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**Review and assessment of options for enhanced voluntary measures
and new or existing international legal instruments**

Information note by the Secretariat of the Basel Convention

The secretariat has the honour to provide, in the annex to the present note, a submission on behalf of the Secretariat of the Basel Convention for the information of the Working Group at its second meeting. The document has been reproduced without formal editing.

* UNEP(DTIE)/Hg/OEWG.2/1.

Annex

Open ended working group to review and assess options for enhanced voluntary measures and new or existing international legal instruments on mercury 6-10 October 2008, Nairobi

Information Note by the Secretariat of the Basel Convention

Executive summary

The Basel Convention is the only global norm-creating instrument on the environmentally sound management (ESM) of hazardous waste and other waste. The Convention already regulates some of the mercury issues and is relevant to most of the global challenges to reduce risks from releases of mercury that have been identified by UNEP/GC Decision 24/3. Mercury and mercury compounds are covered under the technical scope of this Convention, including fly-ashes from coal-fired power plants which are estimated as contributing 25% of anthropogenic mercury emissions to the atmosphere of total mercury emissions. Also covered are mercury containing wastes from industrial pollution control devices for cleaning of industrial off-gases. Currently, the Convention has initiated the task of defining further the concept of ESM as it applies to mercury containing waste through the development of technical guidelines and the pilot testing of these guidelines. Although the Convention is not equipped to address such issues as the mining or trade in primary mercury, it would remain a key contributor to any international efforts to address the global challenges posed by mercury. The Basel Convention could usefully contribute to the undertaking of global measures of a voluntary nature on mercury. In addition, the Convention would be eligible for being considered a 'parent' convention for any protocol on mercury, should this be the wish of the negotiating countries. In this regard, the lack of a financial mechanism under the Basel Convention may be of concern to some countries. This situation should not preclude in any way the possibility of establishing a separate financial arrangement in support of a protocol to be developed under the Basel Convention, as would be required under any other instrument.

1. Background information on the Basel Convention – A unique norm-creating global instrument on environmentally sound management.

1. The Basel Convention establishes a global framework for the control of transboundary movements of hazardous wastes and other wastes as well as for the environmentally sound management (ESM) of such wastes, including hazardous waste and other waste generated at the national level. The main principles guiding the implementation of the Basel Convention are i) transboundary movements of hazardous wastes should be reduced to a minimum consistent with their ESM; ii) the generation of hazardous waste should be reduced to a minimum; iii) hazardous wastes should be treated and disposed of as close as possible to their source of generation.

2. ESM of hazardous waste means 'taking all practicable steps to ensure that waste is managed in a manner which will protect human health and the environment against the adverse effects which may result from such waste'. The obligations on ESM are to ensure the reduction of the generation of hazardous and other wastes, the availability of adequate treatment, recovery, recycling and disposal facilities for hazardous wastes, the minimization of the harmful consequences of pollution to human health and the environment, and the reduction of transboundary movements of such wastes, all of which necessitate an integrated approach to chemical and waste management. The

ESM approach calls for up-stream preventive measures by encouraging waste minimization, minimization of residues at source, recycling, seeking alternatives and recovery.

3. The control of transboundary movements of hazardous waste was the primary focus of international and regional regulatory activities in the first years of implementation of the Convention. A decision to amend the Convention was adopted in September 1995 in order to ban exports of hazardous wastes for final disposal, recovery or recycling from countries listed in a new Annex VII (Parties and other States which are members of OECD, EC, Liechtenstein) to non-Annex VII countries. As of 1 August 2008, 63 Parties had ratified the amendment, but it had not yet entered into force.

4. In the last decade, the norm-creating process on ESM has received increasing attention. This normative process is a result of complex interactions between various factors, encompassing the globalization of trade in waste, the consequences of evolving production and consumption patterns on the generation of waste and the ability of the Parties to develop national ESM capacity to respond to these challenges. In this regard, important work has been undertaken in establishing the objectives, principles and, in certain cases, standards of ESM as they apply to hazardous waste and other waste covered by the Convention. Technical guidelines for the ESM of various waste streams have been developed. These documents have a special value since they were not only developed by highly specialized experts from various countries, organizations, the private sector and the civil society represented in the technical working groups, but were also later adopted by the Conference of the Parties to the Basel Convention.

5. The norm-creating processes under the Basel Convention are an important contribution to the development of a comprehensive and effective international framework on chemicals and waste. As an example, the technical guidelines and standards on ESM developed by the Basel Convention are being used by relevant multilateral environmental agreements, international specialized organizations and financial institutions, national governments, industry and environmental NGOs in the context of their field activities. The significant role of the Basel Convention in this international framework is well established. Thus, for example, the Conference of the Parties to the Stockholm Convention has been requested to ‘cooperate closely with the appropriate bodies of the Basel Convention, *inter alia*, to establish levels of destruction and irreversible transformation (...) as well as to determine what they consider to be the methods that constitute environmentally sound disposal’ (Article 6, paragraph 2 of the Stockholm Convention).

2. Mercury under the Basel Convention

6. The hazardous wastes regulated by the Convention are, by Article 1, paragraph 1(a) of the Convention, defined as those belonging to any category contained in Annex I to the Convention unless they do not possess any of the hazardous characteristics contained in Annex III. The wastes regulated by the Convention are further clarified by the lists of wastes contained in Annexes VIII and IX to the Convention. Mercury and mercury compounds are listed under Y29 in Annex I to the Basel Convention. In addition, mercury wastes are also covered in Annex VIII under the following codes:

- A1010 - metal and metal-bearing waste;
- A1030 - wastes having as constituents or contaminants of mercury and mercury compounds;
- A1180 - waste electrical and electronic assemblies or scrap containing components such as mercury switches or contaminated with mercury;

7. By its decision VIII/33, the eighth meeting of the Conference of the Parties (COP8) agreed to include a new Strategic Plan focus area on mercury wastes. Under the mercury waste programme, COP8 instructed the Secretariat, in cooperation with UNEP, to:

- i) develop partnerships around the theme of environmentally friendly technologies and awareness raising regarding avoidance, use and disposal of mercury wastes;
- ii) develop capacity-building and technical assistance programmes to reduce and prevent pollution from mercury;
- iii) develop guidelines on ESM of mercury wastes with emphasis on the development of sound disposal and remediation practices.

8. Following the Basel Convention's COP8 decision VIII/33, UNEP Chemicals and the Secretariat of the Basel Convention have developed a work plan comprised of the following two components:

a) Component I: To develop and finalize draft texts for the technical guidelines on the Environmentally Sound Management (ESM) of mercury wastes in close consultation with the Open-ended Working Group of the Basel Convention; and

b) Component II: Implementation of pilot projects on Environmentally Sound Management (ESM) of mercury wastes in selected countries.

9. A first draft version of the Technical Guidelines on the Environmentally Sound Management of Mercury Wastes was presented for consideration by the Open-ended Working Group of the Basel Convention at its sixth meeting (OEWG6) in September 2007 in Geneva¹. A revised draft of the technical guidelines was submitted to the ninth meeting of the Conference of the Parties to the Basel Convention (COP9) from 23 to 27 June 2008, Indonesia, which agreed to establish a small inter-sessional working group whose work will be directed by a lead country, if one is identified, or coordinated by the Secretariat, in order to prepare a revised version of the technical guidelines to be considered by the meeting of the Open-ended Working Group of the Basel Convention at its next session.

10. The technical guidelines will provide guidance to Parties and other stakeholders on the ESM of mercury containing waste, including sources and types of mercury waste, chemical analysis of mercury in waste, ESM criteria and practices, a legislative and regulatory framework, prevention and minimization, handling, collection and transportation, treatment and recovery processes, long-term storage and disposal of mercury waste, remediation, public awareness and participation and policy development.

11. A sub-regional program for the ESM of mercury waste in the health sector and in other sectors in several countries in Latin America and the Caribbean will be implemented in support of the development of the Basel Convention Technical Guidelines on the ESM of Mercury Waste. Concrete activities are expected to start by the end of 2008 and will be coordinated by the Basel Convention Coordinating Centre for the Latin America and the Caribbean region, based in Uruguay. The first phase of this program is funded by the United States of America with additional support from Norway. The Secretariat is exploring the possibility of expanding this program on mercury waste management to other regions, in particular to Africa and Asia.

¹ UNEP/CHW/OEWG/6/INF/16

3. Relevance of the Basel Convention in addressing the main global challenges to reduce risks from releases of mercury as identified in Decision UNEP/GC24/3.19

(a) Reduce atmospheric mercury emissions from human sources.

12. Coal combustion is the major source of atmospheric mercury emission worldwide² and is estimated as contributing 25 % of anthropogenic mercury emissions to the atmosphere. Fly-ashes from coal-fired power plants that contain Basel Convention Annex I substances in concentrations sufficient to exhibit Annex III (hazardous) characteristics would be characterized as hazardous waste under Article 1 (a) of the Basel Convention and, indeed, are listed under category A2060 of Annex VIII to the Basel Convention³. Other major sectoral sources of unintentional anthropogenic mercury emissions include residential heating facilities using fossil fuels⁴ (20%) and industrial large scale gold production as well as artisanal small-scale gold mining. Mining, smelting and metal production contribute up to 10% of anthropogenic mercury emissions to the atmosphere. Wastes from industrial pollution control devices for cleaning of industrial off-gases are also clearly identified as hazardous waste regulated under the Basel Convention⁴. As a consequence, the general obligations of the Convention concerning waste minimization are applicable to most, if not all, major atmospheric mercury emissions from human sources.

(b) Find environmentally sound solutions for the management of waste containing mercury and mercury compounds.

13. The ESM of hazardous waste constitutes a fundamental objective of the Basel Convention. Under the general obligations of the Convention, Parties shall take measures to ensure that hazardous wastes are managed in an environmentally sound manner. The competent subsidiary bodies of the Convention further develop the objectives, principles and standards, as appropriate, of ESM for particular waste streams or particular waste treatment operations for consideration and possible adoption by the Conference of the Parties. Under its Article 10, the Convention invites Parties to co-operate with each other in order to improve and achieve ESM of hazardous waste and other waste. The technical guidelines explain what is understood to be the ESM of hazardous waste. On the basis of the review of existing techniques and technologies, these non-mandatory guidelines propose conditions or criteria for their use to ensure ESM of the waste. As of today, the draft Technical Guidelines on the Environmentally Sound Management of Mercury Waste that are being discussed by the technical bodies of the Convention, have specific sections on environmentally sound techniques and technologies for the handling, collection, storage (interim and long-term), transport, treatment, recovery and disposal of mercury containing waste. The technical guidelines are an important tool to guide technology-transfer under the Basel Convention. It is anticipated that the draft guidelines will be finalized for consideration and possible adoption by the next meeting of the Conference of the Parties to the Basel Convention in 2011.

(c) Reduce global mercury demand related to use in products and production processes.

14. *The Source Reduction Principle* (by which the generation of waste should be minimized in terms of its quantity and its potential to cause pollution) and the *Integrated Life-Cycle Principle* (by which substances and products should be designed and managed in such a way that minimum environmental impact is caused during their generation, use, recovery and disposal) are the first listed principles to be considered in the development of waste and hazardous waste strategies⁵. The

² UNEP 2002 report. UNEP Report on Atmospheric Emissions of Mercury (draft, 13 June 2008).

³ Annex VIII, entry A2060 - Coal fired power plant fly-ash containing Annex I substances in concentrations sufficient to exhibit Annex III characteristics (note the related entry on list B B2050).

⁴ Annex VIII, entry A4100 – Waste from industrial pollution control devices for cleaning of industrial off-gases but excluding such wastes specified on list B.

⁵ Guidance Document on the Preparation of Technical Guidelines for the Environmentally Sound Management of Wastes Subject to the Basel Convention, 1994.

general obligations under the Convention to minimize the generation of waste, in particular through product substitution and minimization, constitute a solid legal basis for the development of more stringent action, such as progressive phase out and prohibitions of use of mercury in specific economic activities, including artisanal and small-scale gold mining, product manufacturing and chlor alkali production. In this regard, the existing draft of the Technical Guidelines on the ESM of Mercury Waste proposes a review of possible applications for mercury waste prevention and minimization (including reduction of discharge and emissions). However, the Basel Convention does not regulate the transboundary movements of chemicals or products and would not impose trade restrictions on elemental mercury or mercury compounds.

(d) Reduce the global mercury supply, including considering curbing primary mining and taking into account a hierarchy of sources.

15. The Basel Convention does not regulate the primary mining of mercury and the global supply of mercury. The Basel Convention does, however, participate in several voluntary initiatives which aim to promote the sustainable use of materials, such as the Basel Convention-led “Partnership for Action on Computer Equipment (PACE)” and the Green Lead Initiative. Both programs promote the generation of secondary materials through environmentally sound recovery and recycling and, therefore, have a direct impact upon the mining of primary metals. In this connection, it is noted that secondary lead from recycling activities is today the primary source of lead. Thus, the Basel Convention can play a very active role by addressing the global supply of mercury that originates from wastes (e.g. stockpiles, mercury waste from the decommissioning of industrial processes, mercury recovery operations from end-of-life equipment, waste landfilling and waste incineration, etc).

(e) Find environmentally sound storage solutions for mercury.

16. Environmentally sound storage is an important operation in the management of the waste that is addressed by the Basel Convention, together with collection, labelling, transport, re-use, recovery/recycling and final disposal. Permanent or temporary storage are identified as operations D12 and D15 respectively in Annex IV-A (Disposal Operations) to the Basel Convention. In the absence of environmentally sound disposal operations applicable to mercury waste, permanent or temporary storage of mercury containing waste or of recovered mercury from waste would be considered an environmentally sound solution until better solutions are found. The establishment of criteria and standards for the environmentally sound storage of mercury falls fully within the mandate and the prerogatives of the Basel Convention and its subsidiary bodies. Permanent and temporary storage are both addressed in the draft Technical Guidelines on the ESM of Mercury Waste and are the primary focus of the capacity building activities being implemented by the Convention.

(f) Address, considering the results of the analysis referred to in paragraph 24 (d) below, the remediation of existing contaminated sites affecting public and environmental health.

17. The Basel Convention does not regulate the remediation of contaminated sites affecting public and environmental health. Waste to be controlled under the Convention is defined as substances or objects which are disposed of, or are intended to be disposed of, or are required to be disposed of, by the provisions of national law. Consequently, the remediation of sites in an environmentally sound manner must be addressed in national legislative and regulatory measures. The General Technical Guidelines for the ESM of POPs as Waste also suggest that the question of POPs contaminated sites be taken up under legislation (paragraph 59). At the same time, the draft Technical Guidelines on the ESM of Mercury Waste (April 2008 version) include a review of established and newer remediation techniques available for cleanup of mercury-contaminated sites.

(g) Increase knowledge on areas such as inventories, human and environmental exposure, environmental monitoring and socio-economic impacts.

18. Parties are required to compile information on the effects on human health and the environment of the generation, transportation and disposal of hazardous waste and other waste, as well as on amounts of hazardous waste imported or exported, under Article 13 of the Basel Convention on transmission of information. Article 16 of the Convention also requests the Secretariat to compile information from Parties concerning authorized national sites and facilities available for the disposal of their hazardous waste and to circulate this information among Parties. There are no specific requirements under the Convention for the transmission of information on socio-economic impacts of hazardous waste although a number of pilot surveys are being conducted by several Parties. In addition, Parties have agreed at the 6th meeting of the Conference of the Parties to report to the Secretariat on their national data on the generation of hazardous waste and other waste and to provide information on the measures taken for the reduction and/or elimination of the amount of hazardous wastes and other wastes generated.

4. The Basel Convention - A key contributor to any voluntary program and to the development of a legally binding instrument (e.g. Basel Convention Protocol on mercury).

19. The Basel Convention currently regulates some of the aspects of mercury management that have been identified by the international community for priority action. The Convention is, therefore, a very relevant global instrument to address mercury-related issues and should be considered as a key contributor to any international action to address mercury issues, whether these actions are conducted within a voluntary or a legally-binding framework.

20. As indicated above, the Convention addresses most of the priorities for increased efforts to reduce risks from releases of mercury that have been identified by UNEP/GC Decision 24/3. However, it does not currently have a specific mandate to address the reduction of the global mercury supply, including considering curbing primary mining, nor does it address the remediation of contaminated sites. Thus, as in the case of all other existing multilateral environment agreements, the Convention's current framework does not vest it with the authority to regulate all the global priorities identified by the Governing Council of the UNEP.

21. The Secretariat of the Basel Convention highlights the fact that the development of a protocol on mercury to the Basel Convention has not been presented as a possible legal option before the Ad Hoc Open-ended Working Group for mercury. There is a need to acknowledge that the development of a mercury protocol to the Basel Convention is legally possible under the Convention.

22. Should there be international support for developing a specific legally binding instrument to address all mercury related issues, a protocol under the Basel Convention would have numerous advantages:

- The Basel Convention mandates the Conference of the Parties to consider and adopt protocols (Article 15, paragraph 5(d));
- The Basel Convention is very relevant to the issues related to mercury and, as a potential parent convention, already establishes a set of objectives, principles and standards on the control of transboundary movements and the ESM of mercury-containing waste;
- The bodies of the Basel Convention already make critical contributions to on-going international efforts on this matter, as evidenced by the on-going work in developing Technical Guidelines on the ESM of Mercury Waste and the programmatic activities to pilot test these guidelines;

- Other issues related to mercury already covered by the Basel Convention include import and export control, destruction/disposal problems, illegal traffic, non-compliance, dispute resolution, liability and institutional strengthening;
- A global framework for addressing the capacity-building needs of developing countries and countries with economies in transition already exists through the 14 Basel Convention Regional Centres, providing a cost-efficient option which maximises the use of existing resources and facilities. The Strategic Plan of the Basel Convention has identified these Centres as one of the delivery mechanisms for training and technology transfer not only for hazardous waste, but also chemical-related issues.

23. Of concern to some countries is the lack of a financial mechanism for the Basel Convention. However, this would not preclude the possibility of establishing a financial instrument for a protocol to be developed under the Basel Convention. In this context, it is further noted that, if it is the desire of the States concerned to establish a financial mechanism for a new legal instrument regulating mercury, a new financial arrangement would need to be developed regardless of whether this legal instrument is developed under the auspices of an existing convention, or as an entirely independent convention.

Annex – Basel Convention COP9 Decision on the Technical Guidelines on the Environmentally Sound Management of Mercury Wastes (23-27 June 2008).

The Conference of the Parties,

Recognizing the important contribution of Technical Guidelines on the Environmentally Sound Management of Mercury Wastes to the work on mercury being conducted under the United Nations Environment Programme (UNEP),

Welcoming the contribution by the Chemicals Branch of the United Nations Environment Programme, Norway and the United States for capacity-building pilot projects in which the draft Technical Guidelines on the Environmentally Sound Management of Mercury Wastes will be tested,

1. *Takes note* of the draft Technical Guidelines on the Environmentally Sound Management of Mercury Wastes;⁶
2. *Agrees* that the further development of the technical guidelines should be included in the work programme of the Open-ended Working Group for 2009-2011;
3. *Invites* Parties and others to submit further comments on the draft technical guidelines to the Secretariat by 30 November 2008;
4. *Also invites* Parties to serve as lead country for developing the technical guidelines;
5. *Agrees* to establish a small intersessional working group, to be led by the lead country, if one is identified, or to be coordinated by the Secretariat, on the development of the technical guidelines, which shall work in particular by electronic means;
6. *Invites* countries and others to participate in the work of the small intersessional working group on the development of the technical guidelines and to inform the Secretariat of their participation by 30 October 2008;
7. *Requests* the lead country, if one is identified, or the Secretariat, subject to the availability of voluntary funding, in consultation with the small intersessional working group, to prepare a revised version of the technical guidelines, taking into account the comments received, by 30 April 2009, for publication on the Basel Convention website;
8. *Invites* Parties and others to submit comments on the revised draft technical guidelines to the Secretariat by 30 September 2009;
9. *Requests* the lead country, if one is identified, or the Secretariat, subject to the availability of voluntary funding, in consultation with the small intersessional working group, to prepare a revised version of the technical guidelines, taking into account the comments received, by 31 January 2010, for publication on the Basel Convention website and for consideration at the seventh meeting of the Open-ended Working Group;
10. *Invites* Parties and others to submit comments on the revised draft technical guidelines to the Secretariat by 30 April 2010;
11. *Also invites* Parties and others to contribute financially and in kind towards the further development of the technical guidelines;
12. *Requests* the Secretariat to report to the Conference of the Parties at its next meeting on progress in developing the draft Technical Guidelines on the Environmentally Sound Management of Mercury Wastes.