

**Pan-African Forum on E-waste**  
**14-16 March 2012**  
**UNEP Headquarters, Nairobi, Kenya**

REPORT OF THE MEETING

**I. Introduction**

The Pan-African Forum on E-waste was organized by the Secretariat of the Basel Convention and United Nations Environment Programme (UNEP), with support from the Government of Kenya, and private sector companies including Dell, HP, Nokia and Philips from 12 to 16 March 2012 in UNEP Headquarters in Nairobi, Kenya. The event was held in collaboration with the Basel Convention Coordinating Centre for Training and Technology Transfer for the African Region (BCCCC-Nigeria), the Swiss Federal Laboratories for Materials Science and Technology (EMPA), the Institute for Applied Ecology (the Öko-Institut), the European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL), Solving the E-Waste Problem (StEP), and the United Nations University. Financial support for the Pan-African Forum on E-Waste was provided by the European Commission, the Governments of Norway and Canada, HP, Dell, Microsoft, Sims Recycling Solutions, Safaricom and the National Environmental Management Authority of Kenya.

The main objective of the Forum was to identify possible options for a sustainable solution to e-waste in Africa by developing a clear perspective on a framework approach for environmentally sound management of e-waste applicable in the African context as well as by acquiring an understanding of needs for regulatory frameworks. The Forum also sought to provide a platform to discuss ways for establishing or strengthening national, regional and international collaboration. The Forum brought together one hundred and eighty participants from over 35 countries, including representatives from 20 African States, four States outside Africa, 13 inter-governmental organizations and UN agencies, 14 academic institutions, 22 civil society organizations, and 22 private companies.

**II. Background information**

There were a number of activities which led to the organization of the Forum. One of them was the E-waste Africa project coordinated by the Secretariat of the Basel Convention. The overarching goal of the E-waste Africa project is to enhance the capacity of West Africa and other African countries to tackle the growing problem of e-waste and thereby protect the health of citizens, while providing economic opportunities. Specifically, the project aims to improve the level of information available on flows of EEE and e-waste imported into West African countries; assess 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; study the social-economic aspects of the increasing volumes of used EEE and e-waste; and strengthen national capacities to monitor and control transboundary movements of e-waste and to prevent illegal traffic.

Another important event was the 12th Session of the Africa Ministerial Conference on the Environment (AMCEN) held in Johannesburg from 7-12 June 2008, which endorsed Decision 6: Environmental education and technology-supported learning. This decision provided the opportunity for UNEP to promote environmental education that is complementary to UNEP's Medium-term Strategy 2010-2013 and focused on promoting the goal of healthy and sustainable management of environmental resources including green economy and sustainable consumption and production in view of the development in Africa of a green economy.

The Pan Africa e-Waste Forum is an overshoot of e-learning, a decision 6 of AMCEN 12 which was also a recommendation reached during the National e-Waste Conference in Kenya in 2010. Kenya has been in the lead in implementing the decision in Africa by developing and publishing the e-learning strategy and e-waste guidelines.

### **III. Opening**

The Pan-African Forum on E-waste was opened on Wednesday, 14 March 2012 by Mr. Desta Mebratu, Deputy Regional Director, UNEP/Regional Office for Africa who introduced the Forum's objectives: to share experience, lessons learned, findings of the E-waste Africa Project with a broad range of stakeholders from African States and elsewhere and to have an open discussion between the stakeholders about a sustainable solution for e-waste in Africa, including identifying key elements of the environmentally sound system for e-waste management in Africa.

The first speaker, Mrs. Katharina Kummer, the Executive Secretary of the Secretariat of the Basel Convention, in her opening remarks pointed out that Africa is facing fast growing amounts of EEE in use and, as a consequence, wastes of electronic and electrical equipment (EEE) generated domestically as well as imported as near-end-of-life and end-of-life equipment. While unsound recycling practices pose heavy health and environmental burden on African States, environmentally sound management of e-waste offers economic benefits and green jobs. She noted that it is symbolic that the Forum takes place in Nairobi, where six years earlier in 2006 at the Eighth Conference of the Parties (COP8), the Nairobi Declaration on the environmentally sound management (ESM) of E-waste was adopted which gave a broad mandate to the Basel Convention to address the issue of e-waste in all regions, including Africa.

Mr Ali Mohammed, Permanent Secretary, Ministry of Environment and Mineral Resources of Kenya in his opening remarks highlighted Africa's environmental challenges as growing by the day. This included the exponential growth of electronic waste. He concluded that it was the time for Africa to take action on addressing health

and environmental problems as a result of current recycling practices, while creating jobs and business opportunities and alleviating poverty which could be achieved through an enforceable legislative framework. He explained that the Pan-African Forum on E-waste is based on the success of the National Stakeholders Workshop on e-Waste Management in Kenya that took place in Kenya in 2010. Following the workshop, guidelines on e-waste were developed. Although not legally-binding, the guidelines provide a useful tool and a basis for development of legislation on e-waste. Mr Mohammed emphasized that Kenya welcomes more investment in the e-waste sector.

Opening remarks followed by the statements from Ministers. His Excellency Mr Mostafa Hussein Kamel, Minister for Environmental Affairs of Egypt underlined the urgency to address e-waste issues in Egypt. Some steps have already been taken in that direction, in particular an inter-agency agreement was signed between the Ministries of Environment and Communication to enhance cooperation in fighting the illegal traffic on e-waste. Mr Kamel mentioned that it has been 20 years since the entry into force of the Basel Convention and stressed the urgent need to take measures to implement the Basel Convention. In this respect, Basel Convention regional and coordinating centers should be strengthened to better support the implementation of the Convention in their respective regions.

In his keynote address by Vice President of Republic of Kenya and Minister for Home Affairs, His Excellency Stephen Kalonzo Musyoka expressed his wish to see the African region to become the pioneer in the provision of e-waste policy and guidelines highlighting the framework for identification, collection, sorting, recycling and disposing of e-waste. He highlighted that Kenya is looking forward to the support of the manufacturing companies which should assume its responsibilities and obligations in setting the appropriate solutions and mechanisms to recycle its products from the equipments after selling it in the markets of the developing countries. After the enormous increased access to low quality electronic goods and subsequent high rates of obsolescence the e-waste issue is now finding its way on the development agenda in Africa States.

His Excellency also invited all the telecom and ICT regulators in the developing countries to give the issue of e-waste management the importance that it should deserve and to study the possibility of developing the necessary laws and regulations to regulate the relationship between the equipments providers and the national consumer so as to ensure the legal obligation of the providers and to secure the safe riddance of these equipments after the end of life cycle and expiry date.

His Excellency emphasized the importance of cooperation with UN agencies, such as UNEP, UNIDO, UNESCO, and the World Bank as well as the private sector and scientific organizations for the assistance to the developing countries which encounter the problems of e-waste management. Capacity-building would help in phasing out adverse health and environment impacts related to unsound practices for e-waste management in Africa.

Finally, he reiterated his hopes that African Governments shall exert their maximum efforts to adopt and support the recommendations reached by the Pan African Forum on E-waste to solve the e-waste menace in the African region.

In the following keynote address His Excellency Calist Mwatela, Assistant Minister for Education of Kenya on behalf of His Excellency, Hon. Prof. Amb. Sam Kegengo Onger, Honourable Minister for Education of Kenya, emphasized the potential of Information and Communications Technology (ICT) for policy reforms in Africa. ICT plays an important role in complementing infrastructure in achieving UN Millennium Development Goals. It is important to mainstream ICT in government operations for service delivery. Through its National ICT policy, the Government of Kenya aims to transform Kenya into the digital society with ICT as the foundation of the knowledge-based economy.

Furthermore, ICT is a universal tool serving to improve the delivery of education. His Excellency Calist Mwatela informed the participants about a number of ongoing initiatives in support of the use of ICT in education. The Kenyan Government set aside the amount of 1.7 bln Kenyan shillings for 60,000 units of PCs for school across the country. Another example is the Teachers Service Commission, which in collaboration with Microsoft, Safaricom and HP, launched an initiative providing a laptop for teacher. Computer for Schools Kenya is another initiative which has sourced over 48,000 personal computers deployed in school and academic institutions countrywide. The initiative includes a comprehensive and preventive maintenance programme for ensuring that the computers are fully operational. HP is currently partnering with CAMARA, a volunteer organization that uses technology to improve education in Africa, to establish an East-Africa Recycling Company (EACR) as a viable self-sustaining business in Mombasa. The establishment of the EACR is an important effort in Kenya's continuous move towards becoming the regional standard bearer of environmental stewardship. These initiatives provide opportunities for creating jobs while supporting environmental sustainability and technical support.

Dr Bitange Ndemo, the Permanent Secretary of the Ministry of Information and Communication underlined that ICT is being extensively used in the education, health, industrial, trade, and communication sectors. There is a need for raising the awareness, not only within the civil society, but also on the legislative and institutional levels. The Government of Kenya is calling out to join hands with the private sector and civil society organizations to collaborate towards this national objective for a better working environment. There is an immediate need for collaboration between industry, government, environmental groups, and citizens to solve the problems of e-waste.

Dr. Ndemo empathized that corporate social responsibility should extend its efforts to take back old equipment for proper disposal. This will give manufacturers an economic incentive to devise efficient methods of coping with the problems of old equipment, as well as encouraging them to redesign their products to be more easily and safely recycled. Dr. Ndemo called for the launch of a multi-stakeholder partnership for e-waste

management allowing the elaboration of regionalized practices and demonstrating the benefits of a sustainable e-waste management system.

Mrs. Olufunke Olubunmi Babade, Director of Department of Pollution Control and Environmental Health, Federal Ministry of Environment, Government of Nigeria on behalf of Her Excellency Hadiza Ibrahim Mailafia, the Minister of the Federal Ministry of Environment of Nigeria, highlighted challenges facing Africa and other developing countries in e-waste management at the national level. However some countries already took a number of actions. In particular Mrs Babade informed the participants that the Federal government of Nigeria undertook such measures including the import restriction on unserviceable electrical/electronic appliances and development of a draft National E-waste Policy in 2008, an International Conference on e-waste in Abuja, and its Abuja Platform in 2009, awareness raising and capacity building workshops for the informal sector in Lagos in 2010, and adoption of the National E-waste Regulations.

Mrs. Babade stressed that Nigeria is committed to building on the results of the E-waste Africa project, by strengthening its national enforcement agencies and encouraging the establishment of facilities engaged in sustainable collection, dismantling and recycling of e-waste with active participation by the private sector. The Nigerian government will provide the enabling environment for foreign investors in partnership with local entrepreneurs to play a key role in this sector. Nigeria, as the hub of e-waste in Africa, may in addition require a regional recycling facility that could also serve other countries. These actions would undoubtedly upgrade the capacity of the informal sector, to manage e-waste in an environmentally friendly manner.

#### **IV. Keynote presentations**

Following the high-level segment of the Forum, Prof. Oladele Osibanjo from BCCC-Nigeria, Dr. Enosh Nyakweba Osoro from the Ministry of Forestry and Wildlife of Kenya, and Mrs Beatrice Nzioka from the National Environment Management Authority (NEMA) served as co-chairs at the Forum.<sup>1</sup>

In his keynote presentation, Mr. Jim Puckett, the Head of the Basel Action Network (BAN) provided a comprehensive background of how e-waste became a major environmental challenge in Africa. He highlighted environmental, health and social challenges associated with e-waste. Mr Puckett presented international and regional legal measures aimed to control the transboundary movements of hazardous wastes, i. e. the Basel Convention and its Ban Amendment and the Bamako Convention. He suggested solutions to deal with illegal traffic, harmful but legal traffic and non-harmful/legal traffic, including, for example, the ratification of the above-mentioned legal instruments and the use of guidelines developed under the Mobile Phone Partnership Initiative (MPPI) and the Partnership for Action on Computing Equipment (PACE).

Mr Puckett called attention to the fact that some wastes would need to be moved to destinations in developed countries (e.g. to smelters in Europe) or neighboring

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<sup>1</sup> While Prof. Osibanjo chaired throughout the meeting, Dr. Osoko and Mrs Nzioka took their turns.

developing countries where the environmentally sound management of e-waste can be guaranteed. This is allowed under the Bamako Convention and Basel Convention Ban Amendment under the condition that the transboundary movements are in compliance with prior informed consent procedure. Talking about the domestically generated e-waste, he warned that African countries are already facing the e-waste problem. However, a significant growth in ICT is coming still to Africa and therefore a national strategy for providing collection and recycling infrastructure in every country or region is urgently needed. There is also a need for active public awareness raising, producer responsibility even without laws, and engagement of the informal sector/ NGOs in the collection of e-waste.

Mr Pucket encouraged African countries to start with pilot projects for recycling and refurbishment which would ensure occupational safety standards and data security. He emphasized that electronics recycling is a proven private enterprise or NGO activity while the government role should be related to awareness and policing the established rules. Certifications are important tools in ensuring environmentally sound management of e-waste and must be used to go beyond laws, however but not to replace laws.

Prof. Oladele Osibanjo from the BCCC-Nigeria in his keynote presentation highlighted major challenges to e-waste management in Africa, including the lack of infrastructure for appropriate e-waste management, absence of a regional approach since countries have different approaches to the e-waste issue and legislation dealing specifically with e-waste, and the legal gap related to the near-end-of life of used EEE which is not covered by existing international or regional conventions which makes this equipment difficult to regulate and control.

The export of used e-products to Africa and other developing countries should not be banned but controlled as it provides opportunities for employment, poverty alleviation, recycling business, promote north-south and south-south economic and technological cooperation, and bridging the digital divide.

Prof. Osibanjo emphasized that the organization of the Pan-African Forum on E-waste is a timely initiative given that Rio+20 is just about 3 months away. It would be important for the international community to promote the green economy and waste as a valuable secondary resource in Rio+20. National, regional and global cooperative actions are required to find a lasting solution to the problem. Prof. Osibanjo warned that Africa is at risk from the sheer volume of e-waste influx as well as internally generated e-waste in view of weak infrastructural, institutional, and regulatory framework for solid wastes and with none for e-waste. He called for the private sector, especially the original electronics manufactures (OEMs) to advance and implement their commendable plan for sustainable e-waste recycling in Africa while the governments should provide enabling environment and necessary incentives for industry to operate effectively.

**V. Developing regulatory, policy and legislation framework relevant to electronic and electrical equipment and e-waste**

In the session related to the policy and legislation framework on e-waste, representatives of the governments of Kenya, Nigeria, Ghana, and Cote d'Ivoire reported on the status of the development of non-legally binding and legally-binding instruments on the national level addressing e-waste in their respective countries.

In Kenya, e-waste management guidelines were published in May 2011. The guidelines define roles for each group of stakeholders, establish collection centers and take-back schemes, treatment facilities and disposal mechanisms. There are plans to revise the current legislation to enable the country to import e-waste (with prior informed consent and relevant permits by the Basel Competent Authority of Kenya) especially from the Eastern African region since recycling capacity is being built daily as well as to develop and implement e-waste regulations.

In Nigeria, the National Environmental Standards and Regulations Enforcement Agency (NESREA) of Nigeria developed a guide for importers of used EEE. As a first African country, Nigeria adopted e-waste specific legislation in 2011 "National Environmental (Electrical/Electronic Sector) Regulations". The regulations are based on the life-cycle approach and cover all aspects of the electrical/electronic sector and the principles of the 5Rs: Reduce, Repair, Re-use, Recycle and Recover as the primary drivers of the sector. A part of the regulations is the Extended Producers' Responsibility (EPR) Programme in which importers, exporters, manufacturers, assemblers, distributors, and retailers of various brands of EEE products will be required to participate.

Ghana is in the process of finalizing its bill on hazardous waste and other wastes and e-wastes. The bill has two objectives. First is to incorporate the provisions of the Basel Convention into the national legislation. Second objective is to regulate the issues related to e-waste. The bill provides for electronic waste levy, establishment of an electronic waste recycling fund and building an electronic waste recycling plant.

Finally, while Cote d'Ivoire does not have any laws specifically dealing with e-waste, there are current laws and regulations applicable to e-waste management. These well as the national e-waste strategy were presented at the Forum. In particular, the strategy relies on five on mechanisms of intervention, including political and legal framework, economy and finance, technology and infrastructure, control and information management, and marketing, education and prevention.

## **VI. Findings of the E-waste Africa project**

In the following session, findings from the E-waste Africa project were presented by the Secretariat of the Basel Convention, the EMPA, Oko-Institute and IMPEL. First, the project partners provided an overview of the flow of new, used and end-of-life EEE from Europe to West Africa. In particular, studies related to e-waste generation in the European Union and leakage pathways for (illegal) exports as well as specific statistical data on used and end-of-life EEE exports from Europe to West Africa were presented. Also, project partners gave an insight on existing enforcement structures, gaps and opportunities in project countries in Africa as well as the information on the enforcement

activities that were undertaken within the project: 19 African officials were trained in Europe on e-waste management and monitoring issues; 124 law enforcement officers attended the national E-waste workshops in four African States; capacity building tools were developed; the EU-Africa Enforcement Network was established.

This session also shed light on the findings of the national e-waste assessments that were prepared in Benin, Cote d'Ivoire, Ghana, Liberia and Nigeria. Focus was given to data related to imports of used EEE and e-waste, EEE in use and e-waste generated in those countries.

Furthermore, impacts of current recycling practices and recommendations for collection and recycling based on the cases of Ghana and Nigeria were presented as well as key findings that need to be considered in future strategies as well as conclusions in the areas of policy and legislation, collection and recycling, and import. Detailed information on the finding of the E-waste Africa Programme is available in the publication "Where are WEEE in Africa" and the individual reports posted on the website of the Secretariat of the Basel Convention ([www.basel.int](http://www.basel.int)).

## **VII. Collaboration with the private sector**

During the session on the collaboration with the private sector Dell on behalf of Solving the E-Waste Problem (StEP) Initiative presented StEP activities in and for Africa, including the ongoing e-waste management project in Ethiopia and the E-Waste Academy to be held in June 2012 in Ghana. Furthermore, HP on behalf of the African e-waste 'alliance', which includes Dell, HP, Nokia, Philips, Reclaimed Appliances Ltd., and UNIDO, talked about the vision of the alliance: all e-waste are to be collected and treated as a profitable business according to international standards to protect health and the environment. The alliance informed the participants that it acts together in Ghana, Kenya, Nigeria and South Africa. As a concrete example, East Africa Compliant Recycling, which was initially an HP project, is currently operating in Mombassa, Kenya. It is considered now as the second recycler in Africa running under international recycling standards.

## **VIII. Working Groups**

On Thursday, 15 March 2012, the participants were invited to participate in the discussions within working groups related to various elements of the framework for environmentally sound management of e-waste. Each group discussed one of the elements of the framework guided by the questions and made the recommendations.

**Group 1** Attracting investment and financing mechanisms for e-waste management, moderator David Roachat, SOFIES.

**Group 2** Building policy and regulatory framework and formalizing the informal sector, moderator Mathias Schluep, EMPA.



**Group 3** Stakeholder engagement and collaboration and awareness raising, moderators Oladele Osibanjo, BCCC-Nigeria and Nosiku Sipilanyambe Munyinda, University of Zambia

**Group 4** Maximizing life-cycle and creating value through environmental sound collection and recycling, moderators Andreas Manhart, Oko-Institut and Mushtaq Memon, UNEP DTIE/IETC.

**Group 5** Ensuring a level playing field through information exchange, data management and enforcement cooperation, moderators Piet ten Brink, VROM, the Netherlands and Nancy Isarin, IMPEL.

**Group 6** Capacity building needs for sound management of e-waste, moderator Margaret Bates, the University of Northampton, UK.

The moderator of each working group presented the results of the discussions and recommendations at the plenary. The results of the discussions are presented in annex II.

## **IX. Media round table**

On the second day of the Forum, a media briefing event “E-waste: Challenges and Opportunities for Africa” took place to discuss the way forward for dealing with e-waste on the continent. Experts briefed journalists on, among other topics: e-waste trends in East and West Africa, innovative e-waste recycling projects, national guidelines on e-waste and international efforts to tackle environmental risks. Panel speakers included:

- Achim Steiner, UNEP Executive Director
- Katharina Kummer Peiry, Executive Secretary of the Basel Convention, UNEP
- Ali Mohammed, Permanent Secretary, Ministry of Environment and Natural Resources, Kenya
- Miranda Amachree, National Environmental Standards and Regulations Enforcement Agency (NESREA), Nigeria
- Herve Guilcher, Environmental Programs Director, HP/EMEA
- Jean Cox-Kearns, Director of Compliance, Dell/Global Takeback
- Jim Puckett, Head, Basel Action Network (BAN).

For media coverage related to the Forum, see annex V.

## **X. Panel Discussion on the regional approach to e-waste management in Africa**

On Friday, 16 March 2012, the panel discussion took place where representatives from different stakeholder groups presented their views on working group outputs and regional approach to e-waste solutions in Africa.

*Governments*

Representatives of the governments of Egypt, the United States of America and Zambia pointed to the existing efforts, such of those ongoing within the framework of the Basel Convention (e. g. Indonesian-Swiss country-led initiative to improve the effectiveness of the Basel Convention (decision BC-10/3)) and other fora which will contribute towards a sustainable solution to e-waste challenge in Africa. Individual countries in Africa cannot solve the challenge alone and therefore the region has to act in a coordinated manner. Regulatory frameworks to enable countries to implement the Basel and Bamako Conventions and to deal with e-waste urgently need to be developed. Legislation should incorporate the Extended Producer Responsibility (EPR) principle which can become a critical tool in establishing environmentally sound management systems for e-waste in Africa. Partnerships provide another important tool which contributes to providing a solution to e-waste challenges.

#### *UN agencies and intergovernmental organizations*

Representatives of the Basel Convention Regional Centre for French-Speaking Countries in Africa (BCRC) / Stockholm Convention Regional Centre in Senegal, the Economic Community of West African States (ECOWAS) Commission, the Global Environment Facility (GEF), International Environmental Technology Centre (IETC) in UNEP, International Telecommunication Union (ITU), and UNIDO raised such issues as the importance of the multi-stakeholder approach in dealing with life-cycle of e-waste, need to accelerate regional efforts for e-waste management, including through establishing a network in sub-regions, opportunities for financing e-waste projects through multilateral financial institutions, and the recognition that e-waste challenge can be turned into a green economy business model. Furthermore, some noted that such existing mechanisms as the Global Partnership on Hazardous Wastes can assist in coordinating e-waste related efforts on the ground. Finally, in light of the upcoming Rio+20 Summit there is an opportunity for African States to raise e-waste on the political agenda as a priority issue.

#### *Academia / Civil Society Organizations*

The representatives of the International Pesticide Action Network (IPEN), the University of Zambia and the World Reuse, Repair and Recycling Association discussed the role of civil society in awareness raising of hazards coming from unsound practices of e-waste management, the importance of sharing the results of research among stakeholders, and opportunities for cooperation between the civil society organization and academia with the private sector. Some panelists remarked that sharing and adopting success stories from different regions into Africa would bring benefits in building a sustainable system for environmentally sound management of e-waste.

#### *Industry*

The representatives of Datec Technologies Ltd., S. A. Precious Metals Ltd., and Sims Recycling Solutions provided their views on conditions that need to be in place for a private company to consider investments in e-waste recycling in Africa. They highlighted

that clear policy and regulatory frameworks on the national level, their harmonization on the regional level, good practices based on competition are necessary to provide a level-playing field for the private sector before it would consider a long-term commitment and investment into e-waste recycling infrastructure in Africa. A key issue in the e-waste recycling is material supply. Therefore there is a need to move materials intended for recycling across borders for environmentally sound management of e-waste. In this regard clear and predictable legal regime for transboundary movements of e-waste is important. Also there is a need to realize the value of e-waste recycling in Africa locally which would benefit collection and refurbishment sectors.

## **XI. Recommendations and closing**

The Pan-African Forum on E-Waste in Nairobi adopted a 'Call to Action', which outlines eight priority areas to improve the environmentally-sound management of e-waste in Africa (see annex III).

The Chair of the Forum thanked heartily the participants, the moderators of the working groups and the Forum Steering Committee for their active participation and hard work that has enabled the meeting to enrich the debate on the complex issues surrounding the transboundary movements and management of used EEE and e-waste in Africa. He expressed full satisfaction with the outcomes of the Forum and the high quality of the work done.

He then called on UNEP to make a closing statement. The representative of UNEP, Mr. Gerald Cunningham recognized the Forum as a truly multi-stakeholder platform for open discussion about challenges and opportunities related to e-waste in Africa. He thanked everyone for their excellent work.

He declared the Forum closed at 15:00 on Friday 16 March 2012.

## **XII. Annexes**

- I. Agenda
- II. Outcomes of the working groups
- III. Call for Action
- IV. List of participants
- V. Media coverage

## ANNEX I. Agenda



### Pan-African Forum on E-waste Challenges and Opportunities for a Sustainable Solution

#### A G E N D A



14 - 16 March 2012

United Nations Offices at Nairobi, Kenya • Conference Room 2



DAY ONE		
SESSION 1 Conference Room 2	<b>Introduction and overview of e-waste problem in Africa</b> <i>Facilitator: Desta Mebratu, Deputy Regional Director, UNEP/Regional Office for Africa</i>	
8.00–09.00	Registration and networking	
09:00–09:20	Opening remarks and objectives of the Forum Welcoming remarks	Katharina Kummer Peiry, Executive Secretary, Secretariat of the Basel Convention (SBC) Ali Mohammed, Permanent Secretary, CBS, Ministry of Environment and Mineral Resources of Kenya
09:20–09.45	Statements by Ministers	Mostafa Hussein Kamel, Minister for Environmental Affairs of Egypt Calist Mwatela, Assistant Minister for Education of Kenya, MP Ramadhan Kajembe, Assistant Minister of Environment and Mineral Resources, Kenya, MP
09:45–10.15	Keynote Address by Vice President of Republic of Kenya & Minister for Home Affairs	His Excellency Stephen Kalonzo Musyoka, EGH, MP
10.15–10.30	Tea/Coffee Break	
SESSION 1 Conference Room 2	<b>Introduction and overview of e-waste problem in Africa (cont.)</b> <i>Co-chairs: Oladele Osibanjo, Executive Director, Basel Convention Regional Coordinating Centre for the African Region (BCCC-Nigeria), and Enosh Nyakweba Osoro, Deputy Director, Wildlife Conservation Department, Ministry of Forestry and Wildlife of Kenya</i>	
10:30–12.00	Keynote speeches and presentations	Mohammed Sambo Bashar, Permanent Secretary, Federal Ministry of Environment of Nigeria Bitange Ndemo, Permanent Secretary, CBS, Ministry of Information of Kenya Jim Puckett, Head, Basel Action Network (BAN) Oladele Osibanjo, Executive Director, BCCC-Nigeria
SESSION 2 Conference Room 2	<b>Developing regulatory policy and legislation relevant to electronic and electrical equipment and e-waste</b>	
12:00–13.30	Status of policy and legislation, enforcement issues and national e-waste management strategies <i>Questions and answers</i>	Ayub Macharia, Ag. Director General, National Environment Management Authority (NEMA), Kenya Miranda Amachree, Deputy Director, National Environmental Standard and Regulations Enforcement Agency (NESREA), Nigeria John Alexis Pwamang, Director, Chemicals Control and Management Environmental Protection Agency, Ghana Yao Bernard Koffi, Director of Quality of Environment, Ministry of Environment and Sustainable Development, Cote d'Ivoire
13:30–14:30	Lunch Break	
SESSION 3 Conference Room 2	<b>SESSION 3 Findings from the SBCE-waste Africa programme</b> <i>Co-chairs: Executive Director, BCCC-Nigeria, Oladele Osibanjo and Beatrice Nzioka, Director of the Environmental Education, Information and Public Participation Department, National Environment Management Authority (NEMA)</i> <sup>1</sup>	
14:30–15:10	From Europe to West Africa <i>Questions and answers</i>	Tatiana Terekhova, Programme Officer, Secretariat of the Basel Convention Andreas Manhart, Senior Researcher, Öko-Institut Nancy Isarin, Programme Manager, IMPEL
15:10–15:35	Baseline information on e-waste volumes in selected West Africa countries <i>Questions and answers</i>	Mathias Schluep, Senior Scientist, EMPA
15:35–16:15	Impacts of current recycling practices and recommendations for collection and recycling <i>Questions and answers</i>	Andreas Manhart, Senior Researcher, Öko-Institut Matthias Schluep, Senior Scientist, EMPA
16:15–16:30	Tea/Coffee Break	

<sup>1</sup> The Co-chairs will continue facilitating the discussions through out the Forum.

<b>SESSION 4</b> conference Room 3	<b>Collaboration with the private sector</b>	
16:30–17:30	Overview of StEP (Solving the E-Waste Problem)  <b>A collaborative approach to implement a system solution for e-waste in Africa</b>	Jean Cox-Kearns, Global Compliance Director - Dell Take Back, EMEA Take Back/ StEP  <b>Herve Gulicher, Environmental Director, Hewlett Packard</b> and Elisabeth Tanguy, Senior Sustainability Manager, Nokia, for Original Equipment Manufacturer (OEM) Alliance
17:30–17:45	Closing of Day 1. Outline of working groups in session 5	Forum Steering group
<b>Cocktail Reception hosted by Safalcom from 18:00-19:30</b>		

<b>DAY TWO</b>			
<b>SESSION 5</b>	<b>Discussions in Working Groups – The building blocks of sustainable e-waste management (Part 1)</b>		
09:00–12:30	<b>Working Group 1: Attracting investment and financing mechanisms for e-waste management</b>  <i>Moderators:</i> David Rochat, Senior Environmental Consultant, SOFIES, SA  Conference Room 3	<b>Working Group 2: Building policy and regulatory framework and formalizing the informal sector</b>  <i>Moderators:</i> <b>Mathias Schluep, Senior Scientist,</b> EMPA  Conference Room 13	<b>Working Group 3: Stakeholder engagement and collaboration and awareness</b>  <i>Moderators:</i> Prof. Oladele Osibanjo, BCCC-Nigeria  Conference Room 14
12:30–13:30	Lunch Break		
<b>SESSION 5</b>	<b>Discussions in Working Groups – The building blocks of sustainable e-waste management (Part 2)</b>		
13:30–14:15	<b>Presentation of discussions and findings from the morning session</b>		
14:15–17:00	<b>Working Group 4: Maximizing life-cycle and creating value through environmental sound collection and recycling</b>  <i>Moderators:</i> Andreas Manhart, Senior Researcher, Öko-Institut and Mushtaq Memon, Programme Officer, UNEP DTIE/ETC  Conference Room 3	<b>Working Group 5: Ensuring a level playing field through information exchange and enforcement cooperation</b>  <i>Moderators:</i> Piet ten Brink, Inspector, Human Environment and Transport Inspectorate, the Netherlands / Nancy Isarin, Programme Manager, IMPEL  Conference Room 13	<b>Working Group 6: Capacity building needs for sound management of e-waste</b>  <i>Moderators:</i> Margaret Bates, the University of Northampton, UK  Conference Room 14
17:00–17:30	<b>Presentation of findings from the afternoon session of working groups</b>		
17:30	<b>Moderators to give steering group the conclusions of the working groups for inclusion in the closing findings, recommendations &amp; actions session</b>		

<b>DAY THREE</b>		
<b>SESSION 6</b>	<b>Regional approach to e-waste management in Africa</b>	
09:00–11:00	Panel discussion with Q&A on working group outputs and regional approach to <b>e-waste solutions in Africa (policy and legislation, technology, collaboration and enforcement)</b>	<i>Moderators &amp; Steering group members and other stakeholders</i>
11:00–11:15	<b>Tea/Coffee Break</b>	
<b>SESSION 7</b>	<b>Conclusion and next steps</b>	
11:15–12:30	<b>Presentation and adoption of the findings, recommendation and priority actions from the Forum for follow-up actions</b>	<i>Forum Steering group</i>
12:30–13:00	Closing remarks	<i>Secretariat of the Basel Convention and StEP</i>
<b>CLOSURE OF THE FORUM</b>		



#### BACKGROUND INFORMATION

Africa has been undergoing rapid ICT transformation in recent years, attempting to bridge the “digital divide” by importing second-hand or used computers, mobile phones, and TV sets from developed countries. The countries in the region, however, lack the infrastructure and resources for the environmentally sound management of electrical and electronic waste or e-waste arising when such imports reach their end-of-life. High volumes of e-waste, whether generated domestically but mostly imported as used, near-end-of-life or end-of-life equipment, have manifold impacts on the environment, local communities and the economic systems. It is now time for Africa to take action on addressing health and environmental problems as a result of current recycling practices while creating jobs and business opportunities and combating poverty.

#### ROUNDTABLE MEDIA EVENT (for accredited media only)

A Media briefing event *E-Waste: Challenges and Opportunities for Africa* will take place in Conference Room 6 on Thursday, 15 March 2012 from 10:30-11:45. Panel speakers will include:

- Achim Steiner, UNEP Executive Director
- Katharina Kummer Peiry, Executive Secretary of the Basel Convention, UNEP
- Ali Mohammed, Permanent Secretary, Ministry of Environment and Natural Resources, Kenya
- Miranda Amachree, National Environmental Standards & Regulations Enforcement Agency (NESREA), Nigeria
- Herve Guilcher, Environmental Programs Director, HP/EMEA
- Jean Cox-Kearns, Director of Compliance – Dell /Global Takeback

#### EXHIBITION

Organizations and companies involved in solving the e-waste problem will showcase their initiatives and innovative approaches at the exhibition which will be on display along the upper concourse.

#### RECEPTION

The reception will be hosted by Safaricom and will be held at the Fountain Area on Wednesday, 14 March 2012 at 6.00 pm.

#### INFORMATION CONTACTS

##### Logistics and per diem:

Wilfrida Omenda, (UNON), wilfrida.omenda@unon.org, tel.: +254-722 209 762 (Logistics)

DSA Payment at ATM Room (Wednesday and Thursday 13:00–16:00) for international participants

##### High Level segment, programme of work:

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## **ANNEX II. Outcomes of the working groups**

### **Working Group 1**

#### *Attracting investment and financing mechanisms for e-waste management*

Moderator David Rochat, SOFIES

#### **Part 1: Questions**

- **Perception of environmentally sound e-waste management**
  - o E-waste: is it a burden or a resource?
- **Financing mechanism for environmentally sound management of e-waste**
  - o Who should finance the 'system'?
  - o What kind of investment is required?
- **Enabling conditions to attract investments**
  - o What are critical enabling conditions for investments in the e-waste management?
  - o What are key risks for investors?
  - o What steps should be taken to attract investors?
- **Roles and responsibilities of stakeholders**
  - o Who is the 'producer'?
  - o What is the role of 'producers'?
  - o Which governmental agencies should support and enforce the mechanism for financing environmentally sound management of e-waste under the principle of the extended producer responsibility? What is the role of regulatory authorities?

#### **Part 2. Summary of the discussion**

1) E-waste management is as much a resource as a burden:

- e-waste recycling is a profitable activity for most EEE categories, as long as some technical standards are respected
- managing an e-waste system induces negative costs that cannot pay for themselves, such as monitoring and enforcement, which can become a burden.

Therefore, the burden/resource balance needs to remain positive, and depends on a few factors: commodity prices, technologies applied and composition of e-waste. Some problematic fractions exist in 10-15 years (e.g. CRTs).

2) The objective is to make e-waste management both positive for the environment / society and



It is standards that will define how we move in the upper right corner. Standards can be legislative, technical, etc.

An organized e-waste management system would currently be somewhere between the 2 green

3) Therefore, to bring recycling to a market driven system, responsibilities of stakeholders need to be defined in a legal framework. Main responsibility is shared between producers and government

4) Producers are defined as those who put EEE on the market, whether new or second hand. In this context, those who put EEE on the market are usually small scale and semi-formal. It is one major challenge to get them organized and allocate responsibility to them.

5) Standards need to be set the same for all, based on existing best practice and acknowledged :

6) It is essential to involve all stakeholders, and design the system in a way it minimizes the burden on the end user.

7) Government (tax payers) money could serve to trigger / catalyse the system, but producers should be responsible to operate it.

## **Recommendations**

Main points are:

1) two main actions are recommended:

- Define roles and responsibilities (operations & financial) of ALL stakeholders involved, create discussion platforms
- Make sure there are “financial mechanisms” & “allocation rules” (fair & clear, transparent) to allocate recycling costs for problematic fractions.

The responsibility for these two actions induced many discussions, but all agree that it is between producers and government to initiate action and lead all stakeholders.

2) Workable multi-stakeholder pilot projects (from studies to practical solutions/approaches, in Academia in research of new ones) can be undertaken immediately, on the model of what is being currently conducted by the OEM alliance.

3) Two more actions are proposed:

- create economic incentives to include the existing informal sector
- find synergies for the e-waste system to be economically driven. E.g., put in place mechanism where consumer gets a discount on new equipments if he brings back old ones.

## **Conclusions**

It is a typical chicken and egg situation: what is first, legal framework defining roles and responsibilities or voluntary approach by the producers?

Ideally, both actions should be conducted simultaneously and all stakeholders must be involved.

In all cases, it is not possible to discuss the financing of e-waste management without linking it to legislation and the role and responsibility of stakeholders.

## Working Group 2

### *Building policy and regulatory framework and formalizing the informal sector*

Moderator Mathias Schluep, EMPA

#### Part 1: Questions

- **Definition of e-waste**
  - Does your national legislation include a definition of e-waste?
  - Does your national legislation include criteria to distinguish between used electrical equipment and e-waste (e. g. fully functional, intend of the owner, such as “discarded for reuse, recycling”, etc.)
  - Applicability of the definitions of e-waste of WEEE Directive, PACE guidance, the general definition of hazardous waste in the Basel Convention in the African context.
- **National policy instruments on e-waste**
  - Has your country developed a national strategy or policy on e-waste?
  - National legislation to implement the Basel Convention
  - Has your country ratified the Ban Amendment?
  - Is there a specific law/regulation to implement the Basel Convention?
  - What other legal acts regulating or applicable to e-waste exist in your country?
  - What mechanism can be introduced to ensure all producers play their part in the life cycle?
  - Is there a ‘one size fits all’ regulatory framework, or what economic conditions need to be taken into account when developing a regulatory framework?
  - What measures can be taken to encourage formalizing the informal into the formal sector?
- **Regional policy**
  - What are advantages and disadvantages of adopting an African-wide strategy on e-waste?
  - Poverty reduction and sustainable development strategies and policy on e-waste
  - Is the issue of hazardous waste management or e-waste included in national poverty reduction and sustainable development strategies in your country?
  - Has the contribution of the sound management of e-waste to create green jobs been recognized on the political level? In which policy documents?
  - Inter-agency national coordination for a sustainable e-waste management
- **Roles and responsibilities of different stakeholders**
  - Who are the actors that need to be part of the regulatory framework?
  - Definition of producers / importers / exporters
- **Extended producer responsibility**
  - How would you interpret the extended producer responsibility principle for your country?
- **Market incentives vs. regulation or combined approach**

## Part 2. Recommendations

<b>Actions</b>	<b>Implementing Partners/ Lead</b>	<b>Timeline</b>	<b>Trigger</b>	<b>Priority? (high, medium, low)</b>
1. Develop regional Strategy(for each BCRC region)	BCRC's, coordinated by the BCCC, base it on the existing strategic framework, developed	well before COP 11		high
1a. Enable transboundary movement of WEEE within the context of the Basel and Bamako Conventions regimes in the region and relevant trade agreements	Individual countries, relevant ministries			
1b. Harmonize definitions and specifications - For e-waste - For types of hazardous waste - For near EOL - For ESM	SBC to provide AND disseminate model definitions  Regional Basel Centres to assist individual countries  African members within the ESM expert-group			
1c. Harmonize the identification of the main stakeholders and	BCRC's, the Basel Convention Focal Points and OEM's			

their respective responsibilities (especially EPR principle)				
2. Develop national strategy	Inter-ministerial, open ended (towards non-governmental stakeholders) committee	2012		
2a. Develop guidelines prior to national law	Environmental Protection- regulating Agency, leading a multi stakeholder working group			
2b. Organize cooperation between all relevant governmental institutions	Environmental Ministry, applying 'Sector Wide Approach Process'			
2c. Provide a platform where "informal" actors in the UEEE and e-waste sector interact with the Government	NGO's and / or relevant governmental institutions, such as Trade, Industry, ICT, Environment, etc.			
2d. Domesticating Regional Strategy into National Framework				

### **Working Group 3**

#### ***Stakeholder engagement and collaboration and awareness raising***

Moderators Oladele Osibanjo, BCCC-Nigeria and Nosiku Sipilanyambe Munyinda, University Zambia

#### **Part 1: Questions**

- Roles and responsibilities of different stakeholders
  - What are the international, regional, and national stakeholders engaged in e-waste management?
  - What is the role of non-governmental organizations?
  - Is there a role for public-private partnerships in e-waste recycling in Africa?
  - What is the role of original electronic manufactures whose products may be sold in Africa while they do not have a legal presence in Africa?
- Existing formats of engagement and collaboration initiatives
  - How to ensure that knowledge-sharing and collaboration between the African countries working on e-waste legislation, policy, enforcement, technology transfer, etc.?
- Needs
  - Is active collaboration between stakeholders required or will a clear legal framework and financial incentives provide enough guidance to the stakeholders?
  - Is there need to economic instruments? If so, which ones?
  - How to ensure the engagement of the informal sector (e.g. scavengers) in a system for environmentally sound management of e-waste?
- Awareness-raising on the national and regional levels
  - What are the most effective ways to raise awareness on environmentally sound e-waste collection and recycling?
  - How to raise awareness about it in the rural areas?
  - What are effective mechanisms to raise awareness and collaborate with importers of EEE?
  - Can e-waste stakeholder regional, national, or local workshops, meetings or training events help raise awareness and improve collaboration between all stakeholders? What is the effective format for such events?
  - What is the view of consumers on e-waste recycling? Do they understand recycling is important? How to ensure that consumers are aware of the importance of environmentally sound recycling and disposal of e-waste?

## PAN AFRICAN FORUM ON E-WASTE

### WORKING GROUP 3: STAKEHOLDER ENGAGEMENT, COLLABORATION AND AWARENESS RAISING

ACTIONS	IMPLEMENTING PARTNERS/LEAD	TIMELINE	TRIGGER	PRIORITY? (high, medium, low)
1. To encourage the AU set up an office on e-waste.	AU, AMCEN, Governments, ECA, ADB, World Bank, GEF, BCCC.	Short term-send message from this forum to AMCEN to lobby governments to follow up AU to set up this desk-long term. Can use the MEA platform within the AU.	Recommendation of the Pan African e-waste Forum	High
2. Strengthening of the BCRCs and BCCC, national focal points.	SBC, AU, Donors, UNEP, UNIDO, UNDP, GEF, African Governments, World Bank	Short term	Recommendation of the Pan African e-waste Forum	High
3. Establishment of an African e-waste journals, newsletters etc	SBC, AU, ADB, World Bank, UNEP, UNIDO, UNDP, UNESCO, OEMs. Universities and Research Institutes, Other Stakeholders	Medium	Recommendation of the Pan African e-waste Forum	Medium
4. Establishment of an African network on	SBC, IMPEL, Donors, Governments, Universities, NGOs,	Short term	Recommendation of the Pan African e-waste Forum	High

control of illegal traffic in e-waste	StEP, BCRCs, BCCC, Regional Economic bodies e.g. ECOWAS, COMESA, EAC etc.			
5. Active engagement of informal sector in e-waste collection and recycling	SBC, OEMs, Donors, Governments, BCRCs, BCCC, NGOs, Informal sector, Recycling industry.	Short, Medium and Long Term (ongoing)	Economic, Environmental and Health factors	High
6. Incentives to establish and support e-waste recycling industry	SBC, BCRCs, BCCC, Governments, OEMs, Donors, Investors, Producers, UNIDO, UNEP, Service Providers, UNDP, Organized Private Sector Associations, NGOs, Recycling industry.	Medium	Economic, Environmental and Health factors	Medium
7. Targeted awareness campaigns to agents of change such as Schools, FBOs, traditional leaders, media, political class etc	SBC, BCRCs, BCCC, AU, ADB, World Bank, UNEP, UNIDO, UNDP, UNESCO, UNICEF, Governments, NGOs, ILO, WHO, ITU, OEMs, Donors, Recyclers. Universities and Research Institutes, Other Stakeholders	Short, Medium and Long term (Ongoing)	Recommendation of the Pan African e-waste Forum	



8. Development and inclusion of e-waste management curriculum in educational institutions at all levels of education	SBC, BCRCs, BCCC, UNESCO, STEP, PACE, World Bank, UNDP, WHO, ILO, UNEP, Governments, UNIDO, UNICEF, Association of African Universities, ADB, OEMs, NGOs. Other relevant stakeholders	Medium	Economic, Environmental and Health factors	Medium
9. Research and development on HSE and ESM of e-waste	SBC, Donors, Governments, Universities, Research Institutions, NGOs, CBOs, World Bank, UNESCO, recyclers, OEMs. Other relevant stakeholders	Medium	Recommendation of the Pan African e-waste Forum	Medium
10. Strengthening existing network on Enforcement (exchange programs etc)				

## Discussion Points

*Definition: E-waste: electrical product at its end of life which is non functional, non-reparable*

### Questions

#### 1. Identification of stakeholders

- a. NGOs
- b. Producers
- c. Recyclers
- d. Cooperatives
- e. Informal sector
- f. General public
- g. Shareholders
- h. Investors and financial institutions
- i. Government- Policy and Regulators, e.g. Customs, Ports Authorities, Environmental Ministries and Agencies, Education, Health
- j. Academia- educational institutions
- k. Donors and International Aid Agencies e.g. EU,

## Who are the stakeholders engaged in e-waste?

International	Regional	National
UN agencies	African Union (AU)	Federal and National governments and National Environmental Protection Agencies (EPAs)- Ministries of Environment, Science and Technology, Education, Labour, Health, etc.
World Bank	African Development Bank (ADB)	State Ministries and EPAs and Local governments
GEF	ECOWAS	Civil Society Organizations
Government Oversees Development Agencies	COMESA	National OEMs
European Union (EU)	SADC	Informal sector (collectors)
Commonwealth	East African Community (EAC)	International NGOs
Basel Action Network (BAN)	Indian Ocean Commission (IOC)	Producers- importers, retailers,
International POPs Elimination Network (IPEN)	New Partnership for African Development (NEPAD)	Service providers
Original Equipment Manufacturers (OEMs)	Inter-governmental Authority for Development (IGAD)	
Implementing Environmental Legislation (IMPEL)- EU network of	African Ministerial Conference on Environment (AMCEN)	

2. YES!!!

3. Role of OEMs whose products may be sold in Africa while they don't have a legal presence in Africa?

- a. Extended Producer Responsibility (EPR) and Corporate Social Responsibility (CSR);
- b. Voluntary standards
- c. Collaborate with and provide effective support to producers, marketers, retailers of their products in Africa

**Existent formats of engagement and collaboration initiatives**

1. How to ensure that knowledge sharing and collaboration etc between African countries

- a. Through involvement of BCRCs and BCCC in awareness raising and capacity building workshops as well as projects implementation and coordination.
- b. Information sharing and dissemination through the Secretariat of the Basel Convention, BCRCs and the BCCC through their websites and other means.
- c. StEP activities through their websites and other means of information sharing and dissemination:
- d. Academic and research knowledge exchange between overseas and African universities, European research organization such as EMPA of Switzerland and Oiko Institute of Germany as well as African e-Waste Alliance in awareness raising through workshops and project implementation.

OEMs, Industrial recyclers, StEP and PACE have all been involved in the development of e-waste legislation in various African countries e.g. Nigeria, Ghana and Ethiopia;

e. UNIDO has been involved in pilot projects in various countries...

#### Needs

1. Active collaboration required- Yes; Clear legal framework- Yes
2. Need for economic instruments- Yes. Which ones- Yes. While it's recognized that valuable fraction of e-waste are self-financing, the problematic fractions might require economic incentives i.e. CFC collection, CRT tube. Effective legislation for producer responsibility for problematic fractions. Examples of economic instruments- special levies, tax rebates, duty free exemptions etc for recycling infrastructure; import and export etc.
3. How to ensure the engagement of informal sector for ESM of e-waste? The engagement of the informal sector is key and therefore they should be incentivized and enhance their capacity to collect all fractions including the problematic ones.

#### Awareness raising on National and Regional levels

1. Effective ways: through the all forms of media and road shows, massive education of all sectors of society, labeling of electronic products with respect to safety and disposal; targeted awareness campaigns e.g. school children to further disseminate the information;
2. Awareness in rural areas: schools, Faith Based Organizations (FBOs), traditional leaders and communicators', CBO, NGOs special events, clubs, radios, pilot projects, SMS campaigns through service providers, bill boards, brochures and banners.
3. Awareness and collaboration with importers of used EEE: legislation, registration, permit system, use evidence based research data, exhibitions and trade fairs,

4. Workshop etc? Yes; Effective format: open forum, study visits, regular newsletter for updates, radio and tv discussions, periodic meetings for information sharing and exchange, recognition of best practice in the industry,
5. Consumer view of e-waste recycling, do they understand importance of recycling? No- lack or limited knowledge on recyl; How do we ensure they are aware? Awareness raising campaigns on dangers of poor environmental and practices, showcasing economic, environmental and health benefits of e-waste recycling.

## **Working Group 4**

### ***Maximizing life-cycle and creating value through environmental sound collection and recycling***

Moderators Andreas Manhart, Oko-Institut and Mushtaq Memon, UNEP DTIE/IETC

#### **Part 1: Questions**

- Life-cycle of the electronic and electrical equipment
  - How can the product's life-cycle be maximised?
  - What role the re-use (direct) of electronic and electrical equipment play in African nations?
  - Can African nations influence / encourage the green design of electronic and electrical equipment? Can national procurement policies play this role?
- Collection
  - What is effective e-waste collection strategy for African nations?
  - How to ensure that all fractions (valuable & non-valuable including hazardous) are collected and recycled in facilities in the environmentally sound manner?
- Recycling
  - What is effective e-waste recycling strategy for African nations?
  - What e-waste components can currently be recycled in Africa? And what e-waste components can currently be recycled in the environmentally sound manner?
  - How can the value of secondary raw material be maximised?
  - Manual vs. automatic recycling practices: what is the most appropriate solution for African nations?
  - What steps can be taken to close the materials loop in Africa?
- Roles and responsibilities of stakeholders
  - Who is responsible for environmentally sound collection and recycling of e-waste?
  - What role does the informal sector have to play in the collection and dismantling of e-waste?
  - What role does the re-use and refurbishment sector have in minimising e-waste and extending product life?
- Occupational safety issues
  - What measures should be taken to protect the health and improve conditions for e-waste workers (collectors, refurbishers, recyclers)?
  - What should be the environmental and occupational standards for recycling and resource recovery in Africa?

## **Part 2: Summary of the discussion**

The governments were encouraged to present their challenges and to explore opportunities by working with all the major stakeholders. On eco-designs, a joint strategy at regional or sub-regional level was proposed. For collection and storage of e-waste, it was proposed that private sector is in a better position to provide the service while government should regulate the service to take care of the interests of all the stakeholders. For recycling, it was proposed that proper guidelines should be developed and implemented by the government to ensure proper recycling and occupational health. The governments were encouraged to set up regional or sub regional standards for recycling companies. There was a wide agreement on proper disposal of e-waste including the check on illegal shipment of e-waste.



## **Working Group 5**

### ***Ensuring a level playing field through information exchange, data management and enforcement cooperation***

Moderators Piet ten Brink, VROM, the Netherlands and Nancy Isarin, IMPEL

#### **Part 1: Questions**

- National enforcement (-policy) coordination
  - What are the challenges to effective enforcement of the Basel Convention and the national legislation in your country?
  - Are there difficulties related to inter-agency collaboration for the enforcement of the Basel Convention?
  - Is there a system of priority-ranking in place regarding the monitoring and control of the import and export of goods and wastes? If yes, which agencies are involved in priority-ranking? If yes, what is the ranking of UEEE and e-waste?
  - Is there a national platform or other collaboration structure in place where governmental agencies and other stakeholders jointly determine UEEE- and e-waste solutions? If yes, are enforcement agencies adequately represented?
- Regional enforcement coordination for better e-waste management
  - Is there a need for a regional and inter-regional collaboration for effective enforcement of international, regional and national legislation related to e-waste?
  - Are there existing initiatives/networks for enforcement which could be used/built upon for better enforcement?
  - What level of information exchange is needed to help harmonize enforcement efforts to prevent illegal traffic of e-waste and allow legitimate waste shipments?
  - What can be done to minimize illegal traffic of e-waste and to optimize legitimate traffic of both UEEE and e-waste to support the development of regional e-waste recycling centres?
  - What benefits would a harmonised (in multiple countries) data gathering system for UEEE put on the market, for UEEE imported and for estimated e-waste arising have for production and how could this facilitate the development of regional recycling centres?
  - Is there a stronger need for improved communication between African countries to monitor transboundary movements?
- International enforcement coordination for better e-waste management
  - How can countries without recycling infrastructure use infrastructure in neighbouring countries?
  - What are the barriers preventing this from happening?
  - Do countries of export have sufficient knowledge of trade regulations in countries of import (of UEEE and e-waste) and vice-versa?
  - The same question as above, now related to enforcement priorities.
  - What are the barriers for international exchange of enforcement information?
- Classification system for goods and wastes

- What are currently the challenges related to the various classification systems (e. g. WC codes, OECD codes, Basel codes)?
- What (existing or to-be-developed) system could be leading regarding the distinction between UEEE and e-waste? Which constraints would be met on a national level? Which on an international level?
- Would a system, setting standards for activities in the UEEE/e-waste chain, such as transportation, preparation for re-use and treatment (for recycling) of e-waste be an effective measure to improve e-waste management in your country? Or in the region that your country makes part of? Or for Africa as a whole? If yes, could the European WEEELABEX-system (WEEE Labels for Excellency, introduced by the WEEE Forum) offer good inspiration?

## Part 2: Recommendations

<b>Actions</b>	<b>Implementing Partners/ Lead</b>	<b>Timeline</b>	<b>Trigger</b>	<b>Priority? <i>(high, medium, low)</i></b>
1A. Continued capacity building focused on improved knowledge of the Basel Convention and compliance assistance 1B. Continued awareness raising	Competent Authorities (L)/Enforcement Agencies/BCRCs/BCCC/SBC			
2. Promotion of inter agency collaboration at national level	Competent or enforcement agencies (L)			
3.Promotion of transparency and traceability/due diligence	Joint effort by Competent Authorities and Industry			
4. Develop and include provisions to provide authority to inspection and enforcement in existing model legislation	Government / experts			
5A. Development of minimum criteria for environmental inspections 5B. Development of inspection guidance	Enforcement authorities			
6.Actions to improve collaboration at regional and inter-regional level	AU/INECE/AMCEN/Regional Economic Communities/BCRCs/BCCC/			

	National governments			
7. Facilitate a better information exchange among enforcement agencies both at national and international level	Competent or enforcement agencies (L-nat)/EU-Africa Enforcement Network (L-intreg)/INTERPOL			

## **Working Group 6**

### ***Capacity building needs for sound management of e-waste***

Moderator Margaret Bates, the University of Northampton, UK.

#### **Part 1: Questions**

- Identification of needs
  - What are the needs in capacity-building for environmentally sound management of e-waste?
  - Are there innovative, cost-effective approaches to capacity-building?
  - What are the training needs for environmentally sound management of e-waste in Africa?
- Experience sharing and best practices
  - How to best use results of the capacity-building activities and projects completed in some African countries?
  - What are the mechanisms for identifying and sharing best practices from African countries and best practices from outside Africa related to environmentally sound management of e-waste?
  - How to affect the behaviour of consumers and the public sector in relation to recycling e-waste?
- Implementation of capacity-building activities
  - What are the actors that can assist with capacity-building activities?
  - Is there a need for global/regional coordination efforts/overview of capacity-building activities?
  - How the capacity-building activities can be financed?
  - Is there a need for global/regional donor coordination for capacity-building activities to avoid duplication and maximize impacts?

#### **Part 2: Summary of the discussion (answers to questions)**

Capacity Needs

##### **Who ?**

- All people dealing with ICT
- EPAs need capacity
- Scavengers
- All govt organisations dealing with ewaste e.g. customs, policy makers, house of assembly etc.
- All stakeholders identified in workshop 3
- Throughout the value chain from collectors to recyclers/ final processors
- Teachers

### **What ?**

- Recycling
- Development of region specific technologies
- Policy and regulation
- Collection capacity – to enable access for all
- Partnerships for learning between industry and regulators – e.g. placement schemes
- Physical and intellectual capacity
- Different types of capacity but in different areas but all need capacity building.
- Develop specific systems that work in this environment
- Train the trainers approach based on trusted community and other leaders.
- CBOs faith based groups and other to take training to less populated/rural areas
- Work in partnership e.g. regulators and CBOs etc to work together.
- Example is NEMA help to build capacity for others e.g. regulators, lead agencies and other groups so everything fits within the regulatory framework – so if people know what they are expected to do they can do it.
- New for old systems – use for awareness raising
- Internet – access is limited and so not good for general public and even some govt organizations
- Benefits of face to face capacity – build on respect of trainers – also address the issues of language and culture
- Radio is widespread and so use it

### **Training needs**

- Regulators – policy why and what ? e.g. to enable regulators to understand why regulations exist to enable them to share this with others
- Divide stakeholders into different groups with different training / capacity building for different groups – find similarities and share information – e.g. age groups, faith groups
- Children – target schools and teachers to educate children to enable sustainable capacity building and children to raise awareness with families and others. Also use clubs such as scouts, brownies etc.
- Target large producers e.g. hospitals
- Share best practice e.g. utilising networks e.g. those in East and West Africa for EPAs.

### **Best Practice**

- Sharing legal developments e.g. developments of regulations and borrowing from other countries
- Sharing best practice from other African states e.g. site visits
- Share best practice with the Basel Centres
- Identify best practice through meetings and Basel centres including pilot projects
- ECOWAS region already has free trade and this could be built on by training customs to understand what is waste and what is not
- Simplified trade regime to enable free movement compliant with requirements of Basel Bamako
- Utilise existing structures

- Share through an Africa wide network coordinating existing networks.
- Education exchange through stakeholders, policy makers etc.
- Use StEP and other expertise to establish best practice repository in Basel Centres.
- How to affect consumer behaviors
- Schools
- Collection systems – make it easy
- Consider incentives
- Consider applying fines to those who break the rules and use the money to pay for problematic fractions and or provide incentives

### Part 3: Recommendations

<b>Actions</b>	<b>Implementing Partners/ Lead</b>	<b>Timeline</b>	<b>Trigger</b>	<b>Priority? (high, medium, low)</b>
1. Develop a model for training that can be used by all and adapted depending language and situation	UNIDO, Basel Centres, government, UNETA, OEMs, recyclers, NGOs	6-12 months	Forum has identified need	High
2. Initiate train the trainers projects to enable community based organisations, faith and youth groups etc to deliver training which will reach rural and urban areas.	UNIDO, Basel Centres, government, UNETA	6 -12 months	Forum has identified need	High
3. Establish a pan Africa Environmental Protection Agencies network building on existing networks such as those already in existence in West and East Africa.	EPAs and existing networks	6-12 months	Forum has identified need	Medium to high
4. Workshops to target specific groups such as political classes, legislators and media	Govt, Basel Centres, UNETA etc	12 months		High
5. Develop a best practice repository with Basel Centres	Basel Centres, StEP, OEMs, Govt	ongoing		high



6.Study tours within Africa to learn and share best practice including visiting pilot plants etc	Govt, EPAs, Recyclers etc	Medium term		Medium
7. Educate teachers to educate children in ESM	Govt, recyclers, NGOs	On going		Medium
8. Increase and support research capacity	Govt, donor/funders, academia	Long term		medium
9. Identification of funding sources for a range of projects and project values	Funders, Govts, NGOs etc	Short- medium term		medium

## **ANNEX III**

# **Call for Action on E-waste in Africa**

## ***Set of priority actions***

### **Preamble**

The Pan-African Forum on E-waste held at United Nations Environment Programme Headquarters in Nairobi, Kenya, during 14-16 March 2012, calls for action outlining of priorities to support development of a regional approach for the legal transboundary movements and the environmentally sound management of e-waste for the African continent to protect human health and the environment as well as to provide opportunities for social and economic development.

The participants consisting of Governments from twenty African states, States outside the region, regional organizations, intergovernmental organizations, academia, the private sector, civil society and other stakeholders take into consideration existing international and regional legal frameworks relevant to electronic and electrical waste (e-waste) including in particular the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal, 1992 and its Ban Amendment and the Bamako Convention on the Ban on the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, 1998 as well as Decision BC-10/3 on the Indonesian-Swiss country-led initiative to improve the effectiveness of the Basel Convention and work undertaken under the United Nations Partnership on Hazardous Management led by UNEP International Environment Technology Centre.

Furthermore efforts are to build upon a number of policy instruments, including, inter alia, the Bali Strategic Plan for Technology Support and Capacity-building, 2005, the Ministerial Declaration on the Environmentally Sound Management of Electronic and Electrical Waste, 2006, Bali Declaration on Waste Management for Human Health and Livelihood, 2008, Durban Declaration on E-waste Management in Africa, 2008, the Platform on E-waste, 2009, the report of the International workshop on hazardous substances within the lifecycle of electrical and electronic products held in 2009 in Vienna, and Cartagena Declaration on the Prevention, Minimization and Recovery of Hazardous Wastes and Other Wastes, 2011.

### **Vision**

The participants of the Forum believe that access to Information and Communication Technology (ICT) for all in Africa is of paramount importance for achieving the Millennium Development goals in the region. The participants also recognize increasing demand and use of this and other electrical and electronic equipment (EEE).

However the serious health, socio-economic, and environmental problems that arise from the unsound management of e-waste must be avoided. E-waste that cannot be avoided should be considered as a resource. Managing e-waste in an environmentally sound manner would create green jobs and business opportunities while alleviating poverty. Participants envision a continent free from illegal traffic in e-waste and poorly managed e-waste.

e-waste, achieved through the proper management of all aspects of the life-cycle including green design. Unified action is required for the African region to harness synergies and avoid shifting challenges from one country to another.

### **Set of priority actions**

The following priority areas for action have been identified to support transboundary movements and the environmentally sound management (ESM) of e-waste:

#### **Area 1: Baseline assessment of e-waste problems**

1.1 Participants of the Forum agree to adopt a common approach towards informed decisions on EEE import and export, its use and the generation of e-waste as well as its collection, recycling, and disposal. Relevant institutions from the government, non-governmental sectors will cooperate in producing national, sub-regional, and African e-waste assessments using a multi-stakeholder approach and in sharing knowledge. Support is to be provided to governments undertaking national assessments on e-waste by UNEP, Basel Convention regional and coordinating centers for trade and technology transfer, and other relevant agencies and institutions.

#### **Area 2: Principles for environmentally sound management of e-waste**

2.1 Participants of the Forum agree that an increased pace to implement green design and the phase-out of hazardous substances contained in EEE is required, necessary to improve transparency with respect to information on hazardous substances used in EEE for all stakeholders involved in the life-cycle, including consumers, workers and in communities around manufacturing and disposal sites.

2.2 The system for environmentally sound management of e-waste should be based on the Extended Producer Responsibility (EPR) principle and the polluter-pays principle.

2.3 All African States should develop cost-effective national systems for the environmentally sound management of e-waste, covering collection, recycling, transboundary storage and disposal.

2.4 The system should be based on international recycling standards. Best available technologies should be shared among the countries between the region, developing countries as well as developed countries.

2.5 Refurbishment, repair and re-use of EEE should be encouraged where appropriate from the human health and environmental perspective.

2.6 The system should ensure that the informal sector is recognized as one of the stakeholders and employ practices that minimize risks to human health and the environment as well as give opportunities to them to formalize their operations.

#### **Area 3: Legal, policy and regulatory frameworks**

3.1 African States are to make a concerted effort to ratify the Basel Convention and its Ban Amendment and the Bamako Convention, transpose these Conventions into national law, and enforce their provisions.

3.2 Efforts should also include developing and adopting a separate legal instrument specifically supporting e-waste management on a national level. Key elements of national legislation should be harmonized on a regional level and include, inter alia:

- a) Common understanding and interpretation among African States of a key definitions and terminology such as: e-waste, producer, ESM and in harmony with definitions developed by the Basel Convention, including Mobile Phone Partnership Initiative (MPPI) and Partnership for Action on Computing Equipment (PACE);
- b) Major actors and their roles and responsibilities in e-waste management and transboundary movements;
- c) Health, safety and environmental standards; and
- d) Stakeholder and infrastructure registration and permitting with applicable standards.

3.3 Legislation should ensure a level playing field for all stakeholders, attract investment and upgrade recycling infrastructure in African States.

3.4 African States, in cooperation with relevant regional and international organizations, should be encouraged to develop and implement regional and national strategies on e-waste.

Area 4: Enforcing international, regional and national law concerning imports and exports of used electronic and electrical equipment and e-waste

4.1 African States should work in cooperation with international partners to intensify efforts to prevent the illegal traffic of e-waste and the flow of used EEE lacking a market into the African continent by strengthening enforcement measures.

4.2 African States are encouraged to likewise control near-end-of-life EEE entering their countries.

4.3 Exports of e-waste from African and within African States should be facilitated wherever necessary for ESM due to lack of local infrastructure or effective treatment of hazardous fractions in accordance with the provisions of the Basel and Bamako Conventions and any other relevant national laws and regulations.

4.4 African States are encouraged to establish criteria to distinguish between wanted and unwanted EEE imports and communicate them to the relevant regional and international bodies.

4.5 States of export of used EEE are called upon to adequately enforce compliance with the criteria as stipulated in paragraph 4.4.

4.6 Relevant national authorities in Africa should intensify efforts to enforce law and regulations that are relevant to transboundary movements of e-waste and ESM. This can be achieved, for example, by formalizing working arrangements among national authorities such as regulatory, enforcement and port authorities, conducting inspections and developing criteria for environmental inspections; etc.

4.7 Participants of Forum call for establishment and strengthening of regional and international networks to prevent the illegal traffic of e-waste such as: EU-Africa network on e-waste enforcement, Eastern African Network of Environmental Compliance Enforcement (EANECE), West African Network for Environmental Compliance Enforcement (WANECE), European Network for the Implementation and Enforcement

Environmental Law (IMPEL) and International Network for Environmental Compliance and Enforcement (INECE).

#### **Area 5: Financing environmentally sound management of e-waste**

5.1 To apply the principles of EPR, producers should be required to organize collection, recycling and recovery of e-waste and ensure its environmentally sound management in line with market forces and in accordance with national laws.

5.2 Financial mechanisms should be put in place by producers to facilitate collection and environmentally sound management of all e-waste including non-valuable and hazardous items.

5.3 Financing mechanisms need to recognize the realities of the current system and prioritize the improvement of the health, safety and environmental standards of e-waste recycling through applied research in African States.

#### **Area 6: Environmental, health, and socio-economic aspects of e-waste management**

6.1 Participants of the Forum endorse the safe and efficient recycling and refurbishment of e-waste which provides an opportunity for the generation of employment, economic growth and poverty reduction, if performed in compliance with the Basel Convention, the Bamako Convention and their requirements, guideline and decisions.

6.2 Participants of the Forum call to support the implementation of approaches that promote social inclusion of all stakeholders, including the informal sector, in environmentally sound e-waste collection, recycling and management. Implementation and monitoring of a variety of approaches is believed to be the appropriate way to improve the knowledge-base on sustainable African solutions to the e-waste problem.

#### **Area 7: Capacity building and awareness raising**

7.1 Participants of the Forum call on UN agencies, MEA secretariats, donors, UNEP Convention regional and coordinating centers for training and technology transfer and other stakeholders to assist relevant entities in the African region with capacity building and awareness activities.

7.2 Participants recommend the following activities:

- a) Use existing or develop new training toolkits to adopt a train-the-trainer approach utilizing respected community leaders, community organizations, schools, and others;
- b) Develop a pan-Africa coordinating network for regulatory authorities;
- c) Develop a best practice repository within the Basel convention region coordinating centres for training and technology transfer;
- d) Undertake capacity-building on monitoring and enforcement;
- e) Undertake capacity building for assessments on e-waste problems at national, sub-regional and Pan-African levels; and
- f) Others.

7.3 Education and awareness-raising on risks related to unsound practices and benefits of e-waste recycling as well as on hazards of e-waste dumping should

strengthened throughout the African continent, including through the inclusion university curriculum and educational programmes.

7.4 Bilateral and multilateral donors are encouraged to support these capacity building programmes.

#### **Area 8: Coordination of implementation of the Call for Action**

8.1 UN agencies in partnership with Basel Convention regional and coordination centers for training and technology transfer and national governments will coordinate implementation of the actions.

8.2 Given the success of the Pan-African Forum on E-waste, participants agree the Forum is to take place every two years (when possible back-to-back to the AU Union, the African Ministerial Conference on the Environment (AMCEN) or other relevant meetings).

Adopted on 16 March 2012 in Nairobi, Kenya

**ANNEX IV**

**PAN-AFRICAN FORUM ON E-WASTE**

**14-16 MARCH 2012**

**NAIROBI – KENYA**

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## Annex V



### UNITED NATIONS ENVIRONMENT PROGRAMME

Programme des Nations Unies pour l'environnement

Programa de las Naciones Unidas para el Medio Ambiente

Программа Организации Объединенных Наций по окружающей среде

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### Selected screen shots

- [France 24](#)
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### Media Coverage

- [AFP: Africa to generate more e-waste than Europe by 2017](#)
- [BBC World Service: World Update 0700 GMT](#)
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- [VOA: African Governments Urged To Address Growing E-Waste](#)
- [VOA: UN Concerned About West Africa's E-Waste Problem](#)
- [RFI: En 2017, l'Afrique générera plus de déchets électroniques que l'Europe](#)
- [Libération.fr \(France\): L'Afrique générera bientôt plus de déchets "électroniques" que l'Europe](#)
- [Yahoo! 7 News: Africa to generate more e-waste than Europe by 2017](#)
- [Times of India: Africa to generate more e-waste than Europe by 2017](#)
- [EuraActivity \(Belgium\): West African nations pay a price for EU e-waste](#)
- [Eco Citta Dalle\(Italy\): Rifiuti elettronici: mittente Europa, destinatario Africa. A Nairobi il primo Forum panafricano sui RAEE](#)
- [APO- OPA: UN-led Meeting Agrees on Priority Actions for Managing E-Waste in Africa / Pan-African Forum on E-Waste Underlines Green Economy Opportunities in E-Waste Sector](#)
- [Nigeria News on Line \(Nigeria\): UN to address electronic waste problem in Africa](#)
- [The West \(Australia\): Africa to generate more e-waste than Europe by 2017](#)
- [Bangkok Post \(Thailand\): Africa to generate more e-waste than Europe by 2017](#)
- [Independent online \(South Africa\): Africa to generate more e-waste than Europe by 2017](#)
- [Brecorder.com \(Pakistan\): Africa to generate more e-waste than Europe by 2017](#)
- [News 24\(Nigeria\): Africa to generate more e-waste](#)
- [Modern Ghana \(Ghana\): Africa to generate more e-waste than Europe by 2017](#)
- [New Age \(South Africa\): Africa to generate more e-waste than Europe by 2017](#)
- [Zimbabwe Daily \(Zimbabwe\): Africa to generate more e-waste than Europe by 2017](#)

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La quantité de déchets électroniques émise par les Africains liée à leur

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**Africa to generate more e-waste than Europe by 2017**

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NAIROBI: Better known as a dumping ground for used electronic goods from developed countries, Africa is set to outstrip Europe in the volumes of e-waste it generates within five years, experts said Thursday.

"One study suggests Africa will generate more e-waste than Europe by 2017," Katharina Kummer Peiry, Executive Secretary of the Basel Convention on hazardous waste, told reporters.

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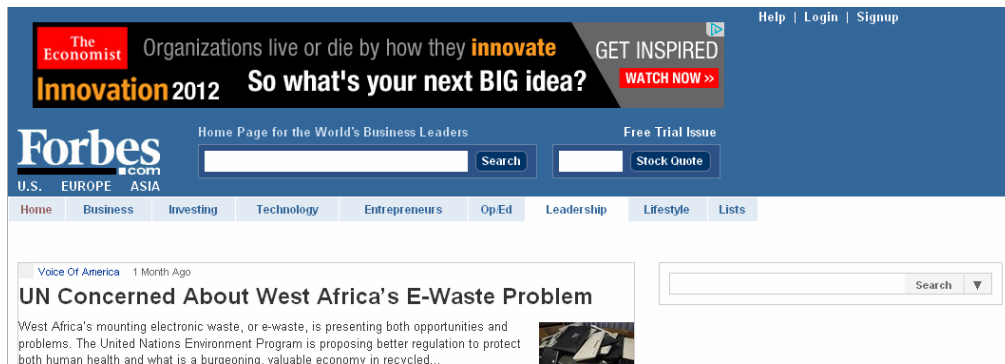
One study suggests Africa will generate more e-waste than Europe by 2017.

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## AFP: Africa to generate more e-waste than Europe by 2017

15 March 2012

Better known as a dumping ground for used electronic goods from developed countries Africa is set to outstrip Europe in the volumes of e-waste it generates within five years experts said Thursday.

"One study suggests Africa will generate more e-waste than Europe by 2017," Katharina Kummer Peiry, Executive Secretary of the Basel Convention on hazardous waste, told reporters.

"At the current rate ... by 2017 we'll be faced with so much e-waste -- even more than in the EU," said Miranda Amachree of Nigeria's National Environmental Standards and Regulations Enforcement Agency.

The two major contributing factors are population growth and increased availability of mobile phones, computers and accessories, the experts said on the sidelines of the Pan-African Forum on E-Waste at the UN environment agency in Nairobi.

"There is population growth ... and there is the penetration rate -- there are increasing numbers of people with access to these devices," Kummer Peiry said.

"You have to bear in mind that there are efforts undertaken at all levels to increase access -- it's part of development," she said, describing the growth of both the population and the penetration rate as "exponential."

Africa, which has traditionally been confronted by thousands of tonnes of electronic waste shipped from Europe for disposal, often under dangerous conditions, is increasingly dealing with the e-waste generated locally.

Kenya for example exonerated information and communication technology (ICT) equipment from import duties in 2008, in an attempt to boost access. Zambia followed suit last year.

"The use of electric and electronic devices ... is still low in Africa compared to other regions of the world but it is growing at a staggering pace," said a report launched last month summarizing findings from the E-waste Africa Programme of the Basel Convention.

The convention, which regulates the transboundary movements of hazardous wastes and their disposal, was adopted in 1989 and took effect three years later.

In Africa "in the last decade, the penetration rate of personal computers has increased by a factor of 10, while the number of mobile phone subscribers has increased by a factor of 100," the report said.

Africa, where most recycling is informal, "needs to move towards more formal recycling in order to ensure precious metals are properly extracted from say, mobile phones," Kummer Peiry said.

Achim Steiner, the head of the UN environment agency UNEP, that is hosting the three-day forum, said a seeming problem can be turned into an opportunity if the right recycling measures are put in place.

"From one tonne of cellphones, minus the batteries, you can extract 3.5 kilos of silver, 340 grammes of gold, 140 grammes of palladium and 130 kilos of copper," he told reporters adding that the cost of smelting recycled metals is "three or four times less energy intensive than smelting virgin ores.

But that sort of recycling will only happen if Africa is given access to the necessary technologies, Steiner warned.

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### **BBC World Service: World Update 0700 GMT**

16 March 2012

Interview with Achim Steiner, Executive Director of UNEP on the Pan-african conference on e-waste at UNEP headquarters in Nairobi.

**Podcast found at:**

<http://www.bbc.co.uk/programmes/p007dhp8/episodes/player>

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### **BBC World Service: Focus on Africa 1700 GMT**

15 March 2012

Executive secretary of the Basel Convention and Miranda Amachree, Deputy Director, National Environmental Standards & regulations Enforcement Agency attending the Pan-African conference on e-waste at UNEP headquarters in Nairobi.

**Pod Cast found at:**

<http://www.bbc.co.uk/worldservice/audioconsole/?stream=focusonafrika1700>

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### **VOA: African Governments Urged To Address Growing E-Waste**

23 March 2012

A group of development specialists and representatives from the United Nations, governments, private sector and civil society have agreed to come up with new ways to curb the rising levels of electronic waste (e-waste) in Africa. Participants at a recent meeting in Nairobi said that obsolete computers, refrigerators, televisions, mobile phones and other devices often originating from Europe were routinely being thrown away on unsupervised dumpsites across Africa, posing serious threats to human and environmental health.

The representatives from 18 African states and the United Nations Environment Program (UNEP) say Africa could have more e-waste than Europe by 2017. That's not only because of an increase in discarded lap tops, mobile phones and other products from Europe, but to increased demand in Africa for new electronic devices.

Ali D. Mohamed, Kenya's Permanent Secretary in the Ministry of Environment and Mineral Resources, says the problem of e-waste is a real threat.

Electronic waste such as old televisions, computers, radios and cellular is a growing environmental problem

Electronic waste such as old televisions, computers, radios and cell phones is a growing environmental problem

"Africa's environmental challenges are growing by the day," he said, "This includes the exponential growth of electronic waste. The numbers of people in our countries are exploding. In Kenya, we now have 40-plus million people, many of whom are urbanizing very rapidly... That means the consumption and production patterns of our society will change very much and we will be using many of the gadgets that will eventually end up as hazardous waste, including the e-waste."

Kenya generates 3,000 tons of electronic waste per year – a figure that is set to rise as demand for electronic goods increases. Mohamed says priority actions for reducing the environmental and health impacts of the growing levels of e-waste are being pursued, alongside promoting the sector's potential for green jobs and economic development.

"We are trying to cope up with the challenges," said Mohamed. "What we have done is to try to address this issue through new legislative guidelines and policies."

The recycling of e-waste in most of Africa today occurs at informal dumpsites or landfills. Hazardous substances can be released during these dismantling and disposal operations. Open burning of cables, for example, is a major source of dioxin emissions; a persistent organic pollutant that travels over long-distances and can end up in food chain.

However, there have been some innovative projects in Kenya that aims at reversing the trend, such as the Computer for Schools, which refurbishes second-hand computers and sends them back to schools with an extended life."

I was so impressed when I went to their facility in Mombasa to see seven tons of iron that had been recycled from e-waste that is send back to the industries," said Mohamed..

Speaking at the forum, Achim Steiner, UNEP Executive Director, said sustainable management of e-waste can combat poverty and generate green jobs through recycling and safeguard the environment and human health from the hazards posed by rising levels of discarded electronics.

"If you take a ton of cell phones today and remove the batteries and recycle the handsets," explained Steiner, "you will be able to recover 3.5 kilos of silver, 340 grams of gold, 130 kilograms of copper. These numbers may even be overtaken because other substances are being taken. What it shows you is that if you take that mountain of e-waste, which is growing exponentially globally and also on the African continent, you begin to create a different framework for managing the e-waste and instead of having the problem of dumping and posing health risks, you turn this into job opportunities."

With just a months to go before the kick-off of the Rio+20 conference in Brazil, the event has underlined how smart public policies, creative financial incentives and technology transfer can turn e-waste from a challenge into an important resource for sustainable development.

Katharina Kummer-Peiry, Executive Secretary of the Basel Convention told the delegates that priority existing laws need to be enforced to improve the environmentally-sound management of e-waste in Africa.

These would include implementation and enforcement by African states of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal and the Bamako Convention. It bans the import of hazardous wastes into Africa,

the development of national systems to improve the collection, recycling, transport, storage and disposal of e-waste.

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## **VOA: UN Concerned About West Africa's E-Waste Problem**

14 March 2012

West Africa's mounting electronic waste, or e-waste, is presenting both opportunities and problems. The United Nations Environment Program is proposing better regulation to protect both human health and what is a burgeoning, valuable economy in recycled electronics.

From dead laptops to battered old refrigerators, West Africa's lively economy in recycling electronics is growing fast. More and more old and broken electronics are being shipped to Africa. Consumer demand has risen across the world, generating a massive waste stream of such goods - which usually have a relatively short life span.

For years, Africa has been the recipient of near end-of-life electronic equipment imported onto the continent for refurbishment, recycling and further use - as well as illegal dumping.

"In Ghana our investigators found that about 70 percent of all the electronic equipment imported were used electronics," explained Michael Stanley-Jones, a U.N. public information officer for environmental issues.

"Thirty percent of those second-hand imports were non-functioning. They should have been classified as waste," he added. "But this is evidence that the import regime is not robust enough to capture this illegal transiting or trans-boundary movement of what is a hazardous product."

Go to any large West African city and you might spot young boys picking through dumps and men stripping copper from old wires. Such goods contains a variety of metals and chemicals - some of them hazardous chemicals and substances such as mercury and lead; some valuable metals such as gold, steel, aluminum, copper and silver.

"They collect what they can easily receive value from and then they throw away everything else and that really creates environmental problems. And of course there is how they do it - there is very little respect for health and safety conditions for those workers," noted Tatiana Terekhova, a U.N. health officer. "They just burn the wires to recover the copper and there is a combination of dioxins and furans [toxins] which is a result of this practice."

The value of this informal economy is difficult to gauge, although the formal and informal income of those engaged in the e-waste sector in Ghana is estimated to be between \$106 million and \$268 million per year.

Nowadays too, there is more and more e-waste being generated in West Africa itself, as domestic consumption of high-end electronic goods increases.

The United Nations Development Program studied five countries in the West African region - Benin, Ivory Coast, Ghana, Liberia and Nigeria. It found that between 650,000 and one million tons of domestic e-waste are now being generated each year

Katharina Kummer Peiry, executive secretary of the Basel, Rotterdam and Stockholm Conventions at the U.N.'s Environment Programme, says the real issue is one of regulation.

"You have the huge health problems and the environmental problems by e-waste not being treated and managed in a proper way - disposed of in communal dump sites," Peiry said. "And you have people, especially children, collecting them and dismantling them, and trying to extract materials in informal operations, backyard burning - which creates problems for the environment and human health. There are precious metals contained in them, so for examples as gold or copper and rare earth metals and those can be recycled and recovered. So there are two sides -- on the one hand the metals contained in them are very dangerous, on the other, some are very valuable."

The U.N. Environment Program's Basel Convention has formally decided to support the economic opportunities generated by such e-waste - on the condition that such goods are dismantled and recycled properly. It believes that if shipments of e-waste do reach Africa, in-country authorities should have the right to send them back.

Katharina Kummer Peiry says the U.N. recognizes that the waste stream provides millions of jobs in the recycling sector.

"There is a bit of an anecdote related to this - as this has been a very contentious issue for years and countries have been very vocal in saying it is totally unacceptable to import waste into poor countries for illicit recycling and disposal," she noted. "Some years ago I had a discussion with a government official in one of those countries, now retired, who said, of course we need to say that this is unacceptable and we have to ban it but in reality if we were to do this, the next day we would have 100,000 people demonstrating in front of the Ministry of Environment that we were taking their jobs away, because there are millions of people living off this."

The Basel Convention will develop a certification plan for e-waste recycling facilities, to ensure that the waste is treated in a proper manner and the economic opportunities are realized. It also proposes to strengthen the regime of customs and inspection in West Africa.

The Pan-African Forum on E-Waste will open on 14 March in Nairobi to address this issue.

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## **RFI: En 2017, l'Afrique générera plus de déchets électroniques que l'Europe**

15 Mars 2012

Le nombre de déchets électroniques va connaître une croissance exponentielle en Afrique : telle est la constatation des experts réunis en colloque à Nairobi au siège du Programme des Nations unies pour l'environnement (PNUE). En 2017, la quantité de ces e-déchets devrait même dépasser celle générée par l'Europe et ce, en raison de la consommation de plus en plus importante d'ordinateurs, de téléphones portables sur le continent africain. La gestion des déchets issus de matériels électroniques en Afrique était à l'ordre du jour d'un colloque organisé au siège du PNUE, Programme des Nations unies pour l'environnement à Nairobi au Kenya ce 15 mars 2012. Les experts présents ont annoncé que le continent africain dépasserait l'Europe en 2017 en terme de production de e-déchets tels que les réfrigérateurs, les télévisions, les téléphones portables.

Deux données expliquent cette évolution : d'une part la croissance démographique et d'autre part l'accès croissant aux équipements électroniques dont font partie les nouveaux outils de la communication et de l'information comme la téléphonie mobile. Le taux de pénétration concernant les ordinateurs personnels a été multiplié par 10 ces dix dernières années et le nombre d'abonnés à un réseau de téléphonie mobile, par cent, indique le rapport du PNUE.

Si le continent africain est déjà confronté à la gestion des déchets venus de l'Europe, elle va se trouver obligée d'appréhender la croissance de ses propres déchets électroniques et le meilleur recyclage des métaux précieux extraits du matériel jeté. Achim Steiner, directeur exécutif du PNUE considère même que cela peut devenir une véritable chance de développement économique : « A partir d'une tonne de téléphones cellulaires, une fois retirées les batteries, vous pouvez extraire 3,5 kg d'argent, 340 grammes d'or, 140 grammes de palladium et 130 kg de cuivre ». Il a néanmoins reconnu qu'un transfert de compétences en matière de technologies de recyclage vers l'Afrique était un préalable.

Malgré la Convention de Bâle qui interdit la circulation de déchets dangereux depuis 1992, les pays industrialisés envoient leur matériel usagé par container dans les pays en voie de développement, notamment en Afrique où ils sont un véritable fléau en raison de la toxicité de certains composants. Le Royaume Uni, la France et l'Allemagne sont d'ailleurs les principaux pays exportateurs de déchets électroniques en Afrique. Un texte adopté au Parlement européen le 19 janvier 2012 prévoit l'interdiction de ces exportations avec un renforcement des mesures de contrôle aux frontières afin d'éviter le départ frauduleux vers l'Afrique de matériels faussement qualifiés d'équipements d'occasion.

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### **Libération.fr (France): L'Afrique générera bientôt plus de déchets "électroniques" que l'Europe**

15 Mars 2012

L'Afrique devrait générer davantage de déchets dits électroniques que l'Europe à partir de 2017, en raison de sa consommation "exponentielle" d'ordinateurs et, plus encore de téléphones portables, ont prévenu des experts jeudi à Nairobi.

"Une étude nous indique que l'Afrique produira plus de déchets électroniques que l'Europe en 2017", a déclaré à la presse Katharina Kummer Peiry, secrétaire exécutive de la Convention de Bâle de 1989 sur le contrôle des mouvements transfrontaliers des déchets dangereux et leur élimination.

"Au rythme où vont les choses (...) en 2017 nous serons confrontés à une énorme quantité de déchets électroniques, davantage même qu'en Europe", a renchéri Miranda Amachree, de l'Agence nationale du Nigeria chargée de l'application des normes et règles en matière d'environnement.

Ces experts s'exprimaient à l'occasion d'un colloque, au siège du Programme des Nations Unies pour l'environnement (PNUE) à Nairobi, sur le défi croissant que pose à l'Afrique la gestion des déchets électroniques, une définition qui inclut également les télévisions, réfrigérateurs, etc.

Si l'Afrique est déjà confrontée à la gestion de milliers de tonnes de ces déchets exportés par l'Europe, elle devra aussi gérer de plus en plus sa propre consommation en augmentation en la matière.

A l'origine de ce phénomène, "il y a la croissance démographique (...) et le taux de pénétration. De plus en plus de personnes ont accès à ces produits" en Afrique, qui a désormais dépassé le seuil du milliard d'habitants, a relevé Mme Kummer Peiry.

"Il faut garder à l'esprit les efforts entrepris à tous les niveaux pour accroître l'accès (notamment aux équipements de communication électronique), cela fait partie du développement", a ajouté cette spécialiste, qualifiant la progression en la matière d'"exponentielle" en Afrique.

Le Kenya, à titre d'exemple, exonère de droits de douane à l'importation les équipements liés aux technologies de l'information depuis 2008, afin de favoriser leur pénétration dans le pays, un exemple suivi notamment par la Zambie l'an dernier.

"L'utilisation d'équipements électriques et électroniques, et en particulier d'outils d'information et de télécommunication, demeure bas en Afrique en comparaison à d'autres régions du monde, mais elle augmente de façon spectaculaire", note un rapport du programme Afrique de la mise en oeuvre de la convention de Bâle rendu public le mois dernier.

"Le taux de pénétration d'ordinateurs personnels a été multiplié par dix au cours de la décennie écoulée, et le nombre d'abonnés à la téléphonie mobile par cent", selon ce rapport

L'Afrique, où le recyclage de ces équipements demeure largement informel, "doit évoluer vers un recyclage plus encadré pour s'assurer que les métaux précieux sont extraits comme il se doit, par exemple, des téléphones portables", a souligné Mme Kummer Peiry.

Car ce qui est un problème potentiel peut être transformé en chance de développement économique, a souligné pour sa part Achim Steiner, directeur exécutif du PNUE.

"A partir d'une tonne de téléphones cellulaires, une fois retirées les batteries, vous pouvez extraire 3,5 kg d'argent, 340 grammes d'or, 140 grammes de palladium et 130 kg de cuivre", a-t-il précisé à la presse.

De plus, fondre des métaux recyclés "requiert trois à quatre fois moins d'énergie que de fondre des métaux à l'état naturel", a-t-il ajouté. M. Steiner a cependant reconnu qu'un transfert des technologies appropriées vers l'Afrique était un préalable à un meilleur recyclage sur ce continent.

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#### **Related pick-up:**

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<http://www.france24.com/fr/20120315-afrique-environnement-dechets-electronique-europe-portable-ordinateur-consommation-developpement->

##### **La Montagne.fr**

Source: <http://www.lamontagne.fr/france-monde/actualites/high-tech/techno/2012/03/15/l-afrique-generera-bientot-plus-de-dechets-electroniques-que-l-europe-1119529-commentaire.html>

##### **Jeune Afrique.com**

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### **Good planet. info**

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<http://www.goodplanet.info/Contenu/News/Africa-to-generate-more-e-waste-than-Europe-by-2017/%28language%29/eng-GB>

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### **Afrique No.1**

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<http://www.africa1.com/spip.php?article19893>

### **Synchro.fr**

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## **Yahoo! 7 News: Africa to generate more e-waste than Europe by 2017**

15 march 2012

Better known as a dumping ground for used electronic goods from developed countries, Africa is set to outstrip Europe in the volumes of e-waste it generates within five years, experts said Thursday.

"One study suggests Africa will generate more e-waste than Europe by 2017," Katharina Kummer Peiry, Executive Secretary of the Basel Convention on hazardous waste, told reporters.

"At the current rate ... by 2017 we'll be faced with so much e-waste -- even more than in the EU," said Miranda Amachree of Nigeria's National Environmental Standards and Regulations Enforcement Agency.

The two major contributing factors are population growth and increased availability of mobile phones, computers and accessories, the experts said on the sidelines of the Pan-African Forum on E-Waste at the UN environment agency in Nairobi.

"There is population growth ... and there is the penetration rate -- there are increasing numbers of people with access to these devices," Kummer Peiry said.

"You have to bear in mind that there are efforts undertaken at all levels to increase access -- it's part of development," she said, describing the growth of both the population and the penetration rate as "exponential."

Africa, which has traditionally been confronted by thousands of tonnes of electronic waste shipped from Europe for disposal, often under dangerous conditions, is increasingly dealing with the e-waste generated locally.

Kenya for example exonerated information and communication technology (ICT) equipment from import duties in 2008, in an attempt to boost access. Zambia followed suit last year.

"The use of electric and electronic devices ... is still low in Africa compared to other regions of the world but it is growing at a staggering pace," said a report launched last month summarizing findings from the E-waste Africa Programme of the Basel Convention.

The convention, which regulates the transboundary movements of hazardous wastes and their disposal, was adopted in 1989 and took effect three years later.

In Africa "in the last decade, the penetration rate of personal computers has increased by a factor of 10, while the number of mobile phone subscribers has increased by a factor of 100," the report said.

Africa, where most recycling is informal, "needs to move towards more formal recycling in order to ensure precious metals are properly extracted from say, mobile phones," Kummer Peiry said.

Achim Steiner, the head of the UN environment agency UNEP, that is hosting the three-day forum, said a seeming problem can be turned into an opportunity if the right recycling measures are put in place.

"From one tonne of cellphones, minus the batteries, you can extract 3.5 kilos of silver, 340 grammes of gold, 140 grammes of palladium and 130 kilos of copper," he told reporters, adding that the cost of smelting recycled metals is "three or four times less energy intensive than smelting virgin ores.

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## **EuraActivity (Belgium): West African nations pay a price for EU e-waste**

15 March 2012

Europeans are barred from exporting hazardous electronic waste to other countries, yet research shows there is a flourishing export market of such junk to Africa.

Efforts are underway to strengthen the EU's rules – the Waste Electronic and Electrical Equipment Directive – on disposal of old appliances, televisions, mobile telephones and computers.

Barely one-third of such items are recycled at home, researchers say, while the bulk goes into landfills. But thousands of tonnes of electronic goods are exported where second-hand computer components and recycled metals are lucrative commodities for poorer countries.

"A lot of this export is illegal or in an illegal grey zone," said Andreas Manhart of the Öko Institute for Applied Ecology in Germany, who collaborated a recent study - 'Where are WEEE in Africa' - produced by the UN Environment Programme.

Changes being considered to the WEEE directive seek to shift the burden of policing cargo from customs agents to exporters themselves. For now, West African countries – including Benin, Côte d'Ivoire, Ghana, Liberia and Nigeria – absorb tens of thousands of tonnes of Europe's electronic discards each year.

The UN study says some 220,000 tonnes of electrical and electronic goods were shipped from the EU to West Africa in 2009. A Pan-African Forum on E-Waste begins tomorrow (14 March) in the Kenyan capital Nairobi.

In Ghana alone, 30% of imports of allegedly second-hand products were useless, skirting EU efforts that call for electronic goods have some reusable value. Overall, the UN report shows that some 85% of containers arriving in Ghana with electrical and electronic goods came from Europe and 4% from Asia.

"In real life for customs it is very difficult to differentiate between what is functioning or what is not functioning," Manhart, a scientific researcher at Öko, said in a telephone interview.

Authorities say illicit waste is typically hidden in containers carrying legitimate cargo to thwart customs inspections.

#### Europol warning

In August 2011, Europol warned that illegal waste dumping was on the rise within Europe – in abandoned mines and gravel pits - and in exports to Africa from ports in Italy and northern Europe.

"Criminals are exploiting the high costs associated with legal waste management and are making substantial profits from illegal trafficking and disposal activities, circumventing environmental legislation," the European police agency said in a statement.

Reusing second-hand computer and other electronics or cycling components is becoming a major business in parts of Africa, where environmental standards are much lower than in Europe or poorly enforced. Imports from Europe had been rising in the past decade, but declined in 2009 - coinciding with the economic decline - UN statistics show.

But the business comes with a price.

Manhart cited severe human health risks and environmental impact from burning off electrical cord casings to get to copper that can then be sold for recycling.

The UNEP says discarded refrigerants and computer displays contain toxins or pollutants that can pose profound risks to people, as well as air and water quality. Some of the leading pollutants from e-waste are lead, mercury and endocrine disrupting substances such as brominated flame retardants

There is also concern that many of the workers engaged in scrap metal and e-waste yards are children - some as young as five, the UN says.

The UNEP has called for better controls in Africa, where the home-grown e-waste problem is growing.

"Effective management of the growing amount of e-waste generated in Africa and other parts of the world is an important part of the transition towards a low-carbon, resource-efficient

Green Economy", Achim Steiner, UNEP's executive director, said in a statement on the release of the WEEE report.

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## **Eco Citta Dalle(Italy): Rifiuti elettronici: mittente Europa, destinatario Africa. A Nairobi il primo Forum panafricano sui RAEE**

14 March 2012

Secondo uno studio UNEP l'80% dei rifiuti da apparecchiature elettriche ed elettroniche che arrivano in Africa giunge dall'Europa. Dal 14 al 16 marzo si svolge a Nairobi (Kenya) il primo Forum panafricano sui rifiuti elettronici. UNEP: "RAEE depositati nelle discariche sono una seria minaccia per salute e ambiente. Ma l'e-waste rappresenta anche un'importante opportunità economica per l'Africa"

Rifiuti elettronici: mittente Europa, destinatario Africa. A Nairobi il primo Forum panafricano sui RAEE  
clicca sull'immagine per ingrandire

Dal 14 al 16 marzo si svolge presso la sede UNEP di Nairobi (Kenya), il primo Forum panafricano sui rifiuti elettronici. L'evento punta a trovare soluzioni sostenibili visti i livelli crescenti di rifiuti elettronici in Africa. Proprio i Paesi occidentali del continente africano sembrano essere la destinazione principale dei rifiuti elettronici europei.

Secondo lo studio "Dove finiscono i RAEE in Africa?" realizzato dall'UNEP, i rifiuti elettronici prodotti dai cittadini europei vengono riciclati solo per un terzo all'interno dei confini UE, il resto va in discarica o esportato come componentistica di seconda mano nei Paesi africani. Paesi dell'Africa occidentale, come Benin, Costa d'Avorio, Ghana, Liberia e Nigeria, assorbono decine di migliaia di tonnellate di scarti elettronici tra elettrodomestici vecchi, televisori, telefoni cellulari e computer. Secondo l'UNEP, 220.000 tonnellate di prodotti elettrici ed elettronici sono stati spediti da parte dell'Unione europea in Africa occidentale nel 2009. In Ghana solo il 30% della componentistica elettronica arrivata dall'Europa era riutilizzabile, il resto, secondo il rapporto, sono inutilizzabili. E l'80% dei container carichi di RAEE arriva nel Paese africano proprio dall'Europa, contro il 4% che arriva dall'Asia.

Negli ultimi dieci anni le importazioni in Africa sono fortemente aumentate e in questa scia è enormemente aumentato l'import di componentistica fortemente inquinante. "Computer obsoleti, frigoriferi, televisori, telefoni cellulari e altri dispositivi - fa sapere l'UNEP - sono depositati sistematicamente in discariche incontrollate in Africa, ponendo in seria minaccia la salute umana e l'ambiente. Ma l'e-waste - afferma ancora il programma Ambiente delle Nazioni Unite - rappresenta anche un'importante opportunità economica per l'Africa attraverso il riciclo, la raccolta e il ripristino degli scarti e sottoprodotti e la raccolta delle materie prime preziose che contengono".

Durante il Forum di Nairobi si discuteranno diverse ipotesi sulla gestione sostenibile dei RAEE, tra cui la possibilità di trasferire l'onere dei controlli sul sistema doganale europeo che dovrebbe preventivamente accertare se la merce da esportare è effettivamente una "seconda mano" riutilizzabile o si tratta solo di rifiuti veri e propri. "In realtà è molto difficile alla dogana stabilire se una cosa funziona o no. La merce è contenuta alla rinfusa nei container ed un controllo selettivo è praticamente impossibile" ha dichiarato Andreas

Manhart dell'Istituto di ecologia applicata Oko in Germania che ha collaborato alla realizzazione dello studio sui RAEE in Africa.

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## **APO- OPA: UN-led Meeting Agrees on Priority Actions for Managing E-Waste in Africa / Pan-African Forum on E-Waste Underlines Green Economy Opportunities in E-Waste Sector**

16 March 2012

UN-led Meeting Agrees on Priority Actions for Managing E-Waste in Africa / Pan-African Forum on E-Waste Underlines Green Economy Opportunities in E-Waste Sector

Priority actions for reducing the environmental and health impacts of growing levels of electrical and electronic waste (e-waste), alongside promoting the sector's potential for green jobs and economic development, were today agreed by representatives from 18 African states, the United Nations, non-governmental organizations, the private sector and academia.

The actions were agreed on the final day of the Pan-African Forum on E-Waste, which was held at the Nairobi headquarters of the United Nations Environment Programme (UNEP).

Organized by the Secretariat of the Basel Convention and UNEP, with support from the Government of Kenya, and private sector companies including Dell, HP, Nokia and Philips the forum was the first event of its kind on the continent. It focused on long-term solutions to the rising levels of obsolete mobile phones, refrigerators, televisions and other e-products in Africa.

Increasing domestic consumption of electronic products, coupled with the ongoing import of waste electronics into Africa from other regions, means that the continent could generate a higher volume of e-waste than Europe by 2017.

The Pan-African Forum on E-Waste in Nairobi adopted a 'Call to Action', which outlines eight priority areas to improve the environmentally-sound management of e-waste in Africa.

- Implementation and enforcement by African states of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal and the Bamako Convention, which bans the import of hazardous wastes into Africa
- Development of national systems to improve the collection, recycling, transport storage and disposal of e-waste
- National institutions to co-operate with multiple stakeholders (UN, NGOs, private sector and others) in producing e-waste assessments
- Recognition that the safe and sustainable recycling of e-waste provides an opportunity for green jobs and poverty reduction
- Awareness raising activities on environmental and health hazards linked to the unsound management of e-waste •

"Managing e-waste, and other kinds of waste, is essential for the transition to a low carbon, resource-efficient Green Economy", said UN Under-Secretary-General and UNEP Executive Director Achim Steiner.

“Sustainable management of e-waste can combat poverty and generate green jobs through recycling, collection and processing of e-waste – and safeguard the environment and human health from the hazards posed by rising levels of waste electronics. With just over three months until the Rio+20 conference in Brazil, this event has underlined how smart public policies, creative financial incentives and technology transfer can turn e-waste from a challenge into an important resource for sustainable development,” added Mr Steiner.

He highlighted that global recycling rates of some e-waste metals—known as rare earth metals—can be as low as one per cent despite these metals being crucial for components in hybrid electric car batteries to the magnets in wind turbines.

“The future of the clean tech, high-tech products and the transition to a Green Economy may in part depend on boosting the recycling of e-waste in order to assure a steady and streamlined supply of these specialty metals for these 21st century industries,” added Mr Steiner.

As well as serving as a valuable source of secondary raw materials, the recovery and recycling of e-waste can reduce pressure on scarce natural resources and contribute to emissions reductions.

“One tonne of obsolete mobile phones contains more gold than one tonne of ore and the picture is similar for other precious substances”, said Katharina Kummer-Peiry, Executive Secretary of the Basel Convention.

“If you consider the value of these materials, then this represents an important economic opportunity. There are recyclers and other industrial sectors who are interested in taking advantage of such opportunities, which can in turn create green jobs and support sustainable development.”

Delegates at the Pan-African E-waste Forum underlined the importance of improved access to Information and Communication Technology (ICT) in Africa towards achieving the United Nations Millennium Development Goals.

But the disposal of obsolete electronic equipment can pose significant environmental and health risks. E-waste can contain hazardous substances, including heavy metals such as mercury and lead, and endocrine disrupting substances such as brominated flame retardants.

Much of the recycling of e-waste that takes place in Africa today occurs on an informal basis – often on uncontrolled dumpsites or landfills. Hazardous substances can be released during these dismantling and disposal operations. Open burning of cables, for example, is a major source of dioxin emissions; a persistent organic pollutant that travels over long-distances and can end up in food chain.

Participants at the Pan-African E-Waste Forum underlined the fact that recycling and recovery activities need to move from the unregulated, informal sector, where health and environmental risks are high, to a more regulated system using international recycling standards.

“Africa’s environmental challenges are growing by the day. This includes the exponential growth of electronic waste,” said Ali D. Mohamed, Permanent Secretary of the Ministry of Environment and Mineral Resources of Kenya.



"It is now the time for Africa to take action on addressing health and environmental problems as a result of current recycling practices, while creating jobs and business opportunities and alleviating poverty. We want to achieve this through an enforceable legislative framework," added Mr. Mohamed.

As part of the 'Call to Action', manufacturers, importers, re-sellers and other handlers of electrical and electronic products should be required to organize the collection, recycling and recovery of e-waste. The forum agreed that Extended Producer Responsibility (EPR) should be a key component of the environmentally sound management of e-waste.

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## **Nigeria News on Line (Nigeria): UN to address electronic waste problem in Africa**

17 March 2012

The United Nations, 18 African countries, as well as non-governmental organizations, the private sector and academia on Friday agreed on priority measures to reduce the environmental and health impacts of electrical and electronic waste on the continent.

Meeting at the headquarters of the UN Environment Programme (UNEP) in the Kenyan capital, Nairobi, the Pan-African Forum on E-Waste also stressed that the electrical and electronic sectors have the potential to create green jobs and facilitate economic development.

Organized by the Secretariat of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal and UNEP, with support from the Kenyan Government and private sector companies, including Dell, HP, Nokia and Philips, the Forum was the first event of its kind in Africa.

It focused on long-term solutions to the rising levels of obsolete mobile phones, refrigerators, televisions and other e-products in the continent.

Increasing domestic consumption of electronic products, as well as the ongoing import of waste electronics, such as used mobile phones, into Africa from other regions, means that the continent could generate a higher volume of e-waste than Europe by 2017, according to UNEP.

The Forum adopted a Call to Action initiative, which outlines eight priority areas to improve the environmentally-sound management of e-waste in Africa. They include the development of national systems to improve the collection, recycling, transport, storage and disposal of e-waste.

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## Similar Pick Up

### **The West (Australia): Africa to generate more e-waste than Europe by 2017**

15 march 2012

Better known as a dumping ground for used electronic goods from developed countries, Africa is set to outstrip Europe in the volumes of e-waste it generates within five years, experts said Thursday.

"One study suggests Africa will generate more e-waste than Europe by 2017," Katharina Kummer Peiry, Executive Secretary of the Basel Convention on hazardous waste, told reporters.

"At the current rate ... by 2017 we'll be faced with so much e-waste -- even more than in the EU," said Miranda Amachree of Nigeria's National Environmental Standards and Regulations Enforcement Agency.

The two major contributing factors are population growth and increased availability of mobile phones, computers and accessories, the experts said on the sidelines of the Pan-African Forum on E-Waste at the UN environment agency in Nairobi.

"There is population growth ... and there is the penetration rate -- there are increasing numbers of people with access to these devices," Kummer Peiry said.

"You have to bear in mind that there are efforts undertaken at all levels to increase access -- it's part of development," she said, describing the growth of both the population and the penetration rate as "exponential."

Africa, which has traditionally been confronted by thousands of tonnes of electronic waste shipped from Europe for disposal, often under dangerous conditions, is increasingly dealing with the e-waste generated locally.

Kenya for example exonerated information and communication technology (ICT) equipment from import duties in 2008, in an attempt to boost access. Zambia followed suit last year.

"The use of electric and electronic devices ... is still low in Africa compared to other regions of the world but it is growing at a staggering pace," said a report launched last month summarizing findings from the E-waste Africa Programme of the Basel Convention.

The convention, which regulates the transboundary movements of hazardous wastes and their disposal, was adopted in 1989 and took effect three years later.

In Africa "in the last decade, the penetration rate of personal computers has increased by a factor of 10, while the number of mobile phone subscribers has increased by a factor of 100," the report said.

Africa, where most recycling is informal, "needs to move towards more formal recycling in order to ensure precious metals are properly extracted from say, mobile phones," Kummer Peiry said.

Achim Steiner, the head of the UN environment agency UNEP, that is hosting the three-day forum, said a seeming problem can be turned into an opportunity if the right recycling measures are put in place.

"From one tonne of cellphones, minus the batteries, you can extract 3.5 kilos of silver, 340 grammes of gold, 140 grammes of palladium and 130 kilos of copper," he told reporters, adding that the cost of smelting recycled metals is "three or four times less energy intensive than smelting virgin ores.

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### **Radio Netherlands Worldwide (Netherlands): Africa to generate more e-waste than Europe by 2017**

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## **Bangkok Post (Thailand): Africa to generate more e-waste than Europe by 2017**

16 March 2012

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A used-computer vendor attends to a buyer at Lagos' computer village in 2006. Better known as a dumping ground for used electronic goods from developed countries, Africa is set to outstrip Europe in the volumes of e-waste it generates within five years, experts said Thursday.

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**Independent online (South Africa): Africa to generate more e-waste than Europe by 2017**

15 March 2012

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## **Brecorder.com (Pakistan): Africa to generate more e-waste than Europe by 2017**

19 March 2012

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## **News 24(Nigeria): Africa to generate more e-waste**

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#### Staggering growth

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"From one ton of cellphones, minus the batteries, you can extract 3.5kg of silver, 340g of gold, 140g of palladium and 130kg of copper," he told reporters, adding that the cost of smelting recycled metals is "three or four times less energy intensive than smelting virgin ores".

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### **Modern Ghana (Ghana): Africa to generate more e-waste than Europe by 2017**

15 March 2012

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"At the current rate ... by 2017 we'll be faced with so much e-waste -- even more than in the EU," said Miranda Amachree of Nigeria's National Environmental Standards and Regulations Enforcement Agency.

The two major contributing factors are population growth and increased availability of mobile phones, computers and accessories, the experts said on the sidelines of the Pan-African Forum on E-Waste at the UN environment agency in Nairobi.

"There is population growth ... and there is the penetration rate -- there are increasing numbers of people with access to these devices," Kummer Peiry said.

"You have to bear in mind that there are efforts undertaken at all levels to increase access -- it's part of development," she said, describing the growth of both the population and the penetration rate as "exponential."

Africa, which has traditionally been confronted by thousands of tonnes of electronic waste shipped from Europe for disposal, often under dangerous conditions, is increasingly dealing with the e-waste generated locally.

Kenya for example exonerated information and communication technology (ICT) equipment from import duties in 2008, in an attempt to boost access. Zambia followed suit last year.

"The use of electric and electronic devices ... is still low in Africa compared to other regions of the world but it is growing at a staggering pace," said a report launched last month summarizing findings from the E-waste Africa Programme of the Basel Convention.

The convention, which regulates the transboundary movements of hazardous wastes and their disposal, was adopted in 1989 and took effect three years later.

In Africa "in the last decade, the penetration rate of personal computers has increased by a factor of 10, while the number of mobile phone subscribers has increased by a factor of 100," the report said.

Africa, where most recycling is informal, "needs to move towards more formal recycling in order to ensure precious metals are properly extracted from say, mobile phones," Kummer Peiry said.

Achim Steiner, the head of the UN environment agency UNEP, that is hosting the three-day forum, said a seeming problem can be turned into an opportunity if the right recycling measures are put in place.

"From one tonne of cellphones, minus the batteries, you can extract 3.5 kilos of silver, 340 grammes of gold, 140 grammes of palladium and 130 kilos of copper," he told reporters adding that the cost of smelting recycled metals is "three or four times less energy intensive than smelting virgin ores.

But that sort of recycling will only happen if Africa is given access to the necessary technologies, Steiner warned.

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## **Zimbabwe Daily (Zimbabwe): Africa to generate more e-waste than Europe by 2017**

15 March 2012

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