

## **CURRICULUM VITAE**

### **(A). General**

Name: Francis Musyoka Mutua (Ph.D.)  
Date of Birth: May 15, 1952  
Nationality: Kenyan  
Marital Status: Married  
Institution: University of Nairobi, Department of Meteorology.  
Appointment: Associate Professor (Hydrology and Hydraulics)  
No. of yrs with U.o.N. 19 years.

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### **(B). Membership in Professional Institutions:**

- African Meteorological Society (AMS)
- Kenya Meteorological Society (KMS)
- International Association of Hydrological Sciences (IAHS)

### **(C). Academic Qualifications**

- Ph.D. (Hydrometeorology), 1988, University of Nairobi
- M.Sc. (Civil Eng.:- Hydraulics), 1983, Colorado State University
- M.Sc. (Hydrometeorology), 1980, University of Nairobi
- B.Sc. (Meteorology), 1977, University of Nairobi

### **(D). Academic and Fellowship Awards**

2000: Was awarded a Netherlands government scholarship to attend a two-week course on “The Dutch River Flow and Quality (DUFLOW) Modeling Software” which was held in IHE-Delft, The Netherlands during the period 20<sup>th</sup> February to 1<sup>st</sup> March 2000

1997: Was awarded a Netherlands government scholarship to attend a one month course on –“Didactics, Course Management and Curriculum Development in Water Resources management and Information systems” which was held in IHE-Delft, The Netherlands during the period 15<sup>th</sup> Sept. to 5<sup>th</sup> October 1997.

- 1991: Was awarded an Irish Government scholarship to attend a three month training course on River Flow Forecasting and Modeling which was held in the University college Galway, Ireland.
- 1981: was awarded a two-year WMO scholarship to do Postgraduate studies in Colorado State University, U.S.A.
- 1977: Was awarded the Gandhi Smarak Award for being the best (overall) 3rd Year B.Sc. student in the Faculty of Science, University of Nairobi
- 1975: Was awarded the Gandhi Smarak Award for being the best (overall) 1st Year B.Sc. student in the Faculty of Science, University of Nairobi

**(E). Professional Experience**

- 2000 – To date: Has been Associate Professor (Hydrology and Hydraulics) in the Department of Meteorology, University of Nairobi.
- 2005: Was nominated Head of the Surface Water and Hydrometeorology Unit of the School of Physical Sciences, College of Biological and Physical Sciences, University of Nairobi.
- 2001-2004: Was External Examiner for undergraduate, post graduate and Masters Theses for the Department of Water Resources Engineering (WRE), College of Engineering and Built Environment
- 1998-2001: Was External Examiner for post graduate and Masters Theses for the School of Environmental Studies, Moi University, Kenya.
- 1993-1998: Was the Head of the Department of Meteorology, University of Nairobi.
- 1993-to date: Has been the Coordinator and trainer of the WMO/UNESCO/IHE sponsored International Postgraduate course in Water Resources Systems and Management, which is conducted in the Institute for Meteorological Training and Research, Dagoretti, Nairobi, in collaboration with the University of Nairobi.
- 1989-2000: Has been Senior Lecturer in the Department; teaching and supervising the B.Sc., M.Sc. and Ph.D. research projects in hydrometeorology and other related disciplines in the Department.
- 1985-1989: Was Lecturer in the Department, teaching and supervising B.Sc. and M.Sc research projects in hydrometeorology and other related disciplines in the Department.
- 1981-1985: Was Tutorial Fellow in the Department, teaching B.Sc and M.Sc courses in hydrometeorology in the Department.
- 1979-1980: Was Graduate Research Assistant in the Department, helping to conduct tutorials in the undergraduate courses.

**(F). Consultancy Experience**

- 2006-2008: Has been appointed as a member of the Hydrological consultancy for the Nairobi City Water Supply Dams Audit Project.
- 2006: Nominated by UNESCO International Governing Council (IGU) to the Board of Directors of the International Research and Training Center on Erosion and sedimentation (IRTCES) in Beijing, China.

- 2004: Was nominated by the Nile basin Initiative to the Steering Committee of the Nile Basin Research Program of Norway in the University of Bergen
- 2001 To date: Was nominated by the Government of Kenya to be the National Coordinator for the Applied Training Project of the Nile basin Initiative.
- 2005-To date: Has been appointed the Regional Coordinator for the Stochastic Studies of the UNESCO/IHP Nile FRIEND Project.
- 1998-2005: Was Regional Coordinator for the Drought and low-Flow Studies of the UNESCO/IHP Nile FRIEND Project.
- 2001: worked as the Hydrological consultant for the Lake Victoria Environmental management Project (LVEMP).
- 1997-2004: Has been a consultant in the Water Resources sector of the UNDP/GEF funded NES project on *Building Capacity in Sub-Sahara Africa to respond to the United Nations Framework Convention on Climate Change (UNFCCC)*.
- 1995-1997: Was consultant on *The Impacts of Climate Change on the Water Resources of the Tana River Basin*, The World Bank funded Kenya Country Studies Project of the Ministry of Research, Technical Training and Technology.
- 1993-1995: Was consultant in the water resources sector of the UNEP-funded Kenya National Academy of Sciences project on the *Impacts of Sea Level Rise on the Kenyan Coast due to Climate Change*.

**(G). Specialized Courses and Workshops Attended**

- 2000: Was a resource person in the 6<sup>th</sup> *Climate Outlook Forum for the September to December 2000 Seasonal Rainfall for the Great Horn of Africa*, Kisumu, 14<sup>th</sup> – 18<sup>th</sup> August 2000.
- 1999 Attended and presented a paper “Drought Characteristics in Eastern Africa” in the *Drought Management Conference/Workshop* in Pretoria, South Africa.
- 1998 Attended (as a resource person) The IHE Allumni Workshop on “*Hydrology of the Wetlands*” held in the Institute for Meteorological Training and Research, Nairobi.
- 1998 Attended and presented a paper in the 3<sup>rd</sup> Kenya Meteorological Society Conference, held in Mombasa,
- 1997 Attended a one month course in *Training of Trainers in Water Resources systems and Management*, in IHE-delft, The Netherlands.
- 1996 Attended a 2-week course on *The use of PC-ARCINFO in Water Resources Management*, which was held in the Department of Civil Engineering (Water Resources Engineering Program), University of Dar Es Salaam, Dec. 26th. 1996-Jan. 5th. 1997.
- 1995 Attended (as a Resource Person), the Training Workshop on “Africa and the Global Change” which was held in Nairobi, Kenya, 13<sup>th</sup> to 25<sup>th</sup> February 1995.
- 1995 Attended (as a resource person) the 3<sup>rd</sup> African Sub-regional Workshop on Natural Disasters -Vulnerability and Reduction, UNEP, Nairobi.
- 1994 Attended and presented a paper in the International Conference on the *Efficient Utilization and Management of Water Resources in Africa*, Khartoum, 1994.

- 1993 Attended a 2-week workshop/course on *River flow Forecasting* in Beijing, Ministry of Water Resources, China.
- 1991 Attended a 3-month course on *River Flow Forecasting* in University College Galway, Ireland.
- 1990 Attended and presented a paper in the Third WMO symposium on Meteorological aspects of Tropical droughts. Niamey, Niger, 30 April to 4 May 1990.
- 1988 Attended and presented a paper in the Seventh Annual Convention and Seminar on Hydrology with a Colloquium on Water Resources Problems of South Asian countries 20-23 October, 1988 Andhra University, India.
- 1987 Attended and presented a paper in the First Technical Conference on Meteorological Research in Eastern and Southern Africa. Dagoretti, Nairobi 6th-9th January, 1987
- 1984 Attended a course *The Seventh FAO/UNDRO/WMO/ESA International Training Course on Satellite Applications in Flood Forecasting, Control and Preparedness*, which was held in Rome, Italy.
- 1977 Attended the *Operational Training Course in weather Forecasting* at the Institute for Meteorology Training and Research Dagoretti Corner, Nairobi.

#### **(H). Publications**

- Mutua, F.M. (2000): Report on the Impacts of climate change on Water Resources in the Kenya. *National Environmental Secretariat, Ministry of Environment and Natural Resources*
- Mutua, F.M. (1999): A Comparison of the General Circulation Models and Trend based Projections of Annual and Seasonal Rainfall in East Africa. *African Journal of Science and Technology*. Vol. 1 No. 1.
- Mutua, F.M. (1999): River Flow Forecasting Using the Difference Equation Linear Model with Dryness Correction. *Journ, African Met. Society*, Vol. 4.
- Mutua, F.M. (1998): Report on the Impacts of climate change on Water Resources in the Upper Ewaso Ngiro basin. *National Environmental Secretariat, Ministry of Environment and Natural Resources*.
- Mutua, F.M. (1997): The Four Parameter General Extreme Value Distribution in Flood Frequency Analysis. *Kenya Journal. of Appl. Sc. and Tech.*, Vol.12(1&2).
- Mutua F.M. (1996): Report on the Sensitivity of the Hydrologic Cycle in the upper Tana Basin due to climate change. Kenya country climate change project. *Ministry of Research Technical Training and Technology*.
- Mutua, F.M. (1994): Persistence of Droughts and their Implications on the the Utilization and Management of Water Resources in Africa. *Proc. of the Int. Conf. on Efficient Utilization and Management of Water Resour. in Africa*. Khartoum, 1994.
- Mutua, F.M. (1994): The Use of the Akaike Information Criterion in the Identification of an Optimum Flood Frequency Model. *Hydr. Sc. Jour*. Vol. 39, No.3.
- Basalirwa, C.P.K., Ogallo, L.J. and Mutua, F.M. (1993): Design of a Regional Minimum Raingauge Network. *Water Resources Dev*. Vol. 9 No.4.

- Mutua, F.M. (1990): The Temporal and Spatial Distributions of Meteorological Droughts in East Africa. Third WMO symposium on Meteorological aspects of Tropical droughts. Niamey, Niger, 30 April to 4 May 1990. *WMO/TN* No. 353, WMO 1990.
- Mutua, F.M. (1989): Transfer Function Hydrological Modeling - A case Study. *Journal. Appl. Hydrology* Vol. 2(2).
- Mutua, F.M. (1988): On Identification of an Optimum Flood Frequency Model. *Seventh Annual Convention and Seminar on Hydrology with a Colloquium on Water Resources Problems of South Asian countries* 20-23 October, 1988 Andhra University, India.
- Mutua, F.M. (1988): The Identification of an Optimum Flood Frequency Model in Kenya. *Ph.D. Thesis*, University of Nairobi.
- Mutua, F.M. (1987): A Review of the Hydrometeorological Research in Eastern Africa. *Proc. 1st Technical Conference on Meteorological Research in Eastern and Southern Africa*. Dagoretti, Nairobi 6th-9th January, 1987.
- Mutua, F.M., Ogallo, L.J. and Lugania, C.N. (1987): Extreme value Analysis of Intensive Rainfall over Kenya. *Ibid.*
- Mutua, F.M. (1984): The Suitability of the Walter Boughton Distribution for Flood Frequency Analysis in Western Kenya. *East Afr. Agr. and Forestry Journal* 46(2).
- Mutua, F.M. (1980): A rainfall runoff Model for the River Nzoia. *M.Sc. Thesis* University of Nairobi.

**(I). Languages And Proficiency**

Language	proficiency in		
	writing	reading	speaking
French	Good	Good	Fair
Swahili	good	excellent	good
English	good	excellent	good