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**Open-ended Working Group of the Basel Convention  
on the Control of Transboundary Movements of  
Hazardous Wastes and Their Disposal  
Eighth meeting**

Geneva, 25–28 September 2012

Agenda item 3 (c) (i) b

**Matters related to the work programme of the  
Open-ended Working Group for 2012–2013:  
legal, governance and enforcement matters:  
follow-up to the Indonesian-Swiss country-led initiative:  
providing further legal clarity: used and end-of-life goods**

## **Study on used and end-of-life goods**

### **Note by the Secretariat**

At its eighth meeting, the Open-ended Working Group considered a revised version of the study on used and end-of-life goods contained in the annex to document UNEP/CHW/OEWG.8/INF/14, which was prepared by the Secretariat. The text of the revised study is contained in the annex to the present note; it has not been formally edited.

## Annex

### Study on used and end-of-life goods

#### *Executive Summary*

In accordance with Decision BC-10/3, this study identifies options for dealing with the problem posed by the transboundary movement and disposal of used and end-of-life goods (“UELG”). These goods do not easily fit the paradigm of wastes to be permanently disposed of. The re-use or recycling of such goods can conserve resources and provide significant economic opportunity to both exporting and importing States. At the same time, export of such goods, especially when not accomplished for the purported purpose of re-use, carries risk to health and the environment, particularly in countries that lack the necessary capacity and infrastructure to manage them properly, including assuring environmentally sound management and disposal of any hazardous components. In addition, lack of clarity regarding the status of these goods under the Basel Convention, combined with divergent national approaches, have complicated efforts to effectively manage their transboundary movement.

A number of Parties to the Basel Convention have developed measures, strategies and policies to address this issue, and a considerable amount of guidance has been developed by public-private partnerships such as the Partnership for Action on Computing Equipment and the Mobile Phone Partnership Initiative. There is considerable agreement that goods are not wastes if destined to be re-used for the purpose they were intended, without the need for repair, refurbishment, or similar processing. However, a lesser degree of consensus has emerged regarding goods that are in need of such processing prior to re-use. There are differences as to whether and how much (if any) processing is allowed before a good is considered a waste, what characteristics should be demanded of the good in question, and what criteria should be applied to any refurbishment or other processing operation. Finally, most Parties consider that used and end-of-life goods, destined not for re-use but for recycling<sup>1</sup> or recovery operations<sup>2</sup>, are wastes to be managed, if hazardous, in accordance with the Basel Convention.

This study also considers the relationship between trade and the environment as it relates to UELG, and concludes that carefully designed and targeted measures to regulate transboundary movement of such goods are not likely to violate international trade rules, if applied in the context of a widely accepted international agreement, such as the Basel Convention.

Drawing upon Party practice and the various guidance documents on the subject, this study offers several options for dealing with the problem posed by UELG, some of which could include take-back obligations.<sup>3</sup> The study considers direct re-use, re-use after some processing; and recycling/recovery of UELG. The Open ended Working Group is invited by the COP to report on the present study and its deliberations thereon to the Conference of the Parties at its eleventh meeting.

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1 For purposes of this study, the term “recycling” refers to the processing or transformation of used materials into new products. The term does not include re-use or direct re-use.

2 For purposes of this study, the term “recovery operation” refers to processes by which materials which are no longer fit for their originally intended purpose are transformed into a usable state or by which materials are extracted in usable form. Cf, Basel Convention Technical guidelines on the environmentally sound recycling/reclamation of metals and metal compounds (R4), <http://www.basel.int/DNNAdmin/AllNews/tabid/2290/ArticleType/ArticleView/ArticleID/189/Default.aspx>. (Retrieved 14 May 2012.)

3 Given the paucity of references on the topic, the options presented do not attempt to clarify the concept of “charitable donations,” although it is possible that such donations could be subject to different criteria than those that apply to UELG that are sold.

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## Introduction

This study was prepared in response to Decision BC-10/3 of the Conference of Parties (“COP”) to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (hereinafter, the “Basel Convention” or “Convention”). In that decision, adopted in furtherance of the “Indonesian-Swiss country-led initiative to improve the effectiveness of the Basel Convention”, the COP noted that “a number of the provisions of the Convention are interpreted differently by parties and that the implementation and application of these provisions would benefit from additional legal clarity.” The COP also “[r]ecogniz[ed] that there needs to be a clear distinction between wastes and non-wastes for some used equipment and second hand goods and that imports of used and near end-of-life goods that soon become waste are a matter of serious concern in some countries.” The decision called for the preparation of “a study to identify options for dealing with the problem posed by used and end-of-life goods, which could include take-back obligations and clarification of the concept of ‘charitable donations.’” As requested by the COP, this study was finalized in the light of the comments received from Parties on a first draft dated 21 May 2012.

This study is divided into four parts. The first part explains the methodology underlying its preparation. The second part identifies problems faced by Parties with respect to used and end-of-life goods (hereinafter, “UELG”).<sup>4</sup> The third part of the study summarizes how Parties and signatories address these problems, as well as other work and initiatives to address UELG. In accordance with the instructions in Decision BC-10/3, the third part also considers the relationship between trade and the environment in the context of transboundary movement of wastes and transboundary movements involving UELG. The final part of this document presents some potential options for dealing with the problems presented by UELG.

The Open ended Working Group is invited by the COP to report on the present study and its deliberations thereon to the Conference of the Parties at its eleventh meeting.

## Part I: Methodology

This study is largely based on a review of information contained in:

- Responses of Parties and other stakeholders to the “Questionnaire on options for dealing with the problem posed by used and end-of-life goods, including take-back obligations and the concept of “charitable donations,” circulated by the Secretariat in February 2012 pursuant to COP Decision BC-10/3 (hereinafter, the “2012 Questionnaire”).<sup>5</sup>
- Recent communications (from 2008-2011) from Parties to the Basel Convention Secretariat regarding the subject matter of the study;
- Compilation of communications from Parties and summary of national laws and regulations, prepared by the Secretariat in 2008 and 2009;

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<sup>4</sup> This study generally uses the term “used goods” to refer to items that may be destined to be re-used without major transformation, whereas end-of-life goods may be subject to recycling or recovery operations and become part of a new product, but are not likely to be re-used without undergoing a major transformative process.

<sup>5</sup> The following Parties responded in time to the 2012 Questionnaire: Argentina, Brazil, Canada, Central African Republic, Chad, Colombia, the European Union and Member States, Ivory Coast, Japan, Lithuania, Malaysia, Montenegro, Morocco, Nicaragua, Paraguay, St. Lucia, Yemen, and Zambia. Responses were also received from the United States, BCRC Teheran, the Information Technology Industry Council, Phillips Medical, and PC Rebuilders and Recyclers, LLP. Unless otherwise indicated, responses to the 2012 Questionnaire, reproduced as Appendix 1 to this study, are the source for references to Parties’ laws, regulations, views, and policies. A more detailed summary of those responses, as well as other information provided by Parties and stakeholders, is provided in Appendix 2.

- Comments submitted by several Parties on a draft of this study, dated 21 May 2012<sup>6</sup>;
- Liaising with focal points and competent authorities of several Parties, as a means of clarifying some points raised in the responses and comments mentioned above;
- Review of national and regional laws and other instruments;
- Guidelines and guidance (some still in draft) issued by the Partnership for Action on Computer Equipment (“PACE”) and the Mobile Phone Partnership Initiative (“MPPI”);
- Reports issued in connection with various initiatives, particularly those involving the Basel Convention, pertaining to the subject of the study, particularly regarding the distinction between waste and non-waste;
- Reports issued by the Organisation for Economic Development (“OECD”), the World Trade Organization (“WTO”) and other international organizations; and
- Publications by non-governmental organizations and academicians<sup>7</sup>.

In addition, the attention of the reader is drawn to the latest version of The Basel Convention Draft Technical Guidelines on Transboundary Movements of Electronic and Electrical Waste (e-waste), in particular the Distinction Between Waste and Non-waste (UNEP/CHW/OEWG.8/INF/9)<sup>8</sup>.

Information regarding the laws, practices and policies of the Parties, as well as recommendations found in the guidance documents mentioned above, was compiled and analyzed for commonalities and differences. The study highlights common and regional approaches, and draws heavily on those approaches in the options presented in Part V.

## **Part II: Problems Posed by Used and End-of-life Goods**

### **1. Background**

Hazardous waste moved to the forefront of the global environmental agenda in the early 1980s, following the discovery in several developing countries of deposits of toxic wastes imported from abroad. In response to growing international concern about the hazards posed to human health and the environment by transboundary movement of hazardous wastes and their disposal, the Basel Convention was adopted by a conference of Plenipotentiaries in Basel, Switzerland on 22 March 1989.<sup>9</sup>

Although hazardous waste dumping and other unsafe final disposal practices may have precipitated development and adoption of the Convention, the instrument also applies to waste destined for certain recycling/recovery operations specified in Annex IVB, which bears the caption, “Operations which may lead to resource recovery, recycling, reclamation, direct re-use or alternative uses.”

The Basel Convention’s framework rests on three pillars:(i) a global control system for the transboundary movement of wastes; (ii) the environmentally sound management (“ESM”) of wastes; and (iii) minimizing the generation of wastes. The extent to which UELG is subject to the global control system for transboundary movement of wastes, or to other potential mechanisms for the control of international trade in UELG, has implications for the environmentally sound management of those goods and their components, particularly in developing countries. In addition, the manner and degree to which the global control system

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6 Comments were submitted by Canada, the Central African Republic, the European Union and its member States, Malaysia and the Philippines.

7 Due to space limitations, few of these sources are cited in this document.

8 This document was not yet available at the time of the finalization of this document.

9 United Nations Treaty Series, Vol. 1673, p. 57 et seq. The Basel Convention entered into force on 5 May 1992.

is applied to the transboundary movement of used and end-of-life goods could affect the extent to which and how such goods are in fact re-used, recycled, or recovered.

This study applies to all UELG, and as such, used electrical and electronic equipment (“UEEE”) are only one example of the waste streams covered by this study.

## 2. Identification of problems posed by used and end-of-life goods

Used goods, in particular UEEE, play an important role in the world’s economy. Access to lower-priced information and communication technology equipment can contribute to higher living standards and development in developing countries, and to the achievement of United Nations Millennium Development Goals. Management of UEEE plays an important economic and social role in some developing countries. For example, in Accra, Ghana and Lagos, Nigeria alone, the refurbishing sector provides income to more than 30,000 people.<sup>10</sup> Re-use, refurbishment and recycling of UEEE if done under the appropriate conditions can also promote resource efficiency, reduce consumption of rare metals, and reduce greenhouse gas emissions, by avoiding energy-intensive primary production of electrical and electronic equipment (“EEE”) and its component materials.

Despite these potential benefits, substantial concern has been raised in recent years about potential environmental and human health problems associated with the transboundary movement of UELG. Informal, unregulated, and improper recycling, recovery, and disposal practices associated with UEEE and its components have released large amounts of toxic chemicals, endangering workers, nearby communities, and the environment.<sup>11</sup>

Few of the respondents to the February 2012 Questionnaire circulated by the Basel Convention Secretariat mentioned specific environmental or health concerns in their responses to the question: “Has your country been faced with or identified problems posed by used and end-of-life goods, particularly transboundary movements of such goods?”<sup>12</sup> Rather, Parties have identified two types of practical problems associated with the transboundary movement of UELG: insufficient capacity and infrastructure, and difficulties associated with the definition, classification and regulation of UELG.

**a. Capacity and infrastructure** -- Several Parties (Andorra, Bosnia & Herzegovina, Bhutan, Central African Republic, Chad,<sup>13</sup> and Montenegro) noted difficulty in providing the requisite technological expertise, processing capacity, or legal/enforcement infrastructure necessary to assure that imported UELG is handled in a safe and environmentally sound manner. Andorra reported that due to its size and resources, the Party lacks the means to treat and recover all hazardous wastes and other wastes generated within it, and accordingly would probably not restrict the export of wastes that it cannot treat or recover itself. Similarly, Bhutan has stated: “We do not have required infrastructure and facilities for recovery. This is coupled with lack of technology and capacity in managing the hazardous wastes.”<sup>14</sup>

10 Basel Convention Secretariat, “Where are Weee in Africa,”: <http://www.basel.int/Implementation/TechnicalAssistance/EWaste/EwasteAfricaProject/Publications/tabid/2553/Default.aspx>. (Retrieved 11 May 2012.)

11 See, e.g., the Ghana e-waste Country Assessment, [http://ewasteguide.info/files/Amoyaw-Osei\\_2011\\_GreenAd-Empa.pdf](http://ewasteguide.info/files/Amoyaw-Osei_2011_GreenAd-Empa.pdf). (Retrieved 13 April 2012.) Advocates for re-use of exported UELG do not generally contest this proposition. (See, e.g., Response to 2012 Questionnaire from the Information Technology Industry Council (ITI) (acknowledging that it is “keenly aware of the problems posed by the mismanagement of end-of-life electronic goods,” and “supports efforts under the Convention to ensure ‘sham recycling’ activities are identified and prohibited).”

12 An exception was the Ivory Coast, who pointed to “Insalubrité, incapacités (financière, matérielle et institutionnelle de gestion de ces différents produits en fin de vie), pollution (du sol, de l’eau, de l’air....)”. (Ellipsis in original.) In addition, Argentina reported unspecified problems with imported materials such as sludge treatment plants, used tires, and UEEE; and Brazil reported several cases of illegal transboundary movements of lead-acid automotive used batteries.

13 Chad reported that it is supported by the Global Environment Facility (GEF) and the Basel Convention Regional Centre for Training and Technology Transfer For French speaking countries in Africa (based in Dakar, Senegal) in the management of PCBs and PCB transformers. However, Chad has no legislation governing the collection and transport for hazardous waste (PCBs).

14 Basel Convention national reporting compilation, 2009, <http://www.basel.int/Portals/4/Basel%20Convention/docs/natreporting/2009/compI/2009-question-3b.pdf>

Presumably, this concern is less acute for items that will be directly re-used, although safeguards to ensure that direct re-use actually occurs should be put in place since in the absence of such direct re-use the Basel Convention requirements, in particular those pertaining to environmentally sound management (“ESM”), would apply. In addition, re-use might only be possible for a limited period of time: if the good is at or near its end of life, the issue of its disposal in compliance with ESM requirements will soon arise.

**b. Regulatory issues** -- Several Parties (Argentina, Canada, Colombia, the European Union and its member States - hereinafter referred to as “the EU”-, Japan, Lithuania, and Morocco) cited difficulty or divergences in differentiating (either on their own part or, in the case of Japan, on the part of trading partners) between used goods and waste.<sup>15</sup> Customs authorities have had difficulty identifying the intended disposition, useful life, and functionality of imports. National and international import statistics generally do not distinguish between the import of new and used EEE, thus making tracking of UEEE in the country of import difficult.<sup>16</sup> The EU cited difficulties associated with distinguishing between used goods and wastes in the context of charitable donations, and noted that such donations had been used as a “cloak” for the export of waste. In a similar vein, Japan advised that some wastes “disguised as the second-hand items” were illegally exported and intercepted by the intended country of import, although it appears that differing national definitions and regulations regarding second-hands goods were also a factor. Malaysia cited illegal import and export of end-of-life cathode ray tubes and computer monitors. Nicaragua advised that too much equipment, products and materials are being imported, and that companies or importers tend to disappear, with the result that materials are illegally disposed of in landfills. Zambia voiced similar concerns.

Industry has also cited concerns about divergent regulatory policies. The Information Technology Industry Council (ITI) reported that at recent meetings of the PACE Working Group, uncertainty surrounding the ability to export used equipment for repair or environmentally sound recycling was identified by its members as a significant barrier to the expansion of voluntary programs in developing countries. Likewise, Phillips Medical indicated that “transboundary shipments of used products regularly meet with administrative/bureaucratic hurdles which impede our desire to create closed loop material streams such as the recovery of rare earth from fluorescent lamps, refurbishment of medical equipment, and parts harvesting of professional products.”

### **Part III: Addressing problems associated with UELG**

#### **1. Approaches adopted by Parties**

Parties have adopted a variety of measures, strategies, and policies to address the problems associated with UELG. A summary of these follows. More detail may be found in the Appendix 2 to this study.

**a. Comprehensive programs** -- The EU’s legal framework for the treatment of waste, or “Waste Framework Directive,”<sup>17</sup> establishes a waste hierarchy. In order of priority are:

15 At the Regional Workshop on Prevention of Illegal Transboundary Movement for Hazardous Waste in Asia held in Beijing in March 2007, participants “shared the perception that illegal traffic of hazardous waste, especially UEEE and waste EEE (“WEEE”), could partly be attributed to differences in interpretation and lack of mutual understanding among Asian (and other) countries regarding the concept of “reusable” products and/or “hazardous” waste and material. Participants agreed that exporting countries should respect the import controls of the countries of import regarding used/waste electrical and electronic equipment.” Basel Convention Coordinating Center for Asia and the Pacific (Asia-Pacific Regional Centre for Hazardous Waste Management Training and Technology Transfer), Report of the Project on “the Import/Export Management of E-waste and Used EEE,” (June 30, 2009) (hereinafter, the “BCCCAP Project Report”). See [http://www.env.go.jp/en/recycle/asian\\_net/Project\\_N\\_Research/E-wasteProject/10.pdf](http://www.env.go.jp/en/recycle/asian_net/Project_N_Research/E-wasteProject/10.pdf) Retrieved 19 April 2012.

16 See Colombia response to 2012 Questionnaire and Basel Convention; See also “Where are Weee in Africa,” note 9 supra.

17 Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008. In June 2012, the European Commission published a guidance document on the interpretation of key provisions of Directive 2009/98/EC on waste ([http://ec.europa.eu/environment/waste/framework/pdf/guidance\\_doc.pdf](http://ec.europa.eu/environment/waste/framework/pdf/guidance_doc.pdf)).

prevention; preparing for re-use; recycling; other recovery,<sup>18</sup> notably energy recovery, and disposal. EU Directives require Member States to introduce legislation on waste collection, re-use, recycling and disposal of UELG. Among other things, Member States are required to: (i) promote the design and production of EEE with a view to encouraging re-use; (ii) set up separate collection systems and optimize collection and transport of WEEE for preparing for re-use, recycling and the confinement of hazardous substances; (iii) establish targets for the recovery and recycling of WEEE; and (iv) ensure that producers provide financing of the collection, treatment, recovery and environmentally sound disposal of WEEE.<sup>19</sup>

**b. Criteria for re-use --** As is discussed in more detail in the accompanying draft report on the implementation of the Basel Convention as it relates to the interpretation of certain terminology, several Parties e.g. Argentina, Canada, China, Colombia, EU, Japan, Singapore, South Africa, as well as the Hong Kong Special Administrative Region of China (“HKSAR”), have developed or are developing measures to clarify when a UELG is to be considered and regulated as a (hazardous) waste, particularly in the context of EEE. Among the measures undertaken are:

- excluding from waste status items that are directly re-used, without intervening repair, refurbishment etc. between import and re-use;
- providing objective criteria to determine whether an item is sufficiently functional and marketable to be considered as intended and destined for re-use; for example:
  - Some Parties (e.g. China, Singapore) require that imported UEEE (and sometimes UEEE intended for export) be accompanied by documentation of functionality testing.
  - China requires that all imported UEEE must undergo inspection after arriving at a port of China and requires “3C certification” that the equipment is comparable to brand new EEE.<sup>20</sup>
  - Many Parties and the HKSAR require that imported UEEE be shipped in sufficient individual protective packaging with legible labels or signs.
- providing objective criteria to determine when an item can be prepared for re-use in a safe and environmentally sound manner; and
- adopting domestic Harmonised System codes and export identification standards to differentiate UEEE from brand-new EEE.

**c. Control as a waste and other import restrictions --** Some Parties (Colombia, Nicaragua, Norway,<sup>21</sup> Viet Nam) have decided to treat UELG as wastes. For example, in Colombia, actions to discard, re-use or deliver what is considered a waste must be controlled at all stages, even when delivered to a third party for processing or subsequent treatment. Colombia declared that “transboundary movements of used or second hand electrical and electronic equipment as well as WEEE should be subject to the control procedures of the Basel Convention, regardless of whether the exporting countries classified them as hazardous or whether [or not] they are intended for recycling or recovery operations.” Colombia also advocated establishment of clear policies against the import of EEE for re-use or

18 Re-use is distinct from recovery (defined as: operation the principal result of which is waste serving a useful purpose) and recycling (defined as: any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes).

19 Directive 2011/.../EU of The European Parliament And Of The Council On Waste Electrical And Electronic Equipment (WEEE), (recast) Articles 4-6, 11-13.

20 BCCCAP Project Report, citing General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ), China. December 31, 2002. Administrative Measure on Inspection and Supervision of Imported Used Mechanical and Electrical Products.

<http://www.chinaccia.org.cn/zcfg/jdcp/jd-12.htm>. 2009-05-27. (In Chinese)

21 Norway would make an exception in the case of equipment returned under warranty to its producer.

refurbishment, noting that if such imports are allowed, importers will be considered as producers and must comply with all obligations concerning the entry of EEE into the country.

Nicaragua favors prior consultation of environmental authorities before authorizing the export of a second-hand good, whether hazardous or non-hazardous, recognizing differences to capacity in handling, use, response and responsibility to return them to their origin. Indonesia has prohibited the import (but not export) of a list of “non-new capital goods, including refrigerators, washing machines, TV, phones, air conditioners, printed circuit, valve and thermion tube, cold cathode or photo cathode tube, etc. Importation into Indonesia of used EEE and e-waste for direct (individual) consumption by consumer is prohibited.”<sup>22</sup> Viet Nam has reportedly banned the import of waste materials, toxic chemical substances and second-hand commodities, including electronic, cooling and home appliances, as well as the import of seven categories of second-hand electronic and communications products. The decree also prohibits the import of spare and component parts for the aforesaid products. Brazil has also prohibited the importation of “virtually all used consumer goods, including motor vehicles... [and] [t]he importation of used machinery, equipment, and cargo containers will only be granted if it is proven that the products are not produced in Brazil and cannot be substituted by a similar product currently produced in that country.”<sup>23</sup> Brazil prohibits the importation of hazardous solid waste and solid wastes that present significant risk to health or the environment, even for treatment, reform, reuse, reuse or recovery.<sup>24</sup>

**d. Take-back --** Schemes under which exporters take back waste and other material that is not being handled in accordance with applicable legal or contractual requirements are increasingly used as a tool to address and minimize problems associated with UELG.<sup>25</sup> Many of these schemes are voluntary programs undertaken by manufacturers of EEE and other equipment. In addition, some Parties (e.g., Colombia, EU, Philippines) have adopted some form of take-back measure either as part of their domestic program to control waste, or in order to minimize and control the transboundary movement of UELG. The EU scheme is part of its broader program of extended producer responsibility, a broad topic that is beyond the scope of this study. The Philippines has adopted “Interim guidelines for the importation of recyclable materials containing hazardous substances,” which allow the import of electronic assemblies and scrap on the condition that residuals from the recycling of materials which contain hazardous substances without any acceptable method of disposal in the Philippines must be shipped back. With respect to WEEE generated internally, Colombia has issued a series of standards requiring manufacturers and importers to establish return and recovery systems. In Canada, a number of State and Provincial governments have adopted legislation that requires electronics take-back. In addition, manufacturers and distributors in these countries often have, on a voluntary basis, instituted programs where consumers can return discarded electronics. Some retail stores offer consumer electronics recycling programs, as well as locations to drop off used mobile phones, rechargeable batteries, and ink-jet cartridges.

**e. Charitable donations --** Some Parties (EU, Japan) have suggested that charitable donations might be used to disguise the export of waste materials. No specific definitions of the term “charitable donations” were provided, although Brazil reports that the following supplies/ goods do not require import licenses:

22 BCCCAP Project, citing H. Hamdani, “Indonesia Regulations and Policies on Export- Import Related Electronic Equipment. Regional Workshop on E-waste Identification toward the Prevention of Illegal Transboundary Movement for Hazardous Waste and Other Wastes in Asia.” [http://www.bcrc.cn/en/meetings/File\\_reg2008/06-INDONESIA-presentation%20beijing%202008.pdf](http://www.bcrc.cn/en/meetings/File_reg2008/06-INDONESIA-presentation%20beijing%202008.pdf), 2009-05-27

23 Response to Questionnaire, citing National Law n° 12.305 from 02/08/2010 – National Policy on Solid Waste – Article 49.

24 Id., citing National Environmental Council (CONAMA) Resolutions Nr. 23 (December, 1996) and Nr. 235 (January 7, 1998). The legislation defines which wastes are forbidden from being imported and which are just controlled.

25 The Basel Convention includes provisions on take-back and re-import, but these apply in case of illegal traffic (Article 9.2) or when transboundary movement of hazardous waste or other waste cannot be completed within the terms of the contract (Article 8).

“Assets donated to hospitals, clinics and other non-profit entities for social assistance and charity, or institutions dedicated to scientific, educational or philanthropic purposes provided that the destination is intended for its own use or meet their institutional aim confirmed through its respective statutes, excluded from the ordinance vehicles such as automobiles.”<sup>26</sup>

In addition, Colombia recommended that donation centres report the final destination and use of the units received, and that the WEEE generated by refurbishment operations at these centres should be treated and recycled properly. In Colombia’s view, a donation center becomes a producer if it introduces used EEE into the market. The recipient of the equipment should be considered as a consumer of an EEE, with the attendant obligations and responsibilities. Finally, recent guidelines issued by PACE set forth a list of principles for corporate donors of functional used computing equipment.<sup>27</sup>

**f. Particular items** -- Some Parties have developed lists of goods or categories of goods as a means of, or factor for, determining whether and how UELG are subject to regulation. For example, and as previously mentioned, Indonesia prohibits import of listed “non-new capital goods,” including refrigerators, washing machines, TV, phones, air conditioners, printed circuit, valve and thermion tube, cold cathode or photo cathode tube, etc.<sup>28</sup> Importation of used EEE and e-waste for direct (individual) consumption by consumer is prohibited”.<sup>29</sup>

The EU recently published a recast of its Directive on WEEE.<sup>30</sup> The recast Directive includes several detailed lists of categories of EEE and items within those categories. Among its requirements related to WEEE management, the recast Directive sets minimum targets for the re-use of various categories of EEE. It would also require Member States to ensure that shipments of used EEE suspected to be WEEE are carried out in accordance with detailed shipping requirements.

## 2. Other initiatives to address UELG

A number of initiatives have sprouted in recent years to address issues associated with the transboundary movement of UELG. These include bilateral, regional and multilateral initiatives, projects within the construct of the Basel Convention and other international fora, and several public-private partnerships, operating in cooperation with Basel Convention Parties. These initiatives are described briefly below.

### a. Bilateral, regional and multilateral Initiatives

*(i) Asia-Pacific e-waste partnership:* The Government of Japan in collaboration with the Secretariat of the Basel Convention launched the Basel Convention Partnership on the Environmentally Sound Management of E-waste for Asia-Pacific Region in November 2005. This programme focuses on enhancement of the capacity of Parties to manage e-waste in an environmentally sound way. The Partnership’s strategic objectives are the:

- assessment of the current situation on e-waste;
- prevention and minimization of e-waste;

26 Ordinance of the Brazilian Foreign Trade Department of the Ministry of Development - DECEX (Portaria nº 370, November, 1994), Nicaragua also provided information on its regulation of the donation of medications.

27 Appendix 10, PACE Guidance Document on the Environmentally Sound Management of Used and End-of-Life Computing Equipment” (discussed in more detail in section 2.c., below). These principles call upon donors to: provide a useful product appropriate to the conditions of the recipient country and community; ensure and verify availability of technical support; test, certify and label functionality; support the recipient with training or training programs; ensure that the recipient community consents in writing to receiving the material in accordance with contractual terms and conditions; and export in accordance with applicable national and international controls. The PACE document does not define the term “charitable donation.”

28 BCCCAP Project, citing Minister of Industry and Trade, Indonesia, Decree No. 756/MPP/KEP/12/2003 on Import of Non-new Capital Goods and Decree No. 610/MPP/Keep/10/2004 Regarding Amendment of No. 756/MPP/KEP/12/2003.

29 Id., citing H. Hamdani, note 22, supra.

30 Directive 2011/.../EU of the European Parliament and of The Council on waste electrical and electronic equipment (WEEE) (Recast).

- introduction of the environmentally sound management of e-waste; and
- promotion of information and training for all sectors.

(ii) **MERCOSUR**: The countries of the Southern Common Market (MERCOSUR) (Brazil, Argentina, Uruguay and Paraguay) defined WEEE as a “universal generation waste,” under the Agreement, “Environmental Management of Special Wastes and the Principle of Extended Producer Responsibility,” which was signed during the Fourth Meeting of Ministers of Environment of MERCOSUR on 29 March 2006 and awaits approval by the Common Market Council. The MERCOSUR countries agreed to “incorporate patterns of sustainable consumption and production in order to minimize the amount and hazardousness of waste generated”.

(iii) **The North American Commission for Environmental Cooperation (CEC)**: Through the CEC, Canada and Mexico are working to enhance the capacity of small and medium-sized enterprises that refurbish and recycle UEEE to implement environmentally sound management practices, estimate the amount of transboundary movements of used computers and monitors, and cooperate in enforcement against illegal trade in UEEE.

#### **b. Initiatives under the auspices of the Basel Convention**

(i) **Basel Convention “Draft technical guidelines on transboundary movements of electronic and electrical waste (e-waste), in particular regarding the distinction between waste and non-waste**

The draft technical guidelines on transboundary movements of electronic and electrical waste (e-waste), in particular regarding the distinction between waste and non-waste (hereinafter draft E-Waste Guidelines), developed through the work of the Basel Convention Open-ended Working Group (OEWG) and drawing on outputs of PACE, MPPI and others, provide, for purposes relevant to this study, guidance on: the distinction between waste and non-waste when used equipment is moved across borders; the distinction between hazardous waste and non-hazardous waste; transboundary movements of used equipment and e-waste; and enforcement of the control provisions of the Convention.

The latest version of the draft E-Waste Guidelines is contained in document UNEP/CHW/OEWG.8/INF/9, not yet available at the time of the finalization of this document. The reader is invited to consider the latest version of the draft guidelines in conjunction with this study.

(ii) **Basel Convention Regional Centre for Training and Technology Transfer for the Asia and the Pacific region - project on “the import/export management of e-waste and used EEE”<sup>31</sup>**

The report on this project provides a detailed and useful review of approaches to controlling the import and export of used EEE and WEEE in 10 Asian countries, namely: Cambodia, China (including HKSAR), Indonesia, Japan, Malaysia, the Philippines, Republic of Korea, Singapore, Thailand and Viet Nam.

(iii) **Basel and Stockholm Convention Regional Centre for Training and Technology Transfer in Tehran (BCRC & SCRC- Tehran)**

In response to requests from organizations and companies working on waste management for consultancy and training services, the Centre has organized workshops on the transboundary movement of waste, including used tyres, WEEE, PCBs and wastes contaminated with PCBs, and used lead acid batteries. The Centre has scheduled programmes for training and transfer of technologies on waste management within the southwest Asian region. The BCRC-Tehran offers an executive training programme on ESM of wastes from the generation to disposal, including a first regional technical workshop in January 2012. BCRC-Tehran favours a strong regulatory scheme to encourage and require ESM of waste, as well as take-back systems for recyclable waste such as e-waste and used tyres.

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31 BCCCAP Project Report, see footnote 15

(iv) “E-waste Africa Project” coordinated by the Secretariat of the Basel Convention and implemented by the Basel Convention Coordinating Centre for Training and Technology Transfer for the African Region (BCCC-Nigeria), the Basel Convention Regional Centre for Training and Technology Transfer for French-speaking countries in Africa (BCRC-Senegal)

The goal of the E-waste Africa project was to enhance the capacity of West African and other African countries to tackle the growing problem of e-waste and thereby protect the health of citizens, particularly children, while providing economic opportunities. Specifically, the project improved the level of information available on flows of EEE and e-waste imported into West African countries; assessed the baseline situation in terms of amounts of EEE imports, EEE in use and e-waste in partner countries, as well as environmental impacts of the e-waste sector; produced studies on the social-economic aspects of the increasing volumes of used EEE and e-waste; and strengthened national capacities to monitor and control transboundary movements of e-waste and to prevent illegal traffic. At the Pan-African Forum on E-waste held on 14-16 March 2012 in Nairobi, Kenya, participating African States called for developing and adopting a separate legal instrument specifically supporting e-waste management at the national level and for harmonizing key elements in national legislation on a regional level including, *inter alia*, e-waste, producer, environmentally sound management and extended producer responsibility, which should be in line with definitions developed under the auspices of the Basel Convention, including the MPPI and PACE.

(v) *Other BCRCs*

Other BCRCs are involved in similar endeavours. For example, PC Rebuilders and Recyclers, LLC reports that it is working with the BCRC in El Salvador to create a micro-financed computer refurbishment programme that will include and support formal material recovery.

#### c. Public/private partnership initiatives

(i) *The Partnership for Action on Computing Equipment (“PACE”)*

In March 2011, PACE<sup>32</sup> approved a “Guidance Document on the Environmentally Sound Management of Used and End-of-Life Computing Equipment” (hereinafter, the “PACE ESM Guidance”).<sup>33</sup> Citing the Basel Ministerial Declaration on Environmentally Sound Management<sup>34</sup>, the document begins from the premise that “used computing equipment should be diverted from disposal practices, such as landfilling and incineration, by a robust collection program, to the more environmentally sound practices of re-use, refurbishment, material recovery and recycling.”<sup>35</sup> The objective of the document is to provide guidance for the environmentally sound management of used and end-of-life computing equipment with an emphasis on re-use and recycling. The document aims to promote development of robust material recovery and recycling infrastructure, including:

- collection of used computing equipment;
- evaluation;
- testing for functionality;
- refurbishment/re-use if appropriate;
- preparing/dismantling of non-reusable computing equipment or parts;

32 PACE is a multi-stakeholder public-private partnership that provides a forum for personal computer manufacturers, recyclers, international organizations, associations, academia, environmental groups and governments to tackle environmentally sound refurbishment, repair, material recovery, recycling and disposal of used and end-of-life computing equipment.

33 UNEP/CHW.10/20. Sections 1, 2, 4 and 5 of the PACE guidance document were adopted by COP Decision BC-10/20. Section 3 on transboundary movement was not adopted. The PACE working group has decided to wait for the final draft of the Basel Convention Technical Guidance on e-waste before finalizing section 3.

34 Adopted by decision V/1 of the fifth meeting of the Conference of the Parties in 1999.

35 PACE ESM Guidance, para. 5.2.1.3.

- separation into material streams;
- final recovery of marketable raw materials; and
- disposal of non-recyclable fractions and processing residues.

The PACE ESM Guidance aims to help ensure that computing equipment and derived materials are managed in environmentally sound management facilities that are licensed and permitted to manage these materials. The document includes recommendations on: ESM criteria, transboundary movement<sup>36</sup>, testing, refurbishment and repair, and material recovery and recycling. These recommendations include *inter alia*:

- *country-specific recommendations* for the environmentally sound management of used computing equipment, including review of measures in place to implement obligations under the Basel Convention and other applicable instruments; taking measures to establish an appropriate infrastructure to ensure that end-of-life equipment is collected and recycled in environmentally sound facilities; and the tailoring of Environmental Management Systems to small and medium enterprises, including the provision for information and know-how sharing;
- *facility-specific recommendations*, including the adoption of measures to meet ESM criteria for material recovery and recycling of end-of-life computing equipment and application of criteria (elaborated in the guidance) to determine and demonstrate functionality of used equipment; certification of facility conformance with an accredited comprehensive environmental management system and electronics recycling standard;
- a *voluntary notification procedure* or “decision tree procedure” to ensure that such movements are being monitored, and the importing country is given an opportunity to react to such movements;
- detailed recommendations for *testing, refurbishment and repair*; and
- recommendations on the *marketing and redeployment* of refurbished/repaired computing equipment.

The Guidance’s recommendations on refurbishment are based on the earlier PACE Project 1.1 Technical Guideline on Environmentally Sound Testing, Refurbishment and Repair of Used Computing Equipment.<sup>37</sup> Summarized broadly, the Project 1.1 Guideline: (i) sets out a list of ESM criteria that are relevant to the refurbishment or repair of used computing equipment; (ii) provides guidance for refurbishment and repair facilities to meet the ESM criteria, including on: the sorting of refurbishable and non-refurbishable equipment; data security and destruction; disassembly; functionality testing; and labeling/documentation, packaging, storage and handling of refurbished and repaired equipment. The guideline also provides guidance for the marketing, donation and redeployment of refurbished and repaired computing equipment and components.

For reference purposes, it may be noted that section 3 of the Guidance on “Transboundary movement of used and end-of-life computing equipment,” which has not adopted by COP-10 but which should be taken into account in the further development of the draft E-Waste Guidelines, indicates that the following shipments are normally considered outside the scope of these procedures and the Convention unless the computing equipment being shipped is defined as or considered to be hazardous waste under paragraph 1 (b) of Article 1 of the Convention or is restricted under applicable national law such as by a prohibition on import of such used goods by the States concerned:

<sup>36</sup> The recommendations on transboundary movement are not yet approved. See note 36, supra.

<sup>37</sup> PACE Project 1.1, “Guideline On Environmentally Sound Testing, Refurbishment & Repair Of Used Computing Equipment”, (17 February, 2011). As noted on the Basel Convention website, this guideline “will be evaluated in a facility type of the environment and subsequently revised taking into consideration results of these evaluations.” <http://archive.basel.int/industry/compartnership/index.html>. (Retrieved 19 May 2012.)

- collected computing equipment that has been tested and labelled or documented and declared as being fully functional<sup>38</sup> and intended for direct reuse<sup>39</sup> in accordance with appendix 7;
- shipments by individual customers of their own defective computing equipment under warranty or subject to a law allowing for a right of the return of the equipment for repair or refurbishment and where the same type or similar product is intended to be returned to the customer. This does not include equipment from take-back programmes;
- batches of defective computing equipment or components, under warranty or subject to a law allowing for a right of return of the equipment, that has been collected from individual customers or consolidated by manufacturers, original component suppliers or their contractual agents and sent back to the manufacturer, original component suppliers or their contractual agents, and for which the same type or similar products have been or will be returned to the customer;
- shipments of used computing equipment under a documented leasing programme, where such equipment is removed from service, documented and declared, using appendix 7, to be in working condition and returned to the computing equipment owner.

#### *(ii) Mobile Phone Partnerships Initiative*

The increasingly ubiquitous<sup>40</sup> mobile phone accounts for a small but significant portion of UELG. For the better part of a decade, the Basel Convention Mobile Phone Working Group (“MPWG”), established under the Mobile Phone Partnership Initiative (MPPI), worked to promote the environmentally sound management of end-of-life mobile phones. In its work programme, the MPWG took into consideration a number of waste management principles including:

- prevention and minimization of waste in production by implementing no-waste or low-waste technologies;
- reduction of hazardous substances in processes and products;
- reduction of waste requiring final disposal through environmentally sound re-use, recovery and recycling
- environmentally sound final disposal of wastes that cannot be recovered or recycled.<sup>41</sup>

The MPPI completed its work with the publication of a guidance document on the environmentally sound management of used and end-of-life mobile phones with an emphasis on re-use and recycling. The document includes guidelines produced by four MPPI projects:

- “*Refurbishment and re-use of used mobile phones,*” intended to encourage companies that refurbish used mobile phones to implement environmentally sound practices and facilitate a process whereby products re-entering the

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38 Fully functional/Full functionality: Computing equipment or components are “fully functional” when they have been tested and demonstrated to be capable of performing the essential key functions they were designed to perform.

Essential key function: The originally intended function(s) of a unit of equipment or component that will satisfactorily enable the equipment or component to be reused.

39 Glossary of terms, appendix 1 to the guidance

40 Global mobile phone subscriptions are estimated at 5.9 billion, as of February 2012. <http://mobithinking.com/mobile-marketing-tools/latest-mobile-stats> (Retrieved 16 April 2012.)

41 MPPI, “Guidance document on the environmentally sound management of used and end-of-life mobile phones,” UNEP/CHW/10/Inf27/rev.1, para. 31. The document was adopted with revisions by COP Decision BC 10/21, and is available on the Basel Convention website.

market comply with applicable technical performance standards and regulatory requirements.

- “*Collection and transboundary movement of used mobile phones*,” providing advice on programmes, legislation and regulations for effective collection of used and end-of-life mobile phones;
- “*Recovery and recycling of end-of-life mobile phones*,” addressing environmentally sound processing of mobile phones for material recovery and recycling; and
- “*Awareness raising on design considerations and training*,” seeking to help manufacturers promote design improvements that would help ensure that end-of-life mobile phones are managed in an environmentally sound manner.<sup>42</sup>

Of most relevance to this study are the MPPI Guidance’s sections on transboundary movement and refurbishment of mobile phones. The document’s recommendations in this regard include:

- All used mobile phones that have been collected should be evaluated/tested and labelled to determine to what extent they are suitable for re-use with or without repair, refurbishment or upgrading prior to any transboundary movement.
- Used mobile phones that have been collected but have not been evaluated and/or tested and labelled as suitable for re-use are subject to Basel Convention procedures, unless it can be demonstrated they are not hazardous using Annex I and the Annex III characteristics.
- End-of-life mobile phones destined for material recovery and recycling or final disposal are subject to Basel Convention controls if they contain Annex I constituents unless it can be demonstrated that the phone is not hazardous using the characteristics listed in Annex III. Even if neither the importing nor exporting country considers a shipment of mobile phones destined for repair or refurbishment to be waste, a voluntary notification (detailed in Appendix 4A of the Guidance or “decision tree” procedure) should apply to ensure that such movements are being monitored, and the importing country is given an opportunity to react.
- In situations where hazardous wastes are to be sent back to the original exporting country or to a third country, the contract between the exporter and importer specifies details of the return of the hazardous waste, return dates and financial responsibilities.
- Importing countries should take measures to establish an appropriate infrastructure to ensure that mobile phones which reach the end of their lives are collected and recycled in environmentally sound facilities, be those located within or outside the country.<sup>43</sup>

The MPPI Guidance considers the following shipments to be *outside the scope* of the Basel Convention:

- collected mobile phones that have been tested and labelled as being suitable for re-use without further repair or refurbishment;
- shipments by individual customers of their own mobile phones for repair or refurbishment (e.g. under warranty) and intended to be returned to them; and
- defective batches of mobile phones sent back to the producer (e.g., under warranty).<sup>44</sup>

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42 Id., para. 5.

43 Id., para. 66.

44 Id., para. 65.

The MPPI Guidance's recommendations on refurbishment of mobile phones are too numerous to repeat here, but feature the following elements:

- sorting phones that can be re-used from those that are suitable only for material recovery;
- evaluating and assessing used mobile phones to determine to what extent they are suitable for re-use with or without repair or refurbishment;
- limiting sales to mobile phones that are tested for functionality, unless it is to a properly authorized recycling vendor or outsource repair centre;
- storing and handling used mobile devices at refurbishment facilities in a manner that protects the mobile phones and reduces the potential for releases of toxic substances into the environment and for injuries to workers;
- using only benign cleaning solutions to clean used mobile phones; otherwise, refurbishers should use cleaning solutions in an environmentally sound, efficient and safe manner; and
- managing end-of-life batteries and any associated circuit boards or electronic assemblies containing lead based solders in an ESM and in accordance with the Basel Convention when destined for transboundary movement.<sup>45</sup>

Additional recommendations are included on:

- the management of components removed from mobile phones during the refurbishment process;
- administrative measures and personnel training;
- inspections and monitoring; and
- regulatory, operational, and import-export requirements.<sup>46</sup>

As with the draft E-waste Guidelines and the PACE ESM Guidelines, the MPPI document includes a similar flow chart, or “decision tree,” to help guide the determination of whether a used mobile phone is a hazardous waste subject to Basel Convention controls and procedures.

*(iii) “Solving the e-waste Problem Initiative” (StEP)*

An initiative of various United Nations organizations with participation of industry, governments, international organizations, non-governmental organizations (NGOs) and academia, SteP aims to initiate and facilitate approaches towards the sustainable handling of e-waste. SteP has established five Task Forces charged with the development of “feasible, just and environmentally safe solutions for the e-waste problem through analysis, planning and pilot-projects.”<sup>47</sup> Among those task forces is the Task Force on Re-use, whose goal is to define globally consistent practices, principles, and standards for EEE products that are economically, socially, and environmentally appropriate for: “a) Changing consumer behaviour to get acceptance for re-use and early product take back (avoiding long storage at consumer site); b) Extending the usage of EEE products and components; and c) Reducing the flow of irresponsible re-use between donor and development countries (‘sham re-use’).”<sup>48</sup>

**d. Private sector and other members of the PACE Working Group**

Elements of the private sector are major participants in PACE, MPPI and other public-private partnerships, and many private companies operate voluntary take-back and other programs associated with the re-use of UELG.

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45 Id., para. 72.

46 Id.

47 Information is from SteP's website, <http://www.step-initiative.org/index.php/Home.html>.

48 <http://www.step-initiative.org/index.php/Reuse.html>. (Retrieved 11 May 2012.)

PC Rebuilders & Recyclers, LLC tests as per the PACE guidelines all equipment that is exported to assure it is refurbishable equipment. This company also has a certified third party witness the loading process so that there is no question about the veracity of the Bill of Lading (BOL).

It might be worth noting that certain large medical devices are exempted from the provisions of the EU Recast Directive. In its response to the 2012 Questionnaire, Philips Medical provided information on refurbishment of such devices. Phillips asserted that medical device refurbishment and repair is an effective means of reducing e-waste while ensuring greater global access to medical device technology. Phillips explained that its refurbishing programme relies on transboundary movement of used professional equipment to its refurbishing locations. Medical devices can have a very long service life, far exceeding the warranty period. Highly specialized or intricate repairs may require that the device be returned to the manufacturer or a regional authorized service centre in another country.

According to Philips Medical, it is critical to business to return systems to the manufacturer or authorized contractor for parts harvesting and repair, which are then used in service operations. To keep the service expenses for medical devices at affordable levels, the return of defective parts for repair is a necessity. The repair of service parts can only take place in central, specialized repair centres, requiring transboundary movements. Return of used parts also significantly expands the lifetime of installed medical devices in addition to the asset value of the equipment. Return of used equipment to the manufacturer or to a test house would be necessary after an “adverse event” in which a patient or user was harmed, in order to complete root cause analysis, meeting regulatory compliance or quality assurance monitoring of devices required by the EU Medical Device Directives.

The United States released a National Strategy that contains the federal government's plan to enhance the management of EEE throughout the product lifecycle. The Strategy contains four goals: (1) building incentives for design of greener electronics and enhanced domestic research; (2) ensuring that the U.S. federal government leads by example; (3) increasing the safe and effective management and handling of used electronics domestically; and (4) reducing harm from U.S. exports of e-waste and improving safe handling of used electronics in developing countries. The U.S. has also adopted a regulation applying notice and consent requirement to the transboundary movement of used and end-of-life cathode ray tubes.

#### **Part IV: Relationship between Trade and the Environment as it Relates to Transboundary Movement of Used and End-of Life-Goods**

The Basel Convention regulates transboundary movements of hazardous wastes. As transboundary movement is also the *sine qua non* of international trade, questions have been raised about the relationship between the Basel Convention and international trade agreements.<sup>49</sup> In particular, control measures that target commerce in UELG might be of potential concern from a trade perspective.

Space does not permit extensive discussion of this subject, which has been the topic of numerous papers published by the OECD, World Trade Organization (“WTO”) and other international organizations, as well as numerous governments, NGOs and scholars. However, several key points may be worthy of consideration, at least from a legal perspective:

- No measure necessary to comply with an obligation contained in a widely-supported multilateral environmental agreement has ever been challenged before the WTO (or any other trade organization).

49 See, e.g., Appasamy, Paul, Madras School of Economics, Chennai, “International Conventions On Hazardous Chemicals,” <http://www.mse.ac.in/trade/pdf/Compendium%20Part%20B/5.%20PPA-chem-conven%282.4.07%29.pdf> (Retrieved 15 March 2012.)

- The GATT and many other trade agreements contain an exception whereby any contracting party may adopt or enforce measures “necessary to protect human, animal or plant life or health”, subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade<sup>50</sup>.
- In the only WTO dispute involving UELG (specifically “retreaded tyres”), the WTO Appellate Body ruled that a prohibition on the importation of used tyres could be considered “necessary to protect human, animal or plant life or health”<sup>51</sup>.
- Given that the Basel Convention, like the GATT, is also a reflection of the views of the international community, and in light of the outcome of several WTO dispute settlement proceedings, it is not clear that a trade dispute panel would presume to characterize a measure required by a widely accepted international agreement such as the Basel Convention as “unnecessary,” or as “a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail,” within the meaning of GATT Article XX(b), especially if both parties to the dispute were also Parties to the Basel Convention.<sup>52</sup>

That said, most Parties to the Basel Convention are also members of the WTO or party to bilateral or regional agreements that impose disciplines on the regulation of trade, and presumably support international trade law’s policy of discouraging unnecessary trade barriers. From a legal perspective, well-targeted restrictions on the import of UELG might not be deemed to discrimination against a “like product” (e.g., a new good from another country that serves the same function)<sup>53</sup> in violation of “most favored nation” clauses in the GATT and other trade agreements. However, unless supported by sound reasoning, application of measures to the transboundary movement of UELG in a manner that discriminates between countries might be viewed as “arbitrary and unjustifiable discrimination,” which would defeat invocation of the GATT’s environmental exception.<sup>54</sup> In considering the proper approach to transboundary movement of UELG, Parties may wish to take into account a number of considerations suggested by the OECD more than a decade ago:

- The use of trade measures should be carefully designed and targeted to the environmental objective;
- Potential difficulties such as illegal trade and inadequate technical and institutional capacity in some countries should be taken into account from the beginning; and

50 GATT Art. XX(b). While Art. XX(b) does not explicitly mention the environment, it has been so-interpreted. See, e.g., North American Free Trade Agreement (NAFTA), 32 I.L.M. 289, 605(1993), Art. 2101 (“The Parties understand that the measures referred to in GATT Article XX(b) include environmental measures necessary to protect human, animal or plant life or health, ...”); Canada-Colombia Free Trade Agreement (2002), Article 2201(1), available at <http://www.international.gc.ca/trade-agreements-accords-commerciaux/agr-acc/colombia-colombie/can-colombia-toc-tdm-can-colombie.aspx?view=d>. (Retrieved 19 May 2012.)

51 Report of the Appellate Body, BRAZIL – MEASURES AFFECTING IMPORTS OF RETREADED TYRES AB-2007-4, para. 212. The Appellate Body also ruled, however, that the import ban was “applied in a manner that constitutes arbitrary or unjustifiable discrimination,” and was therefore not eligible for the GATT Article XX(b) exemption. *Id.*, para. 233.

52 See, OECD Joint Committee on Trade and Environment, “Trade Measures In Multilateral Environmental Agreements: Synthesis Report Of Three Case Studies [including the Basel Convention],” COM/ENV/TD(98)127/FINAL (15 Feb. 1999).

53 Article 1.1 of GATT 1947 provides, in part: “any advantage, favor, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties.”

54 See discussion of Brazil Tyres, *supra*. It possible, however, that the analysis of “arbitrary or unjustifiable discrimination” would be different if (unlike the case in Brazil Tyres), the measure at issue was mandated by a widely supported international instrument such as the Basel Convention.

- Trade measures which treat classes of countries in different ways should clearly be based on environment-related criteria.<sup>55</sup>

## Part V: Options for dealing with the problem posed by used and end-of-life goods

Among the “Guiding principles” of the “Strategic framework for the implementation of the Basel Convention for 2012–2021”<sup>56</sup> is the recognition of a “waste management hierarchy (prevention, minimization, re-use, recycling, other recovery including energy recovery, and final disposal)” that “encourage[s] treatment options that deliver the best overall environmental outcome, taking into account life-cycle thinking.” The Strategic framework encourages the use of waste management policy tools, including “recognition of wastes as a resource, where appropriate.” In addition, Objective 2.5 of the Strategic framework is: “To enhance and promote the sustainable use of resources by improving the management of hazardous and other wastes and to encourage the recognition of wastes as a resource, where appropriate.”

Consistent with the Strategic framework, the options presented below, with the exception of Option 1, are suggested as potential means of dealing with UELG in ways that would recognize the value of re-use, while ensuring that the transboundary movement of goods destined for re-use (and perhaps certain recycling or recovery operations) is consistent with the Convention’s provisions on environmentally sound management. The following options draw heavily on communications from Parties and the other initiatives described above. In keeping with the general direction of national regulation and practice, the options draw a distinction between **re-use** (including re-use following refurbishment or repair and return of defective goods to the manufacturer, as under warranty) and **recycling or recovery** operations, especially as many of the latter are clearly “disposal operations” identified in Annex IV B to the Convention. It is important to recall that under the first two options, the definition of waste would presumably continue to include materials that the importing or exporting Party requires to be disposed of, and each Party retains the right to classify additional materials as hazardous waste, pursuant to Article 1.1(b) of the Convention. These options are in addition to voluntary approaches based on the supposition that the material involved is not a waste.

In considering these options, it should be noted that **used goods** and **end-of-life goods** could be treated differently.<sup>57</sup> By definition, “end-of-life” goods are not exported with the intent of meaningful re-use, at least not for the purpose for which they were originally intended.<sup>58</sup> Thus, end-of-life goods would not seem suitable for re-use, and would not be addressed by Option 2, although they would presumably be covered under Options 1 and 3, and could be included in Option 4.

These options are not intended to be mutually exclusive; a combination of approaches could be considered, particularly among the options involving revision to the Convention or its Annexes, and those that would rely on the issuance of guidance or guidelines. The issuance of guidance or guidelines can provide more flexibility than amendment of the Convention or even an Annex, and may be accomplished more quickly and easily, thus potentially expediting harmonization of national approaches. However, guidance and guidelines cannot be used to achieve an informal amendment of the Convention or an Annex, and thus cannot alter any inherent ambiguities therein.

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55 OECD, Trade Measures in the Basel Convention and the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (1998), <http://www.oecd.org/dataoecd/5/55/36789048.pdf>. (Retrieved 11 Apr. 2012.)

56 Adopted by the Conference of Parties in Decision BC-10/2.

57 The EU considers 'end-of-life goods' to be a synonym for 'waste' whereas 'used goods' may be waste or not depending on the question whether the definition of waste applies. EU comment letter (22 June 2012).

58 For example, the PACE ESM Guidance defines “end-of-life computing equipment: as “equipment that is no longer suitable for use, and which is intended for dismantling and recovery of spare parts or is destined for material recovery and recycling or final disposal. It also includes off-specification or new computing equipment which has been sent for material recovery and recycling, or final disposal.” The glossary of the MPPI Guidance defines “end-of-life” mobile phones in identical terms.

Table 1 below briefly summarizes the options, along with their “pros and cons.”

**Option 1: Treat UELG as waste, subject to the Basel Convention if hazardous**

It should first be recalled that each Party has the right to determine that a material is a hazardous waste, so UELG already cannot be shipped to or from countries that have made that determination, except in accordance with the Basel Convention requirements, including prior notice and consent.<sup>59</sup> Should the Parties so decide, the Basel Convention requirements would apply (or be interpreted to apply, in the case of guidance), to all transboundary movement of UELG among Parties, and if the Ban Amendment enters into force, such shipments could not be made from Parties included in Annex VII (that have ratified the amendment) to Parties not included in Annex VII.

This approach, though not favored by a majority of Parties and stakeholders, could most easily be adopted through guidance. If a binding measure were desired, it might be appropriate to add a category to Annex IVB regarding re-use. If implemented, this approach could reduce the problems faced by developing countries in managing UELG. At the same time, it could also deprive those countries and their citizens of equipment needed for sustainable development, and could exacerbate resource demands associated with the purchase of new equipment.

**Option 2: Define used goods<sup>60</sup> destined for re-use, or some subset thereof, as non-waste, subject to specified conditions or criteria**

As discussed in the accompanying draft report on the implementation of the Basel Convention as it relates to the interpretation of certain terminology<sup>61</sup>, the Convention’s definition of “waste” (or its predicate, “disposal”) could be clarified – or amended -- to exclude used goods destined for re-use or some subset thereof. This could be limited or expanded as follows:

- used goods destined for direct re-use only;
- used goods destined for warranty repair and return to the consumer;
- particular types of used goods, such as large medical equipment;
- used goods donated by charitable organizations.<sup>62</sup>

Under this approach, the Convention would not apply to transboundary movement of excluded used goods. That might raise questions as to whether conditions could be attached to such movement, but it might be possible to articulate the exclusion so as to apply only to used goods that meet specified criteria,<sup>63</sup> both with regard to essential characteristics and to the operations for which they are destined.<sup>64</sup> In addition, the exclusion could be conditioned

59 Under Article 4.1 of the Convention, hazardous waste may not be exported to Parties who have prohibited it.

60 As noted above, this Option would not apply to “end-of-life” goods.

61 UNEP/CHW/OEWG.8/INF/13

62 From a technical standpoint, the potential health and environmental problems associated with charitable donations of used goods are presumably much the same as for sale of used goods, although it might stand to reason that charitable donations might be, on average, of lower quality than goods for sale. On the other hand, some Parties may wish to encourage charitable donations, or certain categories of such donations. What might be needed is not so much a definition of “charitable donation,” but criteria according to which used goods would not be considered to be wastes when they are donated. Such criteria could relate to the charitable organization involved, as well as the characteristics of the goods. End-of-life goods presumably would not be eligible for this exclusion..

63 It seems unlikely that true “end-of-life” goods could meet these criteria, particularly those pertaining to the age of the product. It is arguable that end-of-life goods, by definition, are not susceptible to meaningful re-use, at least not for the purpose for which they were originally intended. For example, PACE defines “end-of-life computing equipment”: as “equipment that is no longer suitable for use, and which is intended for dismantling and recovery of spare parts or is destined for material recovery and recycling or final disposal. It also includes off-specification or new computing equipment which has been sent for material recovery and recycling, or final disposal.” The MPPI glossary defines “end-of-life” mobile phones in identical terms.

64 The United States Environmental Protection Agency (EPA) has followed a similar approach, whereby the status of used cathode ray tubes (CRTs) as hazardous waste depends upon the management practices to which

on appropriate assurances on the part of the exporter to “take-back” the goods if they are not in fact re-used, or perhaps if the goods include hazardous components that must be removed during refurbishment or repair operations.

Before establishing criteria, several threshold issues would need to be resolved. First, what type of future use would serve to exclude the material from status as a waste? Most Parties and stakeholders appear to support the notion that materials exported for re-use upon arrival in the importing country, without the need for refurbishment, repair or other servicing, should qualify. Industry strongly maintains that goods returned to the manufacturer for repair under warranty are not wastes. More controversial is whether goods that are in need of repair prior to re-use should qualify, and if so, what extent of repairs would be acceptable.

These categorical decisions could be informed by the criteria to which each category would be subject. Appendix 3, drawing on criteria developed by Parties or included in guidance/guidelines issued by PACE, MPPI, and the Basel Convention, indicates what some of those criteria might be.

Option 2 could be implemented through guidance, COP decision, amendment to the Convention, or amendment to Annex IV B or Annex IX. If a binding approach is desired, amendment of Annex IV B might be the most efficient. Assuming agreement that the term “waste” does not capture materials destined for re-use without the need for repair or refurbishment, the caption of Annex IV B could be modified to omit mention of goods destined for direct re-use. Or, if the caption is to be maintained, (perhaps without the modifier “direct”), a new “operation” could be added to the “R” list – e.g., any operation for used goods that does not meet specified criteria. One drawback to this approach is that it will probably be desirable to include criteria pertaining to the nature of the used goods themselves, not just the operation to which it will be subject. Similarly, if the criteria for exclusion are to include a take-back obligation, it might be argued that an amendment is required, as the Convention’s take-back provisions apply only to illegal traffic (article 9.2) and transboundary movement of hazardous waste or other waste that cannot be completed within the terms of the contract (Article 8). However, it might be agreed that a good cannot be considered to be intended for re-use unless (i) all relevant criteria are met (e.g., no removal of hazardous components during repair or refurbishment operations), and (ii) the exporter is willing to make a take-back commitment. Alternatively, it might be considered that if the good is not going to be re-used, and if it is hazardous with reference to Annexes I and III, then the export can be characterized as “illegal traffic,” triggering the take-back obligation in article 9.2.<sup>65</sup>

### **Option 3: Exclude UELG destined for certain recycling or other recovery operations from the definition waste, subject to specified conditions or criteria**

By definition, an end-of-life good is not destined to be re-used for its original purpose. Nonetheless, such goods may still have value for other purposes: for example, as feedstocks for industrial processes, recycling operations (involving a transformation of the item and incorporation into a new product), or as a source of valuable resources. Many such operations are specifically included in Annex IV B, so this Option could require a modification to that Annex. As is the case for Option 2, criteria for the recycling/recovery operation could be specified, so that only materials destined for operations meeting those criteria (for example, criteria on preventing the exposure of human health and the environment to the hazards of the UELG) would be excluded from regulation as wastes. If this option is selected, the Parties may wish to consider developing technical guidelines to elaborate the specified criteria.

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they are subject. By regulation, used CRTs, which otherwise would be hazardous waste, are not regulated as such if handled domestically and if specified domestic management practices are followed. Moreover, exporters of CRTs for recycling must notify EPA and receive written consent from the receiving county. See 71 Federal Register 42928 (28 July 2006) and EPA Fact Sheet, <http://www.epa.gov/wastes/hazard/recycling/electron/crt-fs06.pdf>. (Retrieved 15 May 2012.)

65 This raises the issue of whether transboundary movement of a “waste” occurs if the material is disposed of upon arrival in the importing country, even if the exporter does not intend such disposal. See discussion in accompanying report on pages 12-13.

**Option 4: Define UELG in accordance with national law**

This Option would be to clarify under the Convention, for instance through the adoption of a decision, that the status of UELG is to be defined in accordance with national laws. This Option would confirm that Parties who wish to receive imports of UELG (or specified categories thereof) may do so, while perhaps encouraging others to define UELG (or specified categories thereof) as hazardous wastes under their national legal framework and to adopt associated import restrictions/prohibitions, subject to required notifications under Articles 3, 4(1), and 13(2). This Option would not require any amendment to the Convention, which already allows Parties to designate additional categories of hazardous waste; and which many Parties interpret to allow imports and exports of UELG for various purposes and under various conditions. Guidance may be useful in order to assist Parties in determining how to regulate imports and exports of UELG.

Table 1 – Summary of UELG Options, with Pros and Cons

OPTION	Pros	Cons	Comments
1. Treat UELG as waste, subject to the Basel Convention if hazardous.	<ul style="list-style-type: none"> <li>-Would provide certainty, especially if implemented through amendment of Convention or Annexes.</li> <li>-Desirable for Parties who wish to halt trade in UELG.</li> </ul>	<ul style="list-style-type: none"> <li>--Inconsistent with views and practices of many Parties.</li> <li>--Inconsistent with Strategic Framework regarding “waste as a resource.”</li> </ul>	Could be accomplished through Terminology Options 1, 2, or 4.
2. Define used goods destined for re-use, or some subset thereof, as non-waste, subject to specified conditions and/or criteria. Under this approach, the Convention would not apply to transboundary movement of excluded used goods.	<ul style="list-style-type: none"> <li>-Could be tailored to specified categories, such as: <ul style="list-style-type: none"> <li>-- direct re-use;</li> <li>-- warranty repair and return to the consumer;</li> <li>--particular types of used goods, such as large medical equipment;</li> <li>--used goods donated by charitable organizations .</li> </ul> </li> <li>- Could be conditioned on appropriate assurances by the exporter to “take-back” goods that are not re-used or that include hazardous components that must be removed during refurbishment of repair operations.</li> </ul>	<ul style="list-style-type: none"> <li>--Legal issue may be raised as to whether conditions could be attached to movement of non-waste</li> <li>--Counter: The exclusion could be articulated so as to apply only to used goods/operations that meet specified criteria.</li> </ul>	<ul style="list-style-type: none"> <li>-Could be accomplished through Terminology Options 1 or 2.</li> <li>-Inclusion of “takeback” provision probably would require amendment to the Convention or Annex IV B.</li> </ul>
3. Exclude UELG destined for certain recycling, or other recovery operations from the definition of waste, subject to specified conditions or criteria.	<ul style="list-style-type: none"> <li>-Promotes use of waste as a resource.</li> </ul>	Could be viewed as departure from longstanding application of Convention to recycling and recovery operations.	Could be accomplished through Terminology Option 1 or 2a
4. Define UELG in accordance with national law.	<ul style="list-style-type: none"> <li>-Allows each Party to determine policy on imports and exports of UELG.</li> <li>-No requirement for amendments, although guidance might be useful.</li> </ul>	<ul style="list-style-type: none"> <li>-Parties already have this prerogative.</li> </ul>	Similar to Option 4 in the Terminology report.

## APPENDIX 1



## Questionnaire on options for dealing with the problem posed by used and end-of-life goods, including take-back obligations and the concept of “charitable donations”

	<p><b>Introduction</b></p> <p>The Conference of the Parties to the Basel Convention, at its tenth meeting, adopted decision BC-10/3 on the Indonesian-Swiss Country-led Initiative to improve the effectiveness of the Basel Convention.</p> <p>Section C of this decision requests the Secretariat, assisted by legal and technical experts as appropriate and taking into account other initiatives such as the "Partnership for Action on Computing Equipment" (PACE), to prepare a study to identify options for dealing with the problem posed by used and end-of-life goods, which could include take-back obligations and clarification of the concept of “charitable donations”.</p> <p>The present questionnaire aims to collect the views of such legal and technical experts <u>within stakeholders</u>, to provide information towards the preparation of the above-mentioned study. A separate questionnaire has been developed and circulated to collect the views of experts within Parties and signatories in this regard.</p> <p>The Secretariat would be most grateful to you for completing and returning this questionnaire to: Ms. Yvonne Ewang-Sanvincenti (<a href="mailto:yvonne.ewang@unep.org">yvonne.ewang@unep.org</a>) no later than <b><u>15 March 2012</u></b>.</p> <p>We thank you in advance for your kind cooperation.</p> <p style="text-align: right;">The Secretariat of the Basel Convention</p>	
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***Please fill in the following information:***

**Stakeholder:**

**Date when form completed(D/M/Y):** -- / -- / ----

**Name of the person who completed the questionnaire:**

**Title:**

**Address:**

**Telephone no:      Fax no:**

**E-mail:**

For further information and clarification, please contact:

[yvonne.ewang@unep.org](mailto:yvonne.ewang@unep.org)

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Switzerland

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Fax: +41 22 797-3454

**Options for dealing with the problem posed by used and end-of-life goods**

1. Has your organization been faced with, identified or helped to identify problems posed by used and end-of-life goods, particularly transboundary movements of such goods?

No  Yes If yes, please specify the problem(s):

.....  
 .....  
 .....

2. Please provide details of any measures, initiatives or other options that have been developed/implemented by your organization to address this problem, including take-back obligations:

.....  
 .....  
 .....

3. Has your organization defined, interpreted, or contributed to the development of a definition or interpretation of “charitable donations”?

No  Yes

If yes, please specify and provide any related texts (in English) and clarify how such definition or interpretation is used/implemented:

.....  
 .....  
 .....

4. Have any of the measures developed/implemented by your organization to address these problems been linked with the implementation of obligations under the Basel Convention?

No  Yes If yes, please provide details:

.....  
 .....  
 .....

5. Does your organization participate in or contribute to any bilateral, regional, multilateral efforts, initiatives or agreements to harmonise approach(es) for dealing with problems faced from used and end-of-life goods?  No  Yes

If yes, please provide details, in particular as may relate to take-back obligations and/or “charitable donations”?

.....  
 .....  
 .....

**III. Other Relevant Information**

6. Is there any other information you would like to provide concerning the options for dealing with the problem posed by used and end-of-life goods or concerning clarification of the concept of “charitable donations” that could be of relevance to the preparation of the study?

.....  
 .....  
 .....

**Thank you for completing the questionnaire!**

## APPENDIX 2

Summary of data<sup>i</sup>

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
<b>Andorra*</b>	Due to the size and the resources of the Principality of Andorra, the authorities will not be able to possess, according to reasonable criteria, the means to treat and recover all the hazardous wastes and other wastes the country generates. Therefore, and basing its exports on the principles of the Basel Convention (proximity, ecological sound management, reduction), Andorra will probably not restrict the export of wastes that it cannot treat or recover itself.		Article 3 of the Agreement between Andorra and Spain (17-10-06) concerning the transboundary movements of wastes defines which wastes are subject to the agreement. These wastes are: Wastes included in Annex II of the European Council Regulation 259/93/CEE, of 01/02/1993 amended by the Decision of the European Commission 99/816/CE, dated 24/11/1999; Wastes included in Annex III of the European Council Regulation 259/93/CEE, of 01/02/1993 amended by the Decision of the European 99/816/CE, dated 24/11/1999. Article 4 states that, on the Spanish side, all imports of waste will be realized in complete conformity with the European Union rules defined in the Regulation 259/93/CEE.	
<b>Argentina</b>	Lately, there have been problems associated with imported materials such as sludge treatment plant, used tires, used electrical and electronic equipment, etc. Argentina has encountered a problem differentiating between something used and waste.	Accordingly, the national environmental agency has developed strategies to determine when something is a waste or not. In the case of electrical and electronic equipment, the government is studying the issue and will probably set a regulation that defines EEE, used EEE, and waste EEE. While the issue is complex, the rule would give some flexibility to the management sector whose activities include used EEE and their collection, transport and storage, prior to a recovery, treatment and subsequent disposal where will be waste. The national environmental agency has ruled in particular cases that the assets used are waste,	As regards EEE, in the framework of the “Program of Support for Deepening Economic Integration Process and Sustainable Development of MERCOSUR (MERCOSUR ECONORMAS)”, developed by Resolution Group Common Market-GMC 41/2009, an activity carried out within the Regional Indicative Programme (RIP) 2007-2013 for cooperation of the European Union and MERCOSUR (Argentina, Brazil, Paraguay and Uruguay), Argentina has selected the	(See previous entry. Specific mechanism not identified.)

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
		<p>hazardous when they possess hazardous characteristics, except for certain materials which can be ascertained that were remanufactured for use for the same purpose for which they were designed or produced and having the same characteristics of use when they were produced.</p> <p>When classifying goods that have been used (electrical and electronic equipment-EEE) and disposed of, which have hazardous characteristics and intended to be imported for sale or use in the country and the national environmental agency has classified as hazardous waste.</p> <p>Argentina requires special consideration for the following waste(s) when subjected to transboundary movement: Those products that are made by recycling of wastes or which use recycled wastes as raw materials (e.g. carpets made by recycled rubber), require special consideration. (2009 Compendium)</p>	<p>Electrical Products Industry-Electrical and Electronic Used Products and Wastes Recyclers to work in the area of Good Practice for Sustainable Consumption and Production, thinking specially in the informal sector. Besides, the countries of the MERCOSUR defined EEE waste (WEEE) as an universal generation waste, under the Agreement “Environmental Management of Special Wastes and the Principle Extended Producer Responsibility”, which was signed during the “Fourth Meeting of Ministers of Environment of MERCOSUR” on March 29, 2006 and awaits approval by the Common Market Council (CMC). The MERCOSUR countries agreed to “incorporate patterns of sustainable consumption and production in order to minimize the amount and hazardousness of waste generated”. The universal waste regulated are included in Annex I of the Agreement mentioned, and highlight: batteries, electrical appliances electronics; lamps (mercury lamps and fluorescent tubes), used tires, cell phone, among others. The objective of the Agreement is to adopt policies and strategies to ensure proper management of waste in order to protect the health of the population and the environment.</p>	

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
<b>Bhutan</b>	We do not have required infrastructure and facilities for recovery. This is coupled with lack of technology and capacity in managing the hazardous wastes			
<b>Brazil</b>	There have been several cases of illegal transboundary movements of lead-acid automotive used batteries in Brazil.	<p>The Brazilian Biosafety Law, Law number 11,105/2005, provides penalties for illegal transboundary movements which are enforced by competent national authorities. Violators are subjected to penalties and administrative sanctions established in the legislation. The importation of used machinery, equipment, and cargo containers will only be granted if it is proven that the products are not produced in Brazil and cannot be substituted by a similar product currently produced in Brazil. Notable exceptions to this requirement are: factory's production lines related to specific projects; and parts as well as equipment used for maintenance and repair of telecommunication and informatics goods;</p> <p>Non-automatic license required for imports of all used goods, with the exception of packaging material used in temporary importation or re-importation;</p> <p>Granting of non-automatic licenses prohibited, except for imports by the State or educational and scientific institutions. National Law n° 12.305 from 02/08/2010 – National Policy on Solid Waste – Article49. Prohibits the importation of hazardous solid waste and solid wastes that present significant risk to the environment, the public health and the animal and plant health, even for treatment, reform, reuse, reuse or recovery.</p> <p>National Environmental Council (CONAMA) Resolutions Nr. 23 (December, 1996) and Nr.</p>		

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
		235 (January 7, 1998). The legislation defines which wastes are forbidden from being imported and which are just controlled by IBAMA.		
<b>Bosnia</b>	No capacity within the country for recycling, recovery or reuse of hazardous waste 2(f)			
<b>Canada</b>		Updating national waste law to include non-hazardous wastes and to clarify requirements for certain used electronics based on transboundary movement guidance from MPPI and PACE (ongoing). Contributing to the development of a federal e-waste strategy, which establishes ESM requirements for service providers that manage federal surplus electrical and electronic equipment. Supporting Canadian industry-driven ESM standards for recycling and refurbishing used and waste electronics. Enforcement activity related to preventing illegal transboundary movement of hazardous wastes, including e-waste.	Work under the Basel Convention, specifically related to the activities of the former MPPI, current PACE, and this inter-sessional working group on e-waste. Work under NAFTA CEC to gather information, promote ESM, and share intelligence on enforcement issues pertaining to the management of e-waste and other hazardous wastes	
<b>Cambodia</b>		The importation of the household waste and hazardous waste from abroad to the Kingdom of Cambodia shall be strictly prohibited. <sup>ii</sup> .	Work under the Basel Convention, specifically related to the activities of the former MPPI, current PACE, and this inter-sessional working group on e-waste. Work under NAFTA CEC to gather information, promote ESM, and share intelligence on enforcement issues pertaining to the management of e-waste and other hazardous wastes	

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
<b>Chad</b>	In the case of management of PCBs and PCB transformers, we are supported by the GEF and the Centre of Dakar of the Basel Convention for the francophone countries of Africa. Chad has no legislation governing the collection and transport for hazardous waste (PCBs).	Remedies under consideration.		
<b>CAR</b>	Insalubrité, incapacités (financière, matérielle et institutionnelle de gestion de ces différents produits en fin de vie), pollution (du sol, de l'eau, de l'air...).	Le Code d'hygiène et le Code de l'Environnement et leurs Décrets d'application ont de difficultés d'application à cause de personnel qualifié insuffisant, néanmoins certaines terminologies évoquées dans le présent questionnaire n'ont pas été pris en compte.		
<b>China<sup>iii</sup></b>		<p>The export of hazardous waste for recovery must comply with the notice and consent requirements of the Basel Convention (No. 47 ORDER of SEPA). Furthermore, each shipment of hazardous waste should be accompanied by a movement document from the point at which the movement begins to the point of recovery.</p> <p>Import of solid waste which cannot be used as a raw material or in an ESM is prohibited.<sup>iv</sup> In China, all imported UEEE requires 3C certification (which indicates that iscomparable to brand new EEE). In addition the UEEE which are of higher value and environmental risk requires pre-inspection before shipping. Criteria for pre-inspection include the following:</p> <ul style="list-style-type: none"> <li>(i) Examine whether the goods are approved by the Chinese government;</li> <li>(ii) Examine whether the number, specification, and quality of condition are the same as those listed in contract;</li> <li>(iii) Assessment of security, sanitation and environment requirements.</li> </ul> <p>All UEEE require inspection after arriving at the</p>	None	

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
		<p>port of China. Criteria for inspection after arriving China include the following:</p> <p>(i) Opening-box inspection: Examine name, brand, specification, number, quality and packaging conditions;</p> <p>(ii) Security inspection: Comply with compulsion standard related to EEE;</p> <p>(iii) Environmental inspection: Comply with compulsion requirement related to environmental protection</p>		
<p><b>Colombia (entry is based on an informal translation from the Spanish communication .)</b></p>	<p>Customs authorities have identified imports of used electrical and electronic equipment (e.g. cell) where the object of import was not clear, and was not easy to establish the useful life of the product. Nor was it clear whether devices that no longer have functionality (waste) are imported along with used equipment.</p> <p>Problems are expected with the control of the import of goods used or retrofitted from 2012, with the entry into force of the new free trade agreements. Also exported are parts or pieces recovered from electrical and electronic equipment (e.g., printed circuit boards) and different types of scrap metal, without knowing the fate of the same. These parts or equipment are not classified as "waste" in the customs tariff; much less as hazardous waste.</p>	<p>- Colombian regulations provide specific rules for liquid discharges and atmospheric emissions. Associated actions to discard, refuse or deliver what is considered a waste must be controlled at all stages, even when delivered to a third party for a process or subsequent treatment.</p> <p>-- Recommends Establish clear policies against the importation of EEE for the reuse or refurbishment. If allowed, importers must comply with all the obligations applicable to producers arising from this condition with respect to the EEE that entered the country.</p> <p>-- However it has issued rules relating to control transboundary movements of WEEE (hazardous and non hazardous) or used equipment. The only tool you have is now the Basel Convention but it is difficult to apply because many countries do not consider WEEE to be hazardous waste or do not control its movement.</p> <p>It is considered that transboundary movements of electrical and electronic equipment used or second hand and WEEE should be subject to the control procedures of the Basel Convention, regardless of whether the countries classified as hazardous or not and are intended for recycling</p>	<p>Colombia participated during the year 2011 with other countries in the region, in the elaboration of the so-called non-binding document "guidelines for the management of waste from electrical and electronic equipment (WEEE) in Latin America: results of a regional public-private working group". The guidelines were developed within the framework of the RELAC platform with the support of the International Development Research Center, IDRC.</p> <p>WEEE require specific handling differentiated Solid Waste (MSW) and hazardous waste, the waste identified as special management because of its potential use and recovery of toxic compounds contain at a minimum rate, and its accelerated growth determined by the rapid replacement technology. The concept of WEEE is based on the idea of abandonment or disposal by its holder. It is established that the characteristics that make that an EEE is regarded as WEEE, in order of priority, are as follows: when you can not be used for the purpose it was created, for</p>	<p>With respect to WEEE generated internally, the Ministry of Environment has issued a series of standards related to used computers, light bulbs and batteries, under the principle of Extended Producer Responsibility, imposing on producers (manufacturers and importers) obligations to establish return and recovery systems .</p> <p>Latin Am Guidance: Facing the Extended Producer Responsibility: It is recommended that the governments of the region incorporated into national policy frameworks the principle of the SPR, to be applied in the management of WEEE generated within its territory.</p>

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
		<p>or recovery operations.</p> <p>Latin Am Guidance: WEEE require a specific management of urban solid waste (RSU) and hazardous waste, to be identified as a waste of special handling, because of their potential for development and recovery, to contain toxic compounds in a minimum proportion, and by its rapid growth determined by the rapid technological replacement.</p> <p>Suggests implementation of a system of management of WEEE, especially the following: product life cycle (from design through his recovery and disposal); stages of WEEE management (collection, transport , storage, disassembly, refurbishment, recycling and disposal), design and implementation and in some cases, administration and monitoring of the system, administrative tools, economic and informative.</p> <p>Establish clear policies against the import of EEE for reuse or refurbishment. If such imports are allowed, importers will be considered as producers and must comply with all obligations concerning the entry of EEE into the country.</p> <p>It is recommended to maintain the definition of "hazardous waste" based on hazard characteristics that are inherent to the residue. Likewise, it is suggested to submit to the control system of notification of the Basel Convention means equipment used or second hand and WEEE.</p>	<p>replacement technological obsolescence or, when the holder makes the decision discarding it or leave it.</p> <p>Is set to consider WEEE as waste, not merely that the management post-consumer oriented treatment promotes their ability to benefit and recovery as raw materials or production inputs. Facing the Extended Producer Responsibility:</p> <p>It is recommended that the governments of the region incorporated into national policy frameworks the principle of the SPR, to be applied in the management of WEEE generated within its territory.</p> <p>It is suggested that the implementation of a system of management of WEEE are considered, especially the following: product life cycle (from design through his recovery and disposal); stages of WEEE management (collection, transport, storage, disassembly, refurbishment, recycling and disposal), design and implementation and in some cases, administration and monitoring of the system, administrative tools, economic and informative.</p>	
<b>Costa Rica</b>			Central American Agreement on the Transboundary Movement of Hazardous wastes	

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
EU	<p>In the case of waste shipments, enforcement and control authorities often face problems to distinguish between waste (end-of-life goods) and non-waste (e.g. used goods ), for example regarding electrical and electronic waste and under the cloak of being charity donations. Enforcement and control authorities should have easy and fast-to -use criteria or means to differentiate between waste and non-waste.</p>	<p>Enforcement and control authorities should have easy and fast-to -use criteria or means to differentiate between waste and non-waste. EU directives now require Member States to introduce legislation on waste collection, reuse, recycling and disposal of these waste streams. Several EU countries are already managing to recycle over 50% of packaging waste. <a href="http://ec.europa.eu/environment/waste/index.htm">http://ec.europa.eu/environment/waste/index.htm</a> (accessed 6 Apr. 2012)</p> <p>Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008</p> <p><b>SUMMARY</b></p> <p>--establishes a legal framework for the treatment of waste</p> <p>Waste hierarchy in order of priority:</p> <ul style="list-style-type: none"> <li>- prevention *;</li> <li>- preparing for reuse;</li> <li>- recycling *;</li> <li>- other recovery *, notably - energy recovery;</li> <li>- disposal.</li> </ul> <p>-- repeals directives 75/439/EEC, 91/689/EEC and 2006/12/EC. Recovery: any operation the principal result of which is waste serving a useful purpose.</p> <p>Recycling: any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes.</p> <p>The Waste Shipment Correspondents of the EU Member States have agreed on a number of non-legally binding guidelines addressing these issues by clarifying the distinction between waste and non-waste for the specific waste streams of WEEE and waste vehicles (ELVs).<sup>v</sup></p>	<p>The EU and its Member States support the efforts of IMPEL-TFS aiming to promote the exchange of knowledge, best practices and experience with the enforcement of Regulation (EC) No 1013/2006 on shipments of waste. We also take part in the work of the OECD. Experiences gained by the inspection campaigns organized by the EUROPOL (Project AUGIAS) and the World Customs Organization (Operation DEMETER) are also beneficial.</p> <p>On the level of the Basel Convention, the EU and its Member States support the development of technical guidelines on transboundary movements of e-waste, in particular regarding the distinction between waste and non-waste.</p> <p>On export of items being part of charitable donations there is no specific EU initiatives or legislation.</p>	<p>The Basel Convention and implementing EU legislation (Regulation (EC) no 1013/2006) explicitly provide that take-back obligations apply specifically to waste.</p> <p>2008/98:Art. 8 – EPR 1. In order to strengthen the re-use and the prevention, recycling and other recovery of waste, Member States may take legislative or non-legislative measures to ensure that any natural or legal person who professionally develops, manufactures, processes, treats, sells or imports products (producer of the product) has extended producer responsibility.</p>

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
		Elements of the Correspondents' guidelines on WEEE will become legally binding as part of EU legislation in the recast of the new WEEE Directive, whereby the burden of proof on functionality of used equipment is incumbent upon exporters of waste.		
		Le Code d'hygiène et le Code de l'Environnement et leurs Décrets d'application ont de difficultés d'application à cause de personnel qualifié insuffisant, néanmoins certaines terminologies évoquées dans le présent questionnaire n'ont pas été pris en compte		
<b>HKSAR</b>		<p>Hong Kong has developed a list of criteria to distinguish waste EEE from second-hand EEE. These criteria are summarized in Annex I to the accompanying Report. In addition to the Basel Convention requirements, the export of any waste for a purpose other than re-use, recovery, reprocessing or recycling (e.g. for final disposal including landfilling and incineration) of the waste is subject to control by the same procedure as that of the control of export of hazardous waste. (SBC Compilation (2009) 3(c),(f))</p> <p>Under the WDO, contaminated wastes are also controlled as hazardous wastes. For the purpose of control on important export of wastes, a waste is "contaminated" if it is contaminated by a substance to an extent which significantly increases the risk of human health, property or the environment associated with the waste; or</p> <ul style="list-style-type: none"> <li>- Prevents the reprocessing, recycling, recovery or re-use of the waste in an ESM.<sup>vi</sup></li> </ul>		

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
<b>Indonesia</b>		The non-new capital goods listed in its annex are prohibited for import in Indonesia, including refrigerators, washing machines, TV, phones, air conditioners, printed circuit, valve and thermion tube, cold cathode or photo cathode tube, etc. <sup>vii</sup> Importation of used EEE and e-waste for direct (individual) consumption by consumer is prohibited. <sup>viii</sup>		
<b>Japan</b>	Some wastes disguised as the second-hand items have been illegally exported in the past and intercepted by the destined country. One of the reasons was the difference in the definition and regulation on the second-hand goods.	Japan started to use domestic HS codes to differentiate UEEE from brand-new EEE. In addition, Japan developed the identification standards for export of second-hand CRT TVs (2009).	As reference, Japan has various kinds of international cooperation with other countries. One of the international cooperations is technical cooperation projects, including human resource development, provisions of machineries, equipments and materials for the development of recipient countries under the framework of economic cooperation.	
<b>Lithuania</b>	The most common problem in this regard is transboundary shipment of end-of-life vehicles. There have been many cases when it is not clear whether certain vehicles should be treated as used vehicles or end-of-life vehicles and such lack of clarity causes problems with the procedure of transboundary waste shipment.	An act of law is currently being prepared in accordance with the guidelines of EU correspondents on distinction between waste vehicles and used vehicles.		
<b>Malaysia</b>	Illegal import and export of end of life CRTs and Computer Monitors.	In Malaysia, The criteria for UEEE are as follows: - the date of manufacture should not be more than 3 years (for the purpose of importation); - still functioning and have certificate of inspection from competent authority or testing body and destined for direct re-use, and not for recycling or recovery or final disposal; - no physical damage that impairs its function		

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
<b>Mexico*</b>		<p>Mexico restricts the import of hazardous wastes and other wastes for recovery. Import of hazardous waste will be only allowed with the purpose of reusing or recycle hazardous wastes, and in no case may import be authorized of hazardous wastes that are or areconstituted by persistent organic compounds.<sup>ix</sup>The Secretariat will be able to impose limitations to the import of remainders when disincentive or constitutes an obstacle for the reusability or recycling of theremainders generated in national territory.” Also, in accordance with Article 50 of the LGPGIR determines that the followingactivities of hazardous wastes handling requires authorization of the Secretariat:</p> <p>I.The benefit of services of handling of hazardous wastes,</p> <p>II.The use of hazardous wastes in productive processes, in accordance with thearranged thing in Article 63 of the Law, III.... .</p> <p>IV.The accomplishment of anyone of the activities related to the handling of originating hazardous wastes of third part.</p>		
<b>Morocco</b>	<p>Divergence between the national classification of certain wastes with certain importing countries (in Europe). Certain end-of-life products are considered as dangerous wastes and are therefore subject tona notification, while the country of import considers it a raw material.</p>		None	
<b>Montenegro</b>		<p>Follows instructions from BC and EU Regulation as well as national conditions. MNE restricted import of used goods only for direct re use while import of end-of-life goods is practice impossible because in MNE there are no recycling facilities</p>		

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
<b>Nicaragua</b>	No data are available, but too much equipment, products and materials is being imported. Companies or importers tend to disappear and, and the materials are illegally disposed of in landfills.	Regulations being contemplated for several sectors. Nicaragua believes that all countries' Environmental Authorities must ensure prior consultation with their counterparts before authorizing the export of a second-hand good, whether hazardous or non-hazardous, given the ability of handling, use, response and responsibility to return them to their origin.	Central American Regional Agreement to Ban Import of Hazardous Waste, signed by the Presidents of Central America in 1992.	
<b>Norway</b>		Norway considers used equipment destined for repair or refurbishment, except for the situation in paragraph 27 letter b, to be waste and hence procedures for transboundary movement of waste shall apply.		
<b>Philippines</b>		Philippines "Interim guidelines for the importation of recyclable materials containing hazardous substances" allow the import of electronic assemblies and scrap on the condition that residuals from recycling of materials which contain hazardous substances without any acceptable method of disposal in the Philippines must be shipped back. <sup>x</sup> . Used goods such as mobile phones under warranty intended for repair returned back to the consumers are allowed for importation and not subject to the Basel Convention. However, those intended for disassembly and major repair or refurbishment shall be required to undergo the notification process.		See "measures"
<b>Serbia</b>		Principle of waste management hierarchy Waste management hierarchy means the hierarchy of waste management priorities: - waste prevention, the reduction of resource consumption and the reduction of quantities and/or hazardous characteristics of the waste created; - reuse of the same product for the original or other purpose; - recycling, that is treatment of waste for the		

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
		purpose of obtaining raw materials for the production of the original or other product; - Recovery, that is the use of waste value (composting, incineration with energy recovery, etc.); - Disposal of waste through depositing or incineration without energy recovery, if there is no other appropriate solution. [2009]		
<b>Singapore</b>		Import/export of UEEE are allowed if there are documents to support appliances are in working condition and suitable for reuse. Export of UEEE that are not suitable for re-use are prohibited. Import of UEEE for the purpose of dismantling and re-export of the dismantled components are prohibited. <sup>xi</sup>		
<b>South Africa*</b>		South Africa would only import hazardous waste for recovery if the importing company could provide proof that they had a technology which would recover the waste in an ESM which is protective of human health and that the technology meets the permit/licensing requirements of the country. (3(f))Should a South African company wish to export waste to another country for recovery, the exporting company would need to explain why the waste cannot be recovered in South Africa. In addition the Department would require a copy of the environmental permits required for the technology being used to recover the waste in the country of import as well as a copy of the recovery companies ISO 14001 which would demonstrate that they are able to manage the waste in an ESM.		
<b>Thailand</b>		Import of UEEE in Thailand is allowed only for activities of reuse, repair/ refurbish as its original purposes, disassembly and recycle/ recovery with different conditions from Parties. Items of UEEE require import permits from Ministry of Industry. <sup>xii</sup>		

	Identification of Problem Posed By Used and End-of-life Goods	Measures to Address the Problem	Bilateral, etc. initiatives	Take-back
<b>Togo</b>			Notifications et consentement sur certains déchets (huiles usées 1717 m3 and batteries usées 34,480 tonnes) et sur les opérations de recyclage. (w/Ghana)	
<b>Venezuela*</b>		Insofar as materials with hazardous characteristics that, after serving a specific purpose, still have useful physical and chemical characteristics and can therefore be recovered, reused, recycled, regenerated or otherwise used to good effect for that same or another purpose, they are considered by Venezuela's domestic legislation (Decree 2635, article 3), as recoverable hazardous material and are exempt from the Constitutional ban on imports if and only if the country has environmentally safe technology available to recover it. 3(f)		
<b>Vietnam<sup>xiii</sup></b>		In January 2006, Vietnam promulgated Implementation Rules for the Law on Trade (No.12/2006/ND CP) and ban import of waste materials, toxic chemical substances and second-hand commodities, including electronic, cooling and home appliances [15]. In 2006, the Vietnamese Ministry of Post and Telecommunications issued a decree, banning the import of seven categories of second-hand hand electronic and communications products, including computers, CD duplicators and copiers, data processors, calculators, ticket issuing equipments, automatic data processing devices and other intelligence devices, transmitting devices for wireless telephones, telegrams and audiovisuals, cameras and voice recorders. The decree also prohibits the import of spare and component parts for the aforesaid products.		

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
<b>Yemen</b>	In 2010 is set to expired goods were returned to the Country of Origin.			Pesticides were exported expired during the years 1996, 2002, 2004 to dispose of expired pesticides, with the use of procedures of the Basel Convention on transboundary movement, have been exported expired pesticides to Britain for disposal.
<b>Zambia</b>	“Imports of second hand goods into the country that seem not to be functional or of poor quality.”	“We are in the process of enacting the extended producer responsibility regulations”	African Institute framework”.	
<b>United States</b>	While accurate data on the amount of e-waste exported from the United States are not available, the U.S. government is concerned that these exports may be mismanaged abroad, causing serious public health and environmental hazards and representing a lost opportunity to recover valuable resources.	The National Strategy for Electronics Stewardship report details the federal government’s plan to enhance the management of electronics throughout the product lifecycle — from the design to the eventual recycling or disposal. The Task Force recognized that global markets play an important role in reuse, remanufacturing, and recycling of UEEE, creating environmental, economic, and social benefits, including bridging the digital divide by providing access to information technology products to people who would otherwise be unable to afford them. The proximity to markets where electronics are manufactured and where raw materials are available affects where recycling and other processing of UEEE takes place, as do available technologies, environmental standards, and labor rates. For example, there is high demand in Asia for used electronic components for remanufacturing electronics. The Task Force, however, had serious concerns about unsafe handling of UEEE, especially discarded electronics or e-waste, in some countries that result in harm to	Not any specific but we are members of the OEWG, PACE, working in the North American region through the Commission for Environmental Cooperation (CEC) to enhance the capacity of SMEs that refurbish and recycle UEEE to implement environmentally sound management practices, estimate the amount of transboundary movements of used computers and monitors within and from North America, and undertake enforcement cooperation regarding illegal trade in used electronics.	.At the State level, a number of U.S. States have adopted legislation that requires electronics take-back. Furthermore, the U.S. government is working with a diverse group of stakeholders, including state governments, industry and the public, to develop solutions to the problem of used electronics. In addition, NGOs are also very much involved in promoting environmentally sound management of electronics, including raising awareness of the harm caused by unsafe management and providing technical

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
		<p>human health and the environment. The Task Force set forth recommendations, now being implemented, to reduce harm from U.S. exports of e-waste and improve safe handling of used electronics domestically and internationally.</p> <p>On the Federal level, we have adopted a regulation that governs the transboundary movement of used and end-of-life cathode ray tubes</p>		<p>assistance.</p> <p>Many manufacturers of electronics as well as electronics retail chains have joined the charge to find innovative ways of ensuring the safe management of discarded electronics. The manufacturers often have programs where consumers can ship back discarded electronics. Some retail stores offer consumer electronics recycling programs their stores, as well as locations to drop off old cell phones, rechargeable batteries, and ink-jet cartridges. Many U.S. companies have also instituted take-back programs.</p>
<b>PC Rebuilders and Recyclers</b>	<p>Differentiation between used goods that are refurbishable in the receiving country verses equipment that is just being sent for material recovery. I suspect that is a fine line.</p>	<p>We test as per the PACE guidelines all equipment that is exported to assure it is refurbishable equipment. We also have a certified third party witness the loading process so that there is no question about the veracity of the Bill of Lading (BOL).</p>		<p>We are working with the BCRC in El Salvador to create a micro financed computer refurbishment program that will include and support formal material recovery. Take-back obligations are impractical and have a higher negative environmental impact. The greater negative impact is due to the large take back system</p>

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
				that would be required to create. In addition any take back program would have to be operational for a very long time.
<b>IPMI</b>	Reuse, repair, refurbishment and upgrading of used mobile phones are not operations specified in Annex IVA or IVB. Ltr of 25 Feb 2008, commenting on MPPI Chairman's paper Project 2.1			
<b>ITI</b>		<p>On behalf of our member companies, ITI has worked to develop practical approaches to the collection and ESM of UELG in a variety of venues, including PACE, the Basel COP, the multi-stakeholder group convened by the U.S. Environmental Protection Agency to develop the Responsible Recycling (R2) Guidelines. Where appropriate, ITI advocates legislation in the U.S. and elsewhere aimed at promoting practical improvements to the collection and management of e-waste, including additional restrictions on the export of e-wastes that qualify as hazardous from developed to developing (non-OECD) countries.</p> <p>Various ITI member companies have supported other international initiatives aimed at improving the collection and environmentally sound management of e-waste, such as the recent Regional Forum on E-waste in Africa, work under the Mobile Phone Partnership Initiative (MPPI) and StEP.</p>		Member companies have long standing voluntary take-back programs that encourage the return of used equipment to manufacturers for proper disposition.
<b>Philips</b>	Transboundary shipments of used products regularly meet with administrative/bureaucratic hurdles which impede our desire to create closed loop material streams such as the recovery of	Philips Healthcare has B2B product take back programs where legislated. Our focus is on refurbishing used product whenever possible and harvesting parts to promote recycling and extend the product lifetime of the installed products. If refurbishing or part harvesting is not feasible,	Philips participates in lobbying proposed legislation regarding take back obligations directly and through industrial groups. Philips also participates in standards development such as IEC that relate to aspects of the	Used medical devices are refurbished by Philips using the highest possible international standards and sold under full warranty equal to

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
	rare earth from fluorescent lamps, refurbishment of medical equipment, and parts harvesting of professional products.	used products are properly recycling. The Philips EcoDesign program promotes improved design for recycling.	take back obligation such as standardizing product information made available to recyclers.	new. Philips refurbishing program provides reliable and cost effective refurbished medical devices, allowing more patient access to up-to-date technology. This program relies on transboundary movement of used professional equipment to Philips' refurbishing locations. Defining used professional electronic equipment destined for refurbishing or repairs as "e-waste" will stop legitimate transboundary movement of this equipment, prematurely diverting valuable equipment to waste recycling channels. Medical devices can have a very long service life, to well in excess of ten years and, therefore, far exceeding the warranty period. Highly specialized or intricate repairs may require that the device be returned to the manufacturer or a regional authorized service center in another country. Also, it is critical to business to return

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				<p>systems to the manufacturer or authorized contractor for parts harvesting and repair, which are then used in service operations. To keep the service expenses for medical devices to affordable levels, the return of defective parts for repair is a necessity. The repair of service parts can only take place in central, specialized repair centers, requiring transboundary movements. Used parts must move cross border for repair or reuse. Additionally, we strive to reuse parts and components to implement our cradle-to-cradle ambitions, thereby increasing global collection of used parts and components and managing them at the highest residual value in centralized repair and remanufacturing centers. Return of used parts also significantly expands the lifetime of installed medical devices in addition to the asset value of the equipment.</p>

	<b>Identification of Problem Posed By Used and End-of-life Goods</b>	<b>Measures to Address the Problem</b>	<b>Bilateral, etc. initiatives</b>	<b>Take-back</b>
				<p>Medical device refurbishment and repair is an effective means of reducing e-waste while ensuring greater global access to medical device technology.</p> <p>Return of used equipment to the manufacturer or to a test house would be necessary after an “adverse event” in which a patient or user was harmed to complete root cause analysis, meeting regulatory compliance or quality assurance monitoring of devices required by the EU Medical Device Directives.</p> <p>At the moment, the Basel convention seems to be drafted from the assumption that any transboundary shipment of waste is intended to avoid/reduce environmental responsibilities while our intention is the opposite.</p>

## APPENDIX 3

### Potential criteria for exclusion from regulation as a hazardous waste

1. Recognize exclusion for warranty repair work.
  - Protective packaging for shipping and handling, consistent with that provided for new products
  - Documentation of warranty contract and intent to return to customer
  - Limitation on warranty period
  - ESM certification of warranty repair facility
  - Provision for take-back of any hazardous components removed from item
  
2. Recognize exclusion for direct re-use
  - Protective packaging<sup>66</sup> for shipping and handling
  - Legible labeling and signage
  - Full functionality<sup>67</sup> (perhaps comparable to new) and conformance with applicable technical, performance and safety specifications
  - Documentation of:
    - functionality (perhaps comparable to new)
    - applicable technical, performance and safety specifications
    - age, quality, and condition of good
      - maximum age specifications (e.g., 3-5 years for used computing equipment)
      - limitations on wear, damage, defects
    - marketability
    - intended destination or distribution chain
    - legal status in countries of export, import and transit
  - Use only for original purpose
  - Could allow minor repairs/refurbishment
  - Prohibition counterfeit products
  - Could prohibit specified items
  - Assurance of take-back for items not directly reused
  
3. Recognize exclusion for re-use (subject to repair/refurbishment)
  - Protective packaging for shipping and handling
  - Legible labeling and signage
  - Full functionality (perhaps comparable to new) and conformance with applicable technical, performance and safety specifications
  - Documentation of:
    - functionality (taking into account intended repair/refurbishment operation)
    - applicable technical, performance and safety specifications
    - age, quality, and condition of good
    - maximum age specifications (e.g., 3-5 years for used computing equipment)
    - minimum remaining useful life
    - limitations on wear, damage, defects
    - marketability
    - intended destination or distribution chain
    - contracts for repair/refurbishment and intended distribution chain
    - description of intended repairs/refurbishment
    - legal status in countries of export, import and transit
  - Use only for original purpose (?)
  - Limitation on extent or nature of repairs/refurbishment; e.g., could prohibit major reassembly, etc.
  - Environmental considerations

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<sup>66</sup> See PACE ESM Guidance, Appendix III for more detail.

<sup>67</sup> See, e.g. European Union, Malaysia, PACE ESM Guidelines, Appendix V (functionality tests for computing equipment).

- environmental assessment of repair/refurbishment operation
- comparison of environmental impact to use of primary products
- ESM certification of repair/refurbishment facility
- Could prohibit specified items, categories, or operations
- Provision for take-back of hazardous components and items not reused
- Prohibit counterfeit products

#### 4. Recognize exclusion for certain recycling/recovery operations

##### Recognize exclusion for re-use (subject to repair/refurbishment)

- Packaging to prevent release of hazardous materials to the environment
- Documentation of:
  - suitability for intended purpose and recycling/recovery operation
  - legal status in countries of export, import and transit
  - contracts for recycling/recovery operations
  - legal status in countries of export, import and transit
  - commercial demand for material (material must have positive value)
- Could limit to “closed loop” processing within a single industrial organization
- Environmental considerations
  - environmental assessment of recycling/recovery operation and of any waste generated thereby
  - ESM certification of repair/refurbishment facility
  - comparison of environmental impact to use of raw materials

## APPENDIX 4

### References

Unless otherwise indicated, entries refer to both the draft terminology report and the study on UELG. References from the terminology report only denoted by asterisk (\*); references from UELG study only are denoted by a double asterisk (\*\*).

#### A. Information transmitted from Parties in response to 2012 Questionnaire

1. Argentina
2. Brazil
2. Canada
3. Central African Republic
4. Chad
5. Colombia
6. The European Union and its Member States
7. Ivory Coast
8. Japan
9. Lithuania
10. Malaysia
11. Montenegro
12. Morocco
13. Nicaragua
14. Paraguay
15. St. Lucia
16. Yemen
17. Zambia

#### B. Information Communicated by Signatories to the Convention

1. United States of America\*\*

#### C. Information Communicated by Stakeholders in Response to 2012 Questionnaire

1. BCRC Tehran\*\*
2. Information Technology Industry Council\*\*
3. Phillips Medical\*\*
4. PC Rebuilders and Recyclers, LLP\*\*

#### D. Other communications from Parties and Stakeholders

1. Brazil, comments on the “Guidance Document on the Environmentally Sound Management of Used and End-of-life Mobile Phones,” [archive.basel.int/industry/mppi/oewg6-21comments/brazil-e.doc](http://archive.basel.int/industry/mppi/oewg6-21comments/brazil-e.doc). (Retrieved 12 Apr. 2012.)\*
2. Norway, letter of 28 June 2011, “BSC technical guidelines on TBM of E-waste - comments from Norway,” [http://archive.basel.int/techmatters/e\\_wastes/guidelines/comments/2011-02-21norway.pdf](http://archive.basel.int/techmatters/e_wastes/guidelines/comments/2011-02-21norway.pdf). (Retrieved 15 March 2012.)\*

#### E. Basel Convention database of national laws/definitions

1. National Reporting Fact Sheet, <http://archive.basel.int/natreporting/cfs.html> (Retrieved 11 May 2012.)\*

2. National definitions and import restrictions,  
<http://www.basel.int/Countries/NationalDefinitions/tabid/1480/Default.aspx>. (Retrieved 17 Apr. 2012.)\*
3. “National Definition of Hazardous Waste” Compilation (Part I) 2009,  
<http://www.basel.int/Countries/NationalReporting/StatusCompilations/CompilationPartI2009/tabid/2561/Default.aspx>. (Retrieved 17 Apr. 2012.)\*
4. “National Definition of Hazardous Waste” Compilation (Part I) 2008,  
<http://www.basel.int/Countries/NationalReporting/StatusCompilations/CompilationPartI2008/tabid/2561/Default.aspx>. (Retrieved 17 Apr. 2012.)

## **F. National and Regional Laws, Regulations, Judicial Decisions, Guidances, Policies, etc.**

1. European Court of Justice
  - a. *ARCO Chemie*, Case C-418/97 [2000] ECR I-4475.\*
  - b. *Inter-Environment Wallonie ASBL v Région Wallonne*, Case C-129/96 [1997] ECR I-7411.\*
  - c. *Palin Granit Oy*, Case C-9/00 [2002] ECR I-3533\*
2. European Union
  - a. Directive 2011/.../EU of the European Parliament and of the Council on Waste Electrical and Electronic Equipment (WEEE), Articles 4-6, 11-13.
  - b. Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008.
  - c. Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006.\*
  - d. Correspondents’ Guidelines No.1 on WEEE,  
[http://ec.europa.eu/environment/waste/shipments/pdf/correspondents\\_guidelines1\\_en.pdf](http://ec.europa.eu/environment/waste/shipments/pdf/correspondents_guidelines1_en.pdf). (Retrieved 12 Apr. 2012.)\*
  - e Correspondents’ Guidelines No. 9 on Used Vehicles,  
[http://ec.europa.eu/environment/waste/shipments/pdf/correspondents\\_guidelines9\\_en.pdf](http://ec.europa.eu/environment/waste/shipments/pdf/correspondents_guidelines9_en.pdf). (Retrieved 12 Apr. 2012.)\*
3. Hong Kong SAR, “Environmental Protection Department Advice on Import and Export of Used Electrical and Electronic Equipment Having Hazardous Components or Constituents” (3d ed., Nov. 2011), [http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide\\_ref/files/advice\\_on\\_e-waste.pdf](http://www.epd.gov.hk/epd/english/environmentinhk/waste/guide_ref/files/advice_on_e-waste.pdf). (Retrieved 11 April 2012.)\*
4. United States Environmental Protection Agency, Final Rule (Cathode Ray Tubes) 71 Federal Register 42928 (28 July 2006) and EPA Fact Sheet, available at <http://www.epa.gov/wastes/hazard/recycling/electron/crt-fs06.pdf>. (Retrieved 15 May 2012.)\*

## **G. International Agreements**

1. Basel Convention on Transboundary Movement of Hazardous Waste and their Disposal, 1673 U.N.T.S. 57.
2. Canada-Colombia Free Trade Agreement (2002), available at <http://www.international.gc.ca/trade-agreements-accords-commerciaux/agr-acc/colombia-colombie/can-colombia-toc-tdm-can-colombie.aspx?view=d>. (Retrieved 19 May 2012.)\*
3. General Agreement on Tariffs and Trade, 1947 (GATT 1947), 55 U.N.T.S. 194.\*\*
4. North American Free Trade Agreement (NAFTA), 32 I.L.M. 289, 605(1993)\*\*

## H. E-waste Related Initiatives under Auspices of Basel Convention

1. Basel Convention, Draft Technical Guidelines on Transboundary Movements of Electronic and Electrical Waste (E-waste), in Particular Regarding the Distinction between Waste and Non-Waste, (Version 21 February 2011), UNEP/CHW.10/INF/5 , <http://archive.basel.int/meetings/cop/cop10/documents/i05e.pdf>).
2. Basel Convention, Pan-African Forum on E-waste, Nairobi, 14-16 March 2012, <http://www.basel.int/Implementation/TechnicalAssistance/EWaste/EwasteAfricaProject/Workshops/PanAfricanForumonEwasteNairobiMarch2012/tabid/2656/Default.aspx>. (Retrieved 19 May 2012.)
3. Basel Convention, “Technical guidelines on the environmentally sound recycling/reclamation of metals and metal compounds (R4),” available at <http://www.basel.int/DNNAdmin/AllNews/tabid/2290/ArticleType/ArticleView/ArticleID/189/Default.aspx>. (Retrieved 19 May 2012.)\*\*
4. Basel Convention Coordinating Center for Asia and the Pacific (Asia-Pacific Regional Centre for Hazardous Waste Management Training and Technology Transfer), Report of the Project on “Import/Export Management of E-waste and Used EEE” (June 30, 2009), [http://www.env.go.jp/en/recycle/asian\\_net/Project\\_N\\_Research/E-wasteProject/10.pdf](http://www.env.go.jp/en/recycle/asian_net/Project_N_Research/E-wasteProject/10.pdf). (Retrieved 19 Apr. 2012.)\*\*
5. Basel Convention e-Waste Africa Project, “Ghana e-Waste Country Assessment,” [http://ewasteguide.info/files/Amoyaw-Osei\\_2011\\_GreenAd-Empa.pdf](http://ewasteguide.info/files/Amoyaw-Osei_2011_GreenAd-Empa.pdf). (Retrieved 13 April 2012.)\*\*
6. Basel Convention e-Waste Africa Project, ”Meeting the Challenge of e-waste in Africa,” <http://www.basel.int/Portals/4/Basel%20Convention/docs/pub/leaflets/leaflet01012011-2.pdf>. (Retrieved 19 May 2012.)\*\*
7. Basel Convention Mobile Phone Partnership Initiative, “Guidance document on the environmentally sound management of used and end-of-life mobile phones,” UNEP/CHW/10/Inf27/rev.1.
8. Basel Convention Partnership for Action on Computing Equipment Working Group, PROJECT 1.1, “Guideline on Environmentally Sound Testing, Refurbishment & Repair of Used Computing Equipment” (Retrieved 17 February, 2012.)\*\*
9. Basel Convention Partnership for Action on Computing Equipment (PACE), “Guidance Document on the Environmentally Sound Management of Used and End-of-Life Computing Equipment,” UNEP/CHW.10/20 (Retrieved 15 March 2012.)
10. Basel Convention Regional Centre for Southeast Asia, “Technical Guidelines on the Reduce, Reuse, Recycle (3r) of End of Life Electronic Products” [http://www.env.go.jp/en/recycle/asian\\_net/Project\\_N\\_Research/E-wasteProject/12-1.pdf](http://www.env.go.jp/en/recycle/asian_net/Project_N_Research/E-wasteProject/12-1.pdf). (Retrieved 13 May 2012.)\*\*
11. Basel Convention Secretariat, “Where are Wee in Africa,” <http://www.basel.int/Implementation/TechnicalAssistance/EWaste/EwasteAfricaProject/Publications/tabid/2553/Default.aspx>. (Retrieved 11 May 2012.)\*\*

## I. Other International Organizations

1. OECD, “Final Guidance Document for Distinguishing Waste from Non-Waste,” ENV/EPOC/WMP (98)1/REV1,

<http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/EPOC/WMP%2898%291/REV1&docLanguage=En> (Retrieved 11 Apr. 2012.)\*

2. OECD, Trade Measures in the Basel Convention and the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1998), <http://www.oecd.org/dataoecd/5/55/36789048.pdf> (Retrieved 11 Apr. 2012.)\*\*

3. OECD Joint Committee on Trade and Environment, Trade Measures in Multilateral Environmental Agreements: Synthesis Report of Three Case Studies [including the Basel Convention], COM/ENV/ TD(98)127/FINAL (15 Feb. 1999).\*\*

4. World Trade Organisation, Report of the Appellate Body, BRAZIL – MEASURES AFFECTING IMPORTS OF RETREADED TYRES AB-2007-4.\*\*

## J. Literature and other Sources

1. Appasamy, Paul, Madras School of Economics, Chennai, "International Conventions on Hazardous Chemicals," <http://www.mse.ac.in/trade/pdf/Compendium%20Part%20B/5.%20PPA-chem-conven%282.4.07%29.pdf>. (Retrieved 15 March 2012.)\*

2. Dotmobi, "Global mobile statistics 2012," available at <http://mobithinking.com/mobile-marketing-tools/latest-mobile-stats> (Retrieved 16 April 2012.)\*

3. Oxford Dictionaries on line, <http://oxforddictionaries.com/definition/refurbish?region=us&q=refurbish>, Oxford University, 2012. (Retrieved 19 May 2012.)\*

4. The American Heritage® Dictionary of the English Language, Fourth Edition copyright ©2000 by Houghton Mifflin Company, <http://www.thefreedictionary.com>. (Retrieved 15 May 2012.)\*

5. "Solving the E-waste Problem ("StEP"), <http://www.step-initiative.org/index.php/Home.html>. (Retrieved 15 May 2012.)\*

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i Unless otherwise indicated, source material for this Matrix consists of the responses to the 2012 Questionnaire. A single asterisk (\*) denotes information obtained from the SBC compilation of responses to the 2009 Questionnaire (hereinafter, "2009 Compilation"),

<http://www.basel.int/Countries/NationalReporting/StatusCompilations/CompilationPartI2009/tabid/2561/Default.aspx>. A double asterisk (\*\*) denotes information obtained from the SBC compilation of responses to the 2008 Questionnaire (hereinafter, "2008 Compilation"),

<http://www.basel.int/Countries/NationalReporting/StatusCompilations/CompilationPartI2008/tabid/2561/Default.aspx>. Responses have been edited for brevity, and informally translated into English, where necessary. The Matrix does not include responses on clarification of the concept of charitable contributions, as only [two] were received: The Central African Republic stated: "Les dons charitables consistent à assister gratuitement les personnes ou groupe de personnes vulnérables." Nicaragua reported that it has established regulations and conditions on the donation of medicines. In addition, Phillips Health Care advised that "charitable donations are well defined at Philips and must be processed via an internal legal process. Typically, new not used equipment is considered for charitable donation."

ii Report of the Project on "the Import/Export Management of E-waste and Used EEE" June 30, 2009 Basel Convention Coordinating Center for Asia and the Pacific (Asia-Pacific Regional Centre for Hazardous Waste Management Training and Technology Transfer, (hereinafter, BCCAP Project Report), citing Kingdom of Cambodia, April 27, 1999. Sub-decree on solid waste management, [http://www.camnet.com.kh/moe/sub-decree\\_SWM\\_English.htm](http://www.camnet.com.kh/moe/sub-decree_SWM_English.htm).

iii BCCAP Project Report

iv Law of the People's Republic of China on Prevention of Environmental Pollution Caused by Solid Waste, effective on April 1st, 2005, Wastes listed in the " Catalogue of Automatic-Licensing Import Solid Wastes that Can Be Used as Raw Materials in China" and the " Catalogue of Restricted Import Solid Wastes that Can Be Used as Raw Materials in China" are permitted to be imported(Annex-2). Solid wastes which are not included in either of the above two Catalogues are forbidden to be imported.

v See <http://ec.europa.eu/environment/waste/shipments/guidance.htm>.

- vi SBC Compilation, citing Seventh Schedule of the Waste Disposal Ordinance (WDO), the Laws of Hong Kong Chapter 354.
- vii BCCCAP Project Report, citing Minister of Industry and Trade, Indonesia, Decree No. 756/MPP/Kep/12/2003 on Import of Non-new Capital Goods and Decree No. 610/MPP/Kep/10/2004 Regarding Amendment of No. 756/MPP/Kep/12/2003. 2009-05-27.
- viii BCCCAP Project, citing H. Hamdani, "Indonesia Regulations and Policies on Export- Import Related Electronic Equipments. Regional Workshop on E-waste Identification toward the Prevention of Illegal Transboundary Movement for Hazardous Waste and Other Wastes in Asia." [http://www.bcrc.cn/en/meetings/File\\_reg2008/06-INDONESIA-presentation%20beijing%202008.pdf](http://www.bcrc.cn/en/meetings/File_reg2008/06-INDONESIA-presentation%20beijing%202008.pdf), 2009-05-27
- ix Fraction X, of the General Law of Prevention and Integral Management of Wastes (LGP GIR)
- x Department of Environment and Natural Resources, Interim guidelines for the importation of recyclable materials containing hazardous substances. <http://www.emb.gov.ph/laws/toxic%20substances%20and%20hazardous%20wastes/dao94-28.pdf>. 2009-05-27.
- xi BCCCAP Project Report, citing [13] National Environment Agency of Singapore (NEA). March 1998. Hazardous Waste (Control of Export, Import and Transit) Regulations. [http://app.nea.gov.sg/cms/htdocs/category\\_sub.asp?cid=212](http://app.nea.gov.sg/cms/htdocs/category_sub.asp?cid=212). 2009-05-27.
- xii BCCCAP Project Report, citing Patarapol Tularak. Current Status of the Activities for Distinguishing New EEE, Second-Hand and Waste in Thailand. Regional Workshop on E-waste Identification toward the Prevention of Illegal Transboundary Movement for Hazardous Waste and Other Wastes in Asia. [http://www.bcrc.cn/en/meetings/File\\_reg2008/10-Thailand-FP-Baselactivity-Nov2008.pdf](http://www.bcrc.cn/en/meetings/File_reg2008/10-Thailand-FP-Baselactivity-Nov2008.pdf). 2008-12-23.
- xiii BCCCAP Project Report.
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