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**Submission by: ARM Holdings plc, Private Sector**

Draft WSIS+10 Vision for WSIS Beyond 2015

С7. ICT Applications: E-Environment

**1. Vision**

Recognizing the substantial contribution of ICT to sustainable development, the Action Line C7 on e-environment promotes the use of ICT to combat climate change while fostering ways of mitigating the side effects of ICTs on environment and health.

**2. Pillars**

Stakeholder contributions are broadly in line with ARM’s objectives. Examples include:

• Promote technological solutions for environmental preservation and sustainability.

• Ensure ICT is used responsibly for environmental care and contribute significantly to cushion and reduce energy consumption and environmental pollution, as well as its impact on climate change.

• Utilize ICT effectively and efficiently for environment/climate change, ICT-driven environmental measures, smart grid, smart community, energy management through smart meters, and recycle technologies resulting in paperless offices

Again could a reference to these be included in the ‘pillars’?

The *Following* statements provide guidance and priorities for implementation of WSIS Action Line C7 beyond 2015.

1. **Strategic approach**

Maintain a balance in addressing all goals under action line C7 e-environment to avoid singling out only one aspect and to create innovative solutions for sustainability for our natural environment with projects to be developed as multistakeholders’ and multidisciplinary.

1. **Policy direction and legislation**

Encourage governments on the one hand to include in national, regional and international regulations provisions that oblige manufacturers to use certified methodologies, procedures, and quality standards, and on the other hand to provide regulatory incentives encouraging sustainable growth.

1. **Information sharing, training and awareness raising**

Raise awareness and train civil society as well as managers on the role of ICTs in supporting opportunities for society and nature through the expansion of a green economy.

1. **Climate change**

Ensure that ICTs are used effectively for climate monitoring and prediction and also contribute significantly to reducing energy consumption and greenhouse gas emissions, thus minimizing their impact on the climate.

1. **Life-cycle management of ICT equipment**

Apply a life-cycle approach to ICT equipment so that it is designed for longer life and for the easy and effective dismantling and recovery of valuable parts in order to avoid and minimize e-waste. This will protect workers’ health and the environment which producers, service providers, users and regulatory authorities recognize as essential parts of the ICT equipment life-cycle management.

1. **Monitoring, early warning and disaster prevention**

Promote the use of ICT equipment in electronic weather forecasting and early warning systems to increase preparedness for those natural disasters that can be predicted.

**3. Targets**

1. By 20XX, XXX ICT innovative solutions promoted for greening the environment.
2. By 20XX, XXX countries have ratified international agreements e.g. Tampere Convention, and included in their regulations laws obliging manufacturers to use certified methodologies and procedures, as well as quality standards to significantly reduce the WEEE volume.
3. XX dialogues initiated by 20XX to promote the use of more ICTs to communicate and engage with the civil society.
4. XXX partnerships built with international associations of amateur radio operators by 20XX to train people at the national level on using amateur radio during disasters.
5. XXX awareness outreach programmes by 20XX developed about the role of ICTs in supporting opportunities for society and nature through the expansion of a green economy and through elaborating e-environment.
6. By 20XX guidance developed to identify ICT equipment that makes more efficient use of resources, in particular equipment that is designed for longer life, for easy and effective dismantling and recovery of valuable parts.
7. By 20XX guidance developed on life-cycle management for ICT equipment to avoid and minimize e-waste in order to protect workers’ health and the environment.
8. By 20XX the capacity of meteorological offices in all developing counties strengthened to ensure availability of and accessibility to critical data and information for early warning against hydro meteorological hazards and potential disasters.
9. By 20XX, XX countries are using ICTs effectively to support climate services that benefit to the most vulnerable and exposed population to climate change impacts.

**Annex: Zero Draft Stakeholder Contributions**

1. **Strategic approach**
2. Seize the opportunity and implement effective solutions balancing business and environment in a sustainable way through collaboration between stakeholders, particularly industry and governments.
3. Recognize the need for greater collaboration between the ICT community and the environmental, hydro meteorological, climate and other communities, at the national, regional and international levels, on programs and strategies for environmental issues, climate change, electronic waste management, and disaster risk reduction.
4. Create innovative solutions for sustainability for our natural environment and projects should be developed as multistakeholders’ and multidisciplinary.
5. Maintain a balance in addressing all goals under action line C7 e-environment to avoid singling out only one aspect.
6. Continue work in E-government, e-learning, e-health, e-employments, e-environment, e-agriculture, and e-science taking into account the experience accumulated in these areas and opportunities for transversal project.
7. Develop cooperation between ICTs and the environmental sector at national level to address the negative effects of ICTs (Greening the ICT sector), an issue that has become more urgent since the WSIS process started.
8. **Policy direction and legislation**

**Policy:**

1. Continue work on Climate Change, e-waste, ICT Green Standards.
2. Promote ICT innovative solutions for greening the environment.
3. Enhance the existing E-environment with E - Planning Process through e-environment tools for sustainable growth.
4. Implement national policies for ICT waste management.
5. Put more emphasis in measuring performance and establishing reduction goals.
6. Harmonize among countries and regions national policies for better management of ICT wastes.
7. Develop a global common strategy for sustainable and beneficial e-environment related to the overall strategy for the protection of the environment.
8. Seek to reduce the growth in waste and carbon emissions resulting from ICT.
9. Focus on ways of mitigating the negative environmental impact of ICTs, as well as on their potential contribution to sustainable development.
10. Promote technological solutions for environmental preservation and sustainability.
11. **Legislation:**
12. Provide regulatory incentives to develop telecommunications in marginalized areas, including packaging urban projects with rural/remote area projects, in an effort to achieve universal service.
13. Discuss and review the cataloguing of the Electric and Electronic Equipment (EEE), fostering the “local” labeling in each member country, determining if, for example, an EEE is really recyclable or environment-friendly, not only in its’ origin but in the country of use/final destination.
14. Subscribe to international agreements and encourage governments to include in their regulations laws obliging manufacturers to use certified methodologies and procedures, as well as quality standards based on, for instance, ISO standards to significantly reduce the EEE breakage rate and, therefore, the resulting WEEE volume.
15. Encourage the sustainable grow through e-environment tools.
16. **Information sharing, training and awareness raising**

**Information sharing:**

1. Put greater emphasis on closing the life-cycle loop of ICTs and information sharing regarding policy, standards, consumer education, and design innovation.
2. Strengthen dialogue and use more ICTs to communicate and engage with the civil society.
3. Identify mechanisms for strengthening the education aspect from the consumer perspective.
4. Encourage stakeholders to contribute to the stocktaking process, finding ways for benefitting from the lessons learned from these projects.
5. **Training:**
6. Provide training for emergency telecommunication by Government and NGO disaster management units so when they receive such equipment, they know what to do.
7. Build partnerships with international association of amateur radio to train people at the national level on using amateur radio during disasters.

**Awareness raising:**

1. Develop awareness outreach programmes using ICTs to educate people to become environmentally savvy e.g. do not burn rubbish as it emits carbon etc.
2. Design a data and information system about EEE composition.
3. Raise awareness about the role of ICTs in supporting opportunities for society and nature through the expansion of a green economy, through elaborating e-environment as an element of e-education.
4. Address the issues of coverage, quality and affordability for people living in remote islands and rural areas so they too can have access to information on e-environment so they too may understand the green environment that is needed to combat climate change.
5. **Climate change**

**Using ICT effectively and efficiently:**

1. Include a stronger reference to ICTs when engaging the main challenges related to climate change and other forms of environmental degradation.
2. Seek to leverage the potential for carbon savings in other industrial sectors which may be available through ICTs.
3. Utilize ICT effectively and efficiently for addressing environmental and climate challenges, including through ICT-driven environmental measures, smart grids, smart communities, energy management through smart meters, and recycling technologies that result in paperless offices.
4. Develop goals or international actions through WSIS for promoting use of the Cloud. Matters such as vendors’ trust and other issues still slow down the promotion and establishment of such goals.
5. Support the computerization and automation of processes to reach zero paper use.
6. Address the adverse effects of increased use of ICT products on the environment and the climate at a national/regional and global level.

**Energy consumption:**

1. Agree on a common set of methodologies concerning energy consumption.
2. Ensure ICT is used responsibly for environmental care and contribute significantly to cushion and reduce energy consumption and environmental pollution, as well as its impact on climate change.
3. Establish a system that enables consumers to actively participate in energy management of demand and supply of electricity, such as “demand response” in which consumers can choose their own demand based on conditions of suppliers such as diffusion of smart meters.
4. Enhance diffusion of effective and stable energy management that utilizes “demand response”.
5. Promote the use of ICT to minimize traffic accidents and traffic jams and a safe, low-environmental-load and economical road transportation society through utilization of Intelligent Transport Systems (ITS) technologies with which vehicle and vehicle, road and vehicle, and vehicle and human can mutually and in timely form change information; people can use geographical information (G-space information) such as map information and location information on vehicles and people and utilize accumulated data.
6. **Life-cycle management of ICT equipment**

**Design:**

1. Develop equipment that is designed to minimize e-waste through optimized use of electronics, longer life and easy and efficient disassembly.
2. Ensure manufacturers declare the components used (and %, weight or volume) in the EEE manufacturing process, in order to reduce research expenses for the controlling and environment monitoring bodies which will enable the design of more efficient WEEE treatment and final disposal models, specifically addressing the polluting elements contained.
3. Identify ICT equipment that makes more efficient use of resources in particular equipment that are designed for longer life, for easy and effective dismantling and recovery of valuable parts.
4. Develop equipment that is designed to minimize e-waste through optimized use of electronics, longer life and easy and efficient disassembly.
5. Ensure the ICT industry require more energy-efficient solutions.
6. Explore new models of financing the development and deployment of ICT.

**E-waste management:**

1. Collect, refurbished and dismantled material recoveries that will provide opportunities to create green jobs as well as economic incentives in particular for the informal sector.
2. Avoid and minimize e-waste in order to protect workers’ health and the environment which producers, service providers, users and regulatory authorities must recognize as essential parts of the ICT equipment life-cycle management.
3. Reduce ICT contribution towards environmental harm, in particular in relation to electronic waste, including toxic waste, and in relation to the carbon emissions that are among the causes of climate change.
4. Educate all stakeholders in best ways to manage e-waste.
5. Consider e-waste management as a multi-stakeholders approach and a part of integrated solid waste management building on the 3R concept (reduce, reuse and recycle), Life Cycle Assessment and Value Chain Assessment.
6. Find integrated solutions to e-waste and other solid waste management together with the local garbage community rather than the informal sector.
7. Conduct research and studies about models on the treatment of EEE waste (WEEE) in developing countries.
8. Promote research on WEEE treatment and final disposal.
9. Treat e-waste in an environmental friendly way.
10. Design a standardized environment control model that enables to detect, in terms of geography, possible WEEE centers, and ensure it is actually done under local regulations, because there is no international protocol.
11. **Monitoring, early warning and disaster prevention**
12. Define goals and indicators for each action line, in particular establishing limits to the negative environmental impacts of the ICT sector.
13. Using ICTs to save lives through early warning systems for environment-related disasters – for example, flooding caused by cutting down trees around rivers.
14. Promote the establishment of public-private partnerships for funding early warning systems in those countries often on the receiving end of natural disasters, such as flooding, etc.
15. Encourage investments in climate and weather monitoring and prediction systems serving the development agenda.
16. Optimize water usage through ICT-driven comprehensive management systems.
17. Use ICT equipment in the elaboration of electronic weather forecast models for reducing the risks of natural disasters.
18. Develop strategies for people with disabilities when activating disaster evacuations, recognizing that the deaf cannot hear the instructions while the blind cannot see the escape route.

Strengthen the capacity of meteorological offices in all developing counties to ensure critical information for preparedness when disasters that can be predicted approach e.g. Sandy Cyclone.