

CURICULUM VITAE



PERSONAL DETAILS

Name: **OPERE ALFRED OWUOR**

Date of birth: 13th March 1963

Marital status: Married

Address: P.O. BOX 15160, 00100 (GPO) NAIROBI.

Tel. 4441045 (day), 020-3540264 (home), 0722858660 (mobile)

Email: Office: aopere@uonbi.ac.ke Personal: aopere2005@yahoo.com

CAREER OBJECTIVE

To become a Consultant/Lead researcher in Meteorological and Hydrological sciences and Train young professionals in the same fields

CAREER AND PERSONAL ATTRIBUTES

Career Attributes:

- ❖ Believes in quality training and student satisfaction.
- ❖ Has been exposed to various National and International Research groups
- ❖ Believes in quality and applied research

Personal Attributes:

- ❖ A team player and believes in personal motivation
- ❖ Can work with minimal supervision

ACADEMIC QUALIFICATIONS

i) a. Institution attended: University of Nairobi

Year: 1993-1999

Result obtained: Doctor of Philosophy (**Ph. D in Meteorology**)

Title of thesis: *Stream flow characteristics in Kenya (with emphasis on rainfall-runoff modeling in Kenya using conceptual and black box models)*

b. Institution attended: Friedrich-Schiller University, Jena-Germany

Six months attachment (August 1997-February 1998): During this period, I had an exposure on, applications of GIS (arc/info and arc/view) in water resources management and the use of USGS developed PRMS in catchment modeling.

(ii) Institution attended: University of Nairobi

Year: 1988-1991

Result obtained: Master of Science (**MSc. in Meteorology**)

Title of thesis: *The use of a rainfall-runoff model in the forecasting of discharge from rainfall in the Upper Athi river catchment*

(iii) Institution attended: University of Nairobi

Year: 1985-1988

Result obtained: Bachelor of Science degree (**BSc. Hons- Upper second class**)

Subject: Meteorology

PUBLICATIONS IN PEER REVIEWED JOURNALS/ARTICLES

1. Opere, A.O., F.M. Mutua and L.A. Ogallo (2001): Stream flow regionalization using discordancy and heterogeneity measure statistics. *Journal of African Meteorological Society*, vol.5 No.2, 2002, pp71-76
2. Opere, A.O., F.M. Mutua and L.A. Ogallo (2003): The need for a flood forecasting system in Kenya. *Journal of African Meteorological Society*, Vol.6, No.1 (2003) p6-14
3. N. J. Muthama, A. O. Opere and C. Oludhe (2003): Equatorial Total ozone as a predictor of sea surface temperatures useful for East African seasonal rainfall prediction. *Journal of African Meteorological Society*, vol.6.no2, (2003) p1-10
4. J. Muthama, A. O. Opere and C. B. Lukorito (2003): Utilization of Meteorological products in Agriculture and Water sectors in Central and Eastern Kenya. *Journal of African Meteorological Society*, vol.6.no1, (2003), p7-15
5. Opere A.O. and Z.O. Owiti (2004): Flow routing in river Yala using the Muskingum technique. *Discovery and Innovations, African Academy Science publishers, Vol.19 No.1; (2007), 17-22*
6. Shem O. Wandiga, Maggie Opondo, Daniel Olago, Andrew Githeko, Faith Githui, Michael Marshall, Tim Downs, Alfred Opere, Pius Z. Yanda, Richard Kangalawe, Robert Kabumbuli, Edward Kirumira, James Kathuri, Eugene Apindi, Lydia Olaka, Laban Ogallo, Paul Mugambi, Rehema Sigalla, Robinah Nanyunja, Timothy Baguma, and Pius Achola (2006): *Vulnerability to Climate-Induced Highland Malaria in East AIACC Working Paper No.25; 47pp*
7. Opere, A. (2005): Hazard Risk assessment in Mount Kenya headwaters: Sustainable Management of Headwater Resources; research from Africa and India, *United Nations University*, p165-177; Jansky L., Martin J. Haigh and H. Prasad (eds).
8. Opere A.O., Mkhanda S.H. and P. Willems (2006): At Site Food Frequency Analysis for the Nile Equatorial basins. *Journal of Physics and Chemistry of the Earth 31 (2006) 919–927. Elsevier Publishers*
9. Opere, A.O., V.O. Awuor, S.O. Kooke and W.O. Omoto (2006): Rainfall characteristics as an indicator of drought in semi-arid Kitui district of Kenya. *Discovery and Innovations, African Academy Science publishers, Vol.18 No.3; (2006), 235-245*

10. S.O. Wandiga, M. Opondo, D. Olago, A. Githeko, F. Githui, M. Marshall, T. Downs, A. Opere, P.Z. Yanda, R. Kangalawe, R. Kabumbuli, E. Kirumira, J. Kathuri, E. Apindi, L. Olaka, L. Ogallo, P. Mugambi, R. Sigalla, R. Nanyunja, T. Baguma and P. Achola (2006): *Vulnerability to climate induced highland malaria in East Africa; AIACC Working Paper No. 25 March 2006*
11. Pius Yanda, Shem Wandiga, Richard Kangalawe, Maggie Opondo, Dan Olago, Andrew Githeko, Tim Downs, Robert Kabumbuli, Alfred Opere, Faith Githui, James Kathuri, Lydia Olaka, Eugene Apindi, Michael Marshall, Laban Ogallo, Paul Mugambi, Edward Kirumira, Robinah Nanyunja, Timothy Baguma, Rehema Sigalla, and Pius Achola (2006): *Adaptation to Climate Change/Variability-Induced Highland Malaria and Cholera in the Lake Victoria Region; AIACC Working Paper No. 4; 37pp, October 2006*
12. Africa Environment Outlook-2 (AEO-2), 2006: Chapter 4: Freshwater; p119-154
Lead Authors: Kevin Pietersen, Hans Beekman
Contributing Authors: Allali Abdelkader, Hesham Ghany, Alfred Opere, Eric Odada, Tenalem Ayenew, Dagnachew Legesse, Luc Sigha-Nkamdjou, Lekan Oyebande, Ahmed Abdelrehim
13. Africa Global Change Synthesis (AGS) book, 2006: Chapter 8: Water resources and global change. *Global Change Processes and Impacts in Africa; pp.152-172. Lead Author: A. Opere; Contributing Authors: I. Saayman and F. Githui*
14. Daniel Olago, Michael Marshall, Shem O. Wandiga*, Maggie Opondo, Pius Z. Yanda, Richard Kangalawe, Andrew Githeko, Tim Downs, Alfred Opere, Robert Kabumbuli, Edward Kirumira, Laban Ogallo, Paul Mugambi, Eugene Apindi, Faith Githui, James Kathuri, Lydia Olaka, Rehema Sigalla, Robinah Nanyunja, Timothy Baguma, Pius Achola (2007): *Climatic, Socio-economic and Health Factors Affecting Human Vulnerability to Cholera in the Lake Victoria Basin, East Africa; Ambio Journal, vol.36 no.4*
15. Ndeti, C.J. , Opere, A.O. and Mutua F.M. (2007): Flood frequency analysis in Lake Victoria basin based on tail behaviour of distributions. *Journal of KMS, vol., pp.44-54. ISSN 1995-9834.*
16. UNEP 2008. Beekman H.E., Abu-Zeid K., Afouda A., Hughes S., Kane A., Kulindwa K.A., Odada E.O., Opere Alfred., Oyebande L. and Saayman, I.C. : “**Freshwater under Threat**”: Assessing the Vulnerability Assessment of Freshwater Resources to Environmental Change in Africa. United Nations Environment Programme (UNEP), Nairobi, Kenya and WRC, South Africa. ISBN: 978-92-807-2951-1
17. **Lead author** for IDRC publication on “Using seasonal climate forecasts and indigenous climate knowledge in sub-Saharan Africa: Lessons from participatory action research projects (PAPs)” 2010
18. D.O. Olago, A.O. Opere and J. Barongo (2009): Holocene palaeohydrology, groundwater and climate change in the lake basins of the Central Kenya Rift. *Hydrological Sciences–Journal–des Sciences Hydrologiques*, **54**(4) August 2009 Special issue: *Groundwater and Climate in Africa*, pp765-780
19. Opere A.O., Mkhanda S. and P. Willems (2009): Homogeneity Testing for Peak Discharge in Catchments in the Equatorial Nile Basins. *Journal of Meteorology and Related Sciences*, **3**, 13-20(2009)
20. S.O. Wandiga, M. Opondo, D. Olago, A. Githeko, F. Githui, M. Marshall, T. Downs, A. Opere, P.Z. Yanda, R. Kangalawe, R. Kabumbuli, E. Kirumira, J. Kathuri, E. Apindi, L. Olaka, L. Ogallo, G. Ouma, C. Oludhe, P. Mugambi, R. Sigalla, R. Nanyunja, T. Baguma and P. Achola (2010): *Vulnerability to epidemic malaria in the highlands of Lake Victoria basin: the role of climate change/variability, hydrology and socio-economic factors; Climate Change (2010) 99:473-497*

21. Opere A.O. and Okello B.N. (2011): Hydrologic Analysis for River Nyando using SWAT; Hydrol. Earth Syst. Sci. Discuss., 8, 1765–1797, 2011)
22. Rwigy S.K., Opere A.O. and F.M. Mutua, (2012): Comparative Study of Rainfall-Runoff models over the Nyando River Basin. *J. Meteorol. Rel. Sci.*, 6, 35-49(2012)
23. Muthama, N.J., W.B. Masieyi, R.E. Okoola, A.O. Opere, J.R. Mukabana, W. Nyakwada, S. Aura and B.A. Chanzu (2012): Survey on the Utilization of the Weather Information and Products for Selected Districts in Kenya. *J. Meteorol. Rel. Sci.*, 6, 51-58(2012)

OPEN AND DISTANT LEARNING MATERIALS WRITTEN & REVIEWED

1. SMR 103: Quantitative methods & Computer Applications I
2. SMR 309: Hydrometeorology I
3. SMR 307: Thermodynamics & Cloud Physics
4. SMR 207: Fundamentals of Cloud Physics and Atmospheric pollution
5. **SCC 636: Urban Hydrology (started)**

CONFERENCE AND WORKSHOP PROCEEDING PAPERS

1. Opere, A.O., Mutua, F.M. and L.A. Ogallo (1993): Catchment spatial characteristics derived from principal component analysis (PCA). *Proceedings of the First International workshop for the African Meteorological Society*, 8-12 February 1993, KICC, Nairobi, Kenya. Pp.861-870.
2. Opere, A.O. and mutua, F.M. (1996): Transfer-Function model for Upper Athi river catchment of central Kenya. *Proceedings of the 3rd workshop of the Kenya Meteorological Society workshop on Meteorological Research, Applications and Services*, 7-11 October 1996, Mombasa, Kenya
3. Opere, A.O., Mutua, F.M. and L.A. Ogallo (1998): Regional flood frequency analysis. *Proceedings of the Fourth workshop of the Kenya Meteorological Society workshop on Meteorological Research, Applications and Services*, 7-11 September 1998, Mombasa, Kenya.
4. Opere, A.O. (2000): The need for a flood forecasting system (FFS) in Kenya
Proceedings of the Fifth workshop of the Kenya Meteorological Society workshop on Meteorological Research, Applications and Services, 4-8 September 2000, Mombasa, Kenya.
5. Opere, A.O. (2002): Homogeneous climatologic zones using principal component analysis. *Proceedings of pre-forum capacity building training workshop for the Great Horn of Africa (GHA)*, 20th January to 17th February 2002
6. Opere, A.O. (2002): Quality control of rainfall data
Proceedings of pre-forum capacity building training workshop for the Great Horn of Africa (GHA), 20th January to 17th February, 2002, Nairobi, Kenya
7. Opere, A.O. (2002): Lessons from the 1997/98 Elnino floods and the 2000 La nina related drought.
Proceedings of the capacity building training workshop on stream flow modeling for the Great Horn of Africa (GHA), 4th –15th February 2002, Nairobi, Kenya
8. Opere, A.O. (2002): Climate data and GCM models

Report of the af_91 AIACC Project workshop held at Sunset hotel, Kisumu, 2nd –3rd September 2002.

9. Opere, A.O. (2002): Hazard-risk assessment in Mount Kenya Headwater. *Proceedings of the International conference on Sustainable management of Headwater resources*, United States International University (USIU), Nairobi, 5-8 September 2002.
10. Opere, A.O. (2002): Impacts of climate change in water resources planning and management. *Proceedings of the 9th Nile 2002 International conference*, Kenya College of Communications and Technology (KCCT), Nairobi, 7-9 October 2002.
11. Opere, A.O., Awuor, V.O., Kooke, S.O. and W.O. Omoto (2002): Impact of rainfall variability on water resource management. *Proceedings of the 3rd WaterNet/Warfsa Symposium*, WhiteSands Hotel, Dar-es-Salaam, Tanzania, 30-31 October 2002
12. Opere, A.O., Awuor, V.O., Kooke, S.O. and W.O. Omoto (2003): Impact of rainfall variability on water resources management: case study in Kitui district, Kenya. *Proceedings of JACs East Africa Workshop*: Silver Springs Hotel, Nairobi, Kenya, 15 May 2003
13. Opere, A.O., Mkhandi S., Willems, P. (2005): At site flood frequency analysis for the Nile equatorial basins. *Proceedings of the International conference of FRIEND/Nile FUST project*, Sheraton Sharm Hotel, Sharm El Sheik, Egypt
14. Opere, A.O., Mkhandi S., Willems, P. (2005): Homogeneity testing for peak flow in catchments in the equatorial Nile basins. *Proceedings of the International conference of FRIEND/Nile FUST project*, Sheraton Sharm Hotel, Sharm El Sheik, Egypt
15. The Role of ICPAC in the generation, application and dissemination of climate products: *Expert Meeting on Climate Change and Water Resources*, Geneva, Switzerland: 18-20 December 2006
16. Water Resources Vulnerability to Environmental Change in Eastern Africa sub-region: Workshop on Africa's Water Resources Vulnerability to Environmental Change, a *UNEP draft report*, Pretoria, South Africa; 24-26 July 2007
17. Water Resources Vulnerability to Environmental Change in Eastern Africa sub-region . *Join Africa-Asia workshop on Water Resources Vulnerability to Environmental Change*, a *UNEP draft report*, Huahin, Thailand; 16-18 October 2007
18. Methodology for Flood Risk scenarios for Burundi. Workshop on *WFP & ICPAC Consultant mission* on "Development of Flood Risk Scenarios for Burundi": 12-13 November 2007, Bujumbura, Burundi.

WORKSHOPS, CONFERENCES AND SEMINARS ATTENDED

1. Third International Postgraduate Course in Hydrometeorology
11 April to 19 May 1994, Tel Aviv, Israel
Areas covered included: Hands on experience on water conservation practices in Israel, crop production and hydrologic modeling exercises among other lectures
2. 7th International Advanced Course in river flow forecasting
10 April to 23 June 1997, Department of Engineering Hydrology, University College, Galway, Ireland
The work program focused on river flow forecasting modeling exercises using country data. Some of the hydrologic models used in WMO inter-comparison studies were tested.

3. Training of Trainers Course in Hydrology, 13 September to 4 October 1998, IHE, Delft, The Netherlands
The work program focused on curriculum development and efficient methods to deliver lectures in hydrology.
During the program, I developed a curriculum on hydrologic modeling.
4. Meteosat Second Generation- Eumetsat Polar system course (MEC-IVE)
Institute for meteorological Training and Research (I.M.T.R), Nairobi, 6th June-10th November, 2000
5. Hydata Workshop
20-24 May 2001, IMTR, Kenya Meteorological Department, Nairobi, Kenya.
This is an annual workshop since the last ten years and offers training on the use of a Hydrological database (Hydata) for efficient use and management of hydrological data. I have participated for the last ten years.
6. The second workshop on image analysis and remote sensing techniques
21st-31st January 2002
7. Pre-Capacity Building Workshop in Climate Prediction for the Great Horn of Africa (GHA). Drought Monitoring Centre, Nairobi, 21 January to 17 February 2002
8. Capacity Building workshop in Stream flow modeling for the Great Horn of Africa (GHA). Drought Monitoring Centre, Nairobi, 4-15 February 2002
9. Hydrological data processing workshop: Nile/Friend project.
Department of Water Resources Engineering, University of Dar-es-Salaam, Tanzania, 20-25th May 2002
10. International conference on Sustainable management of Headwater Resources. United States International University (USIU), Nairobi, 5-8 September 2002.
11. 9th Nile 2002 International conference. Kenya College of Communications and Technology (KCCT), Nairobi, 7-9 October 2002.
12. 3rd WaterNet/Warfsa Symposium. WhiteSands Hotel, Dar-es-Salaam, Tanzania. 30-31 October 2002
13. 1st workshop for Flood Frequency Analysis component for Nile/FRIEND project. 1-3 April 2003, Cairo, Egypt.
14. Kick-off workshop for the Challenge Program in the Nile rives Basin. 3-4 May 2003, Cairo, Egypt.
15. 2nd workshop for Flood Frequency Analysis component for Nile/FRIEND project. 29 November-1st December 2003, Sharm El Sheik, Egypt.
16. 3rd workshop for Flood Frequency Analysis component for Nile/FRIEND project. 22-24 June 2004, Alexandria, Egypt
17. Lake Victoria Environment Outlook workshop, 2-4 September 2004, Kisumu-Kenya
18. Workshop on Vulnerability of water resources in Africa, 27-1 September, 2004, Unep HQ, Nairobi, Kenya.
19. Africa Global Change Synthesis workshops, 1-5 November 2004, University of Witwatersrand, Johannesburg, South Africa

20. 4th workshop for Flood Frequency Analysis component for Nile/FRIEND project. 26-29 November 2004, Nairobi, Kenya
21. 6th WaterNet/Warfsa Symposium. Lugogo Sun Hotel, Ezwuilini, Swaziland. 1-4 November 2005
22. International conference of FRIEND/Nile FUST project, Sheraton Sharm Hotel, Sharm El Sheik, Egypt, 10-14 November 2005
23. International conference for the “Future of dry lands”, Tunis, Tunisia 19-23 June 2006
24. Launching workshop of the FRIEND/Nile Project-Phase II, Cairo, Egypt: 14-19 August 2006
25. 7th WaterNet/Warfsa Symposium, Capital Hotel, Lilongwe, Malawi 1-3 November 2006
26. Expert Meeting on Climate Change and Water Resources, Geneva, Switzerland: 18-20 December 2006
27. HydroInformatics course: 10-26 march 2007, Unesco Chair of Water resources, Khartoum, Sudan
28. Workshop on Africa’s Water Resources Vulnerability to Environmental Change: 24-26 July 2007, Pretoria, South Africa
29. Training workshop on SWAT Hydrologic model: 6-10 August 2007, Dar Es salaam, Tanzania
30. Join Africa-Asia workshop on Water Resources Vulnerability to Environmental Change: 16-18 October 2007, Huahin, Thailand
31. 8th WaterNet/Warfsa Symposium: 31st October-2nd November 2007, Lusaka, Zambia
32. Workshop/WFP & ICPAC Consultant mission on “Development of Flood Risk Scenarios for Burundi”: 12-13 November 2007, Bujumbura, Burundi.
33. Training workshop in Pedagogy; 24-26 September, 2007, University of Nairobi
34. National Training Course on Floods and Droughts management for professionals in the water sector; 27 August-7 September, 2007, KEWI, Nairobi.
35. WaterNet Professional Training course on reviewing and editing journals; 16-18 January 2008, Harare, Zimbabwe
36. IAP/ASSAf & WRC Workshop on hydrology and hydropower Schemes; 18 – 20 June 2008; Pretoria, South Africa
37. Damage, Loss and Needs Assessment Training workshop; 26-29 September 2008; Kampala, Uganda
38. Capacity building in Surface Water Modeling (HEC HMS) workshop; 23 September -2 October 2008; SCI, University of Nairobi, Kenya
39. 9th WaterNet/Warfsa Symposium: 29th October-31st October 2008, Johannesburg, South Africa
40. Workshop on Attitude change for Adaptation to Climate Change workshop: 24-28 November, 2008, Imperial Hotel, Kisumu, Kenya.

41. Coordinator, DRM Curriculum Development workshop; 17-19 August 2009, ICPAC Nairobi
 42. Coordinator, Streamflow Modeling workshop; 17-22 August 2009, ICPAC Nairobi
 43. Climate and Water: Lecture given to participants (Course 10) of UNU-WVLC on Integrated Water Resources Management (IWRM) Diploma Programme; 17-22 August 2009; Chiromo Campus, University of Nairobi.
 44. Impact of Climate on Water Resources: Lecture to participants of “Sustainable Water Conference: Pre-conference workshop on Green Chemistry and Sustainability; 25th -28th August 2009; University of Nairobi, Chiromo Campus”.
 45. Vulnerability of Water Resources due to climate change in Africa: workshop on “Implications of Climate Change and Regional Climate Variability on Water Resources in Africa” 21-23 September 2009; Center for Energy Studies, University of Cambridge, UK.
 46. Presentation of Eastern Africa Report on during the UNEP/WRC workshop on “ Transboundary Freshwater vulnerability (surface & ground) to Climate change, incorporating IWRM in Africa; 4-6 November 2009, Pretoria, South Africa.
 47. Vulnerability of Water resources in Eastern Africa: Second Africa Water Week (AWW2)/AMCOW: 9-13 November 2009; Midrand, Johannesburg, South Africa.
 48. *Climate change and African forests and wildlife: lessons and way forward*”; February 20-21, 2010 ; Brazzaville, Congo.
 49. 1st Africa Climate Change Communication Conference, 31May-2June , Kampala, Uganda
 50. 2nd IW: Science working group meeting, 12-16 October Durban, South Africa
 51. Expert Lecture in TBWM in Lake Victoria, 4-5 Nov 2010, Kigali, Rwanda
 52. ESPA/Water futures proposal workshop, 10-12 Jan 2011, Kampala, Uganda
 53. UNEP/ Inception workshop on climate change and induced water stress in the Nile basin, 25-27 Jan 2011, Cairo, Egypt
 54. 2nd CBWS Draft Review workshop, 21-26 March 2011, Dar es Salaam, Tanzania
 55. FRIEND/Nile Project Hydrologic Modeling (HM) workshop, 21-25 May 2011, Cairo, Egypt
- Planning Meeting of the AFF working group on climate change, 28-30 May 2011, Naivasha,
56. Planning Meeting of the AFF Working Group on Climate Change and the Expert Panel on Climate Change, May 28-30, Naivasha, Kenya
 57. Workshop on “Climate change and governance in forestry: lessons and way forward for Southern Africa” 2-3 June 2011, Lusaka, Zambia

58. Workshop on “*Adapting to Climate Change Induced Water Stress in the Nile River Basin*”, 13-15 June 2011, Kampala, Uganda
59. Workshop meeting on “DEWFORA WP4” 3-7 October 2011, Reading, UK
60. UNEP Workshop on Technical Review of Assessment report adapting to climate change induced water stress in the Nile basin on ” 24-27 October 2011, Kigali, Rwanda
61. Workshop on “Coordination and Partnership for enhancing the benefits of weather, climate and water related services in the development of LDCs in Africa” 9-11 November, 2011, Cotonou, Benin
62. High Level Technical Workshop on the Comprehensive Basinwide Study & Resource Mobilization: 1 - 3 Dec 2011; Dar es Salaam, Tanzania
63. Drought Early Warning and Forecasting in Africa (DEWFORA) Project Planning meeting; 6-10 February 2012, Sharm El Sheikh, Egypt
64. Thirtieth Climate Outlook Forum for the Greater Horn of Africa (ghacof30): 27 – 29 February 2012, Kigali, Rwanda
65. Inception workshop to launch “Implementing a resilience framework to support Climate Change Adaptation in the Mt Elgon region of the Lake Victoria Basin” Project, at Kisumu Hotel, Kisumu, October 16th - 19th, 2012
66. Thirty second Climate Outlook Forum for the Greater Horn of Africa (ghacof30): 29 – 31 August 2012, Zanzibar, Tanzania
67. UNEP Workshop on Technical Review of Assessment report on adapting to climate change induced water stress in the Nile basin ” 2-6 September 2012, Kampala, Uganda
68. “Workshop on capacity building and skills development in forest-based climate change adaptation and mitigation, Nairobi, Kenya, 12-16 November, 2012”
69. UNESCO workshop on “Operationalizing the Africa Drought Monitor in the Horn of Africa region” 19 – 21 June 2012, IGAD Climate Prediction and Applications Centre (ICPAC), Nairobi, Kenya
70. IGAD HYCOS project consultation meeting between WMO, IGAD and EC; 15-16 April 2012, Djibouti
71. Thirty third Climate Outlook Forum for the Greater Horn of Africa (ghacof30): 18 – 20 February 2013, Bujumbura, Burundi
72. Drought Early Warning and Forecasting in Africa (DEWFORA) General Assembly; 4-9 February 2013, Pretoria, South Africa
73. UNEP Final technical review workshop Assessment report on adapting to climate change induced water stress in the Nile basin ” 25-28 February 2013, Kampala, Uganda

EXPERIENCE AND EMPLOYMENT BACKGROUND

- **Senior Lecturer** in the Department of Meteorology (June 2009 to date)
- **Lecturer** in the Department of Meteorology (2000-2009)
- **Assistant Lecturer** in the Department of Meteorology (1996-2000)
- **Tutorial Fellow** in the Department of Meteorology (1992-1996)
- **Graduate Assistant** in the Department of Meteorology (1990-1992)
- Close to 21 years of University teaching and research in the field of Meteorology, Hydrologic modeling & hydrologic systems analysis, impacts of climate change on water resources with reference to Africa.
- **Theme Researcher** for Flood Frequency Analysis Component for the FRIEND/Nile project Phase I in Kenya which involved 5 countries of the Nile Basin (2002-2005).
- **Theme Researcher** for Hydrologic Modeling (HM) Component for the FRIEND/Nile project Phase II in Kenya which involved 6 countries of the Nile Basin (2006-to date).
- **Team Leader:** Survey team for Rapid onset disasters in the Coast province of Kenya supported by the UNDP (Dec.2003).
- **Team Leader** (Eastern Africa): UNEP funded assessment of vulnerability of water resources in Africa due to environmental change (2004-2006)
- **Author** (2006): Africa Global Change Synthesis book “ Chapter 8: Water resources and Global Change” Global change Processes and Impacts in Africa; p152-172
- Made contribution to the book on “Sustainable Management of Head Water Resources” Research from Africa and India. Eds. Libor Jansky, Martin J. Haigh and Haushila Prasad; p165-177
- **Member**, Steering Committee on Development of Flood Management Strategy in Western Kenya (2004): Supported by WMO and Ministry of Water & Irrigation
- **Member**, group of Consultants for the Office of the President (OP): Development of a National Strategy of Disaster Risk Reduction in Kenya (Feb-June 2006)
- **Member**, group of Consultants for the “Development of Flood Risk Scenarios for Burundi”: WFP/ICPAC project ; November 2007
- **Consultant:** African Forest Forum (AFF) funded project on “Global change process and African forests” 2009
- **Lead author** for IDRC publication on “Using seasonal climate forecasts and indigenous climate knowledge in sub-Saharan Africa: Lessons from participatory action research projects” March-June, 2010
- **Consultant:** UNEP funded project on “Adaptation to climate change induced water stress in the Nile Basin” ongoing since Jan 2011

PROJECTS AND CONSULTANCY

- NCST funded project on Calibration and Validation of Satellite-Derived Data and Products for Improved Environmental Monitoring for Sustainable Development over Kenya; in collaboration with Dr.Gilbert Ouma (Principal Investigator-Dept. of Met, UON), Prof.Nzioka Muthama (Dept. of Met, UON), Prof. John Owino (School of Mathematics, UON); 2005-2006
- NCST funded project on Using Rainfall to Predict Droughts and Floods in Kenya; collaboration with Dr.Agwata Jones (School of Environmental Studies, KU), Prof. Nzioka Muthama (Principal Investigator, Dept. of Met, UON), Dr.Gilbert Ouma (Dept. of Met, UON) and Dr.Joseph Ininda (Dept. Of Met, UON); 2004-2005

- UNEP funded project on “Assessment of vulnerability of water resources in Africa due to environmental change” (2004-2006)
- START funded project on development of “ Africa Global Change Synthesis book “ Chapter 8: Water resources and Global Change” Global change Processes and Impacts in Africa; p152-172
- Consultancy for the Office of the President (OP) on the “ Development of a National Strategy of Disaster Risk Reduction in Kenya” (Feb-June 2006)
- Consultancy for the WFP Bjurundi on the “Development of Flood Risk Scenarios for Burundi”: WFP/ICPAC project ; November 2007
- UNEP funded project on “Adaptation to climate change induced water stress in the Nile Basin” ongoing since Jan 2011

RESEARCH SUPERVISION

Postgraduate Diploma in Applied Hydrology and Water Resources Management

1. Mirghani Sidahmed Mohamed

Title: Catchment Rainfall-runoff modeling: Case study of the Blue Nile (2001)

Successfully completed

2. Joseph Kushoka

Title: Relationship between rainfall, runoff and evaporation using regression models (2001). Successfully completed

Master of Science

1. S.K. Rwigi

Title: Comparative study of linear system and Conceptual models for Nyando river Basin

Successfully completed (June 2005)

2. Joseph Ndetei

Title: Analysis of Hydrologic extremes (2006): Successfully completed

3. Mwangi, J.K.

Title: Rainwater Harvesting in ASAL environment (2007): Completed

4. Peris Muchiri

Title: Applicability of GeoSFM for Shabelle Basin in Somalia (2009): completed

Doctor of Philosophy

1. Julius N. Kabubi

Title: Sensitivity of Hydrological regimes due to socio-economic dynamics and climate change impacts in Kenya. Started (February 2002): Thesis draft in place

2. George S. Oyuga

Title: Modelling Land cover and water resources in the Kenyan Arid and Semi-arid Lands (ASALs) for environmental resource assessment, planning and management. "A case study of Ewaso Ngiro North drainage basin" Started (July 2003): Thesis draft is in place

3. Faith W. Githui

Title: Environmental impacts on Hydrological regimes of Lake Victoria basin. Started (February 2002): Completed (2007)

4. Stephen K. Rwigi

Title: An Investigation of Potential Impacts of Climate Change on the quality of surface water in Kenya. Started (2009)

5. Emmah W. Mwangi???

PAPERS REFEREED

1. Transfer-Function models for short duration hydrological events in ephemeral stream catchments of Kenya. (Sent to the Journal of African Meteorological Society for publication); March 2000.

2. Regionalization of hydrological characteristics of the Upper Ewaso Ngiro basin. (Sent to the Journal of African Meteorological Society for publication); August 2000

3. "Observations and preliminary modeling of over-lake meteorology on large African lakes" . Proceedings of the Ideal 2nd International symposium held in Malawi, January 2000. Sent to "Advances in Global Research Book Series" by P. Hamblin et al; reviewed, March 2001

4. Water balance studies for River Zenne Basin in Belgium

by Githui FW and Ann van Griensven. Sent to the Journal of African Meteorological Society for publication); September 2002

5. Rainfall interpolation using a remote sensing CCD data in a tropical basin – a GIS and geostatistical application

By S.A. Moges^a, B.F. Alemaw^{b,1}, T.R. Chaoka^b, R.K. Kachroo^c; sent to the Journal of Physics and Chemistry of the earth (JPCE); February, 2007

6. Linkages between the Indian Ocean Dipole (IOD) Index and East African Seasonal Rainfall Anomalies

By Z. Owiti and Laban ogallo; sent to the journal of Kenya Meteorological society (KMS); 2007

7. Investigating possible changes of extreme annual rainfall in Zimbabwe By D. Mazvimavi. Sent to the

Hydrology and Earth System Sciences (HESS) journal: *An Interactive Open Access Journal of the European Geosciences Union*; June 2008

??? papers for HESS

INTERNAL EXAMINATION

MSc. Theses

1. S.K. Rwigi; Department of Meteorology, University of Nairobi

Title: *Comparative study of linear system and Conceptual models for Nyando River Basin*

2. M.A. OCHOLA; Department of Meteorology, University of Nairobi

Title: *Role of weather in Insurance Industry*

3. L.W. Gachahi; Department of Meteorology, University of Nairobi

Title: *The Evolution of Atmospheric circulation patterns and their influence on the onset and performance of rainfall of the March-May season over Equatorial East Africa*

PhD Theses

3. JOHN M. NYANGAGA; Department of Geography & Environmental Studies

Title: *The effects of Environmental Degradation on Stream flow and Water Quality variation in the Itare Catchment within the Lake Victoria Drainage Basin in Kenya*

EXTERNAL EXAMINATION

PhD Thesis (2011)

1. Edward M. Namusasi, CDHA, Masinde Muliro University

Title: *Hydrologic and Hydraulic Flood Management for Nzoia River Basin, Western Kenya*

MSc. Thesis(2012)??

DEPARTMENTAL DUTIES AND OTHER RESPONSIBILITIES TO THE SOCIETY

1. Member, College Projects Champion Committee, CBPS
2. Departmental Representative, Open & distant Learning, CBPS
3. Departmental Convener, Income Generating Activities Committee
4. Member, UNESCO IHP National Executive Committee
5. Focal Person, JIIHP
6. Member, KMS workshop organizing committee
9. Editor, Hydrology and Earth System Sciences (HESS) journal: *An Interactive Open Access Journal of the European Geosciences Union*
10. Editor, HESS journal
11. Reviewer & Panel member; Kenya-DAAD Scholarship awards
12. Reviewer, IPCC Fifth Assessment Report

INTERNATIONAL COLLABORATION/ACTIVITIES

1. FRIEND /Nile project: Theme Researcher for Flood frequency Analysis component (2001-2005)
2. FRIEND /Nile project: Theme Researcher for Hydrologic Modelling component (2006-to date)
3. UNEP-DEWA: Team Leader for Eastern Africa: Assessment of Vulnerability of water resources due to environmental change in Africa (2004-2005).
4. START Africa Global Change Synthesis book (2005)
5. MSc. in IWRM module Writer, supported by WATERNET Secretariat (1999/2000)
6. Consultancy mission for the "Development of Flood Risk Scenarios for Burundi": WFP/ICPAC project ; November 2007

MEMBERSHIP TO PROFESSIONAL BODIES

1. Member of the Kenya Meteorological Society (KMS)
2. Member of the Hydrological Society of Kenya
3. Registered, Lead Expert in EIA & Audit with NEMA

INTERESTS - Meeting new friends, socializing, traveling and reading.

REFEREES

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