"ICT as an Enabler for Smart Water Management"​

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*Opening Address*

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Ladies and Gentlemen

Colleagues and friends

Salam alikum

Ahlan Wasahlan

Bonjour

Bienvenue

Good morning and welcome to this the first ever ITU event on Smart Water Management.

On behalf of the ITU Secretary-General I would like thank the Ministry of Communication and Information Technology, and the National Telecommunication Regulatory Authority, for facilitating and hosting this workshop, and Dr. Amr Badawi, Executive President, NTRA for being here to welcome us.

Our thanks also go to Etisalat for sponsoring this event.

It is always a challenge to start a new initiative, and my ITU colleagues from Headquarters, our Arab Regional Office, and the African Region Office, and myself, are fortunate to have such excellent partners to kick-off this important new area of work. Without your kind support and the assistance this event would not have been possible. I would also like to take this opportunity to offer my sincere gratitude to our many expert speakers and moderators who have given their time to be with us here.

Smart water management is a critical issue. Economic growth, climate change, and rising populations are all affecting the availability of water resources.

Let me place this in context with some recent statistics. According to UN estimates, 85 per cent of the world’s population lives in the driest half of the planet. Around two thirds of Africa is arid or semi-arid, and more than 300 of the 800 million people in sub-Saharan Africa live in a water-scarce environment.

Globally, 783 million people do not have access to clean water and almost 2.5 billion do not have access to adequate sanitation. Six to eight million people die annually from the consequences of water-related disasters and diseases.

Moreover, a number of effects linked to climate change, such as lengthy droughts and extreme weather events, are worsening the situation. Water shortages are at the core of many of the UN Millennium Development Goals (MDGs), one of which is to halve the number of people without safe access to water by 2015.

The water management challenge for the Nile River basin, as in many other river basins throughout the world, is sustainability of water supply in the face of intense population growth, recurring drought, and increasing competition for water.

According to the UN World Water Development Report, by 2050 at least one in four people is likely to live in a country affected by chronic or recurring shortages of freshwater.

Unfortunately this region is one of the areas most likely to be directly affected by climate change. While global average rainfall is anticipated to increase marginally, for the Middle East and North Africa (MNA) region, the picture is quite different. The 2008 International Panel on Climate Change (IPCC) report anticipates that in the next century this region will see declining rainfall (between 10 percent to 25 percent decrease); declining soils moisture (between 5 percent to 10 percent decrease), declining runoff (between 10 percent to 40 percent decrease), and more evaporation (between 5 percent to 20 percent increase). Agriculture accounts for 80–90 percent of water use in most of this region, and this use is estimated to increase globally by roughly 19 per cent by 2050

Irrigation is necessary for the production of around half of the world's food supply, and it accounts for about three-quarters of water withdrawals worldwide. But in information technology terms, this a ‘lossy’ solution.

To complicate matters further, water is not confined to national borders. In common with many countries, Egypt shares at least one international water basin.

In the true spirit of the United Nations, coordination and cooperation between our countries will be key.

The application of globally coordinated information and communications technology (ICT) solutions has the potential to substantially reduce water consumption and waste.

ICT provides a unique opportunity for water stakeholders to obtain information in near real-time about a number of physical and environmental variables, such as temperature, soil moisture levels, and rainfall, through web enabled sensors and communication networks. Smart metering technologies can also provide individuals, businesses and water companies with information about their own water use; thus raising awareness about usage, locating leakages, and having better control over water demand.

Technologies such as the semantic sensor web (SSW), and remote sensing with satellite and geographical information systems, can be used by water authorities to obtain information in real time about water use, track and forecast the level of rivers, and identify new sources of fresh water. With the impact of climate change, reliance on historical weather patterns is no longer viable for forecasting. The availability of information about current conditions in a particular situation, on a timely basis, is crucial for water resource management.

ITU as the UN specialized agency for ICTs clearly has a role to play in promoting the application of this technologies to this critical issue.

The World Telecommunication Standardization Assembly (WTSA) Resolution 73 on ICT, environment and climate change, adopted in Dubai in November 2012, resolves to promote the adoption of ITU-T Recommendations for enhancing the use of ICTs as potent, cross-cutting tools to assess and reduce GHG emissions, optimize energy and water consumption, and minimize e-waste, by improving its management across economic and social activities.

ITU-T Study Group 5 at its meeting last January addressed this Resolution within the context of its Question 15/5 on “ICTs and adaptation to the effects of climate change”. Ms Nevine Tewfik from NTRA Egypt leads this work, so I am sure it is in good hands!

At this, the first ITU workshop on this critical topic, we will address a number of issues including: weather forecasting; technological solutions and standards; smart metering; climate smart agriculture; water governance, institutions and regulations; stakeholder engagement; and planning water resources and land use.

In particular we will look at the water management challenges faced by countries in the Nile river basin, and the opportunities new technologies provide to improve the management and use of water for domestic purposes, agriculture, and in cities, and to clearly identify the future role for ITU.

I am sure this will be the first of many such events. We hope to conclude tomorrow with an agreed Call For Action that will indicate how ITU, in collaboration with many of the participants here, can help countries in the Nile River Basin, and others around the world facing similar challenges, to implement best practices and technologies for smart water management. We hope to track progress in implementing the Call for Action in future events.

What will be essential is to bring together the various stakeholders: international and regional organisations; environment, agriculture, irrigation and communications ministries; government agencies; regulators; industry; and academia in a collaborative framework. We have representatives of all these stakeholders here so I am confident that with your support we can move forward with this Call to Action.

I wish you all a productive and enjoyable event, and look forward to seeing a Call for Action that specifies some clear and achievable goals to address this most challenging of problems.

Thank you.