

Prize Winners

Best Poster Award



*Luke Omondi OLANG, PhD candidate
BOKU, Institute of Water Management,
Hydrology and Hydraulic Engineering*

Mr. Luke Olang is a researcher from Egerton University, Njoro in Kenya. He is currently undertaking his doctorate studies at the Institute of Water management, Hydrology and Hydraulic Engineering, BOKU University, Vienna with the support of the ÖAD North-South-Dialogue Scholarship Programme. Mr. Olang is also an alumnus of Hebrew University of Jerusalem in Israel, where he undertook studies on exploration, exploitation and management of ground water systems. He has also worked on consulting projects revolving around the design of irrigation systems for sustainable agriculture in East Africa and the application of geospatial tools for water resource management in Kenya.

His current doctoral research is on the application of GIS on the analysis of land cover change impacts on floods of the Nyando river basin in Kenya. This study was born out of the fact that many river basins in Kenya undergo significant land cover changes due to pressure from population increase. In the Nyando basin such changes have led to the amplification of floods, typical of the basin during the long rainy season. Mr. Olang therefore applied satellite images

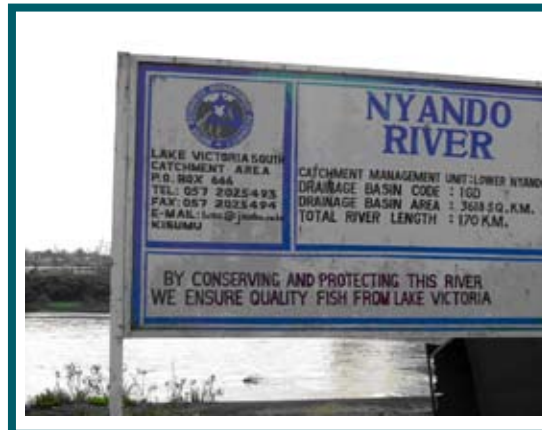
to classify and detect the land cover changes of the last four decades and model their impact on flood characteristics with the aim of providing the relevant information for catchment management.

Part of this work was recently presented during the 12th Biennial Conference of the Euro-Mediterranean Network of Experimental and Representative Basins (ERB), Hydrological Extremes in Small Basins held in Cracow from September 18th - 20th , 2008. This contribution entitled "Impact of land cover changes on the flood hydrology of headwater sub-catchments in the Nyando River Basin of Kenya" was awarded the best poster presentation during the conference.

Mr. Olang's research is still ongoing and he is currently modeling land use scenarios aimed at reducing flood runoffs within the basin. In the future he is interested in calibrating a hydraulic model for flood management based on satellite flood data. This, he says, is an important step in bridging the challenges associated with the lack of measured data in the ungauged river basins in the



Land degradation due to surface runoff



The Nyando River basin



Portion of the Nyando basin upstream of Ahero township

developing countries. He believes that the current availability and access to a large number of spatial datasets for hydrological modeling is a tool that should be exploited by researchers in the developing countries. To achieve this, however, there is the dire need for continued capacity building aimed at training experts from the nations to cope with the technology advances.

On behalf of the ÖAD we congratulate Mr. Olang and wish him well in his future endeavors.