


<p>KILONZO, Fidelis Ndambuki</p> <p>Title: Dr. Eng</p> <p>Department: Agricultural & Biosystems Engineering</p> <p>Position: Senior Lecturer</p> <p>Email: kilonzo.fidelis@ku.ac.ke</p> <p>Area of specialization</p> <p>Water, Environment and Sanitation (WES)</p> <p>Research interests</p> <ol style="list-style-type: none"> 1. Green Economy and Sustainable diets 2. Pro-poor low cost Water supply and Sanitation technologies 3. Ecological sanitation 4. Climate change, Earth sciences and water resources Engineering 5. Sustainable wastewater and Solid waste Management 	
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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

- Fidelis N. Kilonzo, Winnie M. K., Joyce W. K., Juliana K., Daniel K., Catherine M., and Scholastica M., (2020) Wastewater Reuse For Urban And Peri-Urban Agriculture: Why It's Not Happening Soon? Journal of Engineering in Agriculture and the Environment (JEAE), Volume 6. No 2 pg .32-40
- Sarakikya, H.; Kilonzo, F.; Gumbe, L, Kiplagat, J., (2020) Prediction Of Temperature And Flue Gases For The Incineration Process Using Mathematical Modeling And Computer Simulation, Journal of Engineering in Agriculture and the Environment (JEAE), Volume 6. No 2 pg .1-11.
- 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 and Book chapters

- Daniel Kyalo Willy, Fidelis Kilonzo and Juliana Kii, (2020) Who Cares? Consumer Attitudes and Purchase Decisions on Peri-Urban Agricultural Commodities in the Absence of Information Asymmetry: in Kii and Njuguna 2020 (eds) *Food Safety, from Farm to Fork: Emerging and Re-emerging Issues*, Cambridge Scholars Publishing, ISBN (10): 1-5275-5583-6 ISBN (13): 978-1-5275-5583-9.
- Kii Juliana, Kilonzo Fidelis, Kyalo Daniel, Muui Catherine and MathengeScholastica (2020) Potential for Wastewater Re-Use in Urban and Peri-Urban Agriculture to Mitigate Household Food Insecurity in Nairobi, Kenya: in Kii and Njuguna 2020 (eds) *Food Safety, from Farm to Fork: Emerging and Re-emerging Issues*, Cambridge Scholars Publishing, ISBN (10): 1-5275-5583-6 ISBN (13): 978-1-5275-5583-9.
- 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

- Paradigm shift in Linking engineering with the roots; Engineering the Food security agenda, 27th IEK International Conference, 24th to 27th November 2020, PrideInn Paradise Beach Resort, Mombasa, Kenya

- 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)
- Corporate 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