



**THE NATIONAL WORKSHOP ON THE USE OF ICT IN DISASTER  
MANAGEMENT  
GRAND IMPERIAL, KAMPALA, UGANDA, OCTOBER 27 - 29 2009**



## **WORKSHOP REPORT**

### **Purpose of the report**

The report is a summary of the issues presented and discussed during the three day workshop in Kampala, Uganda. It includes conclusions that emerged for follow up and implementation by policy makers and other stakeholders.

### **Opening remarks by the Executive Director of UCC, Mr. Patrick Masambu**

Mr. Masambu welcomed the participants and remarked that the workshop was timely and relevant, given the need to be proactive in the event of natural disasters. He noted that natural disasters were inevitable occurrences that required advance preparation to mitigate their impact and pointed out that ICT was vital for communication during natural disasters

He said methodical planning and preparation could significantly minimize the risk of hazards becoming disasters. He noted that for disaster preparedness, response and recovery, there was an ever increasing variety of ICT tools and solutions available. He said ICT could play a critical role in highlighting risk areas, vulnerabilities and potentially affected populations by collecting statistical data or producing geographically reference analysis through Geographical Information Systems GIS.

He noted that the damage caused by any disaster could be addressed effectively only through careful planning, mitigation and prompt action, and ICT plays a pivotal role in disaster risk assessment, prevention, mitigation and management,

hence the need for robust ICT systems, efficient training, dedication to sharing best practices, and the ability to modify systems developed centrally to respond to changed needs in special circumstances or areas

Mr. Masambu concluded by stating that the more success in enabling the technology in vulnerable communities, the less will be the requirement for intervention. He invited the senior advisor/ITU regional officer to address the participants.

### **Opening remarks**

Mrs. Asenath Mpatwa, Senior Adviser, ITU Regional office for Africa commended the Government of Uganda for hosting this important event. She also thanked Mr. Patrick Masambu and his team for their wonderful hospitality. She gave an overview of ITU and its operation.

She noted that the workshop was evidence of the importance Uganda attached to the use of ICTs, notably for emergency communication. She also noted that Uganda had lost many people due to various disasters such as flooding and wars. She revealed that the lives and property lost since 2000 was increasing consequently it should be in everyone's interest to prevent or minimise such problems whenever possible, through effective use of ICTs. She said the frequency of natural disasters in the world was worrying and cited/quoted the Stern Review on the Economics of Climate Change, first published by the UK government two years ago, that highlighted the devastating impact of climatic change, particularly on the poorest communities.

She noted that the use of ICTs/telecommunication in disaster management had long been recognized and the impact of its absence or inadequacy during the



emergency situation led to increased calamities, suffering and loss of life and property due to poor coordination. She pointed out that communication should not be taken for granted particularly during emergencies. She noted that it was important to develop emergency plans to avoid disruption that could render emergency personnel incommunicado at critical moments, cause confusion and destruction of lives and property. She said disaster preparedness through emergency plans was fundamental in ensuring successful emergency operations.

She observed that planning for emergencies should include all stakeholders. Given the importance of ICTs, all emergency plans should incorporate ICT plans, with inbuilt redundancies. She pointed out that the workshop was intended to stimulate this process and this process should continue. She emphasized the need for regular and periodic drills to ensure that plans developed were functional.

Mrs. Mpatwa also emphasized that everyone needed access to clear, understandable instructions during an emergency. This includes persons with special needs and various types of disabilities because such persons are particularly vulnerable during natural disasters. She said this could be achieved through adoption of universal design standards in the plan and implementation of communication networks by using appropriate user interfaces for a wide range of assistive devices, which are able to receive emergency communication. She hoped the workshop would enable participants to work towards a common goal of providing Uganda with robust emergency communications that were truly inclusive, effective and functional.

**Keynote address by UCC Commissioner Geoffrey Ssebuggwawo on behalf of the Chairman, UCC**

He welcomed the participants and delegates from ITU. He said it was an excellent opportunity for the Government of Uganda, business and public-private sector partnership, and other stakeholders to share experiences and ideas. He commended ITU and UCC for facilitating the workshop and noted that between 1980 and 2006 a lot of property and lives were lost due to natural disasters.

He also noted that recent climatic events highlighted the inadequacy of regional and national disaster preparedness, consequently there was need for strengthening national disaster management policies and procedures; objective investigation; early dissemination of warning communication and better flow of early warning information. He said available technologies such as Internet, GIS, and remote sensing could help to mitigate disasters.

Commissioner Ssebuggwawo explained that Uganda had collaborated with ITU and telecommunication development partners on disaster management issues for a long time. He said during the 2007 floods, ITU assisted Uganda with 20 Thuraya hand-held satellite phones and two Inmarsat Global Area Network (GAN) satellite terminals. Following an agreement between ITU and the Uganda Communications Commission, ITU also paid for airtime related to the usage of the equipment in the country's relief work. He thanked Dr. Zavazava for making this possible.

He concluded by asserting that Uganda took seriously ICT's importance in prediction and management of disasters, changing the way we live, conduct of commerce and response to disasters. Thereafter, he declared the workshop open.

*Session I: Overview of the role of Information and Communication Technologies in Disaster Management today*

Dr. Cosmas L. Zavazava, Head Least Developed countries, Small Island Developing States and Emergency Telecommunications unit, BDT/ITU, thanked Mr. Masambu and his team for making this event possible and welcomed the participants. He enumerated various disasters and their impact, most affected countries and said flooding had become terrible, causing a lot of destruction, particularly in China. He advised everybody to be prepared.

Dr. Zavazava gave an overview of disaster management today and the role Information and Communication Technologies play in all the phases of disaster management.

He noted that since 1990 temperatures have been rising. He also explained that there was need to raise awareness, disseminate critical information, and incorporate early warning systems to help people to respond disasters in a more effective manner.

He explained appropriate methods of dealing with disasters including multi-hazard early warning systems, and use of various technologies to coordinate activities and disseminate information people need. Dr. Zavazava emphasized that all stakeholders should work together closely and complement each other. He also pointed out the need for better coordination, disaster prediction, standard operating procedure and community based approaches.

In his concluding remarks, Dr. Zavazava observed that emergency telecommunication plan should be an integral part of the national plan in disaster management, consultation and coordination should be top priorities, simulations and drills could lead to successful execution of any plan.

### ***Session I: Role of Geographical Information Systems (GIS) in Disaster Management.***

Mr. Isaac Wanasolo, training advisor, Geographical Information Communication Ltd, explained the significant stages in disaster situations such as planning, response and recovery. He noted that GIS could help to enhance planning and bring together all other technologies. He pointed out the common objectives in a disaster situation; protection of lives and property, saving lives, critical and timely information, appropriate and timely response, basic life support needs and expediting recovery.

Mr. Wanasolo also pointed out the common challenges, needs and desired outcomes. He emphasized the need for appropriate technology and the right people to use it. He also mentioned common disasters and emphasized that GIS could be a very important tool in disaster management.

### ***Session II: Overview of Disaster Vulnerability in Uganda***

Ms Rose Nakabugo, Assistant Commissioner for Relief and Disaster Preparedness and Refugees, Ministry of Relief and Disaster Preparedness explained the role of the Ministry. She explained the concepts including hazards, risk and disaster. She noted that disasters cause widespread human, material and environmental damage/losses, and pointed out some causes of disasters. She also mentioned Major disasters that affected Uganda such as civil wars, draught and flooding, and pointed out areas most affected

Nakabugo enumerated some of the major challenges in disaster management including assessment of damage and losses; information management, data collection, processing, analysis and dissemination, limited stakeholder participation and weak coordination and institutional structures.

***Session V: Challenges of climate change and the role of ICT***

Dr. Cosmas A. Zavazava noted that the presentation was based on a study of about 14 countries and therefore representative of the general practice. He explained the components of a National Emergency Telecommunication Plan (NETP) and how they work. He observed that NEPT discussed arrangements for the planning and deployment of telecommunication resources at all stages of disaster management and pointed out the need to formulate emergency telecommunications response plans in coordination with the national authority for emergency management. Dr. Zavazava remarked that it was critical that we interlink with our neighbor and illustrated an emergency telecommunications response operating procedure.

***Session VI: Presentation on the role and challenges confronting radio amateurs in deploying telecommunication resources for disaster response by***

***Mr. David Firth, Africa Director of Engineering, Blessing for obedience***

Mr. David Firth gave an overview of Amateur Radio Services. He said amateurs were community service minded and had a vested interest in the wellbeing of the community that they live in as well as their neighbors. Mr. Firth explained the requirement for amateur radio operators and the skills they require. He pointed out the goals of amateurs such as assisting civil authorities during civil disasters and helping in areas where civil authorities need additional resources and man power.

## **Recommendations**

- UCC's role in emergency telecommunications must be strengthened and it should work closely with all stakeholders
- Encourage more dialogue and collaboration between all stakeholders in the ICT sector.
- Need to empower organizations that can help to mitigate the impact of disasters through the use of ICT or help avert them
- Do more research on how ICT could be used to enhance disaster management
- Raise awareness on the deployment and use ICT for disaster management
- Train different stakeholders in the use of ICT before, during, and after disasters
- Develop curricula for the use of current and emerging ICT systems in disaster management
- Involve more organizations and people in emergency telecommunications
- Conduct exercises and drills together with the Ministry of Relief and Disaster Preparedness, and Refugees in the use of ICT for disaster preparedness
- Establish a comprehensive National coordination Mechanism for the ICT sector chaired by UCC.
- The National coordination Mechanism should contribute to the work of the National Coordination/operations Centre established under the Ministry of relief and Disaster Preparedness
- Develop Standard Operating Procedures
- UCC to coordinate the use of telecommunications, GIS and remote sensing for effective disaster management



- Establish a pilot project for early warning that should be integrated with available means of communication
- To draw up an Action Plan by February 2010.