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**Ad hoc open-ended working group to
prepare for the intergovernmental
negotiating committee on mercury**

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Item 4 (c) of the provisional agenda*

**Preparations for the work of the intergovernmental negotiating
committee to prepare a global legally binding instrument on
mercury: information that might assist the work of the
intergovernmental negotiating committee**

**Information that might assist the work of the intergovernmental
negotiating committee to prepare a global legally binding
instrument on mercury**

Note by the secretariat

1. By paragraph 27 of its decision 25/5, the Governing Council of the United Nations Environment Programme (UNEP) identified a number of provisions to be included in a comprehensive and suitable approach to mercury, one of which pertained to increasing knowledge through awareness-raising and scientific information exchange.
2. In response to previous requests of the Governing Council and of the Ad Hoc Open-ended Working Group on Mercury, the secretariat has prepared a number of reports, toolkits and guidance documents on topics relevant to the provisions identified in the above-mentioned decision. These documents will provide useful background information for the committee.
3. The annex to the present note contains a brief summary of the content of these documents, in addition to a table listing the provisions outlined in paragraph 27 of decision 25/5 and indicating where relevant information may be found.
4. The working group may wish to consider the information available and indicate to the secretariat any additional reports or updating necessary.

* UNEP(DTIE)/Hg/WG.Prep/1/1.

Annex

Documentation available on mercury

- A. Global Mercury Assessment, December 2002**
(<http://www.chem.unep.ch/mercury/Report/Final%20Assessment%20report.htm>)
1. The Global Mercury Assessment was presented to the Governing Council at its twenty-second session. It provides information on many aspects of mercury, including chemistry, toxicology, impacts on human health and the environment and global cycling of mercury. It also provides information on the uses of mercury, prevention and control technologies available at the time and initiatives for controlling releases and limiting use and exposure. It formed the basis for the Governing Council decision that mercury posed global problems and increased action was needed (decision 22/4 of 7 February 2003).
- B. Global Atmospheric Mercury Assessment: Sources, Emissions and Transport, November 2008, and Global Atmospheric Mercury Assessment: Sources, Emissions and Transport (detailed technical report), November 2008**
(http://www.chem.unep.ch/Mercury/Atmospheric_Emissions/Atmospheric_emissions_mercury.htm)
2. The updated emissions report was requested by the Governing Council at its twenty-fourth session. It provides the best available data on mercury atmospheric emissions and trends, in addition to current results from global modelling. Detailed information is provided in the technical report. Key findings include updated information on global emissions, of which anthropogenic activities had resulted in approximately 1,930 tonnes. It found that the largest single source of anthropogenic emissions was the burning of fossil fuels (primarily coal); with artisanal and small-scale gold mining, industrial gold production, other mining and metal production and cement production also responsible for significant emissions. It pointed out that, while comparison of those findings with previous emission estimates was complicated by the addition of new sectors and changes in methodology, it appeared that emissions from previously assessed sectors had fallen during the period 2000–2005. The report also provides information on atmospheric transport and deposition. Modelling was used to explore the regional and global effects of reducing mercury emissions.
- C. Report on supply, trade and demand information for mercury, November 2006** (<http://www.chem.unep.ch/mercury/HgSupplyTradeDemandJM.pdf>)
3. The report on supply, trade and demand information for mercury was prepared to inform discussions at the twenty-fourth session of the Governing Council. The report draws upon information submitted and publicly available databases. It also specifically considers trade in mercury used in artisanal and small-scale mining. It sets out the most common sources of mercury for the global supply, the overall extent of and changes in the global supply, the range of uses of mercury and the demand for mercury in the global supply. It outlines potential scenarios for mercury demand, based both on the status quo of the time and on a focused mercury reduction programme. Information is provided on trends in the price of mercury and the global trade in mercury, while noting that mercury trade may be both private and illegal, therefore rendering it difficult to determine accurately the extent of such trade.
- D. Mercury awareness-raising package, January 2009**
(http://www.chem.unep.ch/Mercury/awareness_raising_package/default.htm)
4. This publication is intended to raise stakeholder awareness of the effects of mercury on human health, wildlife and the environment and of relevant strategies to manage and control mercury. It is designed for use by government officials, community leaders and workers. It is intended to contribute to building public support and capacity to take preventive actions. It includes a user's guide, an overview and five thematic modules on mercury in products and wastes, mercury and industry, mercury use in artisanal and small-scale gold mining, mercury use in health care and dentistry and cultural uses of mercury.

E. Guidance for identifying populations at risk from mercury exposure, August 2008 (<http://www.chem.unep.ch/mercury/Populationsatrisk.htm>)

5. The guidance is intended to assist countries concerned about the potential impacts of mercury pollution in identifying specific populations (or subpopulations) that may be at risk. It aims to provide guidance on estimating exposures to mercury through biomonitoring and exposures to methylmercury using data on dietary fish intake. It gives an overview of mercury toxicity, exposure pathways, health and environmental impacts and available reference levels. It also provides an overview of assessments of mercury exposures for some specific exposure scenarios, including hot spot exposures. It can be used as reference for conducting research or investigations regarding mercury exposure.

F. Toolkit for identification and quantification of mercury releases (pilot draft), November 2005 (<http://www.chem.unep.ch/mercury/Toolkit/default.htm>)

6. The toolkit is intended to assist countries to build their knowledge base by developing a mercury inventory that identifies sources of mercury releases in the country and estimates or quantifies such releases. Its goal is to guide the country through the various techniques and stages of developing the inventory, by providing a methodology, illustrative examples and extensive information on mercury release sources. The toolkit thus facilitates and reduces the workload in the creation of national or regional mercury inventories.

7. It is designed to produce a simple and standardized methodology and accompanying database to enable consistent national and regional mercury inventories to be assembled. It comprises a UNEP-recommended procedure for the effective compilation of source and release inventories of mercury, given that comparable sets of mercury source release data can enhance international cooperation, discussion, goal-definition and assistance. Comparable data sets also help to establish a global picture of the scale of releases as a step in prioritizing actions to control or reduce releases and improve possibilities for enlarging the international knowledge base on mercury uses and releases.

G. Guide for reducing major uses and releases of mercury, June 2006 (<http://www.chem.unep.ch/mercury/Sector%20Guide%202006.pdf>)

8. This document is intended to assist countries to strengthen their knowledge base, to identify sources of possible mercury exposure and to assess readily the viability of the main methods of reducing mercury exposures and risks to populations. The information provided reflects approaches considered or implemented in some countries, industries or products to reduce or eliminate mercury releases. They may not, however, apply to all situations. Whether they are applied in a particular country depends upon government and local priorities, information and education about possible risks, the legal framework, enforcement, implementation costs, perceived benefits and other factors.

H. Report presenting the costs and benefits for each of the strategic objectives, October 2008 (<http://www.chem.unep.ch/Mercury/OEWG2/Documents.htm>)

9. The report provides a general qualitative assessment of potential costs and benefits for each of the priority areas for mercury, classifying such costs and benefits as small, medium, large or not applicable. The assessment takes into account that the cost element is based on the overall costs associated with implementing each strategic objective, while the benefit element is based on the extent to which the strategy would reduce mercury-related risks on a global basis and distinguish between local and global risk-reduction benefits. The final conclusion of the reported work is that there are benefits to health and environment in investing in the reduction of mercury emissions and exposure in the future primarily for the sake of improvement of human health and, more generally, human welfare. It finds that measures involving the application of technology, such as the implementation of installations to remove mercury from the flue gases in electric power plants, waste incinerators and smelters are rather expensive (medium to large costs) compared to non-technological measures, such as prevention activity, capacity-building and the promotion of mercury-containing waste separation (small to medium costs). Both groups of measures would result in large benefits and parallel application of these, depending on resources, would be appropriate.

I. Report on current supply and demand for mercury, including projections considering the phase-out of primary mercury mining, October 2008
(<http://www.chem.unep.ch/Mercury/OEWG2/Documents.htm>)

10. The report provides an assessment of whether projected demand could be met if primary mining were phased out. It also provides, based on available information, a brief summary of major sources of mercury releases by country, or if unavailable, by region, drawing upon, among other sources, the atmospheric emission study prepared for the Governing Council. It covers the following areas: emissions from coal-fired power plants; industrial emissions (e.g., waste combustion, non-ferrous metals and cement production); artisanal gold-mining use and emissions; and use of mercury in products and processes. Its conclusions are that, excepting the current situation in China, mercury mining is not essential. It also demonstrates that the mercury market will reach an equilibrium of supply and demand following major changes, such as the closure of mercury mines in 2003 and 2004.

J. Report on the major mercury-containing products and processes, their substitutes and experience in switching to mercury-free products and processes, October 2008
(<http://www.chem.unep.ch/Mercury/OEWG2/Documents.htm>)

11. The report provides information on mercury-containing products and processes that have effective substitutes, including information on the relative quantities of mercury used and on experience in switching to non-mercury processes or products. The report found three categories of products: those where alternatives are successfully used, those where alternatives are available but challenges to changeover exist, and those where economic, technical, social and institutional factors that affect the feasibility of implementing the non-mercury alternatives vary significantly by site.

K. Other information sources

12. The Secretariat of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal has developed draft technical guidelines on the environmentally sound management of mercury wastes. The guidelines give comprehensive information about mercury waste, including the chemistry and toxicology of mercury, sources of mercury and mercury waste. They also provide knowledge and expertise on environmentally sound management and provisions for mercury waste under international legal instruments.
(<http://www.basel.int/techmatters/mercury/guidelines/040409.doc>)

Provisions identified in paragraph 27, decision 25/5 of the UNEP Governing Council	Information source
To specify the objectives of the instrument	
To reduce the supply of mercury and enhance the capacity for its environmentally sound storage	<p>Report on current supply and demand for mercury, including projections considering the phase-out of primary mercury mining, October 2008</p> <p>Report presenting the costs and benefits for each of the strategic objectives, October 2008</p> <p>Report on supply, trade and demand information on mercury, November 2006</p>
To reduce the demand for mercury in products and processes	<p>Report on the major mercury-containing products and processes, their substitutes and experience in switching to mercury-free products and processes, October 2008</p> <p>Report on current supply and demand for mercury, including projections considering the phase-out of primary mercury mining, October 2008</p> <p>Report presenting the costs and benefits for each of the strategic objectives, October 2008</p> <p>Guide for reducing major uses and releases of mercury, June 2006</p> <p>Report on supply, trade, and demand information on mercury, November 2006</p>
To reduce international trade in mercury	<p>Report on supply, trade, and demand information on mercury, November 2006</p>
To reduce atmospheric emissions of mercury	<p>Report presenting the costs and benefits for each of the strategic objectives, October 2008</p> <p>Guide for reducing major uses and releases of mercury, June 2006</p> <p>Toolkit for identification and quantification of mercury releases (pilot draft), November 2005</p> <p>Global Atmospheric Mercury Assessment: Sources, Emissions and Transport, November 2008, and Global Atmospheric Mercury Assessment: Sources, Emissions and Transport (detailed technical report), November 2008</p>
To address mercury-containing waste and remediation of contaminated sites	<p>Draft technical guidelines on the environmentally sound management of mercury wastes</p> <p>Report presenting the costs and benefits for each of the strategic objectives, October 2008</p> <p>Guide for reducing major uses and releases of mercury, June 2006</p> <p>Toolkit for identification and quantification of mercury releases (pilot draft), November 2005</p>

Provisions identified in paragraph 27, decision 25/5 of the UNEP Governing Council	Information source
To increase knowledge through awareness-raising and scientific information exchange	<p>Guide for reducing major uses and releases of mercury, June 2006</p> <p>Toolkit for identification and quantification of mercury releases (pilot draft), November 2005</p> <p>Guidance for identifying populations at risk from mercury exposure, August 2008</p> <p>Mercury awareness-raising package, January 2009</p> <p>Global Atmospheric Mercury Assessment: Sources, Emissions and Transport, November 2008, and Global Atmospheric Mercury Assessment: Sources, Emissions and Transport (detailed technical report), November 2008</p> <p>Global Mercury Assessment, December 2002</p>
To specify arrangements for capacity-building and technical and financial assistance, recognizing that the ability of developing countries and countries with economies in transition to implement some legal obligations effectively under a legally binding instrument is dependent on the availability of capacity-building and technical and adequate financial assistance	Report presenting the costs and benefits for each of the strategic objectives, October 2008
To address compliance	