Mercury, World Health Organization, 2015. Available at http://www.who.int/ipcs/assessment/public_health/WHOGuidanceReportonMercury2015.pdf?ua=

	✓ UNEP (2013): Minamata Convention on Mercury. Available at http://www.mercuryconvention.org ✓ Minamata Initial Assessments report, 2018 ✓ Mercury Learn - HS codes (2015); COMTRADE database

Table 1.5 Pesticides, biocides and topical antiseptics

1. Category of mercury-added product[5]	☐ Batteries ☐ Switches and relays ☐ Lamps ☐ Cosmetics	☒ Pesticides, biocides and topical antiseptics ☐ Non-electronic measuring devices ☐ Others *(Please specify:_____)*
2. Further description of the product (if any)	There are no mercury containing biocides and pesticides in use in Uganda as revealed in the National Minamata Initial Assessments report, 2018. There are no mercury containing pharmaceuticals for human and veterinary uses in Uganda as revealed in the National Minamata Initial Assessments report, 2018.	
3. Information on the use of the product	**Use of pesticides, biocides** Pesticides are generally classified as agricultural pesticides or non-agricultural (e.g., public health control) pesticides whilst encompassing various sub-categories of products like biocides, fungicides, insecticides, herbicides, etc. These products are subject to strict regulations owing to their potential harm to the environment and human health **Use of topical antiseptics** Topical antiseptics are medical products used for the control of micro-organisms and are applied to injuries and wounds.	
4. Information on the availability of mercury-free (or less-mercury) alternatives	**Mercury free Biocides & Pesticides** ✓ Biocides&pesticideswithoutmercury include carbamates, organophosphates, pyrethroids ✓ Biological pesticides	

[5] Dental amalgam is subject to a separate intersessional process as specified in Decision MC-3/2.

	<u>Mercury free topical antiseptics</u> ✓ Herbal and natural-product antiseptics ✓ Topical antiseptics with active ingredients** like alcohol, benzalkonium chloride, chloroxylenol, Polyvidone iodine, etc. (mercury-free) ✓ Medicated soaps and surface-active agents (mercury-free)
5.(i) Information on the technical feasibility of alternatives	Alternatives already in use
5.(ii) Information on the economic feasibility of alternatives	✓ The alternatives usually cost higher than the more toxic ones ✓ Alternatives are majorly imported hence transferring taxation costs to the consumer
6. Information on environmental and health risks and benefits of alternatives	This will require an assessment
7. If any, additional information being submitted on mercury-added products pursuant to Article 4.4 of the Convention not addressed above (e.g. manufacture, general trade information, etc.)	None
8. Other relevant information pursuant to Decision MC-3/1	None
9. References	✓ Developing National Strategies for Phasing Out Mercury Containing Thermometers and Sphygmomanometers in Health Care, Including in the Context of the Minamata Convention on Mercury, World Health Organization, 2015. Available at http://www.who.int/ipcs/assessment/public_health/WHOGuidanceReportonMercury2015.pdf?ua= ✓ UNEP (2013): Minamata Convention on Mercury. Available at http://www.mercuryconvention.org ✓ Minamata Initial Assessments report, 2018 ✓ Mercury Learn - HS codes (2015); COMTRADE database

Table 1.6 Non-electronic measuring devices

1. Category of mercury-added product[6]	☐ Batteries ☐ Switches and relays ☐ Lamps ☐ Cosmetics	☐ Pesticides, biocides and topical antiseptics ☒ Non-electronic measuring devices ☐ Others *(Please specify:_____)*
2. Further description of the product (if any)	**<u>Availability</u>** There are mercury containing thermometers; manometers and gauges in use in Uganda as revealed in the National Minamata Initial Assessments report, 2018. **<u>Specific description</u>** ✓ Barometer ✓ Manometer ✓ Hygrometer ✓ Thermometer ✓ Sphygmomanometer **<u>Description of the product</u>** ✓ HS codes 902511: Thermometers and pyrometers; liquid filled, for direct reading, not combined with other instruments	
3. Information on the use of the product	**<u>Estimated Mercury input in the environment (MIAs report, 2018)</u>** ✓ At disposal phase, mercury containing thermometers contribute to 21 kg/Hg/Yr ✓ At disposal phase, Manometers and gauges contribute to 205kg/Hg/Yr **<u>Information on use</u>** ✓ In Uganda, measuring devices are extensively used in various sectors such as laboratory analysis, environmental monitoring, healthcare, academia, manufacturing, meteorology, agriculture, etc. Available mercury-free alternatives include alcohol (spirit) thermometers, electronic thermometers, oscillometric sphygmomanometers, etc. Many of these mercury-free measuring devices also conform to industry standards, calibration and other performance-related requirements.	

[6] Dental amalgam is subject to a separate intersessional process as specified in Decision MC-3/2.

	✓ The replacement of mercury-added measuring devices by mercury-free devices has received worldwide attention in some sectors such as in healthcare. Accordingly, the World Health Organization (WHO) has been heavily involved in advocating the shift to mercury-free measuring devices in healthcare facilities. The WHO indeed published a document in 2015 outlining national strategies for phasing out mercury-added thermometers and sphygmomanometers.[7]
4. Information on the availability of mercury-free (or less-mercury) alternatives	**<u>barometer products with less mercury</u>** ✓ Aneroid ✓ Digital ✓ Fortin **<u>Manometer products with less mercury</u>** ✓ Aneroid ✓ Digital **<u>Hygrometer products with less mercury</u>** ✓ Data loggers **<u>Thermometer products with less mercury</u>** ✓ Digital ✓ Alcohol /spirit Electronic and combined for special applications (e.g., data loggers, temperature/conductivity meter, etc.) Gallium-tin Infra-red (laboratory) Standard PlatinumResistance Tympanic/temporal (clinical) **<u>Sphygmomanometer products with less mercury</u>** ✓ Aneroid ✓ Blood pressuremonitors ✓ Digital
5.(i) Information on the technical feasibility of alternatives	✓ There is limited knowledge by consumers on existence of alternatives ✓ There is limited policy restrictions on importation of listed Non-electronic measuring devices ✓ There are no incentives on use/importation of alternatives

[7] See Developing National Strategies for Phasing Out Mercury Containing Thermometers and Sphygmomanometers in Health Care, Including in the Context of the Minamata Convention on Mercury, World Health Organization, 2015. Available at<http://www.who.int/ipcs/assessment/public_health/WHOGuidanceReportonMercury2015.pdf?ua=1>

	✓ There is an institutional framework for promoting adoption of alternatives
5.(ii) Information on the economic feasibility of alternatives	✓ The alternatives usually cost higher than the more toxic ones ✓ Alternatives are majorly imported hence transferring taxation costs to the consumer
6. Information on environmental and health risks and benefits of alternatives	This will require an assessment
7. If any, additional information being submitted on mercury-added products pursuant to Article 4.4 of the Convention not addressed above (e.g. manufacture, general trade information, etc.)	None
8. Other relevant information pursuant to Decision MC-3/1	None
9. References	✓ Developing National Strategies for Phasing Out Mercury Containing Thermometers and Sphygmomanometers in Health Care, Including in the Context of the Minamata Convention on Mercury, World Health Organization, 2015. Available at http://www.who.int/ipcs/assessment/public_health/WHOGuidanceReportonMercury2015.pdf?ua= ✓ UNEP (2013): Minamata Convention on Mercury. Available at http://www.mercuryconvention.org ✓ Minamata Initial Assessments report, 2018 ✓ Mercury Learn - HS codes (2015); COMTRADE database

Table 1.7 Others (laboratory chemicals and equipment)

1. Category of mercury-added product[8]	☐ Batteries ☐ Switches and relays	☐ Pesticides, biocides and topical antiseptics ☐ Non-electronic measuring devices

[8] Dental amalgam is subject to a separate intersessional process as specified in Decision MC-3/2.

	☐ Lamps ☐ Cosmetics	☒ Others *(Please specify:* laboratory chemicals and equipment *)*
2. Further description of the product (if any)	laboratory chemicals and equipment	
3. Information on the use of the product	There are mercury containing laboratory chemicals and equipment in use in Uganda as revealed in the National Minamata Initial Assessments report, 2018. <u>Estimated Mercury input in the environment (MIAs report, 2018)</u> - At disposal phase, laboratory chemicals and equipment contribute to 157 kg/Hg/Yr	
4. Information on the availability of mercury-free (or less-mercury) alternatives	Assessment is needed	
5.(i) Information on the technical feasibility of alternatives	✓ There is limited knowledge by consumers on existence of alternatives ✓ There is limited policy restrictions on importation of listed MAPs ✓ There are no incentives on use/importation of alternatives ✓ There is an institutional framework for promoting adoption of alternatives	
5.(ii) Information on the economic feasibility of alternatives	✓ The alternatives usually cost higher than the more toxic ones ✓ Alternatives are majorly imported hence transferring taxation costs to the consumer	
6. Information on environmental and health risks and benefits of alternatives	This will require an assessment	
7. If any, additional information being submitted on mercury-added products pursuant to Article 4.4 of the Convention not addressed above (e.g. manufacture, general trade information, etc.)	None	

8. Other relevant information pursuant to Decision MC-3/1	None
9. References	✓ Developing National Strategies for Phasing Out Mercury Containing Thermometers and Sphygmomanometers in Health Care, Including in the Context of the Minamata Convention on Mercury, World Health Organization, 2015. Available at http://www.who.int/ipcs/assessment/public_health/WHOGuidanceReportonMercury2015.pdf?ua= ✓ UNEP (2013): Minamata Convention on Mercury. Available at http://www.mercuryconvention.org ✓ Minamata Initial Assessments report, 2018

Table 2.1 Chlor-alkali production

1. Category of manufacturing process in which mercury or mercury compounds are used	☒ Chlor-alkali production ☐ Acetaldehyde production in which mercury or mercury compounds are used as a catalyst ☐ Vinyl chloride monomer production ☐ Sodium or Potassium Methylate or Ethylate ☐ Production of polyurethane using mercury containing catalysts ☐ Others *(Please specify:_____)*
2. Further description of the process (if any)	Chlor-alkali production with mercury technology is not in use in Uganda as revealed in the National Minamata Initial Assessments report, 2018.
3. Information on the manufacturing activities using the process (incl. amount of mercury or mercury compounds used, production amount, etc.)	Requires additional assessment
4. Information on the availability of mercury-free (or less-mercury) alternatives	Requires assessment
5.(i) Information on the technical feasibility of alternatives	✓ There is an institutional framework for promoting adoption of alternatives

5.(ii) Information on the economic feasibility of alternatives	✓ The alternatives usually cost higher than the more toxic ones ✓ Alternatives are majorly imported hence transferring taxation costs to the consumer
6. Information on the environmental and health risks and benefits of alternatives	This will require an assessment
7. Other relevant information pursuant to Decision MC-3/1	None
8. References	

Table 2.2 Acetaldehyde production in which mercury or mercury compounds are used as a catalyst

1. Category of manufacturing process in which mercury or mercury compounds are used	☐ Chlor-alkali production ☒ Acetaldehyde production in which mercury or mercury compounds are used as a catalyst ☐ Vinyl chloride monomer production ☐ Sodium or Potassium Methylate or Ethylate ☐ Production of polyurethane using mercury containing catalysts ☐ Others *(Please specify:_____)*
2. Further description of the process (if any)	Acetaldehyde production in which mercury or mercury compounds are used as a catalyst is not in use in Uganda as revealed in the National Minamata Initial Assessments report, 2018.
3. Information on the manufacturing activities using the process (incl. amount of mercury or mercury compounds used, production amount, etc.)	Requires additional assessment
4. Information on the availability of mercury-free (or less-mercury) alternatives	Requires assessment

5.(i) Information on the technical feasibility of alternatives	✓ There is an institutional framework for promoting adoption of alternatives
5.(ii) Information on the economic feasibility of alternatives	✓ The alternatives usually cost higher than the more toxic ones ✓ Alternatives are majorly imported hence transferring taxation costs to the consumer
6. Information on the environmental and health risks and benefits of alternatives	This will require an assessment
7. Other relevant information pursuant to Decision MC-3/1	None
8. References	

Table 2.3 Vinyl chloride monomer production

1. Category of manufacturing process in which mercury or mercury compounds are used	☐ Chlor-alkali production ☐ Acetaldehyde production in which mercury or mercury compounds are used as a catalyst ☒ Vinyl chloride monomer production ☐ Sodium or Potassium Methylate or Ethylate ☐ Production of polyurethane using mercury containing catalysts ☐ Others *(Please specify:_____)*
2. Further description of the process (if any)	Vinyl chloride monomer production with mercury-dichloride ($HgCl_2$) as a catalyst is not in use in Uganda as revealed in the National Minamata Initial Assessments report, 2018.
3. Information on the manufacturing activities using the process (incl. amount of mercury or mercury compounds used, production amount, etc.)	

4. Information on the availability of mercury-free (or less-mercury) alternatives	
5.(i) Information on the technical feasibility of alternatives	✓ There is an institutional framework for promoting adoption of alternatives
5.(ii) Information on the economic feasibility of alternatives	✓ The alternatives usually cost higher than the more toxic ones ✓ Alternatives are majorly imported hence transferring taxation costs to the consumer
6. Information on the environmental and health risks and benefits of alternatives	This will require an assessment
7. Other relevant information pursuant to Decision MC-3/1	None
8. References	

Table 2.4 Sodium or Potassium Methylate or Ethylate

1. Category of manufacturing process in which mercury or mercury compounds are used	☐ Chlor-alkali production ☐ Acetaldehyde production in which mercury or mercury compounds are used as a catalyst ☐ Vinyl chloride monomer production ☒ Sodium or Potassium Methylate or Ethylate ☐ Production of polyurethane using mercury containing catalysts ☐ Others *(Please specify:_____)*
2. Further description of the process (if any)	Not documented in the Minamata Intial Assessments report of 2018

3. Information on the manufacturing activities using the process (incl. amount of mercury or mercury compounds used, production amount, etc.)	Requires additional assessment
4. Information on the availability of mercury-free (or less-mercury) alternatives	Requires assessment
5.(i) Information on the technical feasibility of alternatives	✓ There is limited knowledge by consumers on existence of alternatives ✓ There is limited policy restrictions on importation of listed MAPs ✓ There are no incentives on use/importation of alternatives ✓ There is an institutional framework for promoting adoption of alternatives
5.(ii) Information on the economic feasibility of alternatives	✓ The alternatives usually cost higher than the more toxic ones ✓ Alternatives are majorly imported hence transferring taxation costs to the consumer
6. Information on the environmental and health risks and benefits of alternatives	This will require an assessment
7. Other relevant information pursuant to Decision MC-3/1	None
8. References	

Table 2.5 Production of polyurethane using mercury containing catalysts

1. Category of manufacturing process in which mercury or mercury compounds are used	☐ Chlor-alkali production ☐ Acetaldehyde production in which mercury or mercury compounds are used as a catalyst ☐ Vinyl chloride monomer production ☐ Sodium or Potassium Methylate or Ethylate ☒ Production of polyurethane using mercury containing catalysts ☐ Others *(Please specify:_____)*

2. Further description of the process (if any)	Estimated Mercury input in the environment (MIAs report, 2018) - At disposal phase, production of polyurethane using mercury containing catalysts contributes to 282.34 hg/kg/Yr
3. Information on the manufacturing activities using the process (incl. amount of mercury or mercury compounds used, production amount, etc.)	Not yet assessed
4. Information on the availability of mercury-free (or less-mercury) alternatives	Not yet assessed
5.(i) Information on the technical feasibility of alternatives	✓ There is limited knowledge by consumers on existence of alternatives ✓ There is limited policy restrictions on importation of listed MAPs ✓ There are no incentives on use/importation of alternatives ✓ There is an institutional framework for promoting adoption of alternatives
5.(ii) Information on the economic feasibility of alternatives	✓ The alternatives usually cost higher than the more toxic ones ✓ Alternatives are majorly imported hence transferring taxation costs to the consumer
6. Information on the environmental and health risks and benefits of alternatives	This will require an assessment
7. Other relevant information pursuant to Decision MC-3/1	None
8. References	

Table 2.6: Other production of chemicals and polymers with mercury compounds as catalysts

1. Category of manufacturing process in which mercury or mercury compounds are used	☐ Chlor-alkali production ☐ Acetaldehyde production in which mercury or mercury compounds are used as a catalyst ☐ Vinyl chloride monomer production ☐ Sodium or Potassium Methylate or Ethylate ☐ Production of polyurethane using mercury containing catalysts ☒ Others *(Please specify:* Other production of chemicals and polymers with mercury compounds as catalysts *)*
2. Further description of the process (if any)	According to the National Minamata Initial Assessments report, 2018, there are no other production of chemicals and polymers with mercury compounds as catalysts
3. Information on the manufacturing activities using the process (incl. amount of mercury or mercury compounds used, production amount, etc.)	
4. Information on the availability of mercury-free (or less-mercury) alternatives	
5.(i) Information on the technical feasibility of alternatives	✓ There are no incentives on use/importation of alternatives ✓ There is an institutional framework for promoting adoption of alternatives
5.(ii) Information on the economic feasibility of alternatives	✓ The alternatives usually cost higher than the more toxic ones ✓ Alternatives are majorly imported hence transferring taxation costs to the consumer
6. Information on the environmental and health risks and benefits of alternatives	This will require an assessment
7. Other relevant information pursuant to Decision MC-3/1	None

8. References	