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Public Consultation on the Ratification by the EU of the Minamata Convention on Mercury

Fields marked with * are mandatory.

General Information

Introduction

This public consultation is issued by the Environment Directorate-General (DG ENV) of the European Commission in view of ratification by the EU of the Minamata Convention on Mercury ("Minamata Convention").

DG ENV is currently preparing a "Minamata ratification package" that will enable the EU to become party to the Convention. A report examining in detail the measures needed to enable EU ratification is currently under preparation and a stakeholders' meeting took place in Brussels on 7/7/2014. More information on the report and the stakeholders' consultation workshop is available on the Commission's mercury webpage.

This consultation focuses on issues related to the ratification and the subsequent EU implementation of the Minamata Convention. It is a working document prepared by DG ENV based on an initial assessment of currently available information. It does not necessarily represent the Commission's views on the content and future orientation of the "Minamata ratification package".

The purpose of the consultation is to provide stakeholders with a concise and clear understanding of the issues involved and to invite them to comment in view of the preparation of a ratification package by the Commission services. Additional information on the mercury issue will be referred to, as needed, throughout this document.

Stakeholders are invited to provide feedback on the Commission's analysis and the issues raised in this consultation, as well as relevant scientific, technical or economic information or other evidence that supports their views.

Who is concerned

Comments are welcomed from anyone with relevant experience and/or interest in this matter.

Persons representing an organisation need to make clear what interest(s) they represent and how inclusive that representation is. Where applicable, you are encouraged to register in the transparency register, where you can describe your organisation and its interest; alternatively you can include such information in your response.

How to respond

The EU online tool for public consultation (Your voice in Europe) is the preferred way of submitting your input. You can answer all questions or limit your response to particular questions. Please provide or refer to the evidence that supports any views that you put forward, whenever possible.

Follow-up

All contributions received will be made public through the Commission's website, unless respondents provide a substantial justification for their opposition to the publication of their contribution. They will be analysed carefully by DG ENV but primary consideration will be given to those supported by established facts and data. Substantiated contributions will be taken into consideration in preparation of the "Minamata ratification package". A report on the consultation, including the main results, will be included in the impact assessment report and a summary will be provided in the explanatory memorandum accompanying the Commission proposal.

Part 1. Background

1. The mercury issue

The extent of the mercury problem has been described extensively, most recently in the UNEP Global Mercury Assessment 2013 so this section presents a fairly brief overview. Readers who seek a deeper understanding of the issues are referred to other sources, including those on the Commission's mercury webpage.

Mercury is a natural element. Due to its unique properties (shiny metal that is liquid at room temperature), mercury has been used in a variety of applications. Pure mercury is rarely found in nature and the metal is mainly extracted from cinnabar. Mercury and most of its compounds are highly toxic to humans, ecosystems and wildlife. Even relatively low doses can have serious adverse neurodevelopmental effects. Mercury is persistent and accumulates in living organisms.

Due to industrialisation, environmental mercury levels have risen substantially. Human activities have contributed significantly to the amount of mercury in the environment and in the food chain.

Mercury is used in a number of industrial processes (e.g. chlor-alkali, plastics industry) and in products (e.g. thermometers, dental amalgam, batteries, light bulbs). It is also released through the burning of fossil fuels (particularly by coal-fired power plants). About half of the mercury currently released into the atmosphere comes from human activity.

Elemental mercury released in the atmosphere is eventually deposited in aquatic environments, where it can be converted to methylmercury, its most toxic form, through the action of bacteria. Methylmercury bioaccumulates in fish and enters the food chain. As larger fish eat smaller ones, methylmercury is concentrated up the food chain, a process known as 'biomagnification'. As a result, top level predators in aquatic systems can build up levels of methylmercury in their systems that are 100,000 times higher than methylmercury levels in the waters where they live.

Depending on its form, mercury can stay in the air up to a year and can be transported throughout the hemisphere before it is deposited. Therefore the mercury issue is a global problem and cannot be addressed at the national level only. Due to its long-range transport properties in the atmosphere, its persistence in the environment, its ability to accumulate in living organisms and biomagnify in ecosystems, and its significant negative effects on human health and the environment, mercury is recognised as a chemical of global concern. Co-ordinated international action is therefore needed to address the mercury problem in a globally effective manner.

2. Summary of the Current EU Policy and the Run-up to Minamata

The Commission adopted a Community Strategy Concerning Mercury in 2005 (the 'Strategy') setting out 20 actions to reduce mercury levels in the environment and associated human exposure. Both the European Parliament and the Council of the European Union have endorsed the Strategy.

In implementing the Strategy, the Mercury Export Ban Regulation*[1]* was adopted in 2008 banning the export of metallic mercury and certain mercury compounds and mixtures from the EU and providing for the safe storage of metallic mercury. The EU now has a comprehensive body of mercury-related legislation in place. In addition to regulating trade in mercury, EU regulations relate to products containing mercury, waste aspects, water quality aspects, emissions to the atmosphere and releases to water and land.

The Strategy was reviewed in 2010, re-emphasising that, due to mercury's long-range transport properties, the exposure of people living in the Union as well as the exposure of the EU's environment could not be reduced to an acceptable level through domestic policies alone. Therefore, more focus would be needed on international activities and in particular on the negotiation of a legally binding instrument on mercury under the auspices of UNEP, which had been advocated by the EU as early as 2005.

The Governing Council of the United Nations Environment Programme (UNEP) decided in February 2009 (Decision 25/5) to launch such negotiations. The negotiation process came to a successful conclusion in January 2013 and the "Minamata Convention" was opened for signature at a Diplomatic Conference in Japan in October 2013. The EU has signed the Minamata Convention and intends to ratify it as soon as possible. By ratifying such an international agreement, the EU commits to fully implement its provisions. Though the EU has already a comprehensive body of mercury-related legislation in place, the Commission's initial analysis suggests that certain additional EU measures will be needed in order for the EU to be fully compliant with the Minamata Convention and hence to ratify it.

[1] Regulation (EC) No 1102/2008, OJ L304/75 of 14.11.2008

Part 2. Minamata Convention

The Minamata Convention is named after the world's worst ever mercury pollution incident that took place in the 1950's in Minamata Bay, Japan.

The Minamata Convention has already been signed by 101 parties (including the EU and 21 Member States) and has been ratified by one Party (the USA). On the basis of previous experience, the entry into force of the Convention, which requires 50 ratifications, can be expected in 2017, at the earliest.

The Convention includes provisions to cover all major uses and releases of mercury at a global level, in particular to:

- **reduce the supply of mercury;**
- **enhance the capacity for its environmentally sound storage;**
- **reduce the demand for mercury in products and processes;**
- **reduce international trade in mercury;**
- **reduce atmospheric emissions of mercury and releases to land and water;**
- **address mercury-containing waste and contaminated sites;**
- **increase knowledge through awareness-raising and scientific information exchange;**
- **specify arrangements for capacity-building and technical and financial assistance;**
- **address compliance.**

More information is available at the Convention official website*[1].*

[1] http://www.mercuryconvention.org/

Part 3. The "Minamata Ratification package"

As mentioned, the EU intends to become a party to the Minamata Convention along with the Member States. In view of this, the European Commission will need to examine in more detail how it will implement the provisions of the Convention and whether EU legislation needs to be amended or new measures put in place in order for it to fully implement the Convention's provisions, while also taking into account its international obligations in other fields such as trade.

Following a comparative analysis of the Convention text vis-à-vis the EU *acquis[1],* likely gaps have been identified in the following areas:

- **Import restrictions for metallic mercury from non-Parties to the Convention;**
- **Export ban for certain products containing mercury;**
- **Mercury use in new products and processes;**
- **Restrictions on certain processes where mercury is used;**
- **Mercury use in Artisanal and Small-scale Gold Mining (ASGM);**
- **Environmentally sound storage of non-waste mercury stocks.**

The "Minamata Ratification Package" to be proposed by the Commission will focus on these areas and this is reflected in the questions in this questionnaire. However, respondents are welcome to raise additional issues, if they so wish.

[1] The legislation, legal acts, and court decisions which, together, constitute the body of European Union law.

Part 4. Questionnaire

A. Identification

Information in this section will be collected and processed in line with Regulation (EC) 45/2001 on the protection of personal data.

*Last Name**

HRASTELJ MAJCEN

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Are you responding to this questionnaire on behalf of/as:*

- ( ) Individual
- (•) Organisation

Organisation Name*

European Association for Chemical and Molecular Sciences (EuCheMS)

Organisation type*

- [ ] EU institutions
- [ ] National government
- [ ] Regional/local authority
- [ ] Educational/Academia
- [ ] Research Organisation
- [x] Non-profit/Non-governmental Organisations
- [ ] Other international Organisation (non-EU)
- [ ] Consultancy firm
- [ ] Private sector
- [ ] Other

In case your organisation is not registered in the transparency register, please upload below any information you may wish to share on its activities.

Please upload a file in word, pdf or other commonly used format.

Country*

BE-Belgium

B. Questions

1. Ratification

The EU and its Member States agreed to sign the Minamata Convention. The EU and most Member States signed in October 2013; others are expected to follow soon. The EU intends to ratify it as soon as possible, and the European Commission is currently examining the additions/amendments needed to the EU *acquis* in order to do so.

Do you support the intention of the EU to speedily ratify the Minamata Convention?

- (●) Yes
- ( ) No

Why?

200 character(s) maximum

EuCheMS agrees with aims of controlling Hg emissions on a global scale and analysis that speedy implementation will encourage other nations to follow. It needs to be done without disadvantage to EU.

2. Import restrictions

The export of metallic mercury and certain mercury compounds is already banned under existing EU legislation. The export ban was intended to reduce the global mercury supply and prevent the EU's surplus mercury from entering the global market and (particularly) being diverted to polluting activities such as Artisanal and Small-scale Gold Mining.

No import restrictions for metallic mercury currently exist under EU law. The Minamata Convention establishes a Prior Informed Consent (PIC) procedure for imports from non-Parties. In particular, Article 3(8) of the Convention restricts imports of metallic mercury and certain mercury compounds and mixtures from non-Parties when such mercury is derived from sources not allowed under the Convention (e.g. primary mining or excess mercury from the decommissioning of chlor-alkali facilities).

When considering implementation of Article 3(8) of the Convention, the EU has the option of restricting imports only from non-Parties as foreseen by the Convention or adopting a stricter approach by legislating a ban on imports from all non-EU countries (including non-Parties to the Convention).

In your opinion, should the EU restrict all imports of metallic mercury and certain mercury compounds and mixtures from

- (●) non-Parties to the Minamata Convention?
- ( ) all non-EU countries (including non-Parties to the Convention)?

Why?

200 character(s) maximum

Importation from non-parties and use of EU disposal/control facilities will ensure reduction in global availability and safer control. Banning import from all countries duplicates controls on Hg.

3. Product exports

Mercury is still used in products quite extensively in many parts of the world. The Minamata Convention foresees a phase out date (2020) for the manufacture, import and export of nine major mercury-containing product categories: batteries, switches and relays, compact fluorescent lamps, linear fluorescent lamps, high pressure mercury vapour lamps, electronic displays, cosmetics, pesticides/biocides/topical antiseptics and non-electronic measuring devices such as barometers, hygrometers, manometers, thermometers, sphygmomanometers. Article 4(1) of the Convention foresees an export ban for certain products containing mercury as specified in Annex A, Part I of the Convention.

Under EU law, products in the above categories containing mercury are regulated under various regimes (e.g. RoHS Directive, Batteries Directive, REACH Regulation) making it illegal to place them on the EU market (or indeed to import them). However, no export restrictions currently exist.

The restrictions under EU law are in many cases tighter than those under the Minamata Convention. An EU export ban could apply either to all the products already banned on the internal EU market or only to those banned for export under the Convention.

In your opinion, should the EU ban the exports of mercury-added products

- (●) ...as indicated in the Minamata Convention (Annex A, Part I)?
- ( ) ...in all cases when they are not allowed in the EU market?

Why?

200 character(s) maximum

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Any current EU manufacture of Hg added products for export would be
moved out of the EU with the consequent loss of control of Hg; loss of
revenue and jobs should also be considered.
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4. Mercury use in new products/processes

The Minamata Convention obliges Parties to take measures discouraging mercury use in new (i.e. not yet placed on the market) products and processes, unless an assessment of the risks and benefits demonstrates environmental or human health benefits (Articles 4(6) and 5(7) of the Convention). There is currently no such provision in EU law that reflects this obligation under the Convention.

One option to implement this would be to establish an obligation for economic actors to notify the use of mercury in new products and processes so as to enable an assessment to be made of potential risks and benefits. An alternative approach would be to completely ban mercury use in new products and processes.

In your opinion, the use of mercury in new (not yet placed in the market) products and processes

- (●) ...should be subject to approval by the EU following and assessment.
- ( ) ...should not be allowed in the EU.

Why?

200 character(s) maximum

There may be applications with no feasible alternative to Hg/Hg compounds and where desired performance/properties are inherent to the physical/chemical properties of the material (see final section).

5. Restrictions on certain processes using mercury

The Minamata Convention covers five manufacturing processes in which mercury or mercury compounds are used, namely the production of:

- chlor-alkali;
- acetaldehyde;
- vinyl chloride;
- sodium (or potassium) methylate (or ethylate);
- polyurethane.

Phase-out dates are foreseen in the Convention for mercury use in chlor-alkali production and acetaldehyde production (2025 and 2018 respectively), while a number of measures to be taken by parties are specified for each of the other processes.

Emissions from industrial installations are currently regulated under EU law by the Industrial Emissions Directive 2010/75/EU (IED). The Directive imposes the use of Best Available Techniques (BAT) aiming at reducing the environmental impact of industrial activities, and covers to a great extent the obligations on manufacturing processes (and in particular the one in respect to chlor-alkali production) undertaken by the EU when ratifying the Convention.

The use of five phenylmercury compounds as catalysts in polyurethane production will be prohibited by EU law under REACH as from 10 October 2017.

Article 5 of the Convention foresees restrictions in the use of mercury in certain processes as specified in Annex B, Part II. The obligations vary depending on the process but include measures such as:

- reducing mercury use;
- reducing mercury emissions to the environment;
- reducing or prohibiting the use of mercury from primary mining;
- supporting research and development for mercury-free processes;
- reporting to the Conference of the Parties on progress made.

In implementing this article, the EU could opt for imposing the restrictions as foreseen in Annex B, Part II of the Convention, or alternatively adopt a stricter approach by banning mercury use in these processes.

In your opinion, the use of mercury in facilities located in the EU for certain processes as described in Annex B, Part II to the Minamata Convention should be

- (●) ...restricted as foreseen in the Convention
- ( ) ...banned altogether in the EU

Why?

200 character(s) maximum

6. Dental amalgam

There is an ongoing debate in the EU concerning dental amalgam which features among the products targeted by the Convention. The Convention proposes a list of measures to be taken by the Parties in order to phase down its use, e.g. by:

- setting national objectives for preventing tooth decay;
- setting national objectives for minimising the use of mercury;
- promoting the use of mercury-free alternatives;
- promoting research on mercury-free fillings;
- education and training of dental professionals;
- insurance policies that do not favour dental amalgam use;
- insurance policies that favour the use of alternatives;
- restricting amalgam use only to its encapsulated form;
- best environmental practices in dental facilities.

Within the EU, dental amalgam is one of the main remaining uses of mercury in products. As a follow-up to the Mercury Strategy Review, the Commission has carried out, in 2012, an extensive study*[1]* on the issue, which estimated the annual consumption of mercury for dental amalgam at 75 tonnes. Additionally, the Commission is currently consulting two independent scientific committees, the Scientific Committee for Health and Environmental Risks (SCHER) and the Scientific Committee for Emerging and Newly Identified Health Risks (SCENIHR). A public consultation on the SCHER opinion was organised from 25 September to 20 November 2013 (including a hearing on 6 November 2013). The SCENIHR opinion will probably be issued in September 2014 and a dedicated public consultation, including a hearing, will be organised before its finalisation. The outcome of that process will also be taken into account by the Commission before concluding on the appropriateness of any next steps.

[1] Bio Intelligence Service (2012), Study on the potential for reducing mercury from dental amalgam and batteries, Final report prepared for the European Commission – DG ENV

In your opinion, the use of dental amalgam should be:

- ( ) ... phased down in line with the relevant Minamata provisions
- (•) ... subject to a phase out (maybe with certain justified exemptions)

Why?

200 character(s) maximum

7. Feedback on current legal framework

When proposing amendments to EU legislation, the European Commission is committed to making EU legislation simpler and to reducing regulatory costs, paying particular attention to the needs of Small and Medium-Sized Enterprises (SMEs). An evaluation and review of the Mercury Strategy took place in 2010, while the EU is currently carrying out a complementary assessment of the Mercury Export Ban Regulation. The forthcoming "Minamata ratification package" will substantially amend (or even repeal and replace) the Mercury Export Ban Regulation, the Commission will thus take the opportunity to introduce potential improvements on the basis its assessment and constructive input from stakeholders.

Would you like to propose amendments to the existing EU legal framework on mercury and in particular to the Mercury Export Ban Regulation with a view to simplifying it and/or improving its effectiveness?

- ○ Yes
- ◉ No

8. Other issues

The Commission wishes to proceed with the ratification and the implementation of the Minamata Convention as quickly as possible, and therefore the focus of this public consultation is on those certain areas where the EU will have to amend its legislation. Stakeholders are welcome to suggest other issues linked to the Convention they consider important for future consideration.

Would you like to raise any other issues in relation to the implementation of the Minamata Convention?

- ◉ Yes
- ○ No

If yes, please specify

2,000 character(s) maximum

Care should be taken to address applications with no technically feasible alternative to the use of Hg&Hg containing compounds and where the desired performance and application are inherent to the physical&chemical properties of the Hg containing material. One such area is the compound semiconductor mercury cadmium telluride (MCT,CMT). This material has been under development for many years, having been invented in the UK in the late 1950s. Early use of this material was for military thermal imaging. It now has a diverse range of applications across military, civil aviation, scientific instrumentation, and increasingly to more commercial applications including:

- Thermal imaging arrays
- IR detectors eg night vision, astronomy, instrumentation, spectrometers
- Infra-red sources
- Gas sensors
- LEDs

Export of material and devices from the USA (major manufacturer) is strictly controlled, and in some cases prohibited, on national security grounds.

MCT (Hg 1-xCdxTe) is an alloy of cadmium telluride (CdTe) and mercury telluride (HgTe) and by altering the composition, x, it is possible to fabricate very long wavelength (20 µm) through to short wavelength (0.8 µm) infrared (IR) devices. It is the only material demonstrated suitable for high-performance detectors for long-wave (8-12 µm) IR detector arrays where high performance means near 100% quantum efficiency over whole band, with background-limited noise and minimal 1/f noise. Because the alloy composition can be varied controllably within the material, MCT also has a unique potential for 2-band IR systems (eg LW/SW; LW/MW; SW/MW) and multiband IR detectors.

MCT can be manufactured via a number of techniques including melt growth, liquid phase epitaxy (LPE), molecular beam epitaxy (MBE) and metalorganic vapour phase epitaxy (MOVPE). All these techniques use elemental mercury as part of the manufacturing process; there is no alternative. In MBE and MOVPE almost all of the elemental mercury is recovered and recy

Useful links

DG ENV mercury webpage (http://ec.europa.eu/environment/chemicals/mercury/)

Background documents

EU Mercury Strategy (/eusurvey/files/2c6f492e-3e6d-428c-bff3-7b722ce34e8f)

Mercury Export Ban (/eusurvey/files/bd7651d2-8efb-40d7-8c4e-308f5404998b)

Mercury Strategy Review (/eusurvey/files/54360209-2eff-4e43-87ca-cfc2e33270a5)

Minamata Convention (/eusurvey/files/04ce990a-4e28-4a3c-91fb-e1a36ead8570)

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