

CURRIVULUM VITAE

GEOFFREY MUGO MACHARIA PhD., M.ED (TDC), (Kenyatta), B.ED (Sc.), (Nairobi).

DATE OF BIRTH: 21st September, 1952
NATIONALITY: KENYAN
MARITAL STATUS : MARRIED
LANGUAGE: ENGLISH, KISWAHILI
OCCUPATION: LECTURER, RESEARCHER AND CONSULTANT
DEPARTMENT OF ENVIRONMENTAL SCIENCE
EMPLOYER: KENYATTA UNIVERSITY
OFFICIAL ADDRESS: P.O. BOX 43844 -00100, NAIROBI
PRIVATE ADDRESS: P.O. BOX 72533-00200, NAIROBI
E-MAIL: machariag2001@gmail.com
CELLPHONE: +254-722610809, +254-738447555
TELEPHONE (OFFICE): 254-02-810901-19, Ext 57223

Areas of Expertise: –

- ◆ Assessment of ecosystem status and impacts of development on environment
- ◆ Environmental Impact Assessment
- ◆ Water and waste water management
- ◆ Aquatic Ecology (Fresh water and Marine) and Water Resources management
- ◆ Human Ecology – Impacts of human activity on Biodiversity
- ◆ Land use planning, Development and Technology and Environment
- ◆ Participatory environmental planning and P.R.A.
- ◆ Rehabilitation of built and development sites
- ◆ Environmental Education and Education of Sustainable Development
- ◆ Training of trainers.

RESEARCH INTERESTS

- ◆ Land use and its effect on biodiversity : assessment of ecosystem health
- ◆ Environmental Impact assessment of various enterprises in the built environment and development projects.
- ◆ Land degradation and desertification and livelihood adaptations in arid and semi arid areas, climate change and livelihoods moderation
- ◆ Environmental monitoring as a tool to maintain human health and the quality of life.
- ◆ Design of rehabilitative innovations to reduce negative effects of development process (industry, construction, agriculture etc.) on the environment.
- ◆ Resource use conflicts and conflict resolution
- ◆ The role of resource use in Ecosystem dynamics and equilibrium
- ◆ Action research on Agricultural intensification, production, Ecosystem modification and effects on livelihoods

- ◆ Effects of Land Degradation/Climate change and Community livelihoods
- ◆ Environmental Education and Education for Sustainable Development

ACADEMIC QUALIFICATION

2009 - PhD, (Kenyatta) in Environmental Ecology - Land use and its effect on Biodiversity in the Lake Ol Bolossat, Basin, Nyandarua., Kenya.

1987- M.Ed. (Biological Sciences), Kenyatta University

1980 - B.Ed. (Sc), University of Nairobi

1976 – KACE (3p 1s - Biology – C, Chemistry – E, Geography – B, General Paper - 4), - Kangaru School, Embu.

1974 –KCE (Division 1) Kangaru School, Embu

1970 –CPE (36points) - DEB Kangaru Primary School

WORKING EXPERIENCE

July, 1989- to-date: Lecturer, Department of Environmental Sciences,
Duties and Tasks:

1. Training Environmental Sciences graduates at various levels:-
 - i. Bachelor of Education and PGDE- Environmental Education
 - ii. Bachelor of Environmental Sciences:
 - ◆ Man and Environment - Impacts of Development on Environment
 - ◆ Aquatic Ecology: Fresh and Marine Resources
 - ◆ Water Resources management
 - ◆ Water and waste water management - Design of water treatment plants, efficacy and process of treatment
 - ◆ Environment and sanitation
 - ◆ Environmental Impacts Assessment and evaluation
 - ◆ Environmental education and community participatory methods
 - ◆ Education for Sustainable Development
 - ◆ Land Degradation and Desertification
 - iii. Master of Environmental Studies
 - ◆ Water resources management
 - ◆ Pollution and its effects on the environment
 - ◆ Training of Trainers in Participatory Rural/Research appraisal (PRA) and conducting PRAs.
2. Carrying out EIAs and EA on various University Projects as a member of the Vice Chancellor's Standing Committee on Environment and Compliance:
 - ◆ Perimeter Wall EIA,
 - ◆ New Administration Block EIA,
 - ◆ Sewage Treatment Plant EA and other planned developments
 - ◆ School of Hospitality and Tourism management
 - ◆ School of Economics

◆ Parklands Campus

3. Development and writing new and revising old Academic Programmes at all levels in the Department of Environmental Sciences and Institute of Peace and Security Studies.
4. Membership of various Departmental and University Committees

1989 – June, 1991: Tutorial Fellow- Kenyatta University:

- ◆ Lectured in Environmental Education- Areas:- impacts of development on the environment
- ◆ Technology and the environment
- ◆ Awareness creation on environmental problems and issues

1992 – 1996: Jomo Kenyatta University of Agriculture and Technology (JKUAT) - Part Time Lecturer in the Dept. of Architecture

Areas:

- ◆ Physical Environment - Landscape Ecology application in Architecture
- ◆ Design of architectural structures and effects of environmental factors on their utilization
- ◆ Impacts of Construction of Buildings on the environment
- ◆ Soil conservation and rehabilitation of construction sites,
- ◆ The role of ornamental plants in environmental rehabilitation.

1996: United States International University (USIU) - Part Time Lecturer

Area: The World Through the Natural Sciences - Development and Impacts of human activity on the environment.

ADMINISTRATIVE EXPERIENCE

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| 2010 –to date | Founding Coordinator, Kenyatta University - Kenya Military Academy BSc (Military Studies) Programme, Institute of Peace and Security Studies |
| 2000- 2009 | Departmental field trips coordinator |
| 1993– 1996: | Practicum Coordinator, Faculty of Environmental Studies, Kenyatta University |
| 1993 – 1997: | Member, Kenyatta University Budget Committee |
| 1992 – 1996: | Member, Graduation Committee, Kenyatta University |
| 1994 | Member, Kenyatta University Benevolent Fund committee, |
| 1988 – 1989: | Head, Biology Department, Kagumo College: Set up the Department |
| 1985: | Deputy Head master |
| | ◆ Supervision of teachers and students, general administration |
| | ◆ In charge of timetable and curriculum matters. |
| 1980 – 1985: | Head of Sciences in Endarasha Secondary school |

1982- 1991: Kenya National Examinations Council trained Examiner for Kenya Certificate of Secondary Education –Agriculture and Biology
Team Leader and Examiner - Agriculture Paper 2 and trained for Biology Paper 2

OTHER RESPONSIBILITIES

2000: In charge, Departmental budget matters
1996: Assistant Patron Kenyatta University Environment Club (KUNEC) - Youth Club of Environmental Studies Students.
1988: Assistant patron Science Club, Kagumo College
1977: Founding Patron- Wildlife Club, Precious Blood Girls Secondary School, Kilungu.

COMMUNITY SERVICE

2012 KAMA/Fathers' Committee Member ACK St. Peter,s Church, Kahawa Sukari Kenya Anglican Men's Association (KAMA)
2010 -2012 Chairman ACK St. Peter,s Church Cluster six- Church families' fellowship association
1991 – 1997: Secretary, Kahawa Sukari Welfare Association -Welfare Issues on services: Electricity, Water, Roads, Security and Fundraising.
1991 – 1995: Secretary, Church Council – St Peters Anglican Church, Kahawa Sukari.

MEMBERSHIP IN ORANIZATIONS

2012 Forestry Society of Kenya
2009- Ecological Society of Eastern Africa
2001- Founder member- Eastern Africa Association of Environmental Impact Assessment (EAAEIA)
2000- Member – Nature Kenya – East Africa natural history Society
2000- The Gedions International – Kasarani Camp Kenyatta University
2000 Member- Soil Science Society of East Africa.

RESEARCH AREAS:

2009: Land use and its effect on Biodiversity in the Lake Ol Bolossat Basin, Nyandarua, Kenya, Ph.D research project.
2001: Environmental Education Activities in school curriculum as a tool to communicate Environmental conservation Concepts to communities in Dagoretti, Nyambene and Shimoni.
1996: Survey of ornamental plants in Eldoret town and its Environs. (in collaboration with Prof. Ik Umene JKUAT)
1991: Environmental Assessment: An Overview of human activity and its impact on Ruiru River. Consultancy for CAS Engineering Firm.

- 1987: Terrestrial Ecology: Trapability and activity of small mammals in a dry sub-humid grassland in Kenya. Effect of seasonal and daily environmental changes on activity of animals.
- 1986: Psychology: Guidance and Counselling in Teacher Education: Relationship to problems Teachers Encounter.
- 1980: Hydrobiology: Species Diversity and abundance of different substrata of a temporary and permanent reach of Muri Stream – Makuyu Kenya.

EXAMINATION OF THESIS:

- 2012 M.A. Thesis by Mugechi M Nyoike, Reg No. C50/7857/02
Title of Thesis : Rangeland Management and Vegetation Ordination in Three Community Ranches in Samburu County, Kenya
- 2012 M.Sc. Thesis by Mwazo, Alexander Gombe, Reg. No. I56/10012/08
Title of Thesis: Distribution and Habitat Association of the Grevy's Zebra, *Equus gravy*, in South-Eastern Kenya
- 2012 M.E.S Thesis by Margaret Wambui Mwaura N50/CE/10007/06
Title of Thesis: effects of non-formal Environmental Education on level of commitment to Environmental conservation among Government personnel in Thika District, Kiambu County
- 2012 M.E.S Thesis by John Mutuota Chege N50/CE/11377/07
Title of Thesis: the role of Stakeholders in Biodiversity Conservation: The Case of Hinde's Babbler(*Tuitoides hindei*) Conservation in Mukurwe-ini Valley, Kenya
- 2010 M.E.S. Thesis by Ambrose Sunya Oroda N50/5007/03
Title of Thesis : The Impact of Land Fragmentation and Increased Sedentarization on the Land Cover and the Resources of Mt. Marsabit Forest Reserve and Its Immediate Surroundings.
- 2010 M.E.S. Thesis by Caleb Odhiambo Ouma N50/10231/06
Title of Thesis: Assessment of the Post Drought Recovery Strategies among Pastoralists in Turkana Central District'

SUPERVISION OF RESEARCH

- 2012 Msafiri Philip Wambua, (N85/23076/2010.) – PhD candidate working on wastewater treatment and management
Title of Research Topic: Effluent Characteristics, Dynamics and Polluter Pays Principle Application To Regulation And Management Of Industrial Wastewater In The County Of Nairobi.

- 2012 Ephraim Maina Wairangu -N50/Ce/23081/2010
M.E.S Research on Fish products management.
Title of Research topic: Utilization of Potential by-Products and Cleaner Production in Industrial Nile Perch Processing In Kenya
- 2010 M.E.S research on Assessment of Post harvest losses of Nile Perch, *Lates niloticus*, incurred by Fishermen from Lake Victoria – by Dedan Mwangi Mungai
- 2010 Kimeu, Luke Ndunda Research on Environmental Education;
Thesis title: Challenges and opportunities of Incorporating and Teaching Environmental Education in Adult Literacy Curriculum in Kisumu division, Makueni County, Kenya.
- 2004: Hazardous Waste Disposal at Kisumu General Hospital
- 2004: Impact of Charcoal burning on the Mangroves at Tudor Creek, Mombasa.
- 2000: Examination of Water Supply System and Sanitation problems in Kabati Estate Naivasha Municipality.
- 1993: Arable Farming Practices and their Implication on Water Quality: A case study of East Bukhoyo, Busia District – Master of Environmental Studies Research and Thesis.
- 1991: The Development and Implication of environmental Education in Kenyan Secondary School: PGDE.

SEMINARS AND WORKSHOPS

- 2012 BSc. (Military Studies) Programme Implementation Mid Term Review Workshop at Morendat Training and Conference Centre, Naivasha, Kenya.
- 2011 Curriculum development on Workshop for Masters and Diploma programmes in Security Management and Police studies at Morendat, Naivasha. Institute of Peace and Security Studies, Kenyatta University.
- 2010: Inception Workshop on Wetland Mapping in Kenya
- 2010: Training Workshop on Environmental Impact Assessment, Meridian Court Hotel, Nairobi Kenya.
- 2010: Curriculum Development workshop for BSc in Military Studies .Programme at North Coast beach Hotel, Mombasa.
- 2009: World Environmental Education Congress, Montreal, Canada.
- 2006: Mainstreaming Education for Sustainable Development in Universities in Africa, Kenya Monetary Studies, Nairobi.
- 2004: Environmental Health Education in Africa, Kenyatta University.
- 2003: Agroforestry Education in Africa, Kenyatta University.
- 2001 Taskforce member on establishment of the Eastern Africa Association of Environmental Impact Assessment (EAAEIA) –IUCN –ROEA, Nairobi.

- 2000: Soil Science Society of East Africa Annual Conference, Continental Hotel, Momasa.
- 2000: Meeting on capacity for Environmental Impact Assessment in Eastern Africa Region. IUCN (World Conservation Union) EA Regional Office, Nairobi.
- 1999: Inland and Tropical Waters Seminar held at KWS Institute, Naivasha.
- 1998: Evaluation of Environmental urban and Development Training Programme Phase 1 and preparation for phase 2, Garden Hotel, Machakos, Kenya.
- 1996: Environment and Urban Development Training Programme: Training of Trainers Two (1 year training), Kenya Ministry of Local Government and Wagenigen University of Agriculture, Netherlands. Coordinated by Igrid Dutchard, WUA- Covered various aspects of impacts of Human development on the Environment and EIA.
- 1994: Environmental Awareness in factories in Kenya. Workshop organized by Journalist for Environment of Kenya Milimani Hotel.
- 1992: Seminar on Wetlands in Kenya, National Museums of Kenya..
- 1991: East African Environmental Network Annual Seminar at National Museums of Kenya.
- 1990: Environment 2000: Kenya's state of the Environment, UNEP Nairobi, Kenya.
- 1989: Soil and Water Conservation Training of Trainers in Soil and Water conservation techniques. Organized by Ministry of Agriculture at Kagumo College.

PUBLICATION

- 2010 Land Use and its Effect on Biodiversity in Lake Ol'Bolossat, Nyandarua, Kenya. Phd Thesis, Kenyatta University, Nairobi.
- 1996: Architectural Design and Environmental Conservation and Rehabilitation. Paper presented at the 2nd All-Africa Conference on Green Architecture and Environmentally sensitive sustainable Development, 25–26 July, 1996, Organized by JKUAT at Pan Africa Hotel.
- 1987 Trappability and Activity of Small Mammals in a Dry sub-humid Grasslands in Kenya. M.Ed. (TDC) Project Report, Kenyatta university.
- 1986; Guidance and Counselling in Teacher Education: Relationship to Problems Teachers Encounter. M.Ed (TDC) Project Report, Kenyatta University, 1986.
- 1980: Species Diversity and Abundance of Different Substrata of a Temporary and Permanent reach of Muri stream, Kenyatta University,.

INTERNATIONAL TRAVEL AND VISITS

- 2009 May-June: Visited various Universities Museums, Parks and Botanical in Montreal, Ottawa, Toronto and Niagara Falls. Also Visited towns and Cities on the eastern board of the United states of America from Ottawa to New York. Theme of my visits was “Towards understanding the world class university status”. Visited institutions and Interacted with staff and student of some.
- 2011 July-August: Visited the Indian sub-continen and travelled over 8,000km on Indian railway system from Alahabad, Dehli and New Dehli, Bhopal, Hyderabad, Bangalore and Chennai. The theme of my visits was “Understanding the University in a multicultural setting”. Visited Five universities in different towns and met some students from Africa in India

REFEREES

Prof: Steve G. Njuguna,
Dean, School of Environmental Studies,
Kenyatta University.
P.O. Box 43844. NAIROBI. 00100
Tel. 811622 ext. 57218

Dr .Benson M. Mwangi
Dept. of Zoological Sciences
Kenyatta University
P.O. Box 43844. NAIROBI. 00100
Tel. 811622 ext. 57223