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Flooding impacts on shallow groundwater and associated water supply in the coastal region of Nigeria

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Nigeria witnessed the wettest season between August and October 2012 characterized by heavy downpour and torrential rainfall. The country which has rainy season from May to September, suffers from seasonal flash flood, which are sometimes lethal, especially in rural areas of overcrowded slums where drainage is poor. Though flooding has been an annual occurrence especially in the last Ten years, however the 2012 episode was described as the worst in terms of human and material costs. The consequence of the 2012 episode was flooding which affected water supply for domestic purposes in 24 out of 36 states of Federation. The implication was the breach of water distribution pipelines and filling of wells with debris and saltwater, especially from coastal overflow in. Monthly measurement of post flooding salinity, Total dissolved Solids, Electrical Conductivity and Temperatures in surface wells and boreholes commenced in Oyo and Ogun states in November, 2012, immediately after the disaster. Data is expected to help a Nation, whose 71% of urban dwellers depend on streams and surface wells and 100% of rural dwellers depend of surface wells and boreholes, to determine the period required for the wells to achieve a tolerable salinization after the flood episode. The model would be very useful for remediation purposes in future flood episodes.

Biography

Olukayode Dewumi Akinyemi pursued his Ph.D. in Earth Physics at University of Ibadan, Ibadan, Nigeria in 2004. He joined the Department of Physics, Federal University of Agriculture, Abeokuta, Nigeria as an Assistant Lecturer in 1998. He is presently an Associate Professor of Environmental Earth Physics and the immediate past Head of Department of Physics in the same Institution. His areas of interest are coupled heat-mass flow in the subsurface, underground/surface water pollutions and hydrothermal properties of porous media. He is a Fellow of the Indian Society of Earth Scientists, and has more than 20 publications in reputable journals.

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