

KALEB ADAMBA MWENDWA

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AAN-4887-2021

<https://scholar.google.com/citations?user=eboVJJEAAAJ&hl=en>

Lecturer | Natural Resources Management Scientist | Technical Advisor | Trainer

PROFESSIONAL SUMMARY

Kaleb holds MPhil. Forestry/Soil Science (Moi University/Institute of Grassland and Environmental Research (IGER)/ University of Aberystwyth, Wales, United Kingdom) and. BSc. Forestry (Moi University) and He also holds a Graduate Diploma in Education (PGDE-Masinde Muliro University of Science and Technology-MMUST). Currently I am a Ph.D. Research Stage student in the Dept. of Disaster Management and Sustainable Development (DMSD-MMUST). Kaleb has obtained several micro-credentials in Research Management from University of Witwatersrand-SA.He is a senior academic and researcher with over 30 years of working experience acquired across a wide range within the forestry/conservation sector, Agroforestry/soil science research, education sector, public sector, civil society, and quasi-government organizations. He has extensive project management skills by designing and executing a wide range of research and programmes in the areas, Natural Resources Management, Agroforestry, Agriculture, Sustainable Land Management (SLM), Biodiversity Conservation, Disaster Management and Renewable Energy and has demonstrated skills in Grants proposal writing, quantitative and qualitative research, participatory methods, report writing, journal publications and higher education teaching. He has the ability to create strategic alliances with different stakeholders to align with and support key scientific and conservation initiatives effectively and has developed leadership skills by leading research teams and supervising university students from undergraduate to Masters Levels. He aspires to challenge himself by contributing his skills and knowledge to implement a wider scope of programs in the NRM, Food and Water Security, forestry/biodiversity conservation, education, public and civil society sectors. He intends to use his experiences in Grant Proposal writing with EU, USAID, IAEA/FAO, DANNIDA, SIDA, IDRC and UKRI to further his career in research and development. He has held management positions e.g. Centre Director for KEFRI-Coast Regional Research Centre, Executive Director, Kenya Marine Forum (NGO-Coast Region) and Director, Centre for Kakamega Tropical Forest Studies (CEKATFOS-MMUST). Kaleb has served internationally in the Philippines as a Coastal Resources Management Advisor, through VSO Jitolee-Kenya.

Core Competences and Skills

- Project management
- Curriculum development
- Participatory Approaches in NRM
- Project budgeting
- Proposal development
- Training and Presentation
- Report Writing
- Policy Formulation
- Research Management
- Data analysis

EDUCATION

- PhD Finalist, Disaster Management and Sustainable Development (DMSD), School of Disaster Management and Humanitarian Assistance (SDMHA), Masinde Muliro University of Science and Technology (MMUST), Kakamega, Kenya, On-going.(*PhD Research Topic: Influence of household resilience to drought induced food and water insecurity in Turkana county, Kenya*)
- Post Graduate Diploma in Education (PG Dip. Edu.), Masinde Muliro University of Science and Technology (MMUST), Kakamega, Kenya, 2010
- MPhil. Forestry-Agroforestry/Soil Science, Moi University, Eldoret, Kenya/Institute of Grassland and Environmental Research (IGER-UK), 1999

Thesis “*Evaluation of Response to Phosphate Rock Fertilization, VA-Mycorrhizae and Rhizobium Inoculation To Agroforestry Tree Species Growing on Two Acid Soils in Kenya Using 32P Isotope Dilution Techniques*”

- Fellowship-International Atomic Energy Agency (IAEA), in Agroforestry and Utilization of Isotopes in plant and soil studies, Institute of Grassland and Environmental Research (IGER) and the University of Aberystwyth. Aberystwyth Wales, United Kingdom, 1997
- B.Sc. Forestry – Upper 2nd Class Honours, Moi University, Eldoret, Kenya, 1990

TRAINING AND PROFESSIONAL DEVELOPMENT

- University of Wits (SA) On-line Examinable Course- Certificate of Competency in Programme Evaluation- October 18th 2021 to 14th December 2021
- University of Wits (SA) -On-line Examinable Course- Certificate of Competency in Intellectual Property, Technology Transfer & Commercialisation- August 20th 2021 to 28th September 2021
- University of Pretoria (UP-SA), SARIMA, and University of Southampton (UoS-UK)). Certificate of Competency in Research Grants and Contracts Management Online Course-5th to 7th July 2021.
- University of Wits (SA) and-SARIMA and On-line Examinable Course-Certificate of Competency in Fundamentals of Research Management. 6th April 2021 to 19th May 2021
- SARIMA On-Line Training Workshop on Basic Principles of Research Management. SARIMA and University of Southampton, 30th to 31st March 2021
- BRECCIA/Vitae UK On-Line Training Workshop/Course on Designing Research Impact Pathways (March 15th to 26th 2021)
- SARIMA and University of Wits (SA)-On-Line Examinable Course for Certificate of Competency in Research Ethics and Integrity , January 9th to March 17th 2021
- BRECCIA project-SDGs and the International Policy Framework Summer School. LEAD, Vitae (UK) and University of Southampton (UK). 21st October 2020. (Virtual)
- BRECCIA project-Training-Introduction to the Policy Process. LEAD, IIED and Vitae (UK). 30th Sept to 2nd Oct. 2020. (Virtual)
- Virtual onsite training workshop on Research and Grants Management, BRECCIA Project & SARIMA, 1st to 3rd September 2020. Southern African Research and Innovation Management Association (SARIMA)
- BRECCIA project-Training- Creating Research Impact. Vitae (UK). 11th August 2020. (Virtual)
- BRECCIA project-Training-Strategic Leadership. Vitae (UK). 27th July 2020. (Virtual)
- BRECCIA Training Workshop in Southampton, UK, University of Southampton 3rd – 16th March 2019
- Training course on use of Geographic technologies for climate change, food security and agriculture including professional development of fellows and mentors, American Association of Geographers (AAG) and East Africa MyCoE/SERVIR, RCMRD, Nairobi Kenya.2012
- Proposal Writing and Advocacy Skills, Kakamega Environmental Education Programme (KEEP), Conservancy. Kakamega, Kenya, 2012
- Ocean Governance: Law, Policy and Management, International Ocean Institute, Dalhousie University, Halifax, Canada, 2006
- Financial Management Training Course, PACT-Kenya and East African Wildlife Society (EAWLS), Mombasa, Kenya, 20014
- Personnel Management Course, PACT-Kenya and East African Wildlife Society (EAWLS). Mombasa, Kenya, 2004
- Forest Management Training, Preparing for Participatory Forest Management, Arabuko Sokoke Forest, Natural Resources Institute, U.K. Gede, Malindi, 2000
- Conflict Resolution/Communication/Handling Effective meeting skills, Consultants for Effective (CET), Gede Forest Station, Malindi, Kenya, 2000
- Geographic Information Systems (GIS) Arc View Software. Organized by Arabuko Sokoke Forest Management and Conservation Project (ASFMCP), Consultant Mr. Bilal Butt (Kentucky University, U.S.A), 2000.
- Data Management and Analysis in Agroforestry Research, International Centre for Research in Agroforestry, Nairobi, Kenya, 1999

- Field Training in Participatory Learning and Action Research, Kenya Agricultural Research Institute, Kakamega Regional Research Centre, 1997.
- Research Fellowship at Institution of Grassland and Environmental Research, IGER, Wales, UK. Use of Isotope and Radiation techniques in plant nutrition studies, 1997.
- Interregional Training Course on the use of Isotope and Radiation Techniques in studies on Soil-Plant Relationships with Emphasis on Better Nutrient utilization to improve Crop production, International Atomic Energy Agency laboratories in Seisberdorf (near Vienna) Austria, 1995
- Scientific Writing and Dissemination of Research Results from 18 January 1993 to 22 January 1993 at KEFRI Headquarters Muguga. Organized by KEFRI and the University of Helsinki-Finland.
- Group Training Courses in Forest Soils, JICA and University of Ryukyus, Okinawa Japan, 1992
- Special Orientation Course in Social Forestry, Kenya Forestry Research Institute (KEFRI), KEFRI and Japan International Cooperation Agency (JICA), 1992

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY

PROFESSIONAL APPOINTMENTS

- **Lecturer, School of Education (SEDU)**, Department of Science and Mathematics Education, Masinde Muliro University of Science and Technology (MMUST), Kakamega, Kenya (August 2012 to present).
- **Director, Centre for Kakamega Tropical Forest Studies (CEKATFOS)** Masinde Muliro University of Science and Technology (MMUST), Kakamega, Kenya (August 2012 to 2017).
- **Coordinator, Research, Resource Mobilization and Scientific Linkages, Centre for Kakamega Tropical Forest Studies (CEKATFOS)** Masinde Muliro University of Science and Technology (MMUST), Kakamega, Kenya (August 2011 to 2012).
- **Assistant Lecturer, School of Education (SEDU)**, Department of Science and Mathematics Education, Masinde Muliro University of Science and Technology (MMUST), Kakamega, Kenya (August 2008 to August 2012)
- **Project Lead at MMUST and Co-Investigator-Building Research Capacity in Sustainable Water and Food Security in the Drylands of Sub-Saharan Africa (BRECCIA)**-University of Southampton (UoS) and 6 African Universities (MMUST, University of Ghana, University of Malawi, University of Nairobi, Technical University of Kenya, Kenyatta University-Kenya)-March 2017 to present
- **Internal part-time Lecturer, Biological Sciences Department**, Masinde Muliro University of Science and Technology (MMUST), Kakamega, Kenya (August 2011 to 2013).
- **Internal Part-timer-Centre for Disaster Management and Humanitarian Assistance**, Dept. of Disaster Management and Sustainable development (August 2014 to 2015). Courses-Ecotourism, Biodiversity and Ecology
- **Project Implementor/Secretary-MUST-Streamlining GIS teaching while emphasizing a regional focus.** A German-Ugandan-Kenyan university cooperation (UnivGisKoop). A Project by Karlsruhe University of Applied Sciences (KSKA)GERMANY, Masinde Muliro University of Science and Technology (MMUST), KENYA, Makerere University (MAK), UGANDA. (June 2012 to 2017).
- **Science Club Leader-Western Province-Popularization of Science In Schools** –Project-“Establishment of Science Clubs across the country with the help of former Kenyan students in France-Project: Agroforestry” Embassy of France in Kenya and Association of France Alumni in Kenya (AFRAKEN)-From April 2012 to March 2014.
- **Member-Education for Sustainable Development Project-MMUST**-Project funded by SIDA and UNEP-from March 2012 to May 2016.
- **Implementer of MMUST and Lutheran World Federation (LWF) partnership**, Diploma in Primary Education for Refugee Teachers, Kakuma and Dabaab Refugee Camps-Environmental Education- 2010- to present
- **Member, Research and Outreach committee**, School of Education (SEDU-MMUST).

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY

Current Teaching Duties

POST-GRADUATE SCHOOL

- a) Management and Conservation of Tropical Forests (Post –Graduate-MSc. Environmental Biology-Biological Sciences Dept.)
- b) Ecology, Conservation and Management (Post-Graduate MSc. Environmental Education, Science and Mathematics Education Department).
- c) Global Climate change and Africa (Post –Graduate MSc. Environmental Education, Science and Mathematics Education Department).
- d) Environmental Impact Assessment-EIA (Post-Graduate MSc. Environmental Education, Science and Mathematics Education Department).
- e) Methods and Practice in Teaching Environmental Education (Post-Graduate MSc. Environmental Education Science and Mathematics Education Department).
- f) Fundamentals of GIS (Post-Graduate MSc. Environmental Education, Science and Mathematics Education Department).

UNDERGRADUATE

- a) Environmental Education ESM 410- Undergraduate 4th years and Diploma-Science and Mathematics Education Department.
- b) Science, Technology and Society ESM 412-4th years and Diploma-Science and Mathematics Education Department).

INTERNAL PART-TIME

- a) Forests and Wildlife (Undergraduate- Biological Sciences Department).
- b) Biodiversity and Ecology (Undergraduate-B.Sc. In Disaster Management and Sustainable Development)
- c) Techniques in Bioresources Management (Undergraduate-Biological Sciences Department)
- d) Introduction to Wildlife Management (Undergraduate-Biological Sciences Department).
- e) Ecotourism (Undergraduate-B.Sc. In Disaster Management and Sustainable Development)

OTHER PROFESSIONAL WORK EXPERIENCE

1. **Coastal Resources Management Advisor**, Muslim-Christian agency for Advocacy, Relief and Development (MuCAARD-POM), Mindanao Region, Philippines (April 2006 to July 2007).
2. **Executive Director**-Kenya Marine Form-Coast Province (2003-2006).
3. **Kenya Government Gazetted Member**, Provincial Environment Committee (PEC), Coast Province (July 2005 to July 2011), National Environment and Coordination Act (1999)
4. **Part-time Lecturer**, Kenya Wildlife Service Training Institute (KWSTI-Naivasha)-March 2008 April 2009.
5. **Technical Director** (Part-Time)-Elimu na Maendeleo Pwani-Trust (Education and Sustainable Development Coast) July 2007 to August 2010).

KENYA FORESTRY RESEARCH INSTITUTE (KEFRI)-August 1990 to December 2003) www.kefri.org

1. **National Research Scientist**, Kenya Forestry Research Institute, (1st August 1990 to December 2003)

Positions Held within KEFRI

1. **Assistant Director**, KEFRI, Kitui Dryland Forestry Research Centre (2002 to 2003)
2. **Team Leader and Project Development Team Member**-KEFRI/Belgium Technical Cooperation-BTC/Forest Department (Ministry of Env. And Natural Resources)-Rehabilitation of Drylands using Agroforestry and MultiDisciplinary Approach (Jan 2002 to Dec. 2003)
3. **Centre Director** –Coast Province (Gede) Regional Research Centre, Kenya Forestry Research Institute (1998-2000)
4. **National Coordinator and Project Developer** –Farm Forestry and natural resources conservation Project around Arabuko Sokoke Forest-Coast Province (KEFRI, EAWLS, ALISEI-ITALIAN INGO) -1999-2002
5. **Project Development Team**- Arabuko Sokoke Forest (Coast, Kenya) Management and Conservation Project (ASFMCP) &part of the team that developed the Strategic Forest Management Plan-2002-2027. (2001-2002)-EU/KEFRI/KWS/FD/NMK and Birdlife international.

6. **Chair**, Research & monitoring and Rural Development Working Groups-Arabuko Sokoke Forest Management and Conservation Project (ASFMCP)-1998-2000
7. **Member**, Rural Development Working Group Arabuko Sokoke Forest Management and Conservation Project (ASFMCP)-1998-2000
8. **Assistant Director**, KEFRI, Maseno Regional Research Centre (1997 to 1998)
9. **Project Officer, KEFRI/GoK**-Ministry of Energy Project-Alternative Household Energy Sources Project-1997-1999
10. **Seconded Project Officer**-KEFRI-International Centre for Research in Agroforestry - ICRAF/Kenya Agricultural Research Institute-KARI-Pilot Project-Nyanza and western -1997-1998
11. **Seconded Project Officer**-CARE (K)KEFRI-Agroforestry Project-Nyanza-1997-1998
12. **Project Officer**-IAEA/KEFRI Project on Use of Nuclear Techniques to study various aspect of trees/plant nutrition- 1995-1998

PUBLICATIONS

TRAINING MANUAL

1. Dr. Namenya Daniel Naburi, Dr. Edward Musungu Mugalavai & **Kaleb Mwendwa Adamba (eds.) 2022**. Climate, Land-Use Change and Watershed Governance for Food Security. **Training Manual. MAY 2022** (in preparation)

BOOK PUBLICATIONS and CHAPTERS

1. **Kaleb A. Mwendwa**, Mohammed B. Dhidha and Agevi Humphrey (2016). Socio-Economic and Biophysical Characteristics of the Tana Delta, Kenya. Enhancing Community Participation in Natural Resources Management (ISBN: 978-3-330-02326-0 LAP LAMBERT Academic Publishing. OmniScriptum GmbH & Co. KG. Bahnhofstraße 28, D-66111 Saarbrücken)
2. **Kaleb A. Mwendwa**, Mohammed B. Dhidha and Agevi Humphrey (2022). Socio-economic characterization of Forest Adjacent Communities (FACs) around Arabuko Sokoke Forest, Coast, Kenya (in preparation).
3. **Kaleb Mwendwa** and Omondi Were (2012). Environment Information, Education and Communication: Chapter 9, Kakamega County State of the Environment Report 2012: Supporting Green Economy for Delivery of Vision 2030. A publication of NEMA with the support of GoK/NEMA/GEF/UNDP/Nature Kenya

CONFERENCE PROCEEDINGS/WORKSHOP PROCEEDINGS EDITORIALS

- George W. Waswa, Alexander Khaemba and **Kaleb Mwendwa (eds.) 2016**. Proceedings of the Conference on Expanding Theoretical And Applied Roles of GIS in a Dynamic Global Environment. Masinde Muliro University of Science and Technology (MMUST), Kakamega, Kenya. ©2016. ISBN 978-9966-096-54-8 216pgs. <https://www.morebooks.de/store/gb/book/socio-economic-and-biophysical-characteristics-of-the-tana-delta,kenya/isbn/978-3-330-02326-0>
- Tsingalia, H. M., **Mwendwa, K. A.**, Wamocho, L. and Kabaji, E. (eds.) 2013. Proceedings of the International Conference on Tropical Forest Resources-Forest Biodiversity, Conservation and Climate Change, 6th to 9th June 2011. 166p. The Centre for Kakamega Tropical Forest Studies and Masinde Muliro University of Science and Technology, Kenya. Copyright © 2013. ISBN 978-9966-21-012-8
- A. Omollo. **K. Mwendwa** and G. Aluoch (eds.) 1998. Proceedings of CARE (K) KEFRI Adaptive Research Symposium. Experiences, Linkages and Sustainability. First Edition 82pp. Kisumu, Kenya February 1998.

PAPERS IN REFEERED JOURNALS/BOOKS

1. Naburi. D. Namenya, Mugalavai. M. Edward, **Mwendwa A. Kaleb**, Ouma Gilbert and Ouma Clinton (2022). Dryland Pastoralism Climate Landscape and Food Security in the Suam River Basin of Kenya. *American Journal of Climate Change* (Accepted/in press)
2. **Mwendwa A. Kaleb**, Agevi Humphrey (2020). Influence of Forest Roads, Distance from the Boundary and Location of Sites on Illegal Activities in Arabuko Sokoke Forest, Coast-Kenya. *American Journal of Agriculture and Forestry*. Vol. 8, No. 6, 2020, pp. 235-246. doi: 10.11648/j.ajaf.20200806.11
3. **Mwendwa Adamba Kaleb**, Obiri John, Agevi Humphrey, Climate Justice within the UNFCCC Negotiations: The Case of the Rights of Indigenous Peoples from Copenhagen Accord to Paris

Agreement, *International Journal of Natural Resource Ecology and Management*. Vol. 5, No. 4, 2020, pp. 160-167. doi: 10.11648/j.ijnrem. 20200504.13 ISSN Print: 2575-3088; ISSN Online: 2575-3061 Alt: <http://www.sciencepublishinggroup.com/journal/paperinfo?journalid=207&doi=10.11648/j.ijnrem.20200504.13>

4. Koros, H., Malombe, I., **Mwendwa, K.**, Pascaline Jeruto, P., Agevi, H. and Konje, M. (2016). Indigenous Knowledge, Uses and Conservation of *Prunus africana* (Hook. F.) Kalkman in Nandi Forests. *Journal of Natural Sciences Research Vol.6, No.14; ISSN 2224-3186 (Paper) ISSN 2225-0921 (Online)*
5. Agevi, H., **Mwendwa, K. A.**, Koros, H., Mulinya, C., Kawawa, R. C., Kimutai, D. K., Wabusya, M., Khanyufu, M. and Jawuoro S (2016). PELIS Forestry Programme as a Strategy for Increasing Forest Cover and Improving Community Livelihoods: Case of Malava Forest, Western Kenya. *American Journal of Agriculture and Forestry*. 4(5): 128-135¹
6. Alice LK Kelly, Charles K Kigen, Humphrey Agevi & **Kaleb A Mwendwa** (2016). Trends in land use and land cover changes; drivers and impacts on Kakamega forest block. In: George W. Waswa, Alexander Khaemba and **Kaleb Mwendwa** (eds.). 2016. Proceedings of the Conference on Expanding Theoretical And Applied Roles of GIS in a Dynamic Global Environment. Pages 59 – 68. 209 pgs. Masinde Muliro University of Science and Technology (MMUST), Kakamega, Kenya. Paper No: 05©2016. ISBN 978-9966-096-54-8
7. **Mwendwa K. A.**, Toili William, Edome P, Michieka R. and Agevi H. (2013). An analysis of secondary school Biology and Chemistry curriculum and KCSE exams in relation to environmental education. *East African Journal of Engineering, Science and Technology EAJEST, Vol .2.*
8. Agevi H. Tsingalia H.M., Winfred M. and **Mwendwa K.A.** (2013). Effects of open patches on seedling germination and establishment in Kakamega Forest. *East African Journal of Engineering, Science and Technology EAJEST, Vol .2.*
9. Mathenge J. Kabugi H. and **Mwendwa K. A.** (2013). Joint management of Natural resources by Kenya wildlife Service and the Forest Department: shared experiences and lessons learnt with introduction of PFM Process to Arabuko Sokoke forest reserve. *East African Journal of Engineering, Science and Technology EAJEST, Vol .2.*
10. N. K. Karanja, **K.A. Mwendwa**, J.R. Okalebo, J. H. P Kahindi, 2004. Effect of phosphate rock fertilization and Arbuscular Mycorrhizae (AM) inoculation on growth and nodulation of agroforestry tree seedlings. *West Africa Journal of Applied Ecology, Vol. 6:55-64.* <https://www.ajol.info/index.php/wajae/article/view/45604> DOI: 10.4314/wajae.v6i1.45604
11. **K.A. Mwendwa**, I Gordon, M. T. E Mbuvi and J. M Wameu (2003). Using Participatory learning and action Research with Forest Adjacent communities. The Arabuko Sokoke Case. Pg. 345-358 (*In Jan Hoorweg and Nyawira Muthiga eds. Recent Advances in Coastal Ecology, Studies from o from Kenya pp.396+xvi, ISBN 90.5448.054.8.*
12. M. T.E. Mbuvi, A. M. Makee and **K.A. Mwendwa** (2003). The Status of Mangrove exploitation and Trade along the Kenyan Coastline (*In Jan Hoorweg and Nyawira Muthiga eds). Recent Advances in Coastal Ecology, studies from Kenya pp.396+xvi, ISBN 90.5448.054.8.*
13. N. K. Karanja, **K.A. Mwendwa** and Zapata, F. (1999) Growth response of *Grevilla robusta*. A. Cunn seedlings to phosphorus fertilization in acid soils from Kenya. *Biotechnol. Agron . Soc. Environ.1999 (1), 57-64* https://www.researchgate.net/publication/26392414_Growth_response_of_Grevillea_robusta_A_Cunn_s_ee_dlings_to_phosphorus_fertilization_in_acid_soils_from_Kenya
14. **Mwendwa, K.A.**, Karanja, N.K., Zapata, F. Maingi, S.W (1997/98). Evaluation of P uptake from Mijingu phosphate rock and growth of six agroforestry tree species growing on acid soil from western Kenya using P 32 isotope dilution technique. *International Journal of Biochemiphysics Vol (6&7), Nos (1&2) p.79-85*
15. **Mwendwa. A. K** and A. Otsamo (1993). Effects of irrigation on Soil Nutrient Status in a 14 month *Prosopis juliflora* and *Eucalyptus microtheca* in Bura Irrigation Scheme, Eastern Kenya. *E.Afr.Agr. For. J.58 Special Issue:101-105.*

PUBLISHED IN REFERRED PROCEEDINGS/BOOKS

1. **Kaleb A. Mwendwa, John Obiri , Humphrey Agevi , Aura Catherine , Umulkheir Ali & Issah Kweyu (2021)** Covid-19 and Nature: The Interconnections In Proceedings of 1st Annual Virtual

¹ Part of paper extracted and cited in Government of the Republic of Kenya 2020: Kenya Sixth National Report to the Convention on Biological Diversity. Ministry of Environment and Forestry. Case study: Malava Forest Kakamega-169: Pages 232-233)

- Conference of Science, Technology, Engineering and Mathematics Education International Conference, Masinde Muliro University of Science and Technology (MMUST,2020), pp. 16-40. ISSN: 22223-490X
2. N. K. Karanja, **K.A. Mwendwa** J. R. Okalebo and F. Zapata. 2003. Effects of phosphate rock fertilization and Arbuscular mycorrhiza inoculation on growth of agroforestry tree seedlings. In: S. S. Chien (eds.). Direct application of phosphate rock and related technology. Latest developments and practical experiences. Proc. Int. Meeting. Kuala Lumpur 16-20 July, 2001, Special Publication IFDC-SP-37. Muscle Shoals, Alabama. USA, p. 353-366.
 3. N. K. Karanja, **K.A. Mwendwa** and F. Zapata. 2002. Response of seedling of *Grevillea robusta* A.cunn to phosphorus fertilization in acid soils from Kenya. In: Assessment of soil phosphorus status and management of phosphatic fertilizers to optimize crop production. IAEA-TECDOC 1272.Pp.201-223.
 4. N. K. Karanja, and **K.A. Mwendwa**, 2002. Evaluation of phosphorus uptake from Minjingu Phosphate rock, growth and nodulation of agroforestry tree species in an acid soil from Kenya. In: Assessment of soil phosphorus status and management of phosphatic fertilizers to optimise crop production crop production. IAEA-TECDOC 1272pp. 183-200.
 5. **K.A. Mwendwa**, W. Eason, N. K. Karanja, V. Rutunga, J. Roberts, F. Zapata and D. O. Nyamai 2002. Estimation of N₂-fixation in phosphorus – fertilized *Leucaena leucocphala* and *G. Sepium* seedlings using *S. siamea* and *E. grandis* as reference tree. In: Proceedings of the 9th AABNF Conference on challenges and Imperatives for Biological Nitrogen fixation: Research and Applications in Africa for the 21st Century, 2002 (eds. Nancy K. Karanja and James H. P. Kahindi) pp. 94-104. John Philips Africa Ltd Publishers, Nairobi, Kenya, ISBN No. 9966-879-41-2)
 6. **K.A. Mwendwa**, Svan Hansen. T, Nyasimi M. de wolf J and Noordin, Q (1999).Dynamics of village organizations, wealth and gender in Western Kenya: Analytic methodologies and challenges. Pp. 150-172 In (C. Farley ed.) Proceedings of Participatory Research for Improved Agroecosystem Management (PRIAM): Proceedings of a synthesis workshop, coordinated by CIAT-Africa. 17th to 22nd August 1998, Melkassa-Nazareth Ethiopia.CIAT African Workshop series, No. 38. 263p.
 7. **K.A. Mwendwa**, Eason, W.,Karanja N. K., Zapata F., Rutunga, V. and Roberts, J. 1999. Effect of phosphorus on growth of four agroforestry tree seedlings and N₂-fixation of *Leucena leucocephala* and *Gliricidia sepium*. In proceedings of the 17th conference of soil science society of east Africa (eds J. S. Tenywa, J.Y. K zake, P. Ebanyat, O. Semalulu and S. T. Nkalubo) pp. 85-94.
 8. **Mwendwa K.A.**,Eason, W.,N. K Karanja, Rutunga, V, Roberts, J.,Zapata F., and Nyamai, D.O. 1998. Estimation of N₂-fixation in phosphorus fertilized *Leucena Leucocephala* and *Gliricidia sepium* seedlings using *Senna siamea* and *Eucalyptus grandis* as reference trees. (eds.F.Dakora) pp. 164-165. Poster presented at the 8th congress of the African association for Biological Nitrogen fixation (AABNF), 23-27 November , 1998
 9. Karanja, N.K. and **Mwendwa, A.K.** 1995. Estimation of availability and uptake of P from Minjingu Rock phosphate (MRP) by six (6) tree species growing on an acid soil using the 32 P isotope dilution technique . Paper presented at the 2nd Research Coordination meeting of the FAO/IAEA co-ordinated Research Programme, held at CIRAD, Montpellier, France 24 - 29 April 1995.
 10. **Mwendwa, A.K.** and Karanja, N.K.1994. Evaluation of availability and uptake of P from Rock phosphate (RP) with mycorrhizal inoculation by agroforestry tree species growing on two acid soils in Kenya. Paper presented at the 2nd Crop Science Society meeting in Lilongwe, Malawi.

GRANTS AND FUNDRAISING

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1. **Project: Building Research Capacity for Sustainable Food and Water Security in Drylands of Sub-Saharan Africa (BRECCIA** (2017 to Present) www.breccia-grcf.com
 - Amount 24.5 Million Shillings (Part of a Total Grant of 300 Million Kenya Shillings)
 - Implementers- University of Southampton 6 African Universities (4 Kenya-MMUST, TUK, UoN and KU; 1 Malawi-UoM and 1 Ghana-UoG), 3 Regional Organizations (SARIMA, AGRHYMET and WATER-Net) and 1 International Organization (UNESCO-IHP)MMUST
 - Co-Investigators-**Kaleb A. Mwendwa (SEDU/CEKATFOS) and Prof. John Obiri (SDMHA/SGS).**
 - Funders: Research Councils of United Kingdom (RCUK)-Global Challenges Research Fund (GCRF)
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2. International Researcher Links Workshop Newton Fund (18th December to Thursday 21st December, 2017)-Project: Role of Small holder Agroforestry systems in the arid and semi-arid region in combating climate change

- Amount-5.5.5 Million Kenya Shillings
 - Hosted by MMUST through Centre for Kakamega Tropical Forest Studies (CEKATFOS)
 - International Organizers- **Kaleb A. Mwendwa (SEDU/CEKATFOS)**, Prof. John Obiri (SDMHA) and Prof. William Shivoga (SONAS)
 - MMUST, University of Southampton (UoS)-UK and University of Venda (UNIVEN)-South Africa (70 Participants from Kenya, U and South Africa)
 - Funders-MMUST, British Council, Newton Utafiti Fund-NRF Kenya
3. **Project: Streamlining GIS teaching while emphasizing a regional focus (June 2012 to December 2016)**
- Amount- 8.5 M Kenya Shillings from DAAD-Germany
 - CEKATFOS, CDMHA and the Faculty of Engineering
 - Co-Investigators-**Kaleb A. Mwendwa ((SEDU/CEKATFOS)**, Dr. Edward Neyole (SDMHA) and Dr. Alex. Khaemba (SEBE)
 - German-Ugandan-Kenyan University cooperation (UnivGisKoop) between MMUST, Karlsruhe University of Applied Sciences (HSKA), GERMANY and Makerere University (MAK), UGANDA.
 - Funders-DAAD
4. International Conference on Expanding Theoretical and Applied Roles GIS in a Dynamic Global Environment, 13th to 14th August 2015
- Amount 4.5 M Kenya Shillings
 - Hosted by MMUST
 - More than 200 participants and exhibitors
 - Funders-DAAD, Centre for International Forestry Research (CIFOR), International Centre for Research in Agroforestry (ICRAF)
 - International Organizers-**Kaleb A. Mwendwa ((SEDU/CEKATFOS)**, Dr. Edward Neyole (SDMHA) and Dr. Alex. Khaemba (SEBE)
5. **International Conference on Tropical Forest Resources (6th to 9th June, 2011) held at MMUST.**
- Amount -3.5 M Kenya Shillings
 - Hosted by the CEKATFOS (MMUST)
 - More than 250 researchers and practitioners in matters regarding tropical forest resources from across the world.
 - Funders-MMUST, the National Commission of Science, Technology and Innovation (NACOSTI), Kenya Wildlife Service (KWS), Kenya Forest Service (KFS), Japanese Society for Promotion of Science (JSPS), United Nations Environmental Programme (UNEP), Ministry of Environment and Mineral Resources, UNDP, International Centre for Research in Agroforestry (ICRAF/-World Agroforestry Centre-WAC) and Mau Forest Secretariat.
 - International Organizers: Prof. M. Tsingalia and **Kaleb A. Mwendwa (CEKATFOS)**

INTERNATIONAL SMALL GRANTS

1. **Kaleb A. Mwendwa**, John Obiri and Namenya Naburi Daniel (March 2020 to present). Determining resilience attributable bio-physical, social/gender, economic and political factors that influence Food and Water Security in Turkana County-Kenya. Funded and supported by UKRI-GCRF through BRECCIA Project and World Agroforestry Centre (International Centre for Research in Agroforestry-ICRAF). £15,000 British Pounds (**Approx. 2M Kenya Shillings**)
2. John Obiri, **Kaleb A. Mwendwa** and Namenya Daniel Naburi (September 2019 to present). Utilisation patterns and management of the invasive species *Prosopis juliflora* in the drylands of Turkana, Kenya £15,000 British Pounds- Funded and Supported by UKRI-GCRF through BRECCIA Project. (**Approx. 2M Kenya Shillings**)
3. Jadu Dash (UoS), Tendai Chibarabada (WaterNet-Zim), Chengxiu Li (UoS) **Kaleb Adamba Mwendwa** (MMUST) and Peter Wanyumba (TUK) - (2020), Development of a Crop Yield Information System for

Improved Livelihoods in Kenya- CRYSLK Funded and Supported by UKRI-GCRF through BRECCIA Project. £15,000 British Pounds (**Approx. 2M Kenya Shillings**)

4. Namenya Naburi Daniel, **Kaleb A. Mwendwa** and John Obiri (September 2019 to present). Trends in climate variability, land use change, watershed governance and implications on food security in the dryland of Suam River Basin, West Pokot County, Kenya. Funded and Supported by UKRI-GCRF through BRECCIA Project. £15,000 British Pounds (**Approx. 2M Kenya Shillings**)

MMUST INTERNAL FUNDRAISING (MMUST URF & INNOVATION FUND)

1. Catherine Aurah (PI), **Kaleb A. Mwendwa (Co-PI 1)** and Ronald Michieka (Co-PI 2) (2021). Gender Analysis and Inclusion in Stem Education and Research: Institutional Transformations to Strengthen Women's Leadership in STEM(SEDU)-**450,000/- Kenya Shillings**
2. Bernadette Sabuni, Michah Muloklwe and **Kaleb A. Mwendwa (Co-PI)** (2021). Structural Characterization of Timber Species in Kakamega County for Engineering Applications (SEBE)-**450,000/- Kenya Shillings**
3. Humphrey Agevi (PI-SONAS), **Kaleb Mwendwa Adamba (Co-PI-SEDU)**, Judith Achoka (SEDU), Umulkher Ali (SOBE), Edwin Kanda (SEBE), Nicholas Kitungulu (SONAS) and Bill Ouda (SASS) (November, 2020 to present). Assessment of Operations and Functions in Masinde Muliro University towards Carbon Management and Transformation into a Green and Sustainable University. Funded and supported by MMUST-(**Approx. 1.8M Kenya Shillings-Awarded-600.000/-**)
4. Agevi Humphrey (PI) and **Kaleb Adamba Mwendwa (Co-PI)**. (2020). Development of Biomass Allometric Estimation Model for *Croton macrostachyus* -MMUST Internal Support for Innovative Projects 2020/2021 Call for proposals (**Awarded -400,000/- Kenya Shillings**)

CURRENT ACTIVE RESEARCH

1. DONOR FUNDED

- a.) **Kaleb A. Mwendwa**, and Namenya Naburi Daniel (March 2020 to present). Determining resilience attributable bio-physical, social/gender, economic and political factors that influence Food and Water Security in Turkana County-Kenya. Funded and supported by UKRI-GCRF through BRECCIA Project and World Agroforestry Centre (International Centre for Research in Agroforestry-ICRAF). £15,000 British Pounds (**Approx. 2M Kenya Shillings**)
- b.) **Kaleb A. Mwendwa**, Namenya Daniel Naburi, Edward Mugalavai and Humphrey Agevi (September 2019 to present). Funded and Supported by UKRI-GCRF through BRECCIA Project. Utilisation patterns and management of the invasive species *Prosopis juliflora* in the drylands of Turkana, Kenya £15,000 British Pounds (**Approx. 2M Kenya Shillings**)
- c.) Jadu Dash (UoS), **Kaleb Adamba Mwendwa (MMUST)** Peter Wanyumba (TUK), Chieng Xiu (UoS) and Agossou Gadedjisso-Tossou (AGRYHMENT-Niger) (2020 to present). Development of a Crop Yield Information System for Improved Livelihoods in Kenya- CRYSLK Funded and Supported by UKRI-GCRF through BRECCIA Project. £15,000 British Pounds (**Approx. 2M Kenya Shillings**)
- d.) Namenya Naburi Daniel, **Kaleb A. Mwendwa** and Edward Mugalavai (September 2019 to present). Trends in climate variability, land use change, watershed governance and implications on food security in the dryland of Suam River Basin, West Pokot County, Kenya. Funded and Supported by UKRI-GCRF through BRECCIA Project. £15,000 British Pounds (**Approx. 2M Kenya Shillings**)
- e.) **Kaleb Adamba Mwendwa**, Alex Khaemba, Francis Oloo (TUK). Development and Testing GIS and Remote Sensing Teaching module. Funded and Supported by UKRI-GCRF through BRECCIA Project. £15,000 British Pounds (**Approx. 2M Kenya Shillings**)

2. MMUST FUNDED

- a.) Humphrey Agevi (PI-SONAS), **Kaleb Mwendwa Adamba (Co-PI-SEDU)**, Judith Achoka (SEDU), Umulkher Ali (SOBE), Edwin Kanda (SEBE), Nicholas Kitungulu (SONAS) and Bill Ouda (SASS) (November, 2020 to present) Assessment of Operations and Functions in Masinde Muliro University towards Carbon Management and Transformation into a Green and Sustainable University. Funded and supported by MMUST-(**Approx. 1.8M Kenya Shillings-Awarded 600,000/-**)
- b.) Agevi Humphrey (PI) and **Kaleb Adamba Mwendwa (Co-PI)**. (2020). Development of Biomass Allometric Estimation Model for *Croton macrostachyus* (**400,000/- Kenya Shillings**). MMUST Internal Support for Innovative Projects 2020/2021 Call for proposals
- c.) **Kaleb A. Mwendwa** (June 2019 to present). Trends in Land Use And Land Cover Changes in Ecosystem Products and Services in Kakamega- Nandi Forest Complex

MMUST INSTITUTIONAL LEVEL PROPOSALS

1. **Kaleb A. Mwendwa, Agevi Humphrey** and CEKATFOS BOARD. Proposal for Rebranding/Renaming of the Centre For Kakamega Tropical Forest Studies (CEKATFOS) to Institute Of Climate Change, Biodiversity and Sustainable Development (ICCBSD) in the Division of Planning, Research and Innovation (DVC, PR&I). Presented to MMMUST-University Management Board (UMB) through DVC, PR&I and Directorate of Research and Post-Graduate Support.

OUREACH AND DISSEMINATION

1. **Kaleb A. Mwendwa** and Agevi Humphrey (MMUST), KEFRI, KWS, KALRO and NEMA. Establishment of an Inter-Institutional Forum for Natural Resources Management and Climate Change Research within and around the Lake Victoria Basin.

ENGAGEMENT WITH NATIONAL and COUNTY GOVERNMENTS

Kakamega County Government

Government of Kenya-The National Treasury and Planning- FINANCING LOCALLY-LED CLIMATE ACTION (FLLoCA) PROGRAM

Call for Submission of Community Project Proposals (Reference: TNT/ZZ/71/07/C/TY/ (33)

Title of Project Proposal: For and On Behalf of Kakamega County Government

Community Driven Sustainable Scaling of Consumption and Production of Green Energy Technologies in Kakamega County

Turkana County Government

Title of Project: Biodiversity Assessment for the Establishment of a National Reserve in Turkana County- Lotikipi National Reserve. In collaboration with Kenya Wildlife Service (KWS), Kenya Forestry Research Institute (KEFRI), and Kenya Forest Service (KFS).

DEVELOPMENT and RESEARCH PROPOSALS UNDER REVIEW/PREPARATION

1. Sam Bennett (sam@sustainablesurf.org), Kevin Whilden (kevin@sustainablesurf.org), **Kaleb Mwendwa** (kmwendwa@mmust.ac.ke) and Edward Mwamuye (cobecnet@gmail.com) (2022). **Socio-Economic, Biophysical and Carbon pools quantification for improved Livelihoods:Ngomeni - Marereni Mangrove areas-North Coast, Kenya**
2. University of Southampton, Masinde Muliro University of Science and Technology, Kenya; University of Ghana; AGRHYMET, West Africa; University of Nairobi; Technical University of Kenya; Kenyatta University; University of Malawi; LEAD-Malawi; WaterNet, Southern Africa; IIED. **Building Climate Resilience in Rural Africa: A Multidisciplinary Approach to Anticipating Risk through Just and**

Gender-Inclusive Action (2022). Submitted to IDRC-CLARE Programme (2022). Funding sought \$ 8,000,000

3. Dash, Jadu (University of Southampton), **Kaleb A. Mwendwa (MMUST)**, Agevi Humphrey (MMUST) John Otuoma (KEFRI) and Booker Ogutu (University of Southampton) (2021/22). **Scalable framework to reverse biodiversity loss and reduce poverty** (Presented to UK –Darwin Initiative, Funding Sought: £195,272.00-under review)
4. **Zedekiah Onyando, Agevi Humphrey and Kaleb A. Mwendwa (2022). Assessing the Link between Hydrologic and Water Quality characteristics of River Isiukhu and Ecological Disturbance of Kakamega Rainforest in Kakamega County.** A Research Project by MMUST to Support Kakamega Rainforest Restoration Project (Approx. 2.5M Kenya Shillings).
5. **Agevi Humphrey and Kaleb A. Mwendwa (2021)** Development of A Massive Open Online Course (Mooc) For The Africa Youth Transformational Leadership Programme (AYTLP) for Wild World Wide Fund for Nature (WWF-AFRICA)-Focus on Biodiversity of Africa (Approx. 1.8 M Kenya Shillings)
6. **Kaleb A. Mwendwa, Humphrey Agevi, John V.Muoma and Dennis W. Ochieno.** Impact of Climate change, Land use and Land cover changes and on the genetic resources and diversity within and around Kakamega County.
7. **Agevi Humphrey and Kaleb A. Mwendwa (2021).** Kakamega Rainforest Restoration Project: Concept for Training Curriculum on Nature Based Income-Generating Activities (Approx. 6M Kenya Shillings)
8. **Kaleb A. Mwendwa, Gordon Nguka, Humphrey Agevi, KWS and COMRED.**A Comparative Study on Effects, Impacts, Adaptive Capacity and Mitigation to COVID-19 and Natural Disasters on Protected Areas In Kenya (MMUST, KWS and KEFRI-To Be submitted by Dec. 2020 to BIOPAMA/NATIONAL GEOGRAPHIC SOCIETY-USA-Approx. 8 M Kenya Shillings)
9. **Kaleb A. Mwendwa, Humphrey Agevi and Tsingalia Mugatsia.** (Being Revised). Small holder agroforestry practices around Forest-Agriculture Interfaces as a strategy for natural forests conservation, climate change mitigation and adaptation and capacity building using Environmental Learnscapes and Communication in Kenya (MMUST-JOUUST-MOI UNIVERSITY-KIBABII UNIVERSITIES Approx. 20M Kenya Shillings-To be Submitted to NRF-Kenya).
10. **Kaleb A. Mwendwa, Agevi Humphrey and Larry Lopez.** The contribution of small holder agroforestry practices in enhancing carbon stocks as a mitigation and adaptation measure against climate change in humid and ASALs in Kenya (OPEN-MMUST and YAMAGATA UNIVERSITY-JAPAN-Approx. 6M Kenya Shillings-NACOSTI-JSPS FY 2021/2022)
11. **Kaleb A. Mwendwa, Agevi Humphrey, Gordon Nguka, Catherine Aura, Raphael Ongunya and Judah Ndiku.(OPEN).** Establishing Learnscapes for Environmental Education (L For EE) through Participatory Learning and Action in selected Educational Institutions and Communities around the Lake Victoria Basin (Kenya): A Project Proposal on Education for Sustainable Development (ESD) and Sustainable Development Goals (SDGs)-(OPEN COLLABORATION-Approx. 30M Kenya Shillings)

CONSULTANCY GRANTS

1. End of Project Impact Evaluation. Mangrove Restoration Project in Kenya. COBEC (Kenya) and Sea Grass (USA).June to August 2022
2. Lower Tana Delta Conservation Pilot Project: Inventory of natural resources and baseline studies of ecological, social and economic parameters in the Lower Tana Delta, Kenya. UNDP-Community Development Trust Fund (EU-CDTF)-Kenya March – August 2014.Referees: Mr.Renaldo Retief (Project Chairman) and Dr.Hezron Mogaka (Project Manager-CDTF).
3. Fertilizer recommendations development for different soils and integrated soil fertility training strategy for south Somalia. Soil Mapping and Fertilizer (UREA, DAP etc.) Calculations. Consultancy on behalf of Food and Agriculture Organization (FAO) of The United Nations-Somalia Office. August 2013 to December 2013.
4. Survey for conservation of Kakamega forest and promotion as sustainable management and benefit sharing to curb climate change project around Kakamega Forest. CDFT/EU Project-January-March 2013
5. Improving the beach management regulator environment and legitimization of beach operators. A project of the ministry of tourism and wildlife, funded by the tourism trust fund (TTF). Beach operators' conservative meeting and policy analysis. December 2005-January 2006. Referees: Ministry of Tourism and Wildlife, Kenya.
6. Marine and coastal genetic resources: a baseline case study at the coastline of Kenya on the ownership, access and policy analysis as regards genetic resources by local communities, may 2005- December,

2005. A project supported by international plant genetic resources institute (IPGRI). Referees Dr. Robert Lettington and Dr. Jaim Esterella (International Plant Genetic Resources Institute-IPGRI/International Centre for Research in Agroforestry-ICRAF)
7. PRA for Kipini location, Garsen, Tana River district-coast province, Kenya. Conservation Education and community participation for a well-managed environment in coast province, Kenya. A project of GTZ/East African Wild Life society. (June 2003); REFEREE-Mr. Hadley Becha Deputy Director-Programmes (EAWLS)
 8. Initial Environmental Evaluation for UNDP funded Dry land biodiversity conservation Project in Kilifi Project, Coast province, Kenya. (July 2002); Mr. Hadley Becha Deputy Director-Programmes (EAWLS)
 9. Rockefeller Foundation Reviewer (1999-2001). Reviewed 3 African Career awards proposals for Rockefeller foundation on various aspects on –farm research and technology transfer (Biological and socio-economic aspects). Referee. John Lynam-Head Rockefeller Foundation, Kenya (2000)
 10. For African highland initiative (AHI-ICRAF-International Center for Research in Agroforestry). Training scientists, extensionists and farmers on various participatory techniques in on-farm technology development. Ethiopia, Uganda, Kenya. (December 1998) REFEREE-Dr. Ann Stroud-Head of Programme (AHI).

AWARDS AND HONOURS

- American Association of Geographers (AAG) and My Community our Earth (MyCOE) SERVIR, East Africa – Fellowship from August 2012. <https://sites.google.com/a/aag.org/mycoe-servirglobal/kaleb/>
- Science Club Leader, Western Province –Popularization of Science in Schools-PROJECT-“Establishment of Science Clubs across the country with the help of former Kenyan students in France”-Project-Agroforestry. Embassy of France in Kenya and Association of France Alumni in Kenya (AFRAKEN), April 2012.
- Russell W. Foundation Fellowship-WWF-USA, at the International Ocean Institute (IOI-Dalhousie University, Canada), Ocean Governance, Policy and Management, May-June 2006.
- Government of Kenya, Gazetted Member, Coast Provincial Environment Committee (PEC)-NEMA-June 2005 to July 2010.
- International Atomic Energy Agency-IAEA/Food and Agricultural Organization-FAO, Fellowship, 1996-1997, Specialization Studies-Use of Nuclear Isotope and Radiation Techniques in studying Tree Plant Nutrition and Water Utilization studies. Institute of Grassland and Environmental Research (IGER-UK)
- Moi University, Eldoret, Kenya, Scholarship, 1995-1998 to pursue Master’s Degree in Forestry (Agroforestry/Soil Science).

CONFERENCES ATTENDED

1. The World Congress of the International Network of Research Management Societies. The International Network of Research Management Societies (INORMS) Congress May 24th to May 27th 2021, Hiroshima, Japan: Promoting Research and Research Management Collaborations: More Trans-National, More Trans-Discipline and More Trans-Sectoral

2. The COP26 Universities Network- COP26 related virtual conference from 17th -21st May 2021

COP26 Universities Network and the Italian University Network for Sustainable Development (RUS), sponsored by UK Research and Innovation (UKRI), Cambridge University Press and the 2021 UN Climate Change Summit (COP26).

Paper Presented

- i. **Kaleb A. Mwendwa**, Daniel N. Namanya, Humphrey Agevi, Edward Mugalavai and Milton Adieri: Analysis of Socio-ecological factors that determine resilience to food and water insecurity in Turkana County, Kenya”, As a pre-recorded presentation.

3. MMUST 14TH International Virtual Conference 19th to 21st May 2021

Papers Presented

- i. **Kaleb A. Mwendwa**, Daniel N. Namanya, Humphrey Agevi, and Milton Adieri. Biophysical And Socio-Economic Factors Influencing Resilience To Food And Water Insecurity in Turkana County, Kenya

- ii. Nadio, E. Clement, Agevi Humphrey, **Mwendwa, A. Kaleb** and Obiri F. John The effects of invasive species *Prosopis juliflora* on Livestock Production and Challenges associated with its control in Turkana County, Kenya
- iii. Daniel Namenya Naburi, Edward Mugalavai, **Kaleb Mwendwa**, Milton Bwibo, Gilbert Ouma, and Clinton Ouma. Dryland River Basin Climate Landscape and Food Security in the Suam, Kenya

4. Science, Technology, Engineering and Mathematics (STEM) Education During and Post COVID'19 **International Conference 2020 (STEMEIC 2020):** "Integrating Pedagogy and Technology to Ensure Resilience, Quality, Equity and Sustainability".MMUST 25th -27th November, 2020

5. 21st- 24th June, 2016. **National Validation Workshop. National Forestry Programme (NFP)** with an emphasis on Forestry Education, Research and Training-2015-2030. Held at Merica Hotel, Nakuru, Kenya

6. 8TH -9TH September, 2016. **Bio-ethics and Biosafety Workshop.** Held at MCU-MMUST, Kakamega, Kenya

7. 24-26TH May, 2016. **International Conference on Health** -Towards attaining Universal Health Care and attainment of SDGs. Held at Bishop Stam Pastoral Centre-Kakamega

8. **International Conference on GIS International Conference** on the Expanding Role of GIS in a Dynamic Global Environment: Theory and Application. Kakamega, Kenya 13th – 14th August 2015

9. **International Conference on Edible and Medicinal Mushrooms**-25th to 29th May 2014. Golf Hotel, Kakamega County

10. **International Conference on Tropical Forest Resources**, 6th to 9th June 2011. Masinde Muliro University of Science and Technology, Kakamega, Kenya.

11. **2nd Conference on Aquatic Resources Kenya**, Organized by Kenya Marine and Fisheries Research Institute (KMFRI). Kenya Wildlife Service Training Institute, Naivasha, October, 2010.

12. **18th Conference of the Soil Science Society of East Africa**, held in Mombasa, Kenya 4th -8th December 2000. Poster Presented.

13. **9th African Association of Biological Nitrogen Fixation Congress**, September 25th-29th, 2000, ICRAF House, Nairobi, Kenya.

14. **Coastal Ecology Conference II**, organized by Kenya Wildlife Service and Moi University, 25th-26th November 1999, Mombasa, Kenya.

15. **7th AfNet (Agroforestry) Network) Workshop**, organized by Tropical Soil Biology and Fertility Programme (UNESCO), Kampala Uganda, 11th-16th September, 1999.

16. **17th Conference and Silver Jubilee of the Soil Science Society of East Africa**, Kampala, Uganda 6th-10th September, 1999. Conference on Agriculture and Food Security in Eastern Africa. Limuru, Kenya 12th to 15th October, 1998.

17. **Second (2nd) Crop Science Conference for Eastern and Southern Africa.** University of Malawi 19th-24th February 1995, Blantyre, Malawi.

SEMINARS AND WORKSHOPS ATTENDED

-
1. Workshop for The School Of Education (SEDU)-MMUST: Theme: Re-Defining A Paradigm Shift in Teacher Training in Kenya: A Comprehensive Curriculum Review. Thursday 14th – Friday 15th October 2021. Farm View Hotel, Busia.
 2. Directorate of Science Park, Innovation and Innovation Centre Workshop (SPIIC): SPIIC IPR POLICY REVIEW/INSIGHT TO PATENT. 4th to 5th March 2021. Bishop Stam, Kakamega, Kenya

3. School of Education (SEDU) Workshop: Innovative Teaching Practices –Reflecting on Education during and Post COVID 19 PANDEMIC. 23rd February 2021. Shieywe Guest House, Kakamega Kenya
4. 12th November 2020. MMUST Institutional Research Workshop. MMUST
5. 6th November 2020. BRECCIA Kenya Project Policymakers and Policy Formulation workshop: Identification of Policy gaps in water and food security in ASALs of Kenya, Nairobi, Kenya.
6. 27th October 2020. Webinar Professional Integrity and Ethics. University of Southampton (UK)
7. 12th October 2020. Webinar: The Role of Digitalization in Climate Resilience-Transforming Local Responses to Climate Change.
8. 9th October 2020. GEO for Cities Webinar: Visions and Pathways related to circular Cities. Hosted by Daring Cities.org
9. 29th Sept 2020. BRECCIA project-Generating Research Impact- Webinar. University of Southampton-UoS & Vitae (UK). 30th Sept to 2nd Oct. 2020.
10. 17th September 2020. BRECCIA Project-Successfully Managing Large Research Projects. University of Southampton (UoS-UK) and Vitae (UK). (Virtual)
11. 3th March-16th March 2020 BRECCIA Project International Virtual Training Workshop. Hosted by University of Southampton-UK
12. 8th July to 18th July 2019- BRECCIA International Summer School/Workshop and Annual Research Meeting. Lilongwe and Sarima, Malawi
13. 16th Jan to 18th January, 2019-BRECCIA Kenya Project Stakeholders engagement workshop: Identification of research gaps in water and food security in ASALs of Kenya, Machakos, Kenya.
14. 25th Nov to 2nd Dec 2018- BRECCIA Ghana Project Stakeholders engagement workshop: Identification of research gaps in water and food security in ASALs of Ghana, Tamale, Ghana
15. 9th July to 14th July 2018-BRECCIA Project International Research Planning Workshop with MMUST (Host), University of Southampton (UK), [Kenyatta University (KU), Technical University of Kenya (TUK), University of Nairobi (UoN)]-Kenya; University of Malawi, University of Ghana, WaterNet (iNGO), AGRHYMET Regional Centre, UNESCO-IHP.Kisumu, Kenya
16. 18TH December – 21st December 2017, Kisumu, Kenya: International Trilateral Researcher Links Workshop on the “Role of Small holder Agroforestry in the Arid and Semi-arid regions in combating climate change”. Organized and hosted by MMUST (Centre for Kakamega Tropical Forest Studies)-University of Southampton (UoS-UK) and Vaal University of Technology (VUT-RSA). Funded by British Council through Newton Fund UK and National Research Fund-Kenya
17. 2nd Symposium on academic linkages, Masinde Muliro University of Science and Technology, Friday 3rd February, 2012.
18. Strengthening Protected Areas Network of the Eastern Montane Forests Hotspot of Kenya-Kakamega Forest Landscape-Workshop for site advisory committee 31st January 2012- Biodiversity Information Centre, Kakamega.
19. Module writing training workshop, Masinde Muliro University of Science and Technology, 26th January, 2012.
20. ISO-Awareness Workshop, Masinde Muliro University of Science and Technology, March, 2011.
21. Eastern Africa Marine Ecoregion (EAME)-WWF Workshop on National Action Plan, 15th and 16th April 2004. Mombasa Beach Hotel Mombasa.
22. BAT biodiversity Workshop 26-28th February 2004. Organized by BAT, Royal Botanical Gardens KEW and Earth Watch Institute.
23. Kenya Marine Forum, 2nd Interim Steering Committee Workshop, April 12th, , 2002, Turtle Bay Hotel Watamu, Kenya organized by IUCN.
24. Kenya Marine Forum, Interim Steering Committee Workshop, 28th February, 2002, Haller Park, Mombasa, Kenya Organized by IUCN.
25. Second Kenya Marine Forum, Kanamai Centre, Mombasa, Kenya, September 25th to 26th 2001.
26. National Agroforestry Strategy Workshop, KEFRI, Headquarters, Kenya, September 18th to 21st 2001.
27. National Wetlands Policy Workshop, Mombasa Beach Hotel, Kenya, 2-3 April 2001. KWS Wetlands Programme.

28. First Kenya Marine Forum Workshop (IUCN/WWF/AWF). Mombasa, Kenya, February 21st-23rd 2000.
29. Regional Biodiversity Forum Workshop (IUCN/WWF/AWF). Mombasa, Kenya, February 21-23rd 2000.
30. African Career Awards Reviewers Workshop. Rockefeller Foundation, 27th-29th October 1999. Windsor Golf and Country Club, Nairobi, Kenya.
31. Final Regional Coordinated meeting of coordinated Research Project on “The use Nuclear and Related Techniques for Evaluating the Agronomic Effectiveness of phosphate fertilizers, in particular rock phosphates” (D1.50.03), Vienna, Austria, 16th-20th November, 1998.
32. Informal seed systems workshop. Organized by CIAT and African Highland initiative. 23rd and 24th October 1998, Kakamega, Kenya.
33. Participatory Research for Improved Agro ecosystem Management (PRIAM) Project Synthesis Workshop, Coordinated CIAT-Africa. 17th to 22nd August 1998. Melkassa-Nazaret, Ethiopia.
34. AFRENA-East and Central Africa Regional Planning and Priority setting meeting, ISAR Headquarters, 23rd – 27th February, 1998, Butare, Rwanda.
35. CARE (K) KEFRI Adaptive Research Symposium: Experiences, Linkages and Sustainability, 3rd-4th February 1998, Kisumu, Kenya.
36. Seminar on “Challenges of sustainable development” – the role of rural based agents in enterprise promotion in Western Province, District Information and Documentation centre (DIDC), November, 1997, Kakamega, Kenya.
37. Approaches to replenishing soil fertility in Africa-NGO perspectives Workshop. Held at International Centre of Research in Agroforestry, 3rd-9th June 1997, Nairobi, Kenya. Poster Presented: Growth and P uptake of *Greville robusta A. cunn* from phosphorus amended acid soil.
38. FINNIDA (Finnish International Development Agency) and KEFRI Research Workshop on 9th - 10th March 1993 at Duduville, ICIPE(Kenya) with an emphasis on education of Forestry Activities at the Bura Irrigation Scheme 1983-1993.
39. JICA Seminar on forest Soils on 26th February 1993 at Hotel Intercontinental, Nairobi Kenya, with an emphasis on follow-up and application of knowledge gained in Japan during the Forests Soils Training Course.

INVITED TALKS

- Mathenge J. Kabugi H, and **Mwendwa K.A** (2013), Joint management of natural resources by Kenya wildlife service and the forest department: Shared experiences and lessons learnt with introduction of DFM Process to Arabuko Sokoke forest Reserve. Paper presented at International Conference on Tropical Forest resources, 6th to 9th June 2011, Masinde Muliro University of Science and Technology, Kakamega, Kenya.
- **Mwendwa K.A.,2002.** P proposal for a Kenya Marine Policy. Paper presented at the 2nd National Wildlife Conference, Jakaranda Hotel, Septembber, 2006.
- Kivyatu M. Bernard, **Mwendwa K.A** and M. T. E Mbuvi (2001). The structural attributes and regeneration of Ngomeni mangroves at the North coast of Kenya. Paper presented at the second symposium on Marine conservation Biology, San Francisco state University June 21-26, 2001.
- Sam Weru and **Mwendwa K.A**, (2001). Community involvement in management and conservation of marine protected areas at the Kenyan coast. Paper presented at the second Symposium on marine Conservation Biology, San Francisco state University June 21-26, 2001.
- **Mwendwa K.A.**, and Karanja, N. K., 1994. Evaluation of availability and uptake of P from Rock phosphate (RP) with mycorrhizal inoculation by agroforestry tree species growing on two acid soils in Kenya. Paper presented at the 2nd Crop science Society meeting in Lolongwe, Malawi.
- Karanja, N. K. and **Mwendwa K.A** 1995. Estimation of availability and uptake of P from Minjingu rock phosphate (MRP) by six (6) tree species growing on an acid soil using the 32 P isotope dilution technique. Paper presented at the 2nd Research co-ordination meeting of the FAO/IAEA coordinated Programme, held at CIRAD, Montpellier, France 24 -29 April 1995.

RESEARCH INTERESTS

- Tropical Forests Biodiversity Research
- Forestry Plantations Research
- Soil Science and Conservation Agriculture Techniques

- Climate Change Adaptation and Mitigation Research
- Marine Forestry (Mangroves)
- Natural ecosystems (Wetlands, Marine, Natural Forests, Wildlife) Research
- Drylands (ASALs)/ Biodiversity Monitoring Systems
- Community participation in Natural Resources Management (Wetlands, Marine, Natural Forests, Wildlife)
- Environmental Education, Information, Communication and Awareness

TECHNICAL REPORTS

- Kaleb A. Mwendwa** and Tsingalia Mugatsia (2013). Analysis of Trends and Impacts of Land Use and Land Cover Changes on Dominant Canopy Trees Diversity of Kakamega Forest-Final MyCoE/SERVIR Report: <https://sites.google.com/a/aag.org/mycoe-servirglobal/kaleb-final>

PROFESSIONAL MEMBERSHIPS

1. South African Research and Innovation Management Association (SARIMA)

SARIMA is a membership organization that brings together Research and Management Practitioners to strengthen these disciplines and institutional capabilities across the SADC region and with branches in East, West and Central Africa. SARIMA is listed with International Professionals Recognition Council (IPRC) to offer accredited courses with University of Wits (Witwatersrand), South Africa. <https://www.sarima.co.za/>

2. East African Wildlife Society (EAWLS)

Founded in 1956, EAWLS is a membership conservation organization that prides itself as the voice of conservation in the East African region. They do this through evidence-based advocacy and engaging different key stakeholders to influence change. Their Key Thematic Areas are in Wildlife, Forestry, Marine and Wetlands. <https://eawildlife.org/>

3. Forest Society of Kenya (FSK)

Forestry Society of Kenya was registered on 13th November 1979 under the Societies Act {cap 108} of the laws of Kenya to provide a forum for professional foresters and to advance the science, technology, education and practice of professional forestry in Kenya for the benefit of Kenyans and the nation. <http://fsk.or.ke/>

4. West Indian Ocean Marine Science Association (WIOMSA)

Formed in 1993, WIOMSA is dedicated to promoting the educational, scientific and technological development of all aspects of marine sciences in the Western Indian Ocean region. It provides resources for research, training/workshops or publications. <https://www.wiomsa.org/>

5. The African Forest Forum (AFF)

Formally established in 2007, the AFF is a membership organization that voices the concerns of African forestry stakeholders, and to use science, indigenous knowledge, and experience to advocate for increasing relevance of forests and trees outside forests to peoples' livelihoods, national economies and the stability of the environment. AFF commissions experts and institutions to carry out studies and research tasks to generate knowledge in general or for specific institutions and organizations on request. <https://afforum.org/>

6. Wildlife Clubs of Kenya (WCK)

Founded in 1965, WCK is a membership and non-profit school-based wildlife and environmental conservation education organization. They engage in training and outreach activities such as tree planting, seminars, field trips, ecology programs and special projects <http://www.kws.go.ke/content/wildlife-clubs-kenya>

7. Educational Management Society of Kenya (EMSK)

Founded in 2009, EMSK is a professional membership organization that aims to encourage scholars to be actively involved in research in order to spur meaningful development on issues of educational management, policy and capacity building. <https://emskenya.org/>

8. Nature Kenya (NK)

Nature Kenya—the East Africa Natural History Society (EANHS)—is Africa’s oldest environmental Society. They were established in 1909 to promote the study and conservation of nature in eastern Africa. NK mission is to connect people with nature and take action for biodiversity conservation. <https://naturekenya.org/>

9. Ecological Society of Eastern Africa (ESEA)

ESEA is Membership and Networking Organization Participating in Ecological Research and Application of Ecological Science in Eastern Africa. It has programmes in a.) **Earth Preservation**-Soil & Ground Diagnostics, Site Decontamination & Rehabilitation, Erosion and Sediment Control, Forestry, Agriculture, Ecotourism, Ecosystem Management and General Geotechnical Engineering b.) **Environmental Information**-Publications, Exhibitions & Conferences; Information Technology; Research & Development; Education & Training; Public Organizations; Industry Associations; Government Agencies; Legislation & Policies; Environmental Audit & Financial Services. <http://www.ecsea.org/>

10. Soil Science Society of East Africa (SSSEA)

The Soil Science Society of East Africa (SSSEA) was conceived in 1974 by the East African Specialists committee for Soil Fertility and Crop nutrition administered by the East African Agriculture and Forest Research Organization (EAAFRO) of the East Africa Community. It promotes the study, research, teaching and application of Soil Science and related subjects in East Africa for improved Soil Productivity. <http://www.sssea.4t.com/>

11. Regional Centre of Expertise (Western Kenya/Kenya and Africa)

RCE Western is part of the The Global RCE Service Centre headquartered at UNU-IAS, where it provides assistance to individual RCEs and facilitates their communication and networking. It was founded in 2003 in response to the UN resolution on the UNDES Decade of Education for Sustainable Development (UNDES 2005-2014). An RCE is a network of existing formal, non-formal and informal education organisations, mobilised to deliver education for sustainable development (ESD) to local and regional communities. **Activities**:- Bridging local and global perspectives on SD; Engaging with transformative learning and research for SD; Contributing to community engagement; Contributing to capacity development of stakeholders and partners. <https://www.rcenetwork.org/>

COMMUNITY MEMBERSHIPS/COLLABORATIONS

1. County Transformation Programme/RCE Greater Western Kenya (CTP/RCE-Western)
2. Kakamega Natural Forest Catchment Conservation Organization (KANFCCO)

INVOLVEMENT IN RESEARCH NETWORKS

1. Steering Committee Member-Research Management Practice Network (ReMAP-Net)

University of Southampton/MMUST/KU/UoN/TUK/University of Malawi/University of Ghana. This Network discusses research management matters within the BRECCIA partner institutions and wider network. It is an informal network currently with approximately 100 researchers at different levels where they share best practice, discuss common issues as well as provide and seek advice and learn from each other on the evolving profession of research managers.

2. Member-Biodiversity and Ecosystem Services Network (BES-Net)

UNDP-Ministry of Environment and Forestry/National Museums of Kenya-NMK/Kenya Forestry Research Institute-KEFRI/Kenya Plant Health Inspectorate Services -KEPHIS

This complements the capacity building work of the Intergovernmental Platform for Biodiversity and Ecosystem Services (IPBES) and promotes effective management of biodiversity and ecosystems by enhancing dialogue, interaction and coordination between science policy and practice. BES-Net is managed as a consortium of the UNDP under the Global Policy Centre on Resilient Ecosystems and Desertification (GC-RED), The UN Environment Programme’s World Conservation Monitoring Centre (UNEP-WCMC) and the UNESCO.

RESPONSIBILITIES, CONTRIBUTIONS TO UNIVERSITY AND COMMUNITY SERVICE.

1. Appointed **Director**, MMUST, Centre for Kakamega Tropical Forest Studies (CEKATFOS) – From August 2012 to 2017
2. UNIVERSITY-**Seconded as Coordinator** (Research, Scientific Linkages and Resource mobilization)-Centre for Kakamega Tropical Forest Studies (CEKATFOS) 2011 to August 2012.
3. UNIVERSITY-INTERNATIONAL ACADEMIC LINKAGES- **Appointed Project Secretary-MMUST-**Project: Streamlining GIS teaching, while emphasizing a regional focus. A German-Uganda-Kenyan University Cooperation (UnivGisKoop). A Project by Karlsruhe University of Applied Sciences (HSka) – GERMANY, Masinde Muliro University of Science and Technology (MMUST), KENYA Makerere University (MAK), UGANDA. (June 2011 to 2017).
4. UNIVERSITY-Appointed as **Internal Part-time Lecturer**, Department of Biological Sciences-September 2011 to present.
5. UNIVERSITY – **Committee Member –Organizing Committee** –International Conference on Tropical Forest Resources February 2011- August 2011.
6. UNIVERSITY-**Chief Rapportuer**-International Conference on Tropical Resources, 6th to 9th June, Masinde Muliro University of Science and Technology.
7. UNIVERSITY-Member, **Member-Fundraising Committee/National Organizing Committee**-International Mushroom Conference on Edible and Medicinal Mushrooms (2013 to May 2014)
8. UNIVERSITY- **Member-Fundraising Committee/National Organizing Committee**-International GIS Conference (May 2014 to August 2015)
9. UNIVERSITY-**Nominated as Committee Member**-Research and Outreach Committee-Fee-28th November 2011 to present.
10. UNIVERSITY-**Committee Member** –Education for Sustainable Development Project MMUST-Project funded by SIDA and UNEP-From March 2012.
11. UNIVERSITY-Committee **Member**-Research and Extension Committee –From February 2015
12. UNIVERSITY-COMMUNITY –**Selected as Science Club Leader**-Western Province Popularization of Science in Schools-PROJECT- Establishment of Science Clubs across the country with help of former Kenyan students in France” project of the Embassy of France in Kenya to the Association of France Alumni in Kenya (ALFRAKEN)-April 2012.
13. UNIVERSITY-COMMUNITY-**Implementer** of MMUST and Lutheran World Federation (LWF) partnership, Diploma in Primary Education for Refugee Teachers, Kakuma and Daadab Refugee Camps-Environmental Education (since April 2010 to present).
14. UNIVERSITY-RESEARCH INSTITUTIONS COLLABORATION-**Secretary** to Preparation of MoUs between MMUST and Kenya Forestry Research Institute (KEFRI) and Kenya Wildlife Service (KWS)-September 2011 to present.
15. UNIVERSITY-GOVERNMENT DEPARTMENTS COLLABORATION-**Secretary** to Preparation of MoUs between MMUST and Kenya Forestry Research Institute (KEFRI) and Kenya Forest Service (KFS) – ongoing.
16. UNIVERSITY-COMMUNITY-Together with Dr. Tsingalia initiated MoU between MMUST and Kakamega Environmental Education Programme (KEEP) –Ongoing.

17. UNIVERSITY-UNEP-Together with Dr. Tsingalia, H. M. (Then Director, CEKATFOS) created awareness on possible partnerships with UNEP Library for MMUST and Kibabii University College. Kibabii University College has since received 3,000 books for their Library from UN-Gigiri, Nairobi Offices.
18. UNIVERSITY-PRIVATE SECTOR –COMMUNITY-**Member** of fundraising Committee for 1st and 2nd Save Kakamega Forest Marathons-June 2011 and June 2012.
19. UNIVERSITY-INTERNATIONAL ACADEMIC LINKAGES

Team MEMBER-Travelled to Germany (September 6th, 17th 2012-in a Team of three (3): Preparation and Finalization of Project Founding Document-Project: Streamlining GIS teaching while emphasizing a regional focus. German-Ugandan-Kenyan University Cooperation (UNIVGiSKOOP). Karlsruhe University of Applied Sciences (HsKA) – Germany, Masinde Muliro University of Science and Technology (MMUST), KENYA Makerere University (MAK), UGANDA. Project Commenced-March 2012.

REFEREES

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