



e-waste Management Forum 9 - 10 February 2009, Cairo, Egypt



Final Report



International
Telecommunication
Union



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INTRODUCTION

1. The E-waste Management Forum: Circulating Success (E-waste 2009) was held in Cairo, Egypt during the period of February 9-10, 2009. The Forum piloted and called for innovative and competitive solutions in electronic waste management (E-waste). In pursuit of this goal, success stories and lessons learned presented at the Forum highlighted how E-waste helps achieve considerable breakthroughs in generating business opportunities, conserving natural resources, adding value and creating jobs along the supply chain, and abating health and environmental hazards effects.
2. The main objectives of the forum were to enhance shared knowledge about E-waste, best practices in E-waste management and lessons learned and their associated business opportunities, and to create a platform consisting of various stakeholders to implement potential business opportunities.
3. The meeting was inaugurated by speeches from H.E. Dr. Tarek Kamel, Egypt's Minister of Communications and Information Technology, Ms. Mawaheb Abou El Azm, Executive Director, Egyptian Environmental Affairs Agency (EEAA) on behalf of H.E. Eng. Maged George, Egypt's Minister of State for Environmental Affairs, H.E. Dr. Nadia Makram Ebeid, Executive Director, CEDARE, Mr. Sami Al Basheer Al Morshid, BDT Director – International Telecommunication Union, and Dr. Basel Al Yousfi, Deputy Regional Director of United Nations Environment Programme, Regional Office for West Asia.
4. More than 200 participants attended the Forum from 20 countries, representing various governmental organizations, private sector enterprises, and non-governmental organizations in addition to representatives from international and regional organizations.
5. The Forum has concluded with the launch of a roadmap for implementing the regional E-waste management programme which comprises five components:
 - ❖ assessment of E-waste status in pilot Arab countries;
 - ❖ establishing multi-stakeholder partnerships;
 - ❖ implementing an awareness campaign on E-waste threats and opportunities;
 - ❖ developing and enhancing capacities for E-waste management, and
 - ❖ establishing an E-waste trading system.
6. Three activities have been identified for immediate implementation: Multi-stakeholder partnership, E-waste management business support unit, and youth network for E-waste.

Forum Partners

- Ministry of Environmental Affairs, Egypt
- Ministry of Communications and Information Technology, Egypt
- Centre for Environment and Development for the Arab Region and Europe (CEDARE)
- United Nations Environment Programme (UNEP/ROWA)
- United Nations Industrial Development Organization (UNIDO)
- Egypt National Cleaner Production Centre (ENCPC)
- United Nations University (UNU)
- Solving the E-waste Problem (StEP) Initiative
- International Telecommunication Union – Arab Region Working Party (ITU-ARWP)
- Basel Convention Regional Centre for Training and Technology Transfer for Arab States (BCRC-Cairo)
- World Bank
- Egyptian Company for Mobile Services – Mobinil
- Zain

INAUGURAL SESSION



7. **H.E. Dr. Nadia Makram Ebeid, Executive Director, Centre for Environment and Development for the Arab Region and Europe (CEDARE).** Dr. Ebeid started by welcoming the distinguished participants with emphasis on the important commitment message that such gathering provides. She thanked H.E. the Minister of Environmental Affairs and H.E. the Minister of Communications and Information Technology for their support and commitment to this forum. She indicated her appreciation for the participation of different stakeholders from the ICT field, the private sector, civil society, the media, and international organizations. Dr. Ebeid highlighted figures that show the dimension of electronic waste such as the world annual production of around 50 million tons and the current one billion computers available worldwide, expected to increase to 2 billion computers by 2015.



8. Dr. Ebeid indicated that the largest generators of E-waste are from industrialized economies and the most vulnerable to the hazards of E-waste are informal recyclers in developing and emerging economies. Dr. Ebeid emphasized the importance of exchanging knowledge about this important issue and encouraging the participants to benefit from and build on the numerous motivating best practices and lessons learnt. Dr. Ebeid highlighted the availability of promising E-waste initiatives, such as the growing trends of take-back, refurbishment, "e-cycling", and safe disposal schemes together with advanced product design. Not only do such efforts generate profit but they also create new "green collar jobs". She concluded by thanking all partners and participants for their cooperation and support.

9. **Dr. Basel Al Yousfi, Deputy Regional Director, UNEP/ROWA.** Dr. Al Yousfi highlighted the valuable partnership between CEDARE and UNEP in developing and implementing projects and activities that are needed to the region. He indicated that the electronics and information technology industry is the world's largest and fastest growing manufacturing industry; E-waste is recognized now as the fastest growing waste stream in the industrialized world and comprises more than five percent of all municipal solid waste.



10. Dr. Al Yousfi indicated that UNEP has different activities for tackling E-waste issues such as the Global e-Sustainability initiative (GeSI), the work of global metal flows group, and various other pilot projects. He highlighted various UNEP's strength points in tackling the E-waste issue such as the expertise complementarities between the challenge of E-waste and other environmental issues, wide experience in creating and fostering the implementation of multilateral environmental agreements and the ability to generate media attention on environmental issues. He pointed out that the recent Arab Region E-waste study identified a number of challenges but also opportunities towards a Green economy. Dr. Al Yousfi emphasized the need to have an efficient regulatory and legal framework to ensure sustainable E-waste management. He also highlighted the important role played by private sector enterprises, and he stated that UNEP is eager to establish public-private partnerships with the private sector, especially the ICT sector. Dr. Al Yousfi concluded by thanking CEDARE and all the partners that support the current initiative.

11. **Mr. Sami Al Basheer Al Morshid, Director, Bureau of Development Telecommunications, International Telecommunication Union (recorded voice message).**

Mr. Al Basheer started by thanking H.E. Nadia Makram Ebeid for organizing this important event that tackles a vital issue. He indicated that the issue of E-waste management is one of the common issues in almost all the developing countries worldwide that has become a pressing problem. He highlighted the fact that the ITU is aware of this multilateral issue, especially the illegal traffic of E-waste from developed countries to the developing world. Mr. Al Morshid stressed on the willingness of ITU to assist its member countries, and he highlighted the role of ICT enterprises to identify efficient and practical solutions to tackle this important issue. He indicated that the issue of E-waste will be considered and discussed in the study groups in both BDT and TSB with the possibility to be included in the agenda of the upcoming World Telecommunication Development Conference (WTDC – 010).



12. Mr. Al Morshid invited the ICT regulatory authorities to offer regulatory measures that could ensure safe treatment of ICT equipment at their end-of-life stage. He indicated that he will direct the Strategies Unit in BDT to study this issue in the next Global Symposium for Regulators (GSR) which will take place during 2009. He mentioned that ITU is totally prepared to hold a meeting between regulators and telecommunication equipment producers to identify appropriate mechanisms to tackle this issue. Mr. Al Morshid indicated that the ITU is willing to adopt and cooperate in implementing the results of this Forum. He concluded his speech by thanking CEDARE for organizing the event and wishing the participants a successful forum.

13. **H.E. Eng. Maged George, Egypt's Minister of Environmental Affairs, represented by Dr. Mawaheb Abou El Azm, Executive Director, Egyptian Environmental Affairs Agency (EEAA).**

Dr. Mawaheb conveyed the apology of H.E. the Minister of Environmental Affairs for not being able to attend this important event due to unforeseen commitments. She thanked CEDARE for organizing this event that has distinguished representation from governmental authorities, the business community and donor agencies as well as decision makers and opinion formulators. She highlighted that industrial wastes are considered hazardous wastes, as they contain more than 1000 contaminated substances; electronic wastes are also classified as one set of industrial hazardous wastes. She pointed out that the Ministry of environmental Affairs considers raising community awareness about E-waste as a vital process. Dr. Mawaheb shed light on the Ministry's plan for the collection and safe disposal of mobile batteries as an encouragement for the private sector to be engaged in this process. She pointed out that the current economic crisis encourages us to make use of the generated waste efficiently and reduce pollution levels. She highlighted that the agenda of the Forum has panelists from different sectors that would enrich the discussions. This would lead to the promotion of public private partnership and show the commitment of Egyptian private sector enterprises to the vital concept of corporate social responsibility.



14. **H.E. Dr. Tarek Kamel, Egypt's Minister of Communications and Information Technology (Official Opening).** H.E. Dr. Kamel expressed his pleasure to participate in this important event that brought together distinguished experts, with a wide range of experience on local, regional and international levels, to share their knowledge and expertise in handling such an important issue as E-waste. He stated that that was the first time to address the E-waste issue in Egypt on a large scale. Dr. Kamel mentioned that during his participation in Davos Forum, Green ICT has been on top of the Forum's agenda. Major CEOs of ICT operators and vendors expressed interest in Green ICT that came as a reflection of the commitment of multinational enterprises to this vital issue. Dr. Kamel pointed out that E-waste management became one of the most important international topics and a controversial issue for various governments.
15. H.E. focused on the importance of implementing a legal framework, a collection system, and effective logistics before a technical solution can be applied. He stated that Egypt reached a mobile penetration rate of more than 52% and an internet penetration rate of more than 16%. H.E. emphasized that ICT is being extensively used in Education, Health as well as Trade and Local Administration sectors: this will require Egypt to start to face the threats of E-waste. He also pointed out that the current E-waste management efforts have been limited to small-scale initiatives.
16. Dr. Kamel emphasized the need to start identifying and assessing the actual size of E-waste in Egypt, develop policies to decrease transboundary movement of E-waste and create new business models that could effectively manage the resulting E-waste. Dr. Kamel emphasized the importance of making sure that our region would not eventually become a dumping E-waste site. He concluded his speech by calling for the launch of a multi-stakeholder partnership for E-waste management that could allow the elaboration of regionalized practices with the aim of highlighting the benefits of a sustainable E-waste management system.



KEYNOTE SPEAKERS SESSION



17. The aim of this session was to offer insight on how leading enterprises deal with environmental issues, especially E-waste management. Four speakers presented the practices of their enterprises in enhancing environment and health status within their organizations and with their clients. Dr. Basel Al Yousfi, Deputy Regional Director, UNEP/ROWA, moderated the session.

18. **Dr. Katharina Kummer Peiry, Executive Secretary, United Nations Basel Convention Secretariat.** Dr. Kummer presented the status of E-waste management in developing countries. She highlighted the need to enhance the legal framework in these countries to improve their capacity in dealing with the E-waste issue. Dr. Kummer emphasized the importance of the way Basel convention addresses the growing E-waste problem. She indicated that a partnership between public and private sectors is a must in order to provide an appropriate method for dealing with the E-waste problem. She provided different cases from Africa and South America. She concluded her speech with the need to identify innovative methods to deal with E-waste components and the importance of addressing the legal framework related to that vital issue.



19. **Eng. Iskandar Shalaby, Chairman, the Egyptian Company for Mobile Services (Mobinil).** Eng. Shalaby presented the committed policy of Mobinil in addressing health and environmental issues such as E-waste management, reducing energy consumption, and providing a healthy working environment. He indicated that Mobinil received the ISO 14001 certificate in September 2001, as the first telecommunications company in Egypt to be awarded such quality accreditation. Eng. Shalaby presented the environmental initiatives that Mobinil has adopted during the last three years such as the mobile battery collection scheme, printer cartridges office recycling in collaboration with Hewlett Packard and providing environmental awareness campaign to Mobinil employees as well as school and university students. He concluded his speech with highlighting the important role that private sector enterprises can play through social and community participation programmes with emphasis on environmental protection.



20. **Ms. Brigitte Bourgoin, Executive Vice President, France Telecom Orange.** Ms. Bourgoin presented France Telecom Orange Company in supporting research and development for providing environmentally-friendly products. She has highlighted Orange enthusiasm in establishing partnership with different stakeholders such as providing eco design live box and universal charger to minimize the quantity of telecommunication electronic waste. Ms. Bourgoin indicated that Orange is one of the founding signatories of the Global Compact Initiative to set the framework of business operations and strategies including the areas of human rights, environment, labor and anti-corruption. Ms. Bourgoin concluded by emphasizing the commitment of Orange to adopt environmental related policies.



21. **Dr. Tarek Shawki, Director, UNESCO, Cairo Office.** Dr. Shawki presented UNESCO's role in both cultural-related activities and scientific research for information and communications technology. He has highlighted the need to increase the number of computers to reduce the digital divide; however, such increase would, in return, cause the E-waste problem to expand. He provided information about two important resources that UNESCO developed for tackling the E-waste issue. The first is the production of the "Entrepreneurs Guide to Computer Recycling" that assists in developing the skills required to handle the growing flux of waste generated by new and used computers in order to protect the environment and public health as well as enhance new business opportunities.



22. The second is the "Digital Pipeline" project, jointly developed by UNESCO and Microsoft, which promotes affordable and environmentally-responsible reuse of old computers to technologically support children's schools and communities in Africa and other parts of the world. He highlighted the commitment of UNESCO to cooperate with the main stakeholders to build capacities to deal with the E-waste problem.

SESSION I: E-WASTE MANAGEMENT INITIATIVES

23. The objective of this session was to present different international initiatives that deal with the E-waste problem. Three panelists presented StEP initiative, Global e-Sustainability (GeSI), and UNEP/MAP-Blue Plan initiatives. The session was moderated by Mr. Paul Makin, Regional Representative, United Nations Industrial Development Organization (UNIDO).



24. **Mr. Mathias Schlupe, Project Manager, EMPA.** Mr. Schlupe presented "Solving the E-waste Problem (StEP)" initiative. He indicated that the United Nations University is administering this important initiative that includes private sector enterprises and international organizations. He highlighted the significant challenges of the E-waste problem and explored hazardous practices from China and India. Mr. Schlupe presented StEP initiative objectives in establishing a shared network of expertise that share experience and practices, implement research and development projects and disseminate good practices, experiences, and recommendations. He provided information about the StEP initiative organizational chart and current taskforces. He concluded by providing examples of projects implemented by the different taskforces.
25. **Mr. Guido Sonnemann, Programme Officer, UNEP/DTIE, France.** Mr. Sonnemann presented the Global e-Sustainability Initiative (GeSI) – E-waste Working Group. He indicated that GeSI has three working groups: climate change, supply chain, and E-waste working groups. He stated that the Board of the Global e-Sustainability Initiative (GeSI), composed of more than 20 leading ICT companies, asked UNEP/DTIE to pilot the effort to re-launch the activities of the E-waste Working Group. He indicated that in collaboration with UNEP/DTIE, GeSI conducted a member of wide surveys, structured to identify common priority areas.
26. Mr. Sonnemann elaborated that during May 2008 GeSI Board agreed to support the re-launch of the E-waste Working Group, focusing on the development of an End-of-Life (EoL) management tool and an integrated road map to guide the future activities of the Working Group. He indicated that the working group has twelve GeSI member companies, currently working on the creation of an EoL contractor tool modeled on the E-TASC supply chain management system. He pointed out that, focusing on the downstream path of electronic waste, this tool is expected to provide GeSI members with the information they need to ensure that electronic products are reused, recycled, or disposed of in the most economically, socially and environmentally sustainable way. Mr. Sonnemann concluded his speech by proposing the next steps that GeSI would implement in the future.

27. **Mr. Oliver Keserue, Programme Manager, Waste UNEP/MAP – Blue Plan, France.** Mr. Keserue presented the Blue Plan (UNEP/MAP) initiatives for the Mediterranean region to deal with the E-waste issue. He highlighted three main issues: E-waste transboundary movement, availability of legal and policy instruments, and consumption growth in the Mediterranean. He provided the prospective outlook for the growth of computers in the Mediterranean region until 2025 and how this would be a major threat that would lead to increasing the E-waste problem in that region. He introduced the main protocols of Barcelona convention and their relation to the E-waste issue. Mr. Keserue also presented the current regional study to assess the E-waste status in Arab Mediterranean countries. He concluded his speech by shedding light on the current report “A sustainable future to the Mediterranean” that provided outlook scenarios beyond 2011 for the Mediterranean region.

SESSION II: COLLECTION, REFURBISHMENT AND RECYCLING PRACTICES

28. The aim of this session was to present private sector enterprises for E-waste management practices. Three panelists from Recycling industry, Mobile operators, and Cleaner production centre shared their experience dealing with E-waste collection, refurbishment and recycling practices. The session was moderated by Ms. Hanan EL-Hadary, Director, Egypt National Cleaner Production Center (ENCPC).



29. **Mr. Steven Art, Sales Manager, E-waste Recycling, UMICORE, Belgium.** Mr. Steven presented UMICORE, Belgium enterprise specialized in metal extraction and recycling, business model in dealing with recycling of Electronic wastes. He stated that E-waste could cause significant environmental damage if not treated in an environmentally sound way. He indicated that more attention should be paid to the overall performance and transparency of the recycling chain dealing with e-scrap, that is Environmental Sound Management (ESM).
30. Mr. Art pointed out that the first step in this chain – collection and dismantling – is usually taken care of locally, but the end treatment to recover metals or plastics takes place on a global scale in a few specialized operations, involving an economy of scale. He emphasized that ‘ESM’ technology has a major impact on the recycling efficiency in terms of the elements and valuables that are recovered as well as the overall environmental performance. Mr. Art concluded his speech by recommending focusing on a proper collection system before seeking to establish a high-tech-industrial recycling plant or developing an effective legislative system.
31. **Mr. Sherif Issa, Sr. Manager Health and Environment Affairs, Regulatory and Corporate Affairs, ECMS – Mobinil, Egypt.** Mr. Issa presented Mobinil’s E-waste management practices. He started by presenting Mobinil’s environmental management system and how the company received ISO14001 as early as 2001. Mr. Issa provided information about a current project for E-waste collection, Battery collection scheme, where Mobinil succeeded in collecting 25,000 batteries and sent them to be recycled in France. Mr. Issa also presented Mobinil’s policies in recycling office printers’ cartridges and accessories.

32. Mr. Issa shed light on a project for providing old computers to NGOs. He concluded his presentation by describing Mobinil's future project to tackle the E-waste problem.
33. **Mr. Edgar Mugisha, Technical Officer, Uganda Cleaner Production Centre, Uganda.** Mr. Mugisha presented the current status of E-waste management in Uganda. He indicated that the growth in the telecommunication sector is one of the main driving forces for accelerating solutions for the E-waste problem in Uganda. Mr. Mugisha presented two practices for E-waste management: the first focused on Mobile phone refurbishing and the second addressed managing end-of-life computers, faxes, and photocopiers. He concluded his speech with recommendations for the way forward and indicated the importance of having specific regulations and legislations for E-waste.

SESSION III: E-WASTE EFFECTS, ASSESSMENT AND LIFE CYCLE

34. The aim of this session is to provide information about E-waste hazardous effects and the importance of having life cycle assessment for Electronic products. Two panelists from Egypt and Austria shared their experience in dealing with issues addressed during that session. The session was moderated by Dr. Azza Morssy, Programme Manager, United Nations Industrial Development Organization (UNIDO),

35. **Prof. Medaht El Messiery, Head of the Egyptian Society for Non-ionizing Radiation Protection, Egypt.** Professor Messiery presented the features of the E-waste problem in Egypt and worldwide. He stated that there are 26 cell phones produced per second worldwide. Professor Messiery provided information on hazardous material constitution within the computer and mobile sectors. He highlighted E-waste illegal transportation, especially from developed countries to China and India. Professor Messiery presented innovative methods to re-use old equipments. He concluded his speech by offering recommendations for minimizing E-waste hazardous effects such implementing E-waste awareness programmes for youth and children.



36. **Dr. Bernd Kopacek, Managing Director, Austrian Society for Systems Engineering and Automation, Austria.** Dr. Kopacek presented the case study of Multi Life Cycle Center in Vienna. He stated that the strategy of the Center is to recover discarded products at the highest possible levels. He provided information on the highest and lowest levels for dealing with end-of-life products. He introduced the services provided by the Center and its functions. Dr. Kopacek presented the enabling technologies that the Centre uses and offered examples of how they can be used. He highlighted two case studies: the first for semi-automated disassembly technology and the second for cell phone disassembly. He concluded his speech by providing services that the Center can provide for the Arab states such as cooperation in setting up an efficient collection system.



SESSION IV: E-WASTE INTERNATIONAL PRACTICES

37. This session aimed at presenting different international practices for E-waste Management. The session included three panelists from the International Mobile Technology Association, Swiss Research Center, and German Development Cooperation who shared insights related to their international E-waste management practices. The session was moderated by Mr. Fareed Bushaheri, Regional Coordinator, UNEP/DTIE.
38. **Dr. Jack Rowley, Director Research & Sustainability – Public Policy, GSM Association (GSMA), UK.** Dr. Rowley presented the GSM association practices for used and end-of-life mobile phones. He provided information about the life cycle of cell phones and indicated that more than 1 billion cell phones are sold annually. Dr. Rowley highlighted the practices that have been implemented in Australia and Kenya for collecting used mobile phones and showed the major differences in these two practices. He also presented the Mobile Phone Partnership Initiative that was initiated by the Basel Convention Secretariat as the first concrete partnership with the cell phone industry that aims to address environmentally-sound management of end-of-life cell phones. Dr. Rowley concluded his speech by highlighting the importance to integrate collection with economical business processes.



39. **Mr. Mathias Schlupe, Project Manager, Swiss Federal Laboratories for Materials Testing and Research (EMPA).** Mr. Schlupe presented EMPA expertise in implementing the E-waste initiative in Africa. He started by introducing EMPA and its role in auditing the Swiss E-waste recycling system and its role in implementing Knowledge Partnerships in E-waste recycling programs in Asia, Africa and Latin-America. Mr. Mathias presented the South African case study and highlighted the lessons learnt, especially the importance of adopting a multi-stakeholder approach. He concluded his speech by indicating that one of the key activities in that particular respect is to adopt a national strategy for E-waste management.
40. **Ms. Martina Kolb, Project Manager, German Development Cooperation (GTZ), Germany.** Ms. Kolb presented the role of the informal sector in E-waste management in India. She indicated that informal economy constitutes the largest active workforce in India. She pointed out that the Indian government started to recognize the available labour skills of the informal sector. Ms. Kolb highlighted the E-waste value chain in Delhi with emphasis on health and environmental hazards available. She drew attention to the key benefits gained through integrating the informal sector in any development process related to such an vital and crucial theme. She offered an overview of the legislative framework in India and presented the training and capacity-building programme that was implemented by GTZ to enhance the skills of the labor force within the informal sector. She concluded her speech with different recommendations to engage the informal sector in a formalized process.

SESSION V: INTERNATIONAL ORGANIZATIONS PRACTICES

41. This session examined the practices of international organizations in the area of E-waste management. Four panelists from regional and international organizations presented their experiences in that area. The session was moderated by Mr. Fareed Bushaheri, Regional Coordinator, UNEP/DTIE.
42. **Mr. Guido Sonnemann, Programme Officer, UNEP/DTIE, France.** Mr. Sonnemann presented the experience of the United Nations Environment Programme for integrating E-waste management activities. He indicated that during November 2004 UNEP/DTIE volunteered to prepare a document that maps the strengths of each E-waste related project within the UN system and potential overlapping areas to prevent duplications of work and to avoid confusion of outsiders to the UN. Mr. Sonnemann provided a list of E-waste activities within the different branches in UNEP. He also highlighted the mapping of E-waste management activities within UN organizations. Mr. Sonnemann presented the strategic priorities in a future programme that includes three themes: taking global action, improving understanding of the E-waste issue, and raising public awareness. He concluded his speech with the importance of the current E-waste forum as an awareness-raising event.



43. **Dr. Azza Morssy, Programme Manager, United Nations Industrial Development Organization (UNIDO), Austria.** Dr. Morssy presented UNIDO's experience in E-waste Management. She provided information about the definition of E-waste and WEEE terms. She highlighted the hazardous substance available in computers. Dr. Morssy indicated the steps required to manage electronic wastes such as collection, storage, and separation. She has provided different recommendations to be implemented by countries that plan to adopt national E-waste management programmes such as the required recycling activities and the development of viable markets for recycling products. Dr. Morssy presented UNIDO's approach in implementing E-waste management activities in collaboration with the National Cleaner production Centers in Uganda and Morocco. She concluded her speech with highlighting UNIDO's cooperation with partners from international organizations and ICT multinational enterprises.
44. **Dr. Hossam Allam, Regional Programme Manager, Strategic Concerns Programme, CEDARE, Egypt.** Dr. Allam presented the results of the study on E-waste Management in the Arab Region. He provided information about the ICT status in Arab countries by exploring the increasing rate of the number of cell phone subscribers and the number of Arab citizens accessing the internet. He indicated that a survey has been sent to different stakeholders to identify current E-waste practices in Arab countries. Dr. Allam highlighted the potential areas of cooperation that were suggested based on the survey results and concluded his speech by highlighting potential partners on national, regional, and international levels that are willing to cooperate in implementing E-waste management activities.
45. **Dr. Saied Dahroug, International Facilitator, Basel Convention Regional Centre for Arab States (BCRC), Egypt.** Dr. Dahroug presented BCRC activities in the Arab Region. He stated that BCRC is one of 14 Regional centers established by Basel Convention Secretariat worldwide. He discussed capacity-building training that was provided to representatives from Saudi Arabia, Egypt, Algeria, Jordan, and the United Arab Emirates to introduce basic concepts of E-waste assessment and offer evaluation of recycling facilities and E-waste policies. Dr. Dahroug presented E-waste assessment activities in collaboration with UNEP/MAP that is being implemented in Egypt, Syria, Lebanon, Libya, Tunisia, Morocco, and Algeria. He also highlighted the cooperation with the Swiss Government to translate Basel convention guidelines on different E-waste issues into the Arabic language. He concluded his talk with emphasis on the importance of raising awareness among the public, corporate executives and civil society as well as decision-makers, and opinion formulators.

SESSION VI: PERSPECTIVE OF PRIVATE SECTOR ENTERPRISES

46. The aim of this Session was to provide practices of private sector enterprises dealing with electronic wastes. Four panelists from ICT enterprises and the International Telecommunication Union (ITU) offered their insights in that respect. The session was moderated by Mr. Sebastien Poisson, ESMP Manager, Zain Group, Bahrain.



47. **Dr. Lutz-Guenther Scheidt, Webix solutions GmbH, Germany.** Dr. Scheidt presented a novel structured approach to the E-waste cycle including management software and processes to secure reuse and recycle factories. Dr. Scheidt provided information about the landscape of recycling and reuse business. He highlighted the need to have high business standards with cost-efficient implementations. Dr. Scheidt presented the main issues of having a management system supported by software systems such as legislations, data security, efficiency, etc. He concluded his speech by presenting Webix ability to cooperate in establishing local and international recycling and reuse management infrastructures for any level of technology and product/ waste.
48. **Mr. Herve Guilcher Environmental Programs Director, HP EMEA, France.** Mr. Guilcher presented HP's vision on E-waste management. He stated that E-waste from information and communications technology equipments forms 20% of the produced E-waste worldwide. Mr. Guilcher indicated E-waste health and environmental hazards and presented the safe stages to handle electronic wastes which include dismantling, sorting, and extracting precious material. He presented the two lessons learnt from that process. He shared key lessons learned from the WEEE experience in the EU and presented the collaboration process with EMPA and their local initiatives in Africa. He concluded his speech by offering recommendations on the importance of establishing a policy structure and legal framework and increasing E-waste advocacy and awareness.
49. **Dr. Reinhard Hoehn, Manager of environmental affairs, IBM, Germany.** Dr. Hoehn presented IBM's E-waste management policies and practices. He indicated that IBM has implemented a take-back programme since 1989 and presented product end-of-life management activities. Dr. Hoehn pointed out that during 2007 IBM processed 44332 tons of electronic waste where 52% were recycled. He emphasized that one of the main issues for evaluating suppliers is ISO 14000 certification or a plan to receive it within a year. He concluded his speech by indicating the need to discover further opportunities to recycle locally.
50. **Mr. Fernando A. Lagrana, Head of Partnership Promotion & Membership Division, ITU, Switzerland.** Mr. Lagrana discussed the issue of E-waste and the need to put the issue on the global agenda for telecommunications. He indicated that the first step that the ITU would recommend to the private sector is to ask international organizations to identify clear approaches to deal with the E-waste issue. He pointed out that each international organization has its own method to deal with E-waste.

51. Mr. Lagrana emphasized that there is a need to harmonize these different approaches. Mr. Lagrana also recommended that Intergovernmental organizations would be in the driving seat. He highlighted the need to use a multi-stakeholder approach that includes the private sector, policy makers, E-waste regulators, and civil society to deal with E-waste issues, as it is unrealistic to expect that one single sector would be able to identify solutions for such a complex and multifaceted problem. He proposed to start a dialogue with the private sector that could eventually produce a clearly defined end-of-life cycle for electronic equipment. He emphasized the importance of having a paradigm shift in reusing electronic equipment especially in the ICT sector. He indicated that it is essential for the government to raise awareness at an early stage of school education. He concluded his speech with the need to identify the various stakeholders that could be engaged in initiating a global E-waste management policy.

SESSION VII: THE WAY FORWARD: E-WASTE IN EGYPT: STATUS AND CHALLENGES

52. The aim of this session was to present insights of private sector enterprises in Egypt together with non-governmental organizations (NGOs) on E-waste status and opportunities in Egypt. The session offered specific recommendations to be implemented in Egypt. The session was moderated by Dr. Howaida Ismail, Director, Technical Assistance Unit, Ministry of Communications and Information Technology, Egypt.



53. **Dr. Khaled Elamrawy, Country Manager, Intel, Egypt, Levant & North Africa.** Dr. Elamrawy demonstrated how Intel is revisiting the building components of its microprocessors and eliminating entirely hazardous components such as lead. Dr. Elamrawy warned the participants of the threats of current legislations of purchasing/importing refurbished ICT products (e-dumping) on the business sector, especially with the current financial crisis in Europe that opens doors for donations rather than recycling. He called for a redefinition of the term 'End-of-Life' and recommended to relate refurbished items purchase to a percentage of equipment end-of-life.
54. **Eng. Ahmed Sami – Country Managing Director – HP Egypt.** Eng. Sami demonstrated HP corporate vision towards green technology and how all components, including their packaging, are environmentally friendly. He pointed out that the E-waste problem constitutes 2% of pollution challenges. He emphasized the importance of raising awareness, described the current era in the region as the 'Pre-awareness' phase and recommended providing more training of e-waste content to university students. In an initiative towards highlighting the problem, HP has organized a competition between students of mass communication in four different universities in Egypt, namely Ain Shams University, Assiut University, American University in Cairo (AUC) and German University in Cairo (GUC), to write articles addressing E-waste problems.

55. **Eng. Ahmed Imam – Managing Director – Raya Maintenance (Nokia Regional Maintenance Center), Egypt.** Eng. Imam demonstrated Raya’s experience in E-waste management and presented its success story in being the Nokia Regional Maintenance Center.
56. **Eng. Amr Sheira – CEO – CompuMe, Egypt.** Eng. Sheira presented his vision concerning corporate social responsibility and how, as a regional retail company, CompuMe could raise more awareness among consumers and propose channels for E-waste collection.
57. **Dr. Amr AbdAllah – Chairman, Dreamers of Tomorrow, Egypt.** Dr. Amr AbdAllah presented the role of the civil society and the important role that the volunteer taskforce can contribute towards change management in all governorates.
58. **Dr. Howida Ismail, Director, Technical Assistance Unit, Ministry of Communications and Information Technology, Egypt.** As the session moderator, Dr. Ismail provided the key points that the speakers agreed upon as follows: The ICT level of readiness in Egypt has augmented during the last decade and the need for ICT solutions is increasing at a local level on a daily basis. This has created new responsibilities not only for the government but also for all stakeholders involved in that process. There is a need to open new dialogue channels between the government and the private sector (multinationals and local SMEs), civil society, and the international community. There is a great need to assess the size of the problem to be able to create new collection mechanisms. All panelists confirmed the importance of raising the awareness level (education, entrepreneurship, training, etc.) of all stakeholders. A multi-stakeholder partnership is essential throughout all the phases involved in strategizing, planning, management, and governance of the E-waste problem. Knowledge sharing is an essential component to speedup lessons learnt and avoid possible challenges.
59. Dr. Ismail concluded the session with the vital remark of the Minister of Communication and Information Technology, Dr. Tarek Kamel’s opening speech, where he called for a taskforce to start outlining the problem and conducting a multi-stakeholder initiative for pilot models.
60. With the outcomes of the panel, **Dr. Baraka, First Deputy to the Minister of Communication and Information Technology**, who was attending the session, confirmed that MCIT will take the lead, in alliance with CEDARE, to call for a meeting with all possible stakeholders within two weeks.

SESSION VIII: THE WAY FORWARD: E-WASTE MANAGEMENT IN THE ARAB REGION

61. The closing session of the Forum sets out to launch CEDARE’s proposed package of deliverables in the form of tangible initiatives and calling for participants to implement the recommended action framework. Several potential partnerships emerged from the private sector enterprises, international development agencies and NGOs, participating in the E-waste Conference. The session was moderated by Mr. Tarek El-Baz, Advisor, Centre for Environment and Development for the Arab Region and Europe (CEDARE), Egypt.



62. **Dr. Hossam Allam, Regional Programme Manager, CEDARE, Egypt**, put forward the initial roadmap set forth by panelist discussions on required actions and possible implementations. In line with the outcomes of the conference, CEDARE announced a five-component programme with three main deliverables to launch and work on for the coming 12 months. Dr. Allam illustrated the five components: 1) providing rapid assessment of E-waste in selected countries within the MENA region; 2) encouraging multi-stakeholder partnership to conduct oversight proposed activities; 3) implementing an Awareness Campaign on E-waste Threats and Opportunities; 4) developing capacity building activities on relevant E-waste management for activities target groups, and 5) establishing an E-waste recycling trading system.
63. In pursuing those five components, Dr. Allam highlighted three recommended deliverables to work on: 1) initiating a multi-stakeholder partnership that encompasses international agencies, the private sector, and active members of the civil society to coordinate policies and support actions in favor of promoting good practices and applications of E-waste management; 2) establishing a Knowledge and Business Support Hub in which lessons learned and development of enterprise capacity building can be available to the private sector in general and SMEs in particular, and 3) establishing a Youth Network to initiate and proliferate E-waste awareness and support eligibly employable youth with good business ideas. With CEDARE recommendations session, the floor was opened for comments from five key panelists representing the private sector, Development agencies, and NGOs.
64. **Mr. Sherif Issa who represents an active telecommunication company (Mobinil)** focused on supporting the idea of having a manageable pilot business model in which the private sector would design a financially viable trading system with an interested youth civil organization engaged. Mr. Issa supported all the three recommended deliverables but was also interested in focusing on the business support model. This includes training on how to safely dismantle electrical components and finding a good market for recycled ones.
65. **Ms. Nehal Kouesny, representing the information centers of the World Bank**, emphasized the need for running some ground work such as the mapping and assessments for E-waste in the Arab Region. She is active and willing to partner in the implementation of a Knowledge Business Hub and the Youth Network.
66. **Mr. Miloud Ameziane, representing the International Telecommunication Union (ITU) as a head of the Arab Region**, emphasized the challenges in the telecom sector that need immediate solutions relevant to the exponential growth in E-waste stock. Mr. Ameziane highlighted the urgency to work on the policy level among countries of the region as well as working on a good business model utilizing a viable E-waste management system. ITU experience in Africa and Asia can be good starting points and is very much supportive to the Multi-stakeholder Partnership.
67. **Both Mr. Fareed Bushaheri, Regional Coordinator of UNEP/DTIE and Mr. Mathias Schlupe, Lab for Technology Society, EMPA**, put forward the practical side of capacity building for NGOs and small businesses interested in learning how to decompose and market the potential recycled ICT components. EMPA is very much interested in being in the creation of a viable business model to set a practical example. Mr. Bushaheri was equally interested in the business model to be accompanied with tangible development aspects for the community such as creation of jobs and enhancement of skills among young people engaged in NGOs (Youth Networks).
68. While some differences on how to start surfaced among the audience, almost all comments were also in line and highly supportive of the proposed future agenda and actions. Agencies such as **UNIDO, Mr. Paul Makin, Guido of UNEP, Fernando of ITU** are eager to cooperate whether in terms of setting good collection system, as suggested by **UMICORE**, or setting a full-fledged integrated business plan for specific projects.
69. **Mr. Ihab Abdel Aziz, Egyptian Federation of NGOs**, expressed great interest to start a business model with potential revenue generation. He, like many others, believes that tangible financial returns are the recipe for success to all the conference efforts in E-waste especially those awareness activities which can eventually fade out without tangible rewards.
70. The closing session revealed major agreement among the panelists in support of CEDARE's call for partners' engagement, at the National and Regional level, in tangible and practical activities to curb the challenges of E-waste rather than just offer theoretical recommendations.

ANNEX A: FORUM PROGRAMME

DAY 1: MONDAY, 9 FEBRUARY 2009	
8:30 -10:00	Registration
Inaugural Session	
10:00-11:15	<ul style="list-style-type: none"> • H.E. Nadia Makram Ebeid, Executive Director, Centre for Environment & Development for the Arab Region and Europe (CEDARE), Egypt. • Dr. Basel Al-Yousfi, Deputy Director, United Nations Environment Programme/ Regional Office of West Asia (UNEP/ROWA), Bahrain. • Mr Sami Al Basheer Al Morshid, Director, ITU Telecommunication Development Bureau, Switzerland. • H.E. Dr. Tarek Kamel, Minister of Communications and Information Technology. • H.E Eng. Maged George, Minister of Environment.
<i>11:15 11:45</i>	<i>Coffee Break</i>
Keynote Speakers: Leadership Insights	
11:45-1:00	<ul style="list-style-type: none"> • Moderator: Dr. Basel Al-Yousfi, Deputy Director, United Nations Environment Programme/ Regional Office of West Asia (UNEP/ROWA), Bahrain. • Dr. Katharina Kummer Peiry, Executive Secretary, Basel Convention Secretariat, Switzerland. • Mr. Iskander Shalaby, Chairman, the Egyptian Company for Mobile Service (ECMS – Mobinil), Egypt. • Ms. Brigitte Bourgoïn, Executive Vice President, France Telecom Orange, France. • Dr. Tarek Shawki, Director, UNESCO Cairo Office, Egypt
<i>1:00 – 2:00</i>	<i>Lunch</i>
Session I: E-waste Management Initiatives	
2:00 – 3:00	<ul style="list-style-type: none"> • Moderator: Mr. Paul Makin, UNIDO Representative and Head, Regional Office, Egypt • Mr. Mathias Schluép, Project Manager, Laboratory for Technology and Society, Materials Science and Technology (EMPA), Switzerland. • Mr. Guido Sonnemann, Programme Officer for Innovation and Life Cycle Management, United Nations Environment Programme (UNEP/DTIE), France. • Mr. Oliver Keserue, Programme Manager – Waste, UNEP/MAP – Blue Plan, France
Session II: Collection, Refurbishment and Recycling Practices	
3:00 – 4:00	<ul style="list-style-type: none"> • Moderator: Ms. Hanan EL-Hadary, Director, Egypt National Clean Production Center, Egypt. • Mr. Steven Art, Sales Manager, E-waste Recycling, UMICORE, Belgium. • Mr. Sherif Issa, Sr. Manager Health and Environment Affairs, Regulatory and Corporate Affairs, (ECMS – Mobinil), Egypt. • Mr. Edgar Mugisha, Technical Officer, Uganda Cleaner Production Center, Uganda.
<i>4:00 – 4:15</i>	<i>Coffee Break</i>
Session III: E-waste Effects, Assessment and Life Cycle	
4:15 – 5:15	<ul style="list-style-type: none"> • Moderator: Ms. Azza Morssy, Programme Manager, United Nations Industrial Development Organization (UNIDO), Austria. • Prof. Medhat El Messierey, Head of the Egyptian Society for Non-ionizing Radiation Protection, Egypt. • Dr. Bernd Kopacek, Managing Director, Austrian Society for Systems Engineering and Automation. Austria.
5:15	Closing

DAY 2: TUESDAY, 10 FEBRUARY 2009	
Session IV: E-waste International Practices	
9:30 – 10:30	<ul style="list-style-type: none"> • <i>Moderator: Mr. Fareed Bushaheri, Regional Coordinator, UNEP/DTIE.</i> • Dr. Jack Rowley, Director of Research and Sustainability, Global Systems for Mobile Communications Association (GSMA), United Kingdom. • Mr. Mathias Schluemp, Project Manager, Laboratory for Technology and Society, Materials Science and Technology (EMPA), Switzerland. • Ms. Martina Kolb, Project Manager, German Development Cooperation (GTZ). Germany. • Ms. Orsolya Csorba, European Commission, DG Environment, Belgium.
10:30 -11:00	<i>Coffee Break</i>
Session V: International Organizations Practices	
11:00 – 12:00	<ul style="list-style-type: none"> • <i>Moderator: Mr. Fareed Bushaheri, Regional Coordinator, UNEP/DTIE.</i> • Mr. Guido Sonnemann, Programme Officer for Innovation and Life Cycle Management, United Nations Environment Programme (UNEP) - Division of Technology, Industry and Economics, France. • Ms. Azza Morssy, Programme Manager, United Nations Industrial Development Organization (UNIDO), Austria. • Mr. Hossam Allam, Regional Programme Manager, Centre for Environment and Development for the Arab Region and Europe (CEDARE), Egypt. • Mr. Saied Dahroug, International Facilitator, Basel Convention Regional Centre for Arab States, Egypt.
Session VI: Perspective of Private Sector Enterprises	
12:00 - 1:00	<ul style="list-style-type: none"> • <i>Moderator: Mr. Sebastien Poisson, ESMP Manager, Zain Group, Bahrain.</i> • Mr. Lutz-Guenther Scheidt, Webix solutions GmbH, Germany. • Mr. Herve Guilcher, Environmental Programs Director, HP EMEA, France. • Dr. Reinhard Hoehn, Manager of Environmental Affairs, IBM, Germany. • Mr. Fernando A. Lagraña, Head of Partnership Promotion & Membership Division, ITU, Switzerland.
1:00-2:00	<i>Lunch</i>
Session VII: The Way Forward: E-waste in Egypt: Status and Challenges	
2:00 – 3:15	<ul style="list-style-type: none"> • <i>Moderator: Dr. Howida Ismail, Director, Technical Assistance Unit, Ministry of Communications and Information Technology, Egypt.</i> • Dr. Khaled El Amrawy, Country Manager (ELN), Intel Corporation, Egypt. • Mr. Ahmed Imam, Director, Nokia Maintenance Center (Raya), Egypt. • Mr. Amr Sheira, CEO, CompuMe, Egypt. • Mr. Ahmed Samy, Country Manager, HP, Egypt. • Mr. Amr Abdallah, Chairman, Dreamers of Tomorrow, Egypt.
3:15-3:30	<i>Coffee Break</i>
Session VIII: The Way Forward: E-waste Management Programme in the Arab Region	
3:30-5:00	<ul style="list-style-type: none"> • <i>Moderator: Mr. Tarek El-Baz, Advisor, Centre for Environment and Development for the Arab Region and Europe (CEDARE), Egypt.</i> • Dr. Hossam Allam, Regional Programme Manager, Centre for the Environment & Development for the Arab Region & Europe (CEDARE), Egypt. • Mr. Ruediger Kuehr, Executive Secretary, StEP Initiative, United Nations University, Germany. • Mr. Fareed Bushaheri, Regional Coordinator, UNEP/DTIE, Bahrain. • Mr. Mathias Schluemp, Project Manager, Laboratory for Technology and Society, Materials Science and Technology (EMPA), Switzerland. • Mr. Miloud Ameziane, Head of International Telecommunication Union Regional Office for the Arab Region (ITU), Egypt. • Ms. Nehal El Kouesny, Information Centers Coordinator, The World Bank, Egypt. • Mr. Sherif Issa, Sr. Manager Health and Environment Affairs, Regulatory and Corporate Affairs, (ECMS – Mobinil), Egypt.
5:00	Closing Session

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ANNEX C: SPEECH OF H.E. DR TAREK KAMEL, MINISTER OF COMMUNICATIONS AND INFORMATION TECHNOLOGY

Distinguished Guests

Ladies and Gentlemen

It is my great pleasure to be with you today in this **First Regional E-Waste Forum: Circulating Success**, organized by the **Centre for Environment & Development for the Arab Region and Europe (CEDARE)**. A workshop that has gathered a number of experts, both from the national and the international arena, to share with us their experiences in handling an important issue as e-waste.

Indeed, during the last years, environmental challenges have been threatening the globe and all international forums have addressed this issue extensively. Global warming, green house gas (GHG) emissions, high consumption of non-renewable energies and e-waste are threats to all countries. Even with the economic crisis capturing the attention of business and government leaders around the world, there is a need to accelerate environmental efforts.

Management of e-waste has become one of the most important international topics, as well as a controversial issue for every government. Rapid technology change, low initial cost and even planned obsolescence have resulted in a fast growing problem around the globe. Technical solutions are available but in most cases a legal framework, a collection system, logistics and other services need to be implemented before a technical solution can be applied.

Ladies and Gentlemen

The Government of Egypt has started in 1999 its ICT master plan, followed by the Egyptian Information Society Initiative in 2003, and finally Egypt 2010 ICT Strategy in 2007. Along these progressive phases of reform, the Government was focusing on raising the awareness and promoting ICT as a basic pillar towards socio-economic development. Egypt has reached a mobile penetration rate of more than 52%, and an internet penetration of more than 16%. The number of ICT companies along the sector increased to more than 2400 companies and our annual export figures from ICT exceeded 650M\$ in 2007, reflecting an annual growth rate of 20%.

ICT is being extensively used in the Education, Health, Trade and Local Administration sectors. Private sector has been installing heavy computing equipments and data centers, mainly mobile operators, banks, and oil companies.

We are now starting to face a new threat from our local e-waste, which will definitely increase in the next years. The Egyptian Government has started to attach greater importance to the management of the e-waste issue to prevent and reduce the resulting pollution, and to work harder to protect the environment. Although there are individual pilots in Egypt and some countries in the region, there is still much work to be done at the legislative and implementation levels.

In Egypt, the current e-waste management efforts have been limited to small-scale initiatives. Among them, we have several projects developed by the two major mobile operators Mobinil and Vodafone in Egypt (with many public and private partners) for the collection and refurbishment of their own e-waste for eventual use by public schools and educational entities.

The Government of Egypt is currently investigating the SymbioCity initiative for sustainable urbanism with the Government of Sweden to be implemented as a pilot in the Smart Village, combining energy, waste management (including hazardous waste), water supply and sanitation, traffic and transport, landscape planning, architecture and urban functions for more efficient use of natural resources.

Despite this, challenges are numerous, starting from identifying and assessing the actual size of the e-waste in the country, to compilation of policies to decrease trans-boundary movement of e-waste and the development of new business models that manage the resulting waste.

From here, we see that 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 Egypt is calling out to join hands with the private sector and the NGOs to collaborate towards this national objective for a better working environment. We have experimented public-private partnerships in different initiatives and we believe in the importance of the peer role of the private sector. There is an immediate need for collaboration between industry, government, environmental groups, and citizens to solve the problems of e-waste, e-scrap, e-surplus, e-junk, e-dump and e-discards.

We need to make use of the already launched European initiatives and comprehend their success parameters to tailor new approaches and legislations suitable to reduce e-waste in our region. Corporate social responsibilities should extend their 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.

Ladies and Gentlemen

We want to make sure that our region will not become the dumping site of e-waste. Indeed, there is need of better policies in controlling e- waste and the collaboration between the Government Sector and NGO's in controlling the issue and taking the region towards sustainable development.

I wish to call 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.

Finally, I would like to express my sincere thanks to H.E. Dr Nadia Makram Ebeid, our reputed activist in Environmental Issues, for her concern in raising this issue at that time when the economic crisis is hitting the world. Recycling our e-waste will optimize our expenditures, decrease our energy consumptions, minimize our surrounding pollution and ensure the sustainability of the environment for the coming generations.

I wish you a great success, and looking forward to receiving the recommendations developed at the end of this two-day workshop.

Thank you.

ANNEX D: SPEECH OF H.E. DR NADIA MAKRAM EBEID, EXECUTIVE DIRECTOR, CEDARE

Excellencies
Distinguished guests
Ladies and gentlemen

I would like to welcome this smart alliance to the Land of the Nile, as old as Egypt itself.

The joy of having you with us today sends a strong message that we are committed to addressing the challenges and opportunities in the field of E-waste Management.

Ladies and gentlemen

I like the theme "circulating success" because I believe that success breeds success ... it is contagious and has a refreshing ripple effect. As they say in Arabic "من جاور السعيد يسعد".

And talking about success, we have two exceptionally successful ministers: H.E. Minister Maged George, Egypt's outstanding Minister of the Environment.

As an Egyptian, I am proud of the solid achievements that continue to be made under his able leadership. The environment today is part of the Egyptian Constitution and this was a dream come true.

H.E. Dr. Tarek Kamel, a dynamic and visionary leader whose achievements surpass any expectations and who has led Egypt into the knowledge society with "flying honors".

We are very pleased to have with us a broad range of partners, who have an impressive track record in this field and I would like to thank them for their valuable support.

We are of course delighted to have "mega-watt" personalities from the ICT field, the private sector, the civil society and many friends of the environment.

We are also very happy to have valued partners from international and regional organizations. As always, the participation of members of the mass media is value added.

The film we have just watched is no Hollywood movie. It is real. I feel problems are crying out for help and these cannot be "wished away". There are also no magic bullets to remove these mountains of e-waste.

And there is more ...

As generations of unprecedented technological advancements continue to evolve (there is no limit ingenuity of human mind!) ... and consumers continue to dispose of their electronic goods in a haphazardly manner, a tsunami of e-waste, with its gruesome health and environmental hazards, will most likely hit us hard ... very hard ... in the next few years.

Let me share with you some "eye-popping" numbers:

Globally, 20 to 50 million tons of electronic waste are generated annually ... it is estimated that if this e-waste was loaded on railway trucks, it would produce a train that would stretch once around the world ...

Two billion mobile subscribers were estimated in 2008... Countries such as Luxembourg actually have more mobile phones than people!

And with the growing switch to High Definition TV's, many countries will soon have more sets than people!

One billion is the size of the personal computer market globally. This is expected to escalate to 2 billion by 2015.

Twenty million is the estimated number of mobiles thrown away in China each year. The list is long and I will refrain from stating the obvious. Dr. Katharina Peiry, the capable Executive Director of the Basel Convention Secretariat will agree with me that these statistics did not exist 20 years ago when the Convention was born.

We also need to bear in mind that while the largest generators of e-waste are industrialized economies, the most vulnerable to the hazards of e-waste are informal recyclers in developing and emerging economies.

Ladies and gentlemen...

We cannot claim to have all the answers. Some may be beside us or ahead of us. But experience will always be the best teacher. Many are undoubtedly found in the knowledge and vast experience of the collective wisdom we are privileged to host in this special forum.

And yes ... we have much to exchange, to compare and also to understand... so let us benefit and build on our numerous motivating best practices and lessons learned.

And there are always reasons for optimism! First because you are here! A powerful and inspiring force to mobilize support for action!

Also, in the midst of the globe's uncertainties and dizzying economic and financial storms, there are many promising e-waste initiatives, such as the growing trends of take-back, refurbishment, "e-cycling" and safe disposal schemes, together with advanced product design. These efforts are generating not only profits but they are creating new "green collar jobs". I prefer green to white or blue.

Women & men of substance

Can we think beyond the curve and together address this rapid growth of e-waste in an intelligent, socially responsible, economically viable and environmentally sensitive manner? Can we, as they say, turn trash into treasures? As President Obama would have said: Yes we can!

Excellencies

Friends and colleagues:

Before concluding let me remind you that one person giving all of his or her time for a worthy cause makes news, but many people, giving a little of their time can make history. Thank you for giving us some of your precious time ...

With "e champions" like you, I am sure the best is yet to come!

ANNEX E: SPEECH OF DR. BASEL AL YOUSSEFI, UNITED NATIONS ENVIRONMENT PROGRAMME

Your Excellency Eng. Maged George, Minister of Environment;
Your Excellency Dr. Tarek Kamel, Minister of Communication and Information Technology;

Your Excellency Dr. Nadia Makram Ebeid, Executive Director, Centre for Environment & Development for the Arab Region and Europe (CEDARE)

Distinguished Guests, Ladies and Gentlemen

On behalf of the Executive Director of UNEP, Mr. Achim Steiner, and all of the colleagues at UNEP, it is my great pleasure to be here today to welcome you to the E-Waste Management Forum.

UNEP has had the honour to have worked of many years with our good partners, CEDARE, developing and implementing projects and programmes that respond to the needs of the region in terms of environment and sustainable development. Today, in this Forum, we witness the realisation of a new programme, that began as an idea between our two organisations and which has brought together valuable international, regional and national partners from both the private and public sectors to address what is fast become of priority for the region, and indeed the world.

The electronics and information technology industry is the world's largest and fastest growing manufacturing industry. As a consequence of this remarkable growth, combined with the phenomenon of rapid product obsolescence, discarded electronic equipment, or e-waste, is now recognized as the fastest growing waste stream in the industrialized world. Today, E-Waste comprises more than 5 per cent of all municipal waste, which is nearly the same amount of all plastic packaging, and is growing steadily.

As such, it is being discussed and addressed in various international fora and different UN agencies, which are leading initiatives or participating in activities on different e-waste topics. There is indeed a wide portfolio of activities in the e-waste field currently ongoing under the UN umbrella; with projects at different stages of maturity: some aiming at designing new approaches, while others strive to be replicated on a large scale by inspiring others to emulate successes.

From the UNEP perspective, we have as our mandate is to coordinate the development of environmental policy consensus by keeping the global environment under review and bringing emerging issues to the attention of governments and the international community for action. UNEP is the voice of an environment coming under numerous pressures from human activity. The global production of e-waste is one such pressure which is fast becoming a burden.

Within UNEP, our Division of Technology, Industry and Economics has a number of ongoing activities, including:

The Global e-Sustainability Initiative, which brings together more than 20 ICT companies, and in which one of the working groups, co-chaired by UNEP, is focussing on E-waste, The International Resource Panel, and in particular the Global Metal Flows Group, is tackling resource efficiency challenges and in particular the issue of material and metal stewardship,

Pilot projects on e-waste are being implemented by the UNEP's International Environmental Technology Centre, based in Japan, within the framework of Bali Strategic Plan for Capacity Building and Technology Support, developing manuals on e-waste management and facilitating technology transfer,

Excellencies, Distinguished Colleagues, Ladies and Gentlemen,

If I may for just a moment elaborate on the activities of the Working Group of the Global e-Sustainability Initiative.

This includes the GSM Association (GSMA), and focuses on identifying the solutions to the e-waste problems from a Corporate Environmental and Social Responsibility perspective. Activities on e-waste have only started recently since the main focus of the Global e-Sustainability Initiative is on supply chain management and climate change. The main purposes of e-waste working group are to share information and develop and implement solutions to fulfil the objectives of reducing the generation of e-waste; promoting environmentally sound management of e-waste; maximizing the reuse, recycling and recovery of end-of-life equipment; using treatment facilities with the highest environmental, health and safety and labour standards, and addressing environmental and social considerations associated with trans-boundary transportation of e-waste.

UNEP has a number of strengths that characterize its work on e-waste, and areas where its skills and capabilities are distinctive. Our strengths include:

A clear global mandate regarding the environment;

Complementarities of expertise between the e-waste topic and other environmental issues that are also priorities for governments (e.g. sustainable consumption and production, integrated resource management);

Strong scientific credentials, including through world-class collaborating and training centres well-spread throughout the world, and in particular in developing countries;

Experience in creating and fostering implementation of multilateral environmental agreements, and strong links to MEA secretariats;

- A proven ability to work on issues requiring a multi-stakeholder approach;
- A strong relationship with some key players in the private sector (e.g. metal industry, ICT Industry), including financial institutions;
- Flexibility and innovation in programme delivery; and
- Ability to generate media attention on environmental issues.

It is these strengths and attributes that UNEP brings with it to its work in the region, and that also reflect the very similar strengths and attributes that our partner in this initiative (among many others) CEDARE also brings. It was thus natural progression for us to join forces on such an important initiative, responding to the needs of the region and falling under both of our mandates.

We started the work on e-waste through the commissioning of the Arab E-Waste Study which identified a number of challenges and, more importantly, opportunities in the Arab Region. Some of the challenges identified included a rapidly growing quantity of e-waste being produced; the hazardous nature of various chemicals and substances used in electronic products; the need for an E-waste Technology, Inventory and Knowledge; the need for e-waste policies and regulations within the region, including in terms of e-waste export from Arab States.

But there are not just challenges to be considered, e-waste also presents us with opportunities, as part of what we at UNEP have coined the Green Economy. The business activities associated with refurbishment and materials recovery from e-waste as well as focussing on recycling-friendly design, can create a new industrial sector, creating jobs and reducing environmental impact – a win-win on all sides.

But what needs to be done first, and what the UNEP/CEDARE project will look at is to raise e-waste awareness in the Arab region. We will also respond to the fact that there are few projects in the region addressing e-waste, indicating that E-waste management in the Arab region is in its starting phase. There is a need for more basic data collection, inventories and

assessment studies in all parts of the region in order to elaborate the most appropriate responses to the challenges posed by e-waste.

To ensure sustainable e-waste management, a regulatory and legal framework will need to be developed and implemented. The level of implementation and the content of the existing regulatory frameworks in the Arab States have potential for improvement, especially concerning the ICT sector.

The project will be looking at the implementation of an e-waste management pilot project. This will provide a basis for the development of technology, best practice and the dissemination of these across the Arab region. Furthermore, methods can be adapted to regional needs and personnel trained.

In setting up such a project the role of the private sector cannot be underestimated. Private enterprises play a key role and have to be incorporated in a recycling system. Therefore, technical assistance and business models have to be developed. Those models should, and will, be based on high social and environmental standards.

This work with the private sector, and the opportunity to develop a solid private-public partnership focussing on e-waste initiatives for the Arab Region, is something that we at UNEP are very excited about. The inclusion of all stakeholders in our response to the ever-growing environmental challenges is at the core of the achievement of sustainable development. We sincerely hope that the work we are doing, and which you will be discussing and elaborating during your Forum over the next two days, will result in something real and tangible for the region that we can hold up to the rest of the world and demonstrate our commitment to rising to the challenges posed by e-waste and developing innovative and practical solutions.

Excellencies, Distinguished Colleagues, Ladies and Gentlemen,

I would like to close by thanking once more our partners in this event, CEDARE, for our ongoing collaboration and for their excellent work in the organisation of this Forum. I would like also to thank the other agencies and companies that have supported this initiative and hope that we will continue to all work in partnership to see the fruition of our labours. Finally, I thank all of our participants for taking the time to join u at this Forum and look forward to the discussions and recommendation made.

Thank you.

ANNEX F: PROPOSED E-WASTE MANAGEMENT PROGRAMME FOR THE ARAB REGION

Background

Information and Communication technologies have gained a major momentum in the Arab region during the last two decades. While this momentum has contributed to increased socio-economic development in many Arab countries; the growing quantity of electronic waste¹ (E-waste) has raised alarm signals.

Several E-waste components are considered to pose serious environmental and health hazards, such as lead and cadmium found in circuit boards; lead oxide and cadmium in monitor cathode ray tubes; mercury in switches and flat screen monitors, and cadmium in computer batteries. In the absence of suitable techniques and protective measures, recycling e-waste can result in toxic emissions to the air, water and soil and pose a serious health and environmental hazard.

Currently, E-waste recycling efforts in the region have been limited to random and small-scale initiatives. Understandably, implementation of proper and safe management for E-waste in the Arab countries remains an untapped opportunity which may reap direct benefits to local communities through increased job creation; lower health risks and environmental conservation. E-waste recycling provides opportunities for people that have difficult access to formal employment.

It is envisioned that the implementation of the E-waste management programme for the Arab Region should include the cooperation of public, private, and NGOs sectors. The private sector can be the main beneficiary for recycled e-waste components; Non-Governmental organizations (NGO) can coordinate training and increase awareness on proper management and recycling of E-wastes in local communities. Public institutions can support this project by providing the necessary legislation related to E-waste. Such legislations are considered to be the corner stone for achieving safe E-waste management.

Objectives

The objectives of this project are (i) assess and enhance E-waste management systems in the Arab countries, (ii) assist in their socio-economic development through establishing the foundation of environmental friendly E-waste recycling industry and trading, and (iii) raise awareness in the Arab countries about the E-waste threats and opportunities.

Activities

Work Package 1: Rapid Assessment of E-waste in the Arab Region

This package focuses on assessing the E-waste management status in three Arab countries (as a pilot phase). The assessment will investigate the available legislations for managing E-wastes, availability and quality of E-waste recycling activities, and identifying key stakeholders in managing E-wastes at the local level.

WPI Activities:

- Identify and agree with the relevant authorities in the selected Arab countries for conducting the assessment
- Identify key stakeholders for E-waste in the selected countries
- Conduct the needs assessment in the selected countries
- Prepare an integrated needs assessment report

Work Package 2: Establish Multi-stakeholder Partnership for E-waste Management

This package establishes a Partnership among interested private sector enterprises, non-governmental organizations, and international organizations to support the programme activities. Private sector involvement is considered a key issue for the success of this programme.

1. _____

¹ E-waste is a generic term encompassing various forms of electronic and electrical equipment (EEE) which are old, end-of-life electronic appliances and which have ceased to be of any value to their owners.

WP2 Activities:

- Identify key enterprises to join the Partnership.
- Establish corporate responsibilities agreements with relevant private sector enterprises.
- Conduct national and regional meetings for the Partnership
- Establish Partnership secretary and committees
- Establish consortium knowledge hub

Wok Package 3: Implement Awareness Campaign about E-waste Threats and Opportunities

The aim of this work package focuses on enhancing awareness about the hazards effects of e-waste, the importance of safe and environmentally friendly management. It will also highlight the critical role of different stakeholders, especially household consumers. Raising awareness would contribute to the success of this programme. The awareness campaign would highlight the benefits of E-waste recycling.

WP3 Activities:

- Organize E-waste Management Success Stories Workshop
- Prepare awareness campaign plan about E-waste threats and opportunities
- Distribute awareness raising material
- Establish E-waste website to be a source of disseminating knowledge about E-waste management and best practices.
- Implement the awareness campaign plan in the selected countries

Work Package 4: Develop and Enhance capacities for Environmental Friendly E-waste management System

This package develops capacity building activities that targets two dimensions. The first targets the establishing of proper legislations for having national environmental friendly E-waste management system. The second dimension focuses on developing capacities of local communities to conduct proper and safe E-waste recycling. This would lead to establishing the foundation of environmental friendly E-waste industry.

WP4 Activities:

- Assist in the preparation or enhancement of national E-waste management policies and legislations
- Prepare capacity building plan for E-waste recycling
- Identify key civil society organizations that can assist in implementing capacity building activities
- Conduct national and regional training on proper and safe E-waste recycling for local communities

Work Package 5: Establish E-waste Recycle Trading System

The objective of this package is to establish the foundation of E-waste trading system. Recycling will be implemented by the local communities that have received the appropriate E-waste recycling training of work package 3.

WP5 Activities:

- Prepare documents on profitable environmental and social management as well as technical information on e-waste
- Prepare E-waste recycle national and regional trading website
- Implement pilot trading system between industry and recycled E-waste entities.

Outputs

- Assessment study of the current status for managing E-wastes in four Arab countries
- Establish corporate responsibility consortium on E-waste management.
- Awareness Plan about E-wastes hazardous effects and recycling benefits
- Enhance national E-waste management systems.
- Well trained human resources on proper and safe E-waste recycling
- Establishing foundation of E-waste recycling trading system

Beneficiaries

The pilot phase would focus on three Arab countries from West Asia and Africa regions. Selection of the candidate countries will be done in consultation between the project partners. The implementation of the activities will be tailored for each country according to its status. Work Package 3 is concerned with the implementation of a regional awareness Campaign about E-waste Threats and Opportunities.

Duration and Schedule

The duration of the pilot phase of the programme is two years. The project will be divided in two phases; the tentative duration and schedule are as follows:

WP / Months (Quarter)	3	6	9	12	15	18	21	24
Work Package 1: Rapid Assessment of E-waste in the Arab Region								
Work Package 2: Establish Multi-stakeholder Partnership for E-waste Management								
Work Package 3: Implement Awareness Campaign about E-waste Threats and Opportunities								
Work Package 4: Develop and enhance capacities for Environmental Friendly E-waste management System								
Work Package 5: Establish E-waste Recycle Trading System								

ANNEX G: MULTI-STAKEHOLDER PARTNERSHIP ON E-WASTE (MSPE)

Multi-stakeholder Partnership is increasingly becoming a popular tool to advance public interest issues that have ultimate impact on the society. The Multi-stakeholder partnership on E-waste (MSPE) will seek to consolidate, standardize, build up on and foster knowledge from parties concerned with e-waste management. It also aims to encourage and solicit innovative viable business solutions in the area of e-waste recycling and ICT refurbishing.

According to the UN, Multi-Stakeholder Partnership is defined as a “voluntary and collaborative relationships between various parties, both State and non-State, in which all participants agree to work together to achieve a common purpose or undertake a specific task and to share risks and responsibilities, resources and benefits”.

The MSPE brings together different stakeholders from different sectors to collaborate towards the achievement of well defined common goals or projects in areas related to E-waste management, at the national and/or regional levels. The concerned sectors will include public, private, civil society sectors, and international and regional organizations.

Objective

Act as a platform to advocate and assist in creating jobs through developing viable plans to initiate collection, refurbishing, and recycling projects.

Terms of Reference

- Recommending appropriate policies and legislation for enhancing the national status of E-waste management.
- Initiate effective awareness campaign on E-waste threats and opportunities especially among youth, such as initiating a Youth network for E-waste.
- Establishing an E-waste Business Support Unit/ Knowledge Hub to support private sector enterprises to adopt viable and innovative business plans for ICT E-waste management that are generated from obsolete ICT equipment.

ANNEX H: BUSINESS SUPPORT UNIT / KNOWLEDGE HUB FOR E-WASTE MANAGEMENT

Private sector enterprises face substantial challenges in identifying economical and environmental processes for disposing their obsolete ICT equipment. ICT equipment turnover is considered one of the highest rates of increase within different sectors, especially telecommunications, banking, and oil and gas industries.

The Hub is geared to support private enterprises to adopt viable and innovative business plans for ICT e-waste management that are generated from obsolete ICT equipment.

Objective

The main objective of E-waste management knowledge hub will be to support private sector enterprises with innovative solutions to manage their end-of-life ICT equipment.

Terms of Reference

- Act as a platform for compiling and disseminating information and lessons learned for E-waste management.
- Interactive advisory assistance for private sector enterprises to assist in developing sound economical and environmental collection, refurbishing, and recycling processes.
- Establishing partnerships with internationally recognized entities in the field of E-waste assessment, refurbishing, and recycling.
- Raise awareness among private sector enterprises on the threads and opportunities associated with end-of-life ICT equipment.

ANNEX I: YOUTH NETWORK FOR E-WASTE MANAGEMENT

Youth represent the driving force for any future advancement ... the e-leaders of the future, are all about growing ideas - that need to be nurtured with knowledge and information, to properly equip youth to play a meaningful role in their communities.

E-waste from ICT is an area that necessitates youth awareness in many areas, including the adverse impacts on health and the environment, the important role of safe sorting and dismantling procedures, to counter-act these adverse effects, and the creation of “green jobs” and financial rewards from e-waste recycling and refurbishing.

Mission:

“E-Waste Youth Network” will work towards raising public awareness among Youth on the serious health and environmental threats resulting from all forms of E-Waste mismanagement. The Network will make the necessary information and knowledge accessible to schools and other youth related entities, through NGOs. It will also provide training and technical support for youth, who will play a key role in executing the safe handling of the subject waste in cooperation with all concerned organizations.

Proposed Actions:

- Raise public awareness on E-Waste hazards and the safe handling of these wastes among young people (eg. E-waste summer camps)
- Develop an interactive youth e-waste website with information, blogs, etc.
- Prepare an action plan for awareness projects including seminars, workshops, and hands on pilot programs designed and made available.
- Showcase successful (sustainable) solutions with potential for creating “green jobs” among eligible youth.
- Identify national Focal points and partners in pilot countries