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**Fourth meeting of the Expanded Bureau
of the seventh meeting of the Conference
of the Parties to the Basel Convention**

Nairobi, 26 November 2006

Item 4 of the provisional agenda*

**World Forum on E-waste: Note by the Secretariat
(including proposed elements for a declaration or statement
on environmentally sound management of E-wastes)**

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Distr.: General
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**Conference of the Parties to the Basel Convention
on the Control of Transboundary Movements of
Hazardous Wastes and Their Disposal**

Eighth meeting

Nairobi, 27 November–1 December 2006

Item 4 of the provisional agenda*

Organization of the meeting

**Creating innovative solutions through the Basel Convention for the
environmentally sound management of electronic wastes**

Note by the Secretariat

I. Introduction

1. The proposed theme for the eighth meeting of the Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal is “Creating innovative solutions through the Basel Convention for the environmentally sound management of electronic wastes”.
2. At its third meeting, the Expanded Bureau of the seventh meeting of the Conference of the Parties to the Basel Convention requested the Secretariat to prepare a paper that would facilitate the consideration by Parties and others of the proposed theme of the Conference.

II. Implementation

3. The paper prepared by the Secretariat is contained in the annex to the present note. Further data and statistics relevant to the proposed Conference theme are set out in document UNEP/CHW.8/INF/35.

III. Proposed action

4. The Conference may wish to note of the paper prepared by the Secretariat and consider appropriate action.

* UNEP/CHW.8/1.

Annex

Creating innovative solutions through the Basel Convention for the environmentally sound management of electronic wastes

I. What is the e-waste problem?

1. Today, the manufacture of electronic equipment is one of the world's fastest growing industries. Yet with the proliferation of such equipment comes also the growing environmental challenge of proper management of the equipment at the end of its useful life. As technology advances and consumers' demands for new and advanced equipment soar, proper management of the ensuing waste will be of paramount importance. In 2004 alone, about 315 million personal computers became obsolete. There were also 850 million mobile phones produced in 2005.

2. Electronic and electrical devices are complex technologies that contain toxic materials, have short product lives and undergo rapid changes or transformations; their manufacture is resource intensive and they are traded worldwide in large quantities. Coupled with the growth in the market for electronic and electrical equipment, in the past few years there has been a significant increase in the transboundary movement of used and end-of-life electronic and electrical equipment. The global market for computers and accessories, mobile phones, refrigerators and other electronic equipment and electrical appliances is expanding rapidly.

3. The magnitude of the situation is apparent in the considerable increase in international transboundary movement of used or end-of-life electronic equipment, including refrigerators, television sets, personal computers and associated hardware, and mobile telephones, for the purpose of removing usable parts, for refurbishment and reuse, and for processing for the recovery of raw materials. Transboundary movement of these goods is forecast to increase significantly as more and more electrical and electronic equipment is produced and consumed and emerging markets steadily expand. Despite efforts by many countries to tighten controls on acceptable disposal methods, adopt processes to recover valuable constituents and use safe practices to deal with the hazardous constituents in electronic and electrical wastes (e.g., cadmium, lead, beryllium, chlorofluorocarbons (CFCs), brominated flame retardants, mercury, nickel and certain organic compounds), many difficulties lie ahead.

4. Many developing countries and countries with economies in transition are confronted with the challenge of properly managing an increased volume of electronic and electrical wastes: managing them in a way that impacts on neither human health nor the environment. Local waste management systems are often not equipped to handle the sharp increases in end-of-life equipment. Population growth and industrial development, coupled with a lack of adequate infrastructure to manage waste, including hazardous wastes, safely result in these wastes being buried, burnt in open air or dumped into sewers, rivers or on the ground. Furthermore, much electronic or electrical equipment is now being produced in developing countries, which has led to the accumulation of domestically produced electronic and electrical waste. Thus, the current export and import of electronic and electrical wastes often leads to environmental pollution and contamination, impacts on human health, loss of precious resources, and illegal and unscrupulous trafficking.

II. Current situation

5. The rapid expansion of international trade and fundamental shifts in the location of markets and production globally are changing the movement of products and thereby that of electronic and electrical wastes, with the consequence of:

(a) Threatening human health and contaminating the environment when wastes are *improperly* managed, due to the hazardous components in electronic equipment; or

(b) Providing economic opportunities when wastes are *properly* handled, because of the chance to reuse, repair, or refurbish used equipment and to recover valuable components from end-of-life equipment.

6. The control system of the Basel Convention and the principles of environmentally sound management need to be reinforced and adhered to in order to ensure that trade in hazardous electronic wastes is properly monitored and managed so as to protect human health and the environment.

7. Substandard or inappropriate technologies and unsound practices in the handling and processing of electronic and electrical wastes should be phased out and replaced by safe and sound technologies for the collection, treatment, recycling and disposal of electronic wastes, through, for instance, international cooperation, capacity-building and transfer of technology.

8. The development of international and regional recycling resource systems for electronic and electrical equipment needs to be promoted and combined with efforts to monitor health and environmental effects and to evaluate such equipment's effectiveness and soundness from the environmental, health, social and economic perspectives.

III. Rationale for global action under the Basel Convention

9. The Basel Convention is the only global instrument in force that controls transboundary movements of hazardous electronic and electrical wastes and provides a worldwide base for managing these wastes in a way that protects human health and the environment. Its effective implementation provides a mechanism to prevent and combat illegal traffic in electronic and electrical wastes.

10. The environmentally sound management principle that underlies the provisions of the Basel Convention covers action at all levels of the waste hierarchy, including waste reduction. It provides a unique framework for international cooperation and an essential drive for aiming at a level playing field among countries regarding electronic waste management. Patchwork rules and varying requirements make it difficult for industry and producers working in the global market to operate.

11. Electrical and electronic wastes are classified in the Basel Convention as Annex VIII entries A1150, A1180 and A2010 and Annex IX entry B1110. Such wastes are characterized as hazardous wastes under the Convention when they contain components such as accumulators and other batteries, mercury switches, glass from cathode ray tubes and other activated glass, and polychlorinated biphenyl capacitors, or when contaminated with cadmium, mercury, lead or polychlorinated biphenyls. Precious metal ash from incineration of printed circuit boards and glass waste from cathode ray tubes and other activated glasses are also characterized as hazardous wastes.

IV. Definitional and classification difficulties

12. Apart from the difficulties experienced in distinguishing secondary raw materials from wastes or defining when a waste ceases to be a waste, a number of uncertainties prevail with respect to the common interpretation of terms such as "reuse", "refurbishment" and "repair".

13. The identification and classification of used and end-of-life electronic equipment in the harmonized system of the World Customs Organization are under consideration.

14. National legislation or regulations often differ regarding the scope of materials to be controlled under the Basel Convention.

V. Challenges

15. In the long run, it is critical to take action to reduce waste at source and guide changes in consumption towards more energy efficiency and conservation of natural resources.

16. A large number of stakeholders, such as manufacturers, brand owners, consumers, local government, municipalities, hospitals, military establishments, schools and universities, research institutions, national administrations, and intergovernmental and non-governmental organizations are responsible for generating electronic and electrical waste.

17. Hundreds of millions of desktop and laptop computers and their accessories are, or will soon become, obsolete globally. Only a marginal portion of these are being recycled through collection and take-back schemes. The majority of this obsolete equipment is stored, discarded together with household wastes or burned in open air.

18. Some of the obsolete electronic and electrical equipment that is recycled is handled by firms operating under strict environmental controls and with high occupational health safety protections. This is not the case in all countries and regions, however, and the effects are damaging to human health and the environment. A large portion of the electronic and electrical wastes collected (not only for recycling) is exported to countries where dismantling and recovery of materials is often not done under safe conditions, leading to poisoning of people and contamination of soil, air and water. Informal dismantling and recycling of electronic wastes in developing countries is emerging in the form of so-called “backyard” activities. Wires are collected and burned in open piles to recover copper. Circuit boards are treated in open acid baths next to watercourses to extract copper and precious metals. Piles of useless computers are set on fire to reduce their volumes, thus emitting toxic fumes.

19. There is a lack of scientific data from public and private entities on the health effects of exposure to the hazardous materials in electronic and electrical wastes. There is also insufficient information on the actual scale and nature of environmental risks associated with informal recycling practices. Data are crucial to help determine the current situation and trends but are often lacking or incomplete. Major gaps exist with respect to the quantity of electronic and electrical wastes generated worldwide and their export or import, particularly bearing in mind that trade flows of secondary raw materials, by-products or used equipment will not necessarily appear in waste statistics. Published estimates of exports of used or end-of-life electronic equipment are limited and it is critical that a better global picture be developed to inform future action.

VI. Recipe for coordinated global action

20. The response by Governments and other stakeholders to the increase in used and obsolete electrical and electronic equipment should be commensurate with the needs and technological capacity of a country or region. One efficient and effective mechanism to address issues related to integrated waste management, energy efficiency and access to environmentally sound technologies is the use of strategic public-private partnerships. Partnerships could be established with a view to:

- (a) Improving collection and segregation of hazardous wastes and household wastes;
- (b) Improving energy efficiency by reducing greenhouse gas emissions (carbon dioxide and methane) through sound disposal practices;
- (c) Improving access to sound technologies that will reduce fossil fuels consumption and the use of primary resources through sound material recovery (e.g., recycling, recovery and co-processing);
- (d) Improving traceability, predictability and transparency in the trade of used and end-of-life products or equipment.

21. Environmentally sound management encompasses resource conservation and reuse, material recovery and energy efficiency. Consequently, the environmentally sound management of used or end-of-life equipment has to be articulated in the context of integrated waste management and the life cycle approach to products. It is important to develop policy and economic tools that aim at reducing the amount of hazardous waste being dumped or finding its way into landfills. Many actions are required in this regard, including sorting wastes at source, and promoting best practices in dismantling, recycling, recovery and collection. In order to assist in improving the disposal of wastes, it is important to put in place measures for waste avoidance by eliminating hazardous constituents in products.

22. A worldwide programme on the environmentally sound management of electrical and electronic wastes is being developed as part of the Strategic Plan for the Implementation of the Basel Convention to 2010, with activities starting in Africa, Asia and the Pacific, and Latin America.

23. The long-term objective of coordinated global action is to improve the management of electronic wastes worldwide and for that purpose to build a global programme that would develop tools to bring traceability, transparency and predictability in the export and import of electronic wastes, supported by guidelines on best and affordable practices to manage these wastes properly.

24. Sound management of electronic and electrical wastes requires the following:

- (a) An appropriate legislative framework;
- (b) Sustainable development policies, including policies on the collection, recycling and recovery of electronic and electrical wastes and ones that address the transboundary movements of such wastes;

- (c) Economic incentives for environmentally sound practices and technologies;
- (d) Green design aimed at reducing the use of hazardous materials in electrical and electronic products and enhancing their recyclability;
- (e) Closing the loop for recyclables;
- (f) Extending the life of products through reuse, refurbishment or repair;
- (g) Elimination of hazardous constituents in products;
- (h) Worldwide environmentally sound management standards or criteria for recycling and final disposal of electronic wastes;
- (i) Action to prevent illegal traffic;
- (j) Broad public awareness;
- (k) Public-private partnerships to engage all stakeholders;
- (l) Regional level playing field on how to deal with export and import of electronic and electrical wastes;

25. The involvement of civil society, provision of decent work and incentives to industry will be necessary to achieve the stated objectives.

26. Principles to support traceability, predictability and transparency that would feature in a framework for the environmentally sound management of electronic and electrical wastes could include the following:

- (a) Export of electronic and electrical wastes should not take place if the receiving country does not possess adequate capacity to manage such wastes in a way that would protect human health and the environment;
- (b) Electronic and electrical wastes characterized as hazards should be subject to control under the Basel Convention;
- (c) Electronic wastes, whether hazardous or not, should be handled in line with environmentally sound management principles, criteria and practices;
- (d) Regional level playing field in trade recyclables should be pursued;
- (e) Testing of used or end-of-life electronic and electrical equipment prior to export should be encouraged to determine its functionality or whether it contains hazardous components content.

VII. Possible actions by the Conference of the Parties

27. Parties, their partners from industry and non-governmental organizations have the opportunity at the eighth meeting of the Conference of the Parties to the Basel Convention to agree on a strategy to address the challenges posed by electronic and electrical wastes. Such a strategy could be articulated in a Ministerial-level statement or declaration providing a direction for work under the Convention aimed at addressing the issue, including specific steps for follow-up action. The following steps are not mutually exclusive, could be implemented in phases and are not listed in any order or sequence:

- (a) Preparation of technical guidelines for the environmentally sound management of electronic and electrical wastes;
- (b) Development of public-private partnerships for the sound management of used and end-of-life personal computers, printers and accessories, and television sets;
- (c) Initiation of pilot projects on voluntary certification schemes, with a regional focus;
- (d) Promoting awareness through the activities of Basel Convention regional centres;
- (e) Involvement of municipalities and non-governmental organizations in developing collection schemes;
- (f) Regional cooperation on the recycling of electronic and electrical wastes.

28. The attached document contains elements that could be used to develop a ministerial declaration or statement. These elements are presented without prejudice to any decisions taken by the Conference of the Parties at its eighth meeting.

Appendix

Draft elements of a ministerial declaration or statement on the environmentally sound management of electronic and electrical wastes

1. The following draft elements are presented without prejudice to any decisions taken by the Conference of the Parties to the Basel Convention at its eighth meeting.

I. Considerations

2. Various considerations justify international action to manage electronic and electrical waste, including:

- (a) The rapid expansion of trade in electronic and electrical wastes worldwide;
- (b) The potential negative effects of such trade in the absence of level playing field amongst countries;
- (c) Differences in national capacities to manage electronic and electrical wastes in ways that protect human health and the environment;
- (d) The opportunities, from an economic and social perspective, that trade in the recycling of electronic and electrical wastes can bring;
- (e) The need to phase out substandard technologies, or technologies not applicable to local circumstances and conditions, and unsound practices regarding the handling of electronic and electrical wastes and to introduce or develop safe and sound technologies for the treatment, recycling or recovery of such wastes;
- (f) The importance of exploiting the know-how and experience in different areas of the world regarding the recycling of electronic and electrical wastes as a means to close the loop for such recyclables;
- (g) The need to combine the rapid development of international and regional recycling systems with action to gather information on and monitor such systems to evaluate their effectiveness and soundness from an environmental, health and economic perspectives.

II. International cooperation

3. Steps to improve the management of electronic and electrical waste could include:

- (a) Acknowledging the importance of the Basel Convention as a global mechanism which provides opportunities for public and private partners to continue discussing and exchanging views and experiences with a view to improving the situation worldwide;
- (b) Encouraging global action for the sound management of electronic and electrical wastes, including end-of-life equipment, such as personal computers and television sets, through shared responsibilities and commitments from all concerned stakeholders;
- (c) Promoting integrated waste management so as to reduce the harm caused by the hazardous components contained in electronic and electrical wastes by ensuring proper collection of end-of-life equipment and its segregation from household or municipal wastes, and achieving this through cooperation with municipalities and non-governmental organizations;
- (d) Reviewing, assessing, developing or consolidating national laws and regulations to improve controls on transboundary movements of those electronic or electrical wastes or components characterized as hazardous wastes, and to prevent and combat illegal traffic in these wastes, taking into account the benefits accrued through harmonization of national laws at the regional level;
- (e) Encouraging manufacturers of electronic and electrical equipment, recycling industries, refurbishers and other relevant economic operators to convene to consider the improvement of every stage of the life of such equipment, including its sound management when it becomes waste;

(f) Developing or consolidating national and regional cooperation and programmes or initiatives to support the implementation of activities aimed at the environmentally sound management of electronic and electrical wastes;

(g) Promoting awareness at all levels of society.

III. Building a sustainable future

4. Further action to ensure the sustainability of efforts to manage electronic and electrical waste could include:

(a) Strengthening the Basel Convention operational network (comprising the Secretariat and 14 regional and coordinating centres) to allow it to fulfil its intended role as an instrument for international cooperation;

(b) Renewing efforts to increase financial support to operationalize the activities set out in the present statement or declaration;

(c) Initiating the preparation of technical guidelines for the environmentally sound management of electronic wastes, a first step in achieving a level playing field in this domain;

(d) Developing public-private partnerships as a means to address the problems associated with the life cycles of electronic and electrical equipment;

(e) Promoting awareness at all levels on the issue of electronic and electrical wastes, challenges and solutions;

(f) Entrusting the Open-ended Working Group to monitor the implementation of a global programme on the environmentally sound management of electronic and electrical wastes and consider pursuing the world forum on electronic and electrical wastes on the occasion of meetings of the Conference of the Parties to review progress in and guide future work for the environmentally sound management of electronic and electrical wastes, taking into account regional specificities.