**Abstract:**

"ICT for Smart Water Management: Challenges & Opportunities in the Nile Basin"

Information and Communication Technology (ICT) can play an important role in what may be called Smart Water Management (SWM). Integrated Water Resources Management (IWRM) which is a more commonly used term in the water sector calls for using advanced technological tools in water management. Technological tools are important for monitoring water flows, groundwater tables, water resources assessment, measuring water consumption, water projects impact assessment, and simulating surface water regimes, river sediment transport, and groundwater flows and contaminant transport.

ICT tools that can be of great assistance in implementing SWM include Remote Sensing, Geographic Information Systems (GIS), telemetry, GSM mobile data transfer, remote water meters reading devices, data loggers, remote & water level controlled river gates, soil moisture water requirements devices, time-control drip and sprinkler irrigation systems, smart phone applications, surface flow & sediment transport simulation models, groundwater simulation models, weather and flow forecasting models, and Decision Support Systems for water planning, management, and impact assessment.

The challenges that are facing the shared management of the transboundary Nile River basin by the 11 riparian countries can be overcome by the opportunities that can be offered by the vast range of ICT applications.