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**United Nations
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**Intergovernmental negotiating committee
to prepare a global legally binding
instrument on mercury**

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Item 4 of the provisional agenda*

**Preparation of a global legally binding
instrument on mercury**

Update of information on the supply and trade of mercury

Note by the secretariat

1. At its twenty-fourth session the Governing Council of the United Nations Environment Programme (UNEP) considered a report on the global supply of, trade in and demand for mercury, which was set out in annex II to document UNEP/GC/24/INF/17. At that session the Governing Council adopted decision 24/3, by which it committed itself to increased efforts to address the global challenges posed by mercury, established the open-ended working group on mercury and requested the Executive Director of UNEP to undertake a range of activities.
2. As part of its response to decision 24/3 UNEP began a project on reducing mercury supply and investigating mercury storage solutions, in connection with which it commissioned consultants to update and supplement the information contained in annex II to document UNEP/GC/24/INF/17 by preparing reports on mercury supply, trade and demand at the regional level. To date, two such reports have been completed: one for Latin America and the Caribbean and one for Asia and the Pacific.
3. At its meeting in Bangkok from 19 to 23 October 2009, the ad hoc open-ended working group to prepare for the intergovernmental negotiating committee on mercury agreed on a list of information that the secretariat would provide to the committee at its first session to facilitate its work. Among other things, the secretariat was requested to provide an update of the report on mercury supply, trade and storage set out in annex II to document UNEP/GC/24/INF/17.
4. In response to that request the secretariat is making available the reports on regional mercury supply, trade and demand for Latin America and the Caribbean and Asia and the Pacific referred to above, each of which comprises an executive summary and a detailed discussion. For ease of reference the executive summaries are set out in annexes I and II to the present report. The full reports are set out in the annexes to document UNEP(DTIE)/Hg/INC.1/INF/9, in English only. Both the executive summaries and the full reports are presented as submitted, without formal editing.

* UNEP(DTIE)/Hg/INC.1/1.

5. The movement towards the use of alternatives to mercury results in a surplus supply of mercury. That surplus, and out-of-date mercury-containing products, must be managed properly and stored to prevent their re-entry to the global market. Although the requirements for mercury waste storage are similar in some ways to those for the storage of other hazardous wastes, the permanence of mercury and the lack of any alternative to long-term storage as a means of disposal are unique.¹ Long-term storage facilities are needed to isolate surplus mercury from the biosphere and hydrosphere indefinitely. While both the European Union and the United States of America are looking at the establishment of terminal storage facilities, there are no such initiatives under way in other regions. The reports set out here and in document UNEP(DTIE)/Hg/INC.1/INF/9 give an estimation of surplus mercury and discuss work under way to assess options for storage facilities.

¹ Throughout the reports the terms “storage” and “long-term management” are used interchangeably, and refer to long-term sequestration of surplus mercury from the global marketplace. The terms are not intended to suggest how the mercury would be sequestered or what type of sequestration facilities would be best.

Annex I

Executive summary of the report “Assessment of Excess Mercury in Asia and the Pacific, 2010 – 2050”

1. The report is a revised version of the original report dated November 2008. It was prepared to provide information to support the work of the Asia and Pacific mercury storage project, aimed at initiating a regional process to support the sequestration of excess mercury in Asia and the Pacific. The report takes account of comments provided by China, Japan and Nepal.

2. This report provides a framework for better understanding future mercury flows within Asia and will inform discussions about managing excess mercury in the region. The original version of the report provided background information for the inception meeting of the project on the storage of mercury in Asia, that took place from 4 to 5 March 2009, in Bangkok.

3. The reduction of mercury supply and long term management of mercury, have both been identified as priorities by the Governing Council of the United Nations Environment Programme. It is imperative that Governments and other stakeholders consider how to deal with excess mercury, since elemental mercury, apart from being toxic, cannot be destroyed or degraded, and hence must be managed over the long term in order to avoid its re-entry into the global marketplace.

4. Importantly, mercury flows in Asia need to be better understood before subsequent steps are taken – which may include planning for the necessary storage capacity, discussing regional coordination activities, securing financial and technical support, identifying technical criteria (including site assessments) that constitute environmentally sound long-term storage, and developing the basic design of such a facility or facilities.

5. Present information suggests that future sources of mercury in the Asian region will include principally mercury recovered as a by-product from various mining and smelting activities, from the cleaning of natural gas, from the closure or conversion of mercury cell chlor-alkali plants, and from other significant sources such as end-of-life products. Regional sources of mercury are correlated in this analysis with regional uses, such as lamps, measuring devices, and dental amalgam over the same time period in order to estimate excess mercury that will be generated in the region.

6. The report illustrates that the Asian region is a significant net importer of mercury at the present time. The vast majority of the imported mercury is used for small-scale gold mining, and lesser amounts are used for product manufacturing, with China consuming much of its own mined mercury producing vinyl chloride monomer to be used in the production of polyvinyl chloride. Therefore, the timing of the generation of excess mercury in Asia depends to a large extent on the timing and magnitude of demand reduction in these key sectors.

7. Experts from the United Nations Industrial Development Organization and other entities have determined that mercury supply restrictions can contribute to significant demand reductions in small-scale gold mining through increased prices and more difficult access to mercury supply. Subsequently, measures to influence supply and demand can be mutually reinforcing, and to some extent supply restrictions must precede demand reductions to be effective. Planning for the diversion of mercury supply into storage may be especially important as an initiative to further encourage demand reduction.

8. Currently, demand for mercury in Asia exceeds supply. According to the scenarios assessed in the report, mercury supply and demand in Asia are projected to reach a rough equilibrium beginning about 2014 or 2015, after which it is anticipated that supply will exceed demand. This time frame could be shorter if stricter requirements for the collection of by-product mercury released from ores in metal processing and currently emitted or released to the environment result in substantial additional by-product mercury being made available to the market. This would produce an excess of mercury which is either available for use, or would be required to be stored. On the other hand, this time frame could be longer if demand reduction in small-scale gold mining proves to be more difficult to achieve relative to the goals set out in the artisanal and small scale gold mining partnership area of the UNEP Global Mercury Partnership.

9. Furthermore, after 2017 the urgency of developing an Asian mercury storage capability is likely to depend on the rate of further demand reductions (contributing to excess mercury supply), the extent to which countries in the region wish to encourage these further demand reductions through supply restrictions such as increased regulation or controls on access to mercury, and the extent to which a

solution which is suitable for all countries in the region is achieved (even though net supplies of excess mercury may occur in a relatively small number of countries).

10. In any case, substantial excess mercury can be expected in Asia after 2030, based on an assessment of current declines in use of mercury as a result of increasing legislation and voluntary controls on the use of mercury, as well as the assessment of mercury available through recycling, by-produce mercury and liberation of stockpile, the quantity of excess mercury, mostly accumulated between 2030 and 2050, would likely amount to just over 5,500 tonnes (around 400 m³). According to an alternative policy scenario, in which regional authorities may decide to move the storage of excess mercury to an earlier timepoint than 2030, the quantity of mercury accumulated may be as high as 7,500 tonnes (around 560 m³).

Annex II

Executive summary of the report “Excess mercury supply in Latin America and the Caribbean, 2010–2050”

1. Decision 24/3 IV of the UNEP Governing Council identified seven priority areas for action to reduce the risks from releases of mercury, two of which are:
 - To reduce the global mercury supply, including considering curbing primary mining and taking into account a hierarchy of sources; and
 - To find environmentally sound storage solutions for mercury.
2. In its decision GC 25/5 the Governing Council agreed to take further international measures including the elaboration of a legally binding instrument on mercury, which could include both binding and voluntary approaches, as well as a range of interim activities, to reduce risks to human health and the environment.
3. In the Latin American and Caribbean region, the increasing capture of by-product mercury from mining operations, and the increasing use of alternatives to replace mercury, will result in excess mercury in the region. In addition, the management of mercury supply is now seen as a valuable policy tool with which to help reduce the demand for mercury in sectors where there are viable mercury-free alternatives.
4. If not needed for acceptable applications, mercury must be managed properly and stored, thereby preventing its re-entry into the global market. Identifying environmentally sound storage solutions for mercury is therefore recognized as a priority.
5. Places to sequester safely the excess mercury are needed, since elemental mercury, apart from being toxic, cannot be destroyed or degraded. Governments and other stakeholders need to understand how to manage this mercury over the long term in order to avoid its re-entry into the global market place. This understanding includes planning for the necessary storage capacity, discussing regional coordination activities, securing financial and technical support, identifying technical criteria for environmentally sound long-term storage, and developing the basic design of such a facility or facilities. As a first step in the planning process, the report on excess mercury supply estimates the quantities of mercury that may become available in the region for sequestration, and time horizons for taking appropriate action.
6. The report confirms that the Latin American and Caribbean region imports and exports significant quantities of mercury. The vast majority of mercury consumed in the region is used for small-scale gold mining, and lesser amounts for industrial use in the production of chlor-alkali using the mercury process, as well as use in mercury containing product applications.
7. This analysis observes that future sources of mercury in the Latin American and Caribbean region will include mainly mercury recovered as a by-product of mining operations, and mercury recovered from the closure or conversion of mercury cell chlor-alkali plants. Such regional sources of mercury are correlated in this analysis with the regional uses mentioned above in order to better understand the mercury supply and demand equilibrium in the region.
8. Accordingly, the report presents a framework for better understanding future mercury supply and demand within Latin America and the Caribbean, a framework necessary to inform discussions about managing and storing mercury in the region. The analysis provided background information for the inception meeting of the project on the storage of excess mercury in the Latin American and Caribbean region, held in April 2009, in Montevideo, Uruguay.
9. Experts from the United Nations Industrial Development Organization and other entities have determined that mercury supply restrictions, such as mercury storage, can contribute to significant demand reductions in small-scale gold mining through increased prices and more difficult access to mercury supply. Subsequently, measures to influence supply and demand can be mutually reinforcing, and to some extent supply restrictions that precede demand reductions can be even more effective. Planning for diversion of mercury supply into mercury storage may be especially important as an initiative to further encourage demand

10. According to the base case scenario assessed in the report, the mercury supply in Latin America and the Caribbean may exceed demand even before 2015, which could imply a need for storage of the excess mercury. This scenario assumes that stricter requirements will be imposed on the industrial mining sector that will lead to the recovery of additional by-product mercury. On the other hand, this time frame could be a few years longer if certain international gold mines in South America continue to export their by-product mercury to the United States.

11. The urgency of a Latin American and Caribbean mercury storage capability will depend on the rate of further demand reductions (contributing to excess mercury supply), the extent to which countries in the region wish to encourage these further demand reductions through supply restrictions such as increased regulation or controls on access to mercury, and the extent to which a regional storage solution is achieved (even though net supplies of excess mercury may occur in a relatively small number of countries).

12. The base case scenario shows that the quantity of mercury that may need to be stored in the Latin American and Caribbean region between 2015 and 2050 could amount to over 8,000 tonnes. According to an alternative minimum storage scenario, in which it is assumed that some by-product mercury continues to be exported, and it is assumed there is a generally slower increase in the generation of by-product mercury, the quantity of mercury accumulated may be closer to 2,000-3,000 tonnes. These scenarios do not reflect the possible adoption of an immediate or near-term regional strategy of sequestering mercury as a way of encouraging reduced mercury demand. Adoption of such a strategy would require development of storage capacity as soon as possible.
