

Dr. Martha Konje - Curriculum Vitae

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No. of citations: Google Scholar **88** citations; ResearchGate **86** citations

EDUCATIONAL BACKGROUND

2021- PhD in Plant Ecology, Department of Plant Sciences, Kenyatta University, Nairobi, Kenya

2002 -Masters of Science in Biodiversity Conservation, Addis Ababa University, Ethiopia

2000 - Bachelor of Education (Science) – Botany and Zoology, Kenyatta University, Kenya.

1993- Kenya Certificate of Secondary Education - KCSE; Othaya Girls High School

1989 - Kenya Certificate of Primary Education - KCPE; Kiamabara Primary School

WORK EXPERIENCE:

April 2015 to 2022– Senior Lecturer, Kibabii University, Bungoma, Department of Biological and Environmental Sciences; Faculty of Science

2009 to 2014: Lecturer, Masinde Muliro University of Science and Technology, Biological Sciences Dept; Faculty of Science in Kakamega, Kenya. Also: Coordinator – MMUST Botanical Garden

2004 – 2009: Assistant Lecturer, Masinde Muliro University of Science and Technology, Biological Sciences Department, Faculty of Science in Kakamega, Kenya.

2002 -2003: Tutor, Kenya Wildlife Service Training Institute, Naivasha

2000 – 2001: Teacher, Don Bosco Secondary School, Nairobi

LEADERSHIP AND ADMINISTRATIVE POSITIONS:

- **2024 – Coordinator**, Directorate of Technical, Vocational Education and Training (TVET), Kibabii University
- **2015 – 2021**: Head of Department, Biological and Environmental Sciences Department, Kibabii University (6 years)
- **April 2022 – to date**: Appointed E-Learning Champion in the Department

- **Sept 2021 – to date:** Departmental Examinations and Timetables Coordinator, Kibabii University
- **June - July 2021** – Acting Dean, Faculty of Science, Kibabii University
- **March 2022** – Appointed as the Support Programme Leader For **Masters of Science in Microbiology**
- **July 2020** – Programme Leader for **Bachelor of Science in Bioresource Conservation and Management**
- **July 2020** - Support Programme Leader for **Bachelor of Science in Biology programme**
- **2015 – to date:** Faculty of Science, Curriculum Development and Review Coordinator, Kibabii University
- **2009 – 2013:** Coordinator, MMUST Botanical Garden - MMUST
- **2006 – 2009:** Warden, Student Hostels in MMUST
- **2005 - 2010:** Academic Advisor, undergraduate students, Bachelor of Science in Biology class

ACADEMIC AND RESEARCH - AREAS OF SPECIALIZATION:

- Biology – Biological Sciences/Plant Ecology
- Biodiversity Conservation
- Environmental Sciences and Climate Change Studies
- Gender and Women in STEM studies

RESEARCH GRANTS WON:

2023 - In a team of 5 research Scientists of Kibabii University, we have managed to win research grants worth **US Dollars 47,000.00** funded by RUFORUM-RAINCA, (RAINCA Project Grant Number-109705-001/002), to carry out research titled: *Use of Smart Technology to Predict Climate Change Effects on Terrestrial Plants Diversity and Conservation for Sustainable Livelihood in North-Rift Region, Kenya*

2023 – In a team of research Scientists from three cooperating countries Kenya, Austria and Lesotho and from the following Universities: Kibabii University, Medical University-Graz and National University of Lesotho, we managed to win research grants worth **30,000 Euros** funded by *Africa-UniNet Research Cooperation Project-2022* to carry out a project on strengthening mental health awareness among secondary school students in Kenya.

POSTGRADUATE STUDENTS THAT I HAVE SUPERVISED:

1. **Eric Sifuna Siunduh**, PhD student, Kibabii University, thesis title “*Use of Smart Technology to Predict Climate Change Effects on Terrestrial Plants Diversity and Conservation for Sustainable Livelihood in North-Rift Region, Kenya*. In progress.
2. **Wabusya Moses**, Msc in Environmental Biology at Masinde Muliro University of Science and Technology. Graduated.
3. **Esther Vuhiya**, Msc in Environmental Biology at Masinde Muliro University of Science and Technology. Graduated.
4. **Lenard Obiet Okumu**, Msc in Environmental Biology at Masinde Muliro University of Science and Technology. Graduated.
5. **Sandra Khatiebi**, Msc in Environmental Biology at Masinde Muliro University of Science and Technology. Graduated.

6. **Eliud Kwabok**, Msc in Environmental Biology at Masinde Muliro University of Science and Technology. Graduated.
7. **Hillary Koros**, Msc in Environmental Biology at Masinde Muliro University of Science and Technology. Graduated.

ADDITIONAL PROFESSIONAL TRAINING

- 1) **July 2021** – completed a 3 weeks leadership training on “Commonwealth Digital Education Leadership Training in Action, sponsored by Commonwealth through Kibabii University
- 2) **June 2022** - I attended a technical course on **Technical and Vocational Education and Training (TVET) Curriculum Based Education Training (CBET)**, that was held in Kibabii University, Kenya
- 3) **May 2022** - I attended a 5 days technical course training on **Technical and Vocational Education and Training (TVET) for Career Services officer’s**, sponsored by Kibabii University, Kenya. Trainers were from TVETA.
- 4) **In 2021** – I Attended a 3 weeks oDEL training on “*Train the Trainers for C-DELTA* training on E-learning and Learning Management System” at Kibabii University, sponsored by Commonwealth
- 5) **October 2021** - I attended a technical online training on **Digital Content Design and Learning Management System**, organized by Directorate of ODEL of Kibabii University, Kenya
- 6) **October 2017** – attended a training workshop on “*ISO 900:2015 Quality Management System Process Owners’ Training Course*” held at Kibabii University, Bungoma
- 7) **March 2017** - I attended a **Grant Proposal Writing training** that was organized by African Population and Health Research Center (APHRC) at Kibabii University, Bungoma
- 8) **July 2014** – attended a 5 days training on **Audit Performance Standards**, by trainers from KUSCCO

MEMBERSHIP IN UNIVERSITY COMMITTEES:

For the last 10 years, I have been appointed to serve in the following University Committees:

1. Member of the University committee on Competence Based Curriculum (CBC) implementation committee, Kibabii University
2. Member of the University research CRACK TEAM
3. Member of the Board of the Institute of Gender and Development Studies, Kibabii University
4. Member of the Board of Institute of Directorate of Technical and Vocational Education Training (TVET), Kibabii University
5. Member of the Ad-hoc Committee on developing a proposal for the construction of School of Nursing at Kibabii University
6. Member of the University Curriculum and Programmes Review Committee, Kibabii University
7. Member of the Committee for Developing University Partnership and Linkages Committee
8. Member of the Kibabii University Committee for Capital Development Projects and Acquisition of Assets
9. In 2015, Appointed the chairperson of a committee to draft a policy on Women in Science, Technology, Engineering and Mathematics (WiSTEM)

10. Member of the Working Committee to Explore Possibilities of Collaborating between Kibabii University and Bukura Agricultural College
11. Member of the Task Force for Development of the Kitale/Eldoret University College of Masinde Muliro University of Science and Technology (MMUST)
12. In 2016, Chairperson of Committee on Intellectual Property Rights, Kibabii University
13. Member of the Aids Control Unit (ACU) of Kibabii University, Kibabii University
14. Member of Ad-Hoc Part Time Payment Review Committee, Kibabii University
15. Member of the Procurement Plan Committee, Kibabii University
16. Member of the Organising Committee for the 2nd Kibabii University International Conference

EXTERNAL EXAMINER:

1. I am currently the external examiner of Biological and Agricultural Department at **Kaimosi Friends University, Kenya** from November 2022 to October 2025
2. I have been appointed twice to be an internal examiner to moderate examination results at Biological Sciences department, **Kibabii University, Kenya** in 2021 and 2022 academic year

EXAMINATION OF THESIS:

- External Examiner of thesis for Msc student (Msc in Evolutionary Biology) from **Turkana University College**, Student Name: Aaron Eipa Emmanuel; Thesis title: Comparative Description of Catarrhine Specimens from the New Oligocene Site of Topernawi, West Turkana, Kenya.
- External Examiner of thesis for Msc student ((Msc in Evolutionary Biology) from **Turkana University College**, Student Name: Mbatha Pauline Mbete; Thesis title: Comparative Morphometric Study of Proboscidean Dentition from the APARK Member of the Nachukui Formation at Lothagam, Kenya
- Appointed as Examiner of thesis for Msc student (Msc in Environmental Biology) from **Masinde Muliro University of Science and Technology**, Student Name; Mr. Zedekiah Odira thesis entitled “Macro-Invertebrates assemblages along land use gradients in River Isikhu watershed, Western Kenya.
- Appointed as Examiner of thesis for Msc student (Msc in Environmental Biology) from **Masinde Muliro University of Science and Technology**, Student Name; Mr. Enock Syoley Mati, thesis entitled “Diversity of plants and birds as indicators of environmental quality in Bumula wetlands, Western Kenya.
- Appointed as Examiner of thesis for Msc student (Msc in Environmental Biology) from **Masinde Muliro University of Science and Technology**, Student Name; Ms. Christine Onyango, thesis entitled “Assessment of water quality by use of Macroinvertebrates in Omubhira and Lurambi Streams: Implications of Management and Conservation”.

APPOINTMENT AS EXAMINER FOR MODERATION OF EXAMINATION RESULTS

- **June 2022**, I was appointed as an Internal Examiner to moderate examination results for 1st and 2nd Year Examinations results for 2021/2022 Academic year for the Department of Biological and Environmental Sciences, Kibabii University
- **November 2021**, I was appointed as an Internal Examiner to moderate examination results for Second Semester Examinations results for 2020/2021 Academic year for the Department of Biological and Environmental Sciences, Kibabii University
- **September 2021**, I was appointed as an Internal Examiner to moderate examination results for Semester 1 and 2, 2020/2021 for 1st Year, 2nd, 3rd and 4th year Examinations results, for the Department of Biological and Environmental Sciences, Kibabii University

SCIENTIFIC PUBLICATIONS IN PEER-REVIEWED JOURNALS

I have published the following 17 scientific papers in peer-reviewed journals

1. Bwambok Eliud and **Martha Konje (2022)**. Uses, Threats and Conservation of Plant Species in Kisere Catchment Area of Kakamega Forest, Kenya. Vol. 11, (2), February 2022, 85-91. Paper ID: SR211123165445; DOI: 10.21275/SR211123165445
2. **Konje Martha**, Muoria Paul, and Wabuye Emily. (2021). Spatial-temporal variation of biomass production by shrubs in the Succulent Karoo, South Africa. *Journal of Biodiversity and Environmental Sciences*, Vol.18,(4), 82-92
3. **Konje Martha**, Muoria Paul, Wabuye Emily, Griffin Neil and Vetter Susanne. (2021). Rainfall and Soils, Not Grazing Intensity, Determine the Composition and Productivity of Annual Plants in a Bio-diverse Arid Winter Rainfall Region. *Journal of Natural Sciences Research* www.iiste.org, Vol.12, (10), 35-48
4. **Konje Martha**, Muoria Paul, Wabuye Emily and Vetter Susanne. (2021). Spatio-Temporal Variation in Forage Production in a Key Resource Area in the Succulent Karoo Rangeland, South Africa. *Researchjournali's Journal of Ecology*, Vol. 8 (1), 1-21
5. Bwambok Eliud and **Martha Konje**. (2021). Impact of Anthropogenic Activities on Tree Species Density and Stem Size Distribution in Kisere Fragment of the Kakamega Forest, Kenya. *Researchjournali's Journal of Forestry*, Vol. 8(1), 1-16
6. Khatiebi,S., D. Siamba, Z. Onyando, C. Mulmbala, **M. Konje**. (2018). Heavy metal contamination at dumpsites at Eldoret, Kenya, in the Lake Victoria Basin. *African Journal of Tropical Hydrobiology and Fisheries* 16 (2), 93-97
7. Koros, H., I Malombe, K Mwendwa, P Jeruto, H Agevi, **M Konje**. (2016a). Indigenous knowledge, uses and conservation of prunus africana (hook. f.) kalkman in Nandi forests. *J. Nat. Sci. Res.* 6, 2224-3186
8. Koros, H., **M. Konje**, M. Wambua, C. Chesire, D. Odeny, I. Malombe. (2016b). Population status and conservation hotspots of Prunus Africana (Hook. F.) Kalkman in South Nandi Forest, Western Kenya. *Researchjournali's Journal of Forestry*, Vol. 3,No. 4, 1-13

9. Khatiebi Sandra, Siamba Donald Namasaka, **Konje Martha Muthoni**. (2015). Physicochemical characteristics and Biodegradability of organic fraction of solid wastes generated in Eldoret Municipality, Kenya. *Res. J. Environ. Earth Sci.*, 7(3): 42-49
10. **Konje M.**, P. Okoth, H. Tsingalia, C. Kigen, H. Nyongesa, A. Njue and M. Wabusya (2013). Influence of Soil Properties and Environmental Variables on Plant Communities in Lake Naivasha Drainage Basin; Kenya. *Elixir Pollution* 64: 19215-19221
11. Vuyiya E, **Konje M**, Tsingalia H, Obiet L, Kigen C, Wamalwa S, Nyongesa Humphrey (2014). The impacts of human activities on tree species richness and diversity in Kakamega Forest, Western Kenya; *International Journal of Biodiversity Conservation; Vol.6 (6) pg 428-435*
12. Kigen C, P. Okoth , **M. Konje**, W. Shivoga, D. Ochieno, S. Wanjala, H. Agevi, Z. Onyando, B. Soy, P. Kisoyan, and S. Makindi (2013) . Modeling the Spatial Impact of Climate Change on Grevy's Zebra (*Equus grevyi*) niche in Kenya. *Elixir Remote sensing* 62 (2013) 17608-17611
13. Lenard Obiet, **Konje Martha**, Muyekho Francis, Danyuku Esther, Kigen Charles, Wamalwa Stella, Kassilly Fredrick & Wabusya Moses (2014). Forage Availability and Quality for the Impala (*Aepyceros Melampus* (Brian)Kathryh) of Impala Sanctuary, Kenya. *International Journal of Recent Scientific Research Vol. 5, pp 1896-1899* (Oct, 2014)
14. Mutonyi J, Shibairo S.I, Chemining'wa G.N, Olubayo F.M, Keya N.C.O & Nyongesa, H.W, **Konje Martha**. (2014). Sugarcane Response To Liming, Manuring And Inorganic Fertilizers On Acid Acrisols In Western Kenya *International Journal of Recent Scientific Research Vol. 5, Issue, 7, pp 1703 – 1707* (Sept, 2014)
15. Wabusya W, **Konje M**, Nyongesa H, Tsingalia H and Wekesa R. (2014). Influence of land use practices on plant species richness and growth forms in Nzoia River Drainage Basin. *Elixir Appl. Biology* 68 (2014) 22197-22200
16. Mutonyi, J., Shibairo S., Chemining'wa, G, Olubayo, F, Nyongesa, H, **Konje, M.** (2014). Effects of N and K fertilization of sugarcane (*Saccharum officinarum*) on acrisols in Western Kenya. *Elixir Agriculture* 67 (2014) pg 21669-21675
17. Kigen C., P. Okoth, W. Shivoga, Z. Odera, D. Ochieno, **M. Konje**. (2014). Mapping of sorghum growing areas in Kenya. *Ellixir International (Remote Sensing)* 44: 1141- 1165

MEMBERSHIP TO SOCIETIES AND PROJECTS

1. Member of Nature Kenya (Easter Africa Natural History Society)
2. Member of the Kenya Museums Society
3. Member of Ecological Society for Eastern Africa (ESEA)
4. Member of Kakamega Forest Environmental Education Program (CBO)
5. Member and Alumni of Organization of Women in Science in Developing countries (OWSD)

COMMUNITY SERVICE:

1. Supporting the needy students in Kibabii University (financial and material support). In 2021, I was issued with a certificate of appreciation for supporting the needy students through generous financial and material support

2. Supporting Kibabii University Christian Union (CU), In March 2022, I was issued with a certificate of appreciation for financial, spiritual and mentorship support toward Kibabii University Christian Union Evangelism programmes
3. Active participation in girls mentorship programmes in Girls High Schools by either visiting their schools, or when they visit Kibabii University through the Directorate of Career Services, Kibabii University
4. Supporting Widows and Orphans in Bungoma community through the Food Bank program in the church, IGC Church, Bungoma
5. I am a church leader in International Growthway Church (IGC), Bungoma

SCHOLARSHIPS AWARDED

- Awarded Scholarship by Organization of Women in Science in Developing Countries (OWSD) for PhD study
- Awarded DAAD Scholarship, In-country and In-Region Scholarship at African Universities for my PhD study
- As a PhD student, I was incorporated into a research project funded by NRF (South Africa) to carry out research in Richtersveld National Park. The project was on on “Key natural resources, livestock population dynamics and pastoral livelihoods” under the. NRF Competitive Programme for Unrated Researchers
- I was awarded scholarship to study Msc. Degree in Addis Ababa University by Swedish International Development Agency (SIDA-SAREC) through National Museums of Kenya, under RPSUD project

PARTICIPATION IN WRITING RESEARCH AND GRANTS PROPOSALS

- **In 2022** - Participated in a group proposal writing in response to a call “icipe-BioInnovate”. The title of the research proposal was **"Sustainable production of herbal medicinal remedies for prevention and treatment of cancer in Eastern Africa"**
- **In 2022** - Participated in development of a grant proposal writing on **“Call For Innovation Research Grants on Responsible Artificial Intelligence For Climate Action”, case study of North Rift Region of Kenya** (won research grants)
- **In 2021** - Participated in development a concept note and research proposal on **“Conflict prevention and recovery program (CPRP) of vulnerable groups (women, girls, children and persons with disability) in Bundalangi, Busia county”**
- **In 2020** - As a team member of STEM and Gender Ad-hoc committee, I participated in writing of a grant proposal for funding in STEM..

WORKSHOPS, CONFERENCES AND SEMINARS ATTENDED:

- **June 2021** – attended an International Conference (Kibabii University 5th International Conference) held in Kibabii University, and presented a paper

- **May 2021** – attended an international 3 days conference (4th KIPPRA Annual Regional Conference).
- **June 2019** – attended an International Conference (Kibabii University 4th International Conference) held in Kibabii University, Theme “*Creative and Innovation for Sustainable Development*” and made a presentation
- **May 2019** – attended a two days training on “*Pedagogical Skills Training Course*” that was held in Kibabii University, Bungoma
- **June 2018** – attended an International Conference (Kibabii University 3rd International Conference) held in Kibabii University, Theme “*Creative and Innovation for Sustainable Development*” and made a presentation.
- **April 2017**- I attended a seminar on *African Women in Science*, Western Kenya Region Chapter at Masinde Muliro University of Science and Technology, organized by AWSF, Kenyan Chapter.
- **March 2017**, I attended a *Grant Proposal Writing workshop training* organized by African Population and Health Research Center (APHRC) at Kibabii University, Bungoma
- **July 2015** – attended a 2 days’ workshop training on “*Pedagogical Skills Training-Enhancing Quality Instructions and Assessment in the Provision of University Education in the 21st Century*” that was held at Kibabii University
- **July 2014** – attended a training on “*Audit Performance Standards*” held in Busia, Kenya. Organized by KUSCO Education and Training Programmes
- **January 2014** – attended a training workshop on “*Curriculum Development and Review for Public Universities in Kenya; Implementation and Accreditation*” held at Masinde Muliro University.
- **May 2013**, I attended a short course training on “*Possibilities For Improvement To Species Diversity Modelling*” held at ICIPE, Duduville campus Nairobi, organized by ICIPE and GIZ
- **November, 2012**- I attended an International 3 weeks training on “*Adaptive management of natural resources, to support decentralized forests and natural management for rural development*” held at Kumasi, Accra in Ghana. Organized by Center for Development Innovation, Wageningen UR, Netherland
- **August 2012** – attended a training workshop on “*Effective Teaching Strategies for Biological and Environmental Scientists; Developing Research Capacity among African Environmental Scientists*” held in Kampala, Uganda, organized by Tropical Biology Association
- **In June, 2010**, I attended an international conference in Beijing, China. The conference was entitled ‘*Women Scientists in a Changing World*’, and covered a critical range of topics of

interest to the overall objectives of promoting women in science and technology, Sponsored by Women in Science (OWSD).

- In **May, 2010**, I attended a conference organized by Ecological Society for Eastern Africa (ESEA) at the Multimedia University College, Nairobi. The conference was entitled “*Climate Change and Natural Resource use in Eastern Africa: Impacts, Adaptations and Mitigation*” and is expected to address the issue of climate change and natural resource use in the region.
- In **July 2008**, I attended the 43rd Grassland Society of South Africa Annual Congress that was held at Baadplas, South Africa and I presented a paper entitled “*Measurement of spatial and temporal variation in forage production by use of remote sensing data (MODIS) and line-intercept method in Richtersveld National Park, South Africa*”. The paper contributes to the understanding of the role of the new technology of remote sensing and GIS in monitoring rangeland productivity.
- In **July 2007**, I attended a conference organized by Arid Zone Ecology Forum (AZEF) that was held in Sutherland, South Africa. During the conference I presented a poster entitled “*the effect of rainfall and grazing on plant species composition, richness and productivity in Richtersveld National Park, South Africa*” and I won a trophy and a price for the best poster presentation.
- In **2006**, I attended a *Competitive Grant Systems Proposal Writing Training Course* in Nakuru, Kenya that was organized by the Regional Programme for sustainable use of Dryland Biodiversity (RPSUD) based in National Museums of Kenya.
- In **2004**, I attended a Multi-Disciplinary Course in *Tropical Fresh Water Ecosystems Management* that was organized with the support of MarcArthur Foundation, Norwegian Agency for Development Cooperation (NORAD) and Pan African START Secretariat (PASS).
- **2000** – Attended a “*Computer systems and Applications course*” in Kenyatta University, African Virtual University Unit.

NEW IDEAS AND TECHNIQUES RECENTLY ACQUIRED

- New knowledge and skills acquired on eLearning using Learning Management System (LMS), by attending various training programmes offered in Kibabii University by Directortate of Open and Distance Learning (ODel)
- Attend a 3 weeks training sponsored by Commonwealth through the “*Train the Trainers for C-DELTA training on E-learning and Learning Management System*” at Kibabii University. Through this Training of Trainers course that was drawn on an experiential learning approach, it enabled us the participants to undertake some activities in the C-DELTA modules, gain a personal experience of the pedagogical approach and advance our own digital education leadership simultaneously. The knowledge and skills acquired will be applied in online training of students and in improving the digital visibility of scholars in various online platforms.

- During my PhD research work, I have gained knowledge and expertise on application of the new technologies of Geographic Information System (GIS) and remote sensing technology in rangeland ecology, pastoralists' movement and resources distribution patterns. I used high resolution remote sensing imageries of Moderate Resolution Imaging Spectroradiometer (MODIS) to measure temporal and spatial variation in forage production. GIS and remote sensing technology has proved useful in frequent assessment of spatial and temporal rangeland productivity, vegetation cover change and in monitoring the effects of climate change especially in arid and semi-arid ecosystems.

REFEREE:

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