


<p><b>KILONZO, Fidelis Ndambuki</b>  <b>Title: Dr. Eng</b>  <b>Department:</b> Agricultural &amp; Biosystems Engineering  <b>Position:</b> Senior Lecturer  <b>Email:</b> kilonzo.fidelis@ku.ac.ke</p> <p><b>Area of specialization</b>  Water, Environment and Sanitation (WES)</p> <p><b>Research interests</b></p> <ol style="list-style-type: none"> <li>1. Pro-poor low cost Water supply and Sanitation technologies</li> <li>2. Ecological sanitation</li> <li>3. Climate change, Earth sciences and water resources Engineering</li> <li>4. Sustainable wastewater and solid waste Management</li> </ol>	
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### **Academic & professional Qualifications**

1. PhD Engineering, 2014, Vrije Universiteit Brussels(Belgium)/UNESCO-IHE (Netherlands)
2. Msc. Environmental Sanitation (2005), Ghent University, Belgium
3. Msc Water Resources Management (2003), Lunenburg University, Germany
4. Bsc. Agricultural Engineering (1996), Jomo Kenyatta University of Agric & Technology, Kenya

### **Professional training**

1. 2019: Flood and Drought Hazard Mitigation, ICPAC, Nairobi, Kenya
2. 2019: Christian counselling course, Crisis Prevention Centre, Nairobi, Kenya

3. 2017: Groundwater Data Collection and Interpretation, UNESCO-IHE, Institute of Water Education in Delft, The Netherlands
4. 2016: Land Cover Mapping and Agriculture Change Assessment Workshop– ECONET-FAO methodology \_ RCMRCD, Nairobi, Kenya
5. 2008: Project cycle Management course, Humboldt University, Berlin
6. 2008: Conflict Prevention and Resolution course, Humboldt University, Berlin

## **Employment history**

### **Current Position**

Head of Department and Senior Lecturer: Agricultural & Biosystems Engineering Dept, Kenyatta University, Kenya

### **Other professional responsibilities**

- Chair, Agriculture subcommittee of the Institution of Engineers of Kenya (IEK), Policy, Research and Advocacy Committee (2020-2022)
- Member, Sanitation and water treatment Technical Committee, Kenya Bureau of Standards.

### **Other employment positions**

2016 -2018: Senior Lecturer and Examination Coordinator Civil Engineering dept, Kenyatta University, Kenya

2009-2016: Lecturer: Civil Engineering dept, Kenyatta University, Kenya

2008: Research Scientist (Engineering & Environment), Kenya Industrial Research and Development Institute (KIRDI).

2006-2008: Environment Officer, National Environment Management Authority (NEMA).

1998 - 2001: Project Engineer, Rift Valley Machinery Services Ltd, Nakuru

## **Publications**

### **1. Articles in refereed journals**

- Tadesse A., F. Kilonzo, A. van Grinsven, and W. Bauwens, (2017) Evaluation and application of alternative rainfall data sources for forcing hydrologic models in the Mara Basin, Hydrology Research.
- Kilonzo F., F. O. Masese, A. Van Griensven, W. Bauwens, J. Obando, and P. N.L. Lens, (2014). Spatial-temporal variability in water quality and macro-invertebrate assemblages in the upper Mara river basin, Kenya, Physics and Chemistry of the Earth, 67-69,93-104.

- Kilonzo F., U. Mutwiwa, S. Mutua, and M. Waweru, (2012). Evaluating the use of Constructed Wetland in the Treatment of Tannery Wastewater, Kenya Science, Technology and Innovation Journal.
- Kilonzo F., Van Griensven A., Obando J., and Bauwens W, (2012). Using Cluster and Averaging technique to improve model performance in data poor catchments, Centre International Capacity Development (CICD) Series (ISSN 1868-8578)
- Van Griensven A., P. Ndomba, S. Yalew, and F. Kilonzo, (2012) Critical review of the application of SWAT in the upper Nile Basin countries. Hydrol. Earth Syst. Sci, 16, 3371-3381
- Coetsiers, M., F. Kilonzo, and K. Walraevens; (2008). Hydrochemistry and source for high Fluoride in groundwater of the Nairobi area, Kenya, Hydrological Sciences (IAHS) 53(6) pg 1230-1240

## **2. Books**

- Kilonzo, F.N., 2014. Assessing the Impacts of Environmental Changes on the Water Resources of the Upper Mara, Lake Victoria Basin, CRC Press/Balkema, ISBN 9781138026384

## **3. Presentation of papers at Academic and professional conferences**

- Feeding city population on dying waters, how can we move into the future?" 22nd International conference on Environmental indicators (ICEI2017), 1-5 August 2017, Helsinki, Finland.
- Quantity or Quality? Threats from land cover changes on water resources of the Mara River basin, 3 rd International Water Association (IWA) development congress, 14-17 November 2013, Nairobi, Kenya.
- Evaluation of a modified septic tank system optimized for effluent re-use in Agriculture, paper presented at the 3 rd International Water Association (IWA) development congress, 14-17 November 2013, Nairobi, Kenya
- Food production systems and the farmers' adaptive capacity to Climate Change in the Upper Mara River Basin, Kenya, paper presented at the 3rd Lake Victoria Basin Scientific conference, 22-23 Oct, 2012, Entebbe, Uganda.
- Spatio-temporal variation in water quality of the upper Mara River basin, paper presented at the WaterNet/ Symposium, 31 Oct- 2 Nov, 2012, Johannesburg, South Africa.

- Kilonzo F., A. Van Griensven and W. Bauwens, (2012) Distributed validation of hydrological model using field and remotely sensed data in Sepplet et al., (eds): Managing resources of a limited planet: pathways and visions under uncertainty, Sixth Biennial meeting, Leipzig Germany, International Environmental Modelling and Software Society (iEMSs).
- Selecting a Potential Evapotranspiration method (PET) in the absence of Essential climatic input data, paper presented at the SWAT International Conference 14-17 June, 2011, Toledo, Spain,
- Improving model predictive capacity in poorly gauged catchments, paper presented at the LAKE AND CATCHMENT RESEARCH SYMPOSIUM (LARS2011) conference, 14-18 March, 2011, Nairobi, Kenya

## **Research**

### **1. Funded projects**

1. Principal investigator - Eco-friendly Urban and Peri-Urban Agriculture (UPA) - Kenyatta University VC grant-2016
2. Principal investigator - Improving the research capacity in Kenyatta University-NUFFIC/UNESCO-IHE -2014
3. Principal investigator - Evaluating the use of constructed wetland in the treatment of tannery wastewater - National Council for Science and Technology (NCST) - 1998
4. Co-investigator - Drought Early warning systems, Is it time for Kenya to have one? - National Research Fund (NRF-Kenya) shortlisted for funding - 2017

### **2. Postgraduate supervision**

- Currently supervising 4 PhD students in the general area of water, energy and environment
- Supervising 6 Msc Students from diverse backgrounds including engineering, geography, public health, environmental sciences

## **Stakeholder engagement beyond academia**

### **1. Affiliation to Professional Credentials**

- Registered Professional Engineer (EBK -A3070)
- Member Institution of Engineers of Kenya (IEK -M5524)
- Founding Member Environment Institute of Kenya (EIK)
- Registered Lead Expert for EIA/EA (Reg. 1500)
- Member. German water Network, (GAWN)
- Member, Holland Alumni
- Member, DAAD Alumni

- Member. VLIR Alumni

## **2. Convening and coordinating conferences**

- Workshop Coordinator, GIS training workshop on Water Resources Management, 17 – 21 February 2014, Kenyatta University, Nairobi, Kenya
- Team leader, Technology fair sub-Committee, 6th ICAT conference on Appropriate technology, October 2014, Kenyatta University, Nairobi, Kenya

## **3. Relevant skills**

- Image processing software including ERDAS IMAGINE, ENVI
- GIS software including Arcview, ArcGIS,
- Computer Aided Design software including AutoCAD, SimScale.
- Hydrological modeling
- Open data kit tools

## **4. Social Responsibility engagements**

- Chairman - St Clare SCC, St Augustine Parish, Juja; 2013-2019
- Organising secretary. Madre Teresa Choir, St Augustine Parish, Juja; 2016 – to date
- Secretary- Riverside Estate Welfare group, Juja; 2015 – To date
- Secretary- Twitethyie Investment group -2018- to date

## **5. Proficiency of languages**

English - Reading - Excellent, Written - Excellent, Spoken - Excellent

Kiswahili - Reading - Excellent, Written - Excellent, Spoken - Excellent

Kikamba - Reading - Excellent, Written - Excellent, Spoken - Excellent

German - Reading - good, written - good, Spoken - Fair

Dutch - Reading - Fair, Written - Fair, Spoken - Fair

Kikuyu - Reading - Fair, Written - Fair, Spoken - Fair

French - Reading - basic, Written - basic, Spoken - basic