

ACADEMIC STAFF

1.1 Personal Profile

1.1.1 Personal Details

- Name: Dr. Ezekiel Ndunda
- Qualification: PhD
- Department: Environmental Science and Education
- Position: Senior Lecturer
- Contact Address: P.O. Box 43844 -00100, Nairobi
- Email: ndunda.ezekiel@ku.ac.ke

Website:

- <https://www.ku.ac.ke/schools/environmental/index.php/departments/environmental/environmental-sciences-and-education>

Area of Specialization:

- Environmental Economics

Google Scholar:

- <https://scholar.google.com/citations?user=-%20%20o3X0NcAAAAJ&hl=en&scioq=ezeziel+ndunda&user=-o3X0NcAAAAJ>

ORCID ID:

- <https://orcid.org/0000-0002-8788-7884>

ResearchGate Profile:

- <https://www.researchgate.net/profile/Ezekiel-Ndunda>

1.1.2 Academic Qualifications

- PhD (Environmental Economics), University of Pretoria, Pretoria - South Africa
- MSc (Agricultural Resource Economics), Moi University, Eldoret - Kenya
- BSc (Agricultural Engineering), University of Nairobi, Nairobi – Kenya

1.1.3 Employment History

- Chairman - Department of Environmental Science and Education, Kenyatta University (October 2025 to date)
- Senior Lecturer - Department of Environmental Science and Education, Kenyatta University (September 2019 to date).

- Lecturer - Department of Environmental Science and Education, Kenyatta University (February 2014 - September 2019).
- Tutorial Fellow - Department of Environmental Science and Education, Kenyatta University (February 2009 - February 2014).
- Assistant lecturer - Department of Agricultural Economics, Moi University (September 2006 - February 2009).

1.1.4 Achievements

- Development of a Policy Brief Development of Access Roads in Informal Urban Settlement in Nairobi County.
- Facilitation in the development of a Memorandum of understanding between Freiburg University (German) and Kenyatta University (Kenya).
- Facilitation in the development of a Memorandum of understanding between Kenya Forest Services and Kenyatta University.
- Training on Climate Change and Sustainable Development organized by Environment Protection Training and Research Institute (EPTRI) in Hyderabad, Telangana, India.
- Development of a Policy and Bill for Kenya Water Towers Agency.
- Randomization of interventions for impact evaluation in the Lower Nzoia Irrigation Project.
- Total economic valuation of Mt. Elgon Forest Ecosystem.
- Curriculum review for the Department of Environmental Science and Education.
- Development of postgraduate programs in the Department of Environmental Science and Education.

1.2 Publications

1.2.1 Books and Books Chapters

- 1) Kinyili B.M. and Ndunda, E. (2021). Potential of Agroforestry to Improve Rural Income and Livelihoods in Sub-Saharan Africa. In: J. Kumar [ed.]. Research Trends in Silviculture and Agroforestry. AkiNik Publications, New Delhi.
ISBN: 978-93-90846-38-2
Book DOI: <https://doi.org/10.22271/ed.book.1185>
- 2) Ndunda, E.N. and Eric D. Mungatana, E.D. (2015). Wastewater reuse in urban and peri-urban irrigation: An Econometric Analysis. LAP LAMBERT Academic Publishing.
ISBN-13: 978-3-659-71692-8
Website: <https://www.lap-publishing.com/>
- 3) Ndunda, E.N. and Eric D. Mungatana, E.D. (2014). Innovative Risk-Reduction Measures and Urban Welfare in Wastewater-Irrigated Agriculture: An endogenous Switching Regression Approach for Nairobi, Kenya. In: (ed. P. Chanie) Innovative Water Resource Use and Management

for Poverty Reduction in Sub-Saharan Africa: An anthology. Organisation for social Science Research in Eastern and Southern Africa (OSSREA).
ISBN: 9789994455751

- 3) Ndunda, E.N. (2014). Wastewater reuse in urban and peri-urban irrigation: an economic assessment of improved wastewater treatment, low-risk adaptations and risk awareness in Nairobi, Kenya (Doctoral dissertation, University of Pretoria, South Africa). Retrieved from https://repository.up.ac.za/bitstream/handle/2263/40235/Ndunda_Wastewater_2013.pdf?sequence=1

1.2.1 Conference/Workshops/Seminar Papers

1.2.1.1 Conference Papers

- 1) Gudere, A., Ndunda, E. and Wemali (2022). Factors influencing adoption of climate-smart technologies among agro-pastoralists of Marsabit County, Kenya. 1st International Conference on Transforming Food Systems through Climate Smart Agriculture (CSA) scheduled for October 27 -28, 2022 at Resource Center, Haramaya University.
- 2) Mbaabu P., Ndunda, E. and Kitur, E. (2019). Pond water fertilization effects on the performance of *Oreochromis niloticus* in different culture systems in Meru County. The 5th International Conference on Science Technology, Innovation and entrepreneurship in Dedan Kimathi University of Technology, Kenya, 13th–15th November 2019.
- 3) Kinyili, B.M., Ndunda, E. and Kitur, E. (2019). Influence of agroforestry age stand on physico-chemical soil quality parameters. The 5th International Conference on Science Technology, Innovation and entrepreneurship in Dedan Kimathi University of Technology, Kenya, 13th–15th November 2019.
- 4) Kinyili, B.M., Ndunda, E. and Kitur, E. (2019). Socio-economic and institutional factors influencing adoption of agroforestry in arid and semi-arid Lands (ASALs) of Sub-Saharan Africa. The 6th International Research Conference in Main Campus, Chuka University, Kenya, 6th–8th November 2019.
- 5) Mbaabu P. and Ndunda, E. (2019). Aquaculture adoption in Meru County, Kenya on introduction of fish farming stimulus project in 2009. The 6th International Research Conference in Main Campus, Chuka University, Kenya, 6th–8th November 2019.
- 6) Kinyili, B.M., Ndunda, E. and Kitur, E. (2019). Influence of Agroforestry on Rural Income and Livelihood of Smallholder Farmers in the Semi-Arid Region of Sub-Saharan Africa. The 24th International Forestry and Environment Symposium in Jetwing Blue, Negombo, Sri Lanka, 11th–12th October 2019.
- 7) Kinyili, B.M., Ndunda, E. and Kitur, E. (2019). Trade-off Between Agroforestry and Ecosystem Services among Smallholder Farmers in Machakos (Kenya). 6th International Interdisciplinary Conference (IIC6) in Eldoret University, 4th – 6th September 2018.
- 8) Kamande, P., Ndunda, E. and Kabuyah, R.N. (2018). Irrigation Water on the Soil-to-Crop-Transfer Factor in Leafy Vegetables Grown along Peri-Urban Areas of Kiambu County, Kenya. The 1st Annual International Conference in Machakos University, 17th – 19th April 2018.

- 9) Otieno, R.O., Ndunda, E. and Makokha, M. (2015). Seasonal variations of physico-chemical and microbiological characteristics of groundwater quality in Ruiru, Kiambu County, Kenya. Regional Conference of the International Network of Women Engineers and Scientists in Speke Resort & Conference Center, Kampala Uganda, 21th - 23th October 2015.
- 10) Ndunda, E., Muasya, R.M., Serem, A., Chumo, E.C., and Kipsat, M.J. (2007). Socio-Economic Constraints to Adoption of Improved Horticultural Production Technologies by Smallholder Farmers in Uasin Gishu District, Kenya. The 2nd Research Week and International Conference in Egerton University, 16th - 20th July 2007.
- 11) Ndunda, E., Chumo, E.C., Mutai, H., and Tulla, R.A. (2007). An Assessment of the Factors Affecting Smallholder Dairy Farmers of Endebess Division, Trans Nzoia District, Kenya. Moi University 3rd Annual International Conference, 31st July - 4th August 2007.
- 12) Makundi, H.K., Muasya, R.M., Serem, A.K., Gohole, L.S., Ochwo-Ssemakula, M., Nyangweso, P.M., Ndetu, V.N., and Ndunda, E.N. (2007). Socio-Economic Constraints to Spiderplant (*cleome gynandra*, L.) Leaf and Seed Production by Farmers in Western Kenya and Eastern Uganda. A Paper Presented at the RUFORUM Biennial Conference 23rd – 27th April 2007, Mangochi, Malawi.
- 13) Kipsat, M.J., Maritim, H.K., Ndunda, E., Korir, M.K., Serem, A.K., Nyangweso, P.M., and Mduma, J.K. (2006). Role of Women in Agricultural Development. Moi University 2rd Annual International Conference, 29th August – 2nd September 2006.
- 14) Chumo, E.C., Maritim, H.K., Serem, A.K., and Ndunda, E. (2007). An Assessment of Cocoyam (*colosia esculenta* and *xanthosoma sagittifolium*) Contribution to Food Security in the Lake Victoria Region, Kenya. Moi University 3rd Annual International Conference, 31st July - 4th August 2007.
- 15) Ndunda, E., Kipsat, M.J., and Maritim, H.K. (2006). Challenges to Maintaining Improved Horticultural Production Technologies: A Case Study of Smallholder Adopter Farmers in Uasin Gishu District, Kenya. Moi University 2rd Annual International Conference, 29th August – 2nd September 2006.

1.2.2.2 Workshops Papers

- 1) Gudere, A. and Ndunda, E. (2022). Agro-pastoralists determinants of adoption of Climate Smart Technologies and Pastoralism in Marsabit County, Kenya. The Annual Meeting Of African Science Academies (AMASA) held at Nairobi Safari Club Hotel, Nairobi Kenya November 28th - 30th, 2022.
- 2) Ndunda, E. (2009). Valuation of Environmental Benefits of Biofuels: A Contingent Valuation Approach for Biodiesel in Kenya. A Paper Presented in the Biofuels Research and Training Workshop Under the Environmental Economics Capacity Building Programme held at the Southern Sun Cape Sun Hotel, Cape Town, South Africa from May 11 – May 15, 2009.

1.2.2.3 Seminar Papers

- 1) Yoshida, S. and Ndunda, E. (2016). Maximizing the returns to large scale infrastructure investments: Example from the Nzoia Irrigation Program. DIME Forum: Using Evidence to Improve Policy and Program Designs. <https://www.poverty-action.org/event/dime-forum-using-evidence-improve-policy-and-program-designs>

1.2.2 Referred Journals

- 1) Masara, A.N., **Ndunda, E.** & Nyamira, E.N. (2026). Perception of Climate Change Among Smallholder Dairy Farmers in Njoro Sub County, Nakuru County, Kenya. *Asian Journal of Geographical Research* 9(1):122-33.
<https://doi.org/10.9734/ajgr/2026/v9i1361>
- 2) Walakira, P., Gichuki, C., Muriuki, J., **Ndunda, E.**; Olanya, P.B. & Kasoma, P.M.B. (2026). Plant Species Diversity and Composition in Kanyabaha Wetland in Rukiga District, Uganda. *Watershed Ecology and the Environmental*, 8: 36-45. <https://doi.org/10.1016/j.wsee.2025.10.003>
- 3) Masara, A. N. & **Ndunda, E.** (2026). Climate-Smart Technologies Adopted by Smallholder Dairy Farmers in Njoro Sub-County, Nakuru County, Kenya. *East African Journal of Environment and Natural Resources*, 9(1), 231-243.
<https://doi.org/10.37284/eajenr.9.1.4490>
- 4) Omwenga, J., **Ndunda, E.**, & Maingi, S., (2025). Physicochemical and Biological Quality of Groundwater in Kajiado County, Kenya. *International Journal of Current Aspects*, 9(1), 58-71.
<https://doi.org/10.35942/8fvad309>
- 5) Muange, P.M. & **Ndunda, E.** (2025). Effect of Climate Variability on Malaria Prevalence among Children in Elgeyo Marakwet West Sub County, Kenya. *Asian Journal of Geographical Research*, 8(3): 87-99.
<https://doi.org/10.9734/ajgr/2025/v8i3278>
- 6) Mamo, M.B., Muriuki, J., & **Ndunda, E.** (2025). Perceptions, Impacts, and Adaptation to Climate Change among Gabbra Pastoralists in Marsabit County, Kenya. *Asian Journal of Geographical Research*, 51: 235-249.
<https://doi.org/10.9734/ajgr/2025/v8i3278>
- 7) Kinyili, B., **Ndunda, E.** & Kitur, E. (2024). Agroforestry stand age influence physical and chemical soil parameters. *Trees, Forests and People*, 18-100694.
<https://doi.org/10.1016/j.tfp.2024.100694>
- 8) Kibe, W. N., Mburu, B. & **Ndunda, E.** (2024). Impacts of Carbon Sequestration Projects on Household Income, and Consumption Expenditure of Smallholder Farmers in Meru County, Kenya. *East African Journal of Forestry and Agroforestry*, 7(1), 357-371.
<https://doi.org/10.37284/eajfa.7.1.2326>
- 9) Mamo, B.M, **Ndunda, E.** & Muriuki, J. (2024). Livelihood Vulnerability of the Gabra Agropastoralists to Climate Variability and Change in Marsabit County, Kenya. *International Journal of Applied Environmental Sciences*, 19(2): (2024), 71-105.
<http://www.ripublication.com/ijaes.htm>
- 10) Mamo, B.M, **Ndunda, E.** & Muriuki, J. (2024). Temperature and Rainfall Trends Analysis using Mann-Kendall and Sen's Slope Estimator Test in Marsabit County, Kenya. *International Journal of Applied Environmental Sciences*, 19(2): 109-129. <http://www.ripublication.com/ijaes.htm>
- 11) Walakira, P., Gichuki, C., Muriuki, J., Kasoma, P. M. B. and **Ndunda, E.** (2024). Mapping Vegetation Types and Land Use Dynamics in Kanyabaha Wetland from 1990 to 2021. *Journal of Global Ecology and Environment*, 20(3):13-27.
<https://doi.org/10.56557/jogee/2024/v20i38798>

- 12) Karemeri, M., Nzengya, D.M & **Ndunda, E.** (2024). Dynamics of Enablers and Barriers to Hotel Waste Management in Nakuru County, Kenya. *Journal of African Interdisciplinary Studies*, 8(9), 52 – 66.
<https://kenyasocialscienceforum.wordpress.com/wp-content/uploads/2024/09/4pdf-karemeri-et-al-dynamics-of-enablers-and-barriers-to-hotel-waste-management-in-nakuru-county-kenya.pdf>
- 13) Walakira, P., Gichuki, C., Muriuki, J., **Ndunda, E.**, Kasoma, P.M.B., & Majaliwa, J.G.M. (2024). Spatio-Temporal Dynamics of Land Use/Cover Change and Associated Carbon Stocks in Kanyabaha Wetland in Rukiga District, Uganda. *Journal of Global Agriculture and Ecology* 16 (4):7-23.
<https://doi.org/10.56557/jogae/2024/v16i48852>
- 14) Oloitipitip, F. R., **Ndunda, E.** & Gichuki, C. M. (2024). Climate Variability and Livelihood Vulnerability of Maasai Pastoralists in Amboseli Ecosystem, Kajiado County, Kenya. *Journal of the Kenya National Commission for UNESCO*, 4(2), 2958-7999.
<https://doi.org/10.62049/jkncu.v4i2.101>
- 15) Walakira, P., Gichuki, C., Muriuki, J., Kasoma, P.M.B. & **Ndunda, E.** (2024). Mapping Vegetation Types and Land Use Dynamics in Kanyabaha Wetland from 1990 to 2021”. *Journal of Global Ecology and Environment* 20 (3):13-27. <https://doi.org/10.56557/jogee/2024/v20i38798>
- 16) Oloitipitip, F. R., **Ndunda, E.** & Gichuki, C. M. (2024). Adaptation Strategies to Climate Variability by Amboseli Ecosystem Households in Kajiado County, Kenya. *East African Journal of Environment and Natural Resources*, 7(1), 172-182. <https://doi.org/10.37284/eajenr.7.1.2003>.
- 17) Muia V. K., Opere A. O., **Ndunda E.**, Amwata D. A. (2024) Rainfall and Temperature Trend Analysis using Mann-Kendall and Sen's Slope Estimator Test in Makueni County, Kenya, *J. Mater. Environ. Sci.*, 15(3), 349-367.
- 18) Njeru, P. C., & **Ndunda, E.** (2024). Perception and Knowledge of Solar Photovoltaic Technology in Climate Change Mitigation by Households in Embu County, Kenya. *Journal of Geography, Environment and Earth Science International*, 28(4), 27-40.
- 19) Gudere, A., Wemali, E. and **Ndunda, E.** (2023). Analysis of Temporal Rainfall and Temperature Trends in Marsabit County, Kenya. *East African Agricultural and Forestry Journal*, 87(3):74-82.
- 20) Kabingu , W.A., **Ndunda , E.** & Kirubi, G. (2023). Consumer Willingness to Pay for Energy Efficient Refrigerators in Nairobi City County, Kenya. *Journal of Geography, Environment and Earth Science International*, 27(11), 1–10. <https://doi.org/10.9734/jgeesi/2023/v27i11723>
- 21) Owusu EK, **Ndunda, E.**, Koech M (2023) Carbon Footprint of Food Waste in Classified Star Hotels in Nairobi City County, Kenya. *Adv Environ Stud* 7(1):557-566.
- 22) Gudere, A., Wemali, E. and **Ndunda, E.** (2022). Adaptation of Climate-Smart Technologies among Agro-Pastoralists of Marsabit County, Kenya. *East African Agricultural and Forestry Journal*, 86(1-2):59-67.
- 23) Kevin Nyakundi, **Ndunda, E.** & Adino, D. (2022). Mann-Kendall And Sen's Slope Estimator Statistical Tests For Analyzing Changes In Meteorological Variables In Kwale County, Kenya. *Journal of Forestry, Wild Life and Environment*, 6(8):1-12.

- 24) Beth Waithera Njiraini, B.W., **Ndunda, E.** & Kamande, P.N. (2020). Assessment of Physico-Chemical Properties of Shallow Well Water in Kawangware Location, Nairobi City, Kenya. *Journal of Applied Science*, 6(9): 01-20.
- 25) Nyirandorimana, E., **Ndunda, E.** & Muriuki, J. (2020). Factor influencing adaptation choices employed by farmers against climate change to improve rice yield in Bugarama Wetland in Rwanda. *East African Journal of Agriculture and Biotechnology*, 2(1): 12-22.
- 26) Wambugu, M.M., **Ndunda, E.** & Gathuru, E. (2020). Integrating fish into rice farming as an economic substitute to chemical pesticides. *Journal of Agriculture and Research*, 6(3): 17-37.
- 27) Mbaabu, P., Kitur, E. & **Ndunda, E.** (2020). Pond Water Fertilization Effects on the Performance of *Oreochromis Niloticus* in Different Culture Systems in Meru County. *Journal of Computer Engineering*, 22(2): 21-28.
- 28) Kinyili, B.M., **Ndunda, E.** & Kitur, E. (2020). Trade-off between agroforestry and ecosystem services among smallholder farmers in Machakos County, Kenya. *East African Journal of Forestry and Agroforestry*, 4(1): 13-23.
- 29) Kinyili, B.M., **Ndunda, E.** & Kitur, E. (2020). Socio-economic and institutional factors influencing adoption of agroforestry in Arid and Semi-Arid (ASALs) areas of Sub Saharan Africa. *International Journal of Forestry and Horticulture*, 6(1): 8-18.
- 30) Mukundente, L., **Ndunda, E.** & Gathuru, G. (2019). Agroforestry technologies adopted by smallholder farmers in Southern Province of Rwanda. *East African Journal of Forestry and Agroforestry*, 4(1): 24-31.
- 31) Mukundente, L., **Ndunda, E.** & Gathuru, G. (2019). Socio-economic and institutional factors affecting smallholders farmers to adopt agroforestry practices in Southern Province of Rwanda. *International Journal of Agricultural Science and Food Technology*, 6(1): 68-74.
- 32) **Ndunda, E.** (2018). Economic impact of climate change on smallholder agriculture in coastal Kenya: a Ricardian approach. *Journal of Agriculture and Research*, 4(11):1-13.
- 33) **Ndunda, E.N.** and Muia, V.K. (2018). Estimating the willingness to pay for improved municipal solid waste management in Nairobi, Kenya. *International Journal of Environmental Science*, 3:8-16.
- 34) **Ndunda, E.N.** and Eric D. Mungatana, E.D. (2013). Evaluating the welfare effects of improved wastewater treatment using a discrete choice experiment. *Journal of Environmental Management*, 123:49-57.
- 35) **Ndunda, E.N.** and Eric D. Mungatana, E.D. (2013). Farmers' Perception and Knowledge of Health Risks in Wastewater Irrigation. *Natural Resources and Conservation*.
[dx.doi.org/10.7392/Research.70081917](https://doi.org/10.7392/Research.70081917)
- 36) **Ndunda, E.N.** and Eric D. Mungatana, E.D. (2013). Determinants of farmers' choice of innovative risk-reduction interventions to wastewater-irrigated agriculture. *African Journal of Agricultural Research*, 8(1):119-128.
- 37) Muia, V.K. and **Ndunda, E.** 2013. Evaluating the impact of direct anthropogenic activities on land degradation in arid and semi-arid regions in Kenya. *Journal of Agricultural Research*, 2(6):173-182.

- 38) **Ndunda, E.**, Gacii, S.M., Mugo, T., Ipara, H. & Odunga, P. 2010. The effects of service quality and visitor satisfaction on loyalty of park recreation facilities: a case of Uhuru Park in Kenya. *International Journal of Sustainable Development*, 3(7):50-60.
- 39) **Ndunda, E.N.**, Muasya, R.M, and Mulinge, R. (2009). Inter- Relationship between Market Structure, Conduct and Performance of Cut Flowers: A Case Study of Uasin District, Kenya. *International Journal of Sustainable Development*, 1(1):57-64.

1.2.3 Technical Reports

- 1) Obiri, J., Fehr, C. and **Ndunda, E.** (2008). A Total Economic Valuation for the Mt. Elgon Ecosystem of Kenya and Uganda. *Nature and Development Africa: IUCN MERECP*, Kampala, Uganda. EARO/76554-000/1158.

1.3 Research Work

1. Rapid needs assessment report for Isiolo County, Kenya
 - Funded by ACTION AID
2. Baseline survey on socioeconomic and environmental impacts associated with development of access roads in informal urban settlement in Nairobi County
 - Funded by KURA
3. Maximizing the returns to large scale infrastructure investments using evidence-based decision-making process in Lower Nzoia Irrigation Development, Kenya
 - Funded by WORLD BANK
4. Economic benefits of moving up the hierarchy of waste management in Nairobi's industrial area, Kenya
 - Funded by DENMARK EMBASSY
5. Economic analysis of innovations in urban and peri-urban wastewater reuse in Nairobi, Kenya
 - Funded by ORGANISATION FOR SOCIAL SCIENCE RESEARCH IN EASTERN AND SOUTHERN AFRICA (OSSREA)
6. Total economic valuation of Mt. Elgon Ecosystem (Kenya-Uganda)
 - Funded by THE INTERNATIONAL UNION FOR CONSERVATION OF NATURE (IUCN)
7. Challenges, Opportunities and the Way Forward for Food Production in Western Kenya
 - Funded by FLEMISH INTERUNIVERSITY COUNCIL - UNIVERSITY DEVELOPMENT CO-OPERATION (VLIR-UOS)

1.4 Funded Projects

1. 2024 to date: Leadership for Education for Sustainable Development (LEAD-ESD)
 - Funded by United Nations Educational, Scientific and Cultural Organization (UNESCO)
2. 2024-2025: Innovative Integration of a Sustainable Water Kiosk with a Repurposed Solar Power Management Technology.
 - Funded by UK Research and Innovation (UKRI)

3. 2024-2026: Enhancing Climate-Smart Agriculture Solutions for Small-Holder Farming in Makueni County, Kenya
 - Funded by Shah Family Global Innovation Lab's 2023 Seed Grant Award
4. 2023-2024: Rapid needs assessment in Isiolo County, Kenya.
 - Funded by Action Aid
5. 2021-2023: Baseline survey on socioeconomic and environmental impacts associated with development of access roads in informal urban settlement in Nairobi County.
 - Funded by Kenya Urban Roads Authority (KURA)
6. 2019-2020: Developing the Mount Kenya forest business case on the ecosystem services by reviewing the existing secondary and project updated information; assessing the values of biodiversity and forest restoration initiatives based on both market and non-market values; identifying the full range of financial mechanisms available for financing forest restoration; organizing and updating the Mt. Kenya forest restoration business case; determine the risk factors and their severity in the described scenarios an implication to the business model being promoted; and assessing barriers that need to be addressed to operationalize the Mt. Kenya business case and incentives that may be required.
 - Funded by Nature Kenya
7. 2018-2019: Development of a Coordination Policy and a Bill for Kenya Water Towers.
 - Funded by Kenya Water Towers Agency (KWTa)
8. 2017-2018: Analysis of economic benefits of moving up the hierarchy of waste management in Nairobi's industrial area, Kenya.
 - Funded by Royal Danish Embassy in collaboration with Kenya Climate Innovation Centre (KCIC)
9. 2017-2019: Consultant for the Kenya Water Security and Climate Resilience Project to improve water security and build climate resilience by strengthening water and climate risk investment planning, preparation, and implementation that is supported by an enhanced enabling institutional framework.
 - Funded by the World Bank in collaboration with the Ministry of Water and Sanitation.
10. 2014-2016: Consultant under the Panel of Eminent Development Consultants in Environmental, Social and Economic Analysis of Tree Promotion Activities in the Coastal Region under Kenya Coastal Development Project.
 - Funded by the World Bank in collaboration with the Kenya Marine and Fisheries Research Institute (KMFRI)
11. 2014-2016: Consultant for the International Union for Conservation of Nature to conduct Total Economic Valuation of Mt. Elgon Ecosystem (Kenya-Uganda).
 - Funded by the International Union for Conservation of Nature (IUCN)

1.5 Conferences/Workshops/Seminars Attended

1.5.1 Conferences Attended

- 1) Africa2080 curriculum for Climate Systems Science and Engineering Conference held in the University of Ghana, Accra from January 4th - 6th, 2026.
- 2) LEAD-ESD National Policy Dialogue and conference for Uganda held in Kampala on 18th - 19th 2025 at Kyambogo University, Kampala, Uganda
- 3) The Annual Meeting of African Science Academies (AMASA) 2022 held at Nairobi Safari Club Hotel, Nairobi Kenya November 28th - 30th, 2022.
- 4) The 1st Annual International Conference in Machakos University held from 17th – 19th April, 2018.
- 5) Regional Conference of the International Network of Women Engineers and Scientists in Speke Resort & Conference Center, Kampala Uganda held from 21th October - 23th October, 2015.
- 6) The 2nd Research Week and International Conference in Egerton University held from 16th July - 20th July, 2007.
- 7) Moi University 3rd Annual International Conference held from 31st July - 4th August, 2007.
- 8) RUFORUM Biennial Conference held in Mangochi, Malawi from 23rd April – 27th April, 2007.
- 9) Moi University 2rd Annual International Conference held from 29th August – 2nd September, 2006.
- 10) Moi University 3rd Annual International Conference held from 31st July - 4th August, 2007.
- 11) Moi University 2rd Annual International Conference held from 29th August – 2nd September, 2006.

1.5.2 Workshops Attended

- 1) LEAD-ESD Regional Inception Workshop at Kenyatta University, Nairobi, Kenya from 16th - 18th June 2025.
- 2) Advanced ESG Professional Course Workshop held at Golden Tulip Hotel Westlands, Kenya from 14th - 26th July 2024.
- 3) ESPA Professional Development Course Workshop held at Kenyatta University Conference Centre in Kenyatta University from March 5, 2018 - March 7, 2018.
- 4) System Theory and Higher Education Workshop held at Kenyatta University Conference Centre in Kenyatta University from April 24, 2017 – April 28, 2017.
- 5) Research Management Cycle Workshop held at Kenyatta University held at Kenyatta University held at Graduate School in Kenyatta University on September 30, 2015.
- 9) Randomized Evaluations J-PAL Africa/ CEEPA Workshop held at Pretoria, South Africa from August 28, 2014- August 29, 2014.
- 4) Training of Trainers Course on the use of Smartboard in Teaching held at Kenyatta University held at Kenyatta University Workshop held at Kenyatta University Business and Students Centre in Kenyatta University from February 11, 2014 – February 20, 2014.

- 5) Teaching Methodology held at Kenyatta University held at Kenyatta University Workshop held at Kenyatta University Business and Students Centre in Kenyatta University from May 28, 2013 - November 14, 2013.
- 6) Biofuels Research and Training Workshop Under the Environmental Economics Capacity Building Programme held at the Southern Sun Cape Sun Hotel, Cape Town, South Africa from May 11 – May 15, 2009.

1.5.3 Seminars Attended

- 1) A Decade of Biosafety Regulatory Excellence: Experiences and Lessons. Pre-Conference Workshop on Emerging Trends in Biotechnology and Biosafety Regulation on 2nd – 3rd November 2021.
- 2) Functional Biosafety Systems towards commercialization of Agricultural Biotechnologies for Economic Development in Kenya. The 9th Annual Biosafety Conference. Live Webinar held from 10th November 2020 – 13th November 2020.
- 3) Biosafety Socio-Economic Considerations Seminar held at Kenya School of Monetary Studies in Nairobi on 8th March, 2018
- 4) String Theory, Particle Physics and Cosmology Seminar held at Kenyatta University Business and Students Centre in Kenyatta University on 4th April, 2017.
- 5) Shaping the Future of the Nation through Innovation, Science and Technology Seminar held at Kenyatta University Business and Students Centre in Kenyatta University on 21st October, 2016.
- 6) Using Evidence to Improve Policy and Program Designs Seminar held at Windsor Golf Hotel and Country Club on 14th June, 2016.

1.6 Supervision of Postgraduate Students

1.6.1 Master's Degree Candidates Supervised

- 1) Joseph M. Mang'oka (N50/CTY/PT/21829/2012) - Evaluation of irrigation water quality of the Yatta Canal in Machakos County, Kenya.
 - (Graduated)
- 2) Peter N. Kamande (N50/CE/23662/2013) - Assessment of some heavy metals in vegetables, cereals and fruits grown along River Kiu in Kiambu County, Kenya.
 - (Graduated)
- 3) Nyanchoka V. Maryvine (N50/CTY/24631/2013) - The importance of ecosystem functions on rural livelihoods of communities around Mt. Elgon Forest, Uganda.
 - (Graduated)
- 4) Rachel O. Otieno (N50/CTY/24631/2013) - Groundwater quality and its suitability for domestic use in Ruiru Area, Kiambu County, Kenya.
 - (Graduated)

- 4) David M. Njiru (N50/CTY/PT/20701/2012) - Climate change and potential for development of micro hybrid systems for electricity access in Upper Eastern and North-Eastern Counties, Kenya.
 - (Graduated)
- 5) Joseph Karanja (N50/29065/2014) - Climate resilient geothermal production in Eburru, Menengai and Olkaria, Nakuru County, Kenya.
 - (Graduated)
- 6) Phyllis W. Wachira (N50/CE/26778/2013) - Economic impact assessment of climate change on agriculture in Kwale County, Kenya.
 - (Graduated)
- 7) Kanyaru S. Mbura (N50/CE/20730/2012) - Assessment of the physico-chemical parameters of ground water in Tharaka Nithi County, Kenya.
 - (Graduated)
- 8) Beth W. Njiraini (N50/CE/26874/2011) - Assessment of the quality of groundwater in Kawangware slum, Nairobi County, Kenya.
 - (Graduated)
- 9) Mercy M. Wambugu (N50/CE/28769/2014) - Aquaculture as a substitute economic mechanism to disastrous pesticides: integrating fish into rice farming at Mwea Irrigation Scheme in Kirinyaga County, Kenya.
 - (Graduated)
- 10) Esther Nyirandorimana (N50EA/26051/2018) – Assessing the socioeconomic impacts of climate change on rice production at Bugarama Wetland of Rusizi District, Rwanda.
 - (Graduated)
- 11) Liliane Mukundente (N50EA/26073/2018) – Evaluating the impact of adopting agroforestry technologies on livelihood improvement among smallholder farmers in Southern Province of Rwanda.
 - (Graduated)
- 12) Kevin Nyakundi Morang’a (N50/28237/2013) - Potential of sawdust briquettes as a source of sustainable biomass energy in Kenya.
 - (Graduated)
- 13) Gudere Ann Ngauri - (50/26327/2018) - Adoption of Climate-Smart Technologies and Practices Among Agro-Pastoralists of Marsabit County in Kenya.
 - (Graduated)
- 14) Pamella Camu Njeru (N50/CTY/PT/28851/2019) - Solar Photovoltaic Technology Uptake in Climate Change Mitigation by Households in Embu County, Kenya.
 - (Graduated)
- 15) Caroline A. V. Mmata (N50/CE/27862/2013) - Effects of indoor air pollution on maternal and infant health in Mombasa County, Kenya.
 - (Graduated)
- 16) Wahome Alvin Kabingu (N50/25138/2018) - Consumer willingness to pay for energy efficient refrigerators in Nairobi City County, Kenya.
 - (Graduated)

- 17) Kibe N. Winnie (N50/29004/2014) - Socioeconomic impacts of carbon projects on livelihoods of smallholder farmers in Meru County, Kenya
 - (Graduated)
- 18) Pamela Kalondu Muange (N50/CTY/PT/26983/2018) - The effect of climate variability on malaria prevalence among children in Elgeyo Marakwet County, Kenya.
 - (Graduated)
- 19) Joe A. Omwenga (N50/CTY/PT/21830/2012) - Effects of septic tank effluent on groundwater quality in Nairobi County, Kenya
 - (Graduated)
- 20) Emmanuel Kwabena Owusu (N50F/26439/2019) - Life Cycle Assessment of Food Systems and Development of a Sustainability Standard in Nairobi City County, Kenya
 - (Completed)
- 21) Caroline M. Kwamboka (N50/25167/2011) - Adaptation to climate change for smallholder farmers Kitui County, Kenya.
 - (Ongoing)
- 22) Simon P. Odawa (N50/CTY/PT/27609/2013) - Impacts of land-use changes on Mau Forest Ecosystem, Narok County, Kenya.
 - (Ongoing)
- 23) Dorine M. Ngeti (N50/CTY/PT/20726/2012) - Impact of payment for ecosystem services on welfare in Taita Taveta County, Kenya.
 - (Ongoing)
- 24) Fredrick K. Sang (N50/29005/2014) - Using travel cost and contingent valuation approaches to inform sustainable management of King'wal Wetland in Nandi County, Kenya.
 - (Ongoing)
- 25) Ruth Moraa (N50/CTY/PT/33085/2015) - Measuring the exposure of infants and children to indoor air pollution from biomass fuels in urban slums of Kenya.
 - (Ongoing)
- 26) Rhoda Njeri Mwangi (N50/39739/2016) – Assessing the social benefits of soil conservation measures by smallholder farmers in Saba-Saba Sub-Basin in Murang'a County, Kenya.
 - (Ongoing)
- 27) Magdalene Mumbua Nzau ((N50/37176/2017) - Evaluating the adoption of smallholder irrigation as a climate-smart agriculture and its effects on livelihoods in Machakos County, Kenya.
 - (Ongoing)
- 28) Kayamberi Pauline Agesa (N50/20033/2021)-Determination of the role of gender in the adoption of sustainable soil rehabilitation methods in Machakos county, Kenya.
 - (Ongoing)
- 29) Merveille Sanginga Arlette (N50F/21525/2021)-Gender disparities in the adoption of agroforestry for climate change mitigation and implications for household food security In Machakos county, Kenya.
 - (Ongoing)

- 30) Alice Nyamoita Masara (N50/CE/22513/2021)- Climate variability and household coping strategies in Nakuru County, Kenya.
 - (Ongoing)
- 31) John Osore (N50/CTY/PT/28753/2014) - Gender dimension and climate smart technologies for Climate change adaptation in Kakamega County, Kenya.
 - (Ongoing)
- 32) Winfred Mwende Paul (N50/CE/25279/2018) - Adaptive capacity of beekeeping farmers to climate variability in Kitui County, Kenya.
 - (Ongoing)
- 33) Kereu Micah Obondi (N50/CTY/PT/28828/2019) - Physicochemical and bacteriological assessment groundwater quality from Kitengela Municipality boreholes Kajiado County, Kenya.
 - (Ongoing)
- 34) Ng'ang'a Teresia Wairimu (N50/39207/2017) - Situational analysis of healthcare waste management system in the hospitals of Kiambu County in Kenya.
 - (Ongoing)
- 35) Cynthia Juma Mutsoli (N50/39465/2016) - Effect of agriculture on water quality in Ewaso Nyiro River, Laikipia County, Kenya.
 - (Ongoing)
- 36) Dorcas Chira Maina (N50/20819/2021) - Adoption of soil-based nature positive interventions by smallholder Farmers in Vihiga and Kisumu Counties, Western Kenya.
 - (Ongoing)
- 37) Norman Oduor Oloo (N50/CTY/PT/20955/2022) - Estimation of Sediment Load Transported to the Indian Ocean from the River Sabaki: A Hydrodynamic Modeling Approach Using HEC-RAS.
 - (Ongoing)
- 38) Lewis Muriuki Irungu (N50/CTY/PT/26590/2018) - Ecotourism as a Management Tool for Sustainable Forest Management in Kiambu County, Kenya.
 - (Ongoing)
- 39) Agatha Nelima Soita (N50/24361/2024) - Market Structures and Adoption of Agroforestry Systems Among Smallholder Farmers in Bungoma County, Kenya.
 - (Ongoing)
- 40) Margaret Wambui Muiruri (N50/25398/2024) - Role of Circular Economy Model in Reducing Plastic Pollution and its impact on Climate change in Kibra Sub-County, Kenya.
 - (Ongoing)
- 41) Shama Josephine Jillo (N50/CE/25572/2018) - Assessing the Effects of Climate Change on Agro-Pastoral Productivity and Income in Saku Sub-County, Marsabit County, Kenya.
 - (Ongoing)
- 42) Yahye Abdi Ibrahim (N50EA/CE/24495/2024) - Financing Clean Development Mechanism Projects in Somalia: Barriers and Opportunities for Climate Investment, Somalia.
 - (Ongoing)
- 43) Reagan Onyango Ongoro (N50/CE/24008/2024) - Household Vulnerability and Adaptive Capacity to Climate-Related Water Scarcity in Rachuonyo North, Homa Bay County, Kenya.

- (Ongoing)
- 44) Ely Kogei (N50/PT/CTY/24814/2024 - Comparative Effects of Biochar, Compost and Manure on Climate resilient Growth of Indigenous Tree Seedlings in Karura Forest
 - (Ongoing)

1.6.2 Doctorate Degree Candidates Supervised

- 1) Mbaabu Patrick (N85/CE/27764/2013) - Effects of feed, fertilized water and liming on the production of *Oreochromis Niloticus* in different culture systems in Meru County, Kenya.
 - (Graduated)
- 2) Benjamin M. Kinyili (N85/29390/2014) - Effect of agroforestry systems on ecosystem services and livelihoods for smallholder farmers in Machakos County, Kenya.
 - (Graduated)
- 3) Faith Resiato Oloitipitip (N85/28515/2018)-Climate variability and livelihood vulnerability of the Maasai pastoralists in Amboseli ecosystem, Kajiado County, Kenya
 - (Graduated)
- 4) Mamo Boru Mamo (N85/28922/2013) - Impacts of Climate Change and Adaptation Strategies among the Gabbra Pastoralist In Marsarbit County, Kenya
 - (Graduated)
- 5) Nyanchoka V. Maryvine (N85/38924/2018) – Modelling urban air pollution within an Urban Canyon in Nairobi City, Kenya.
 - (Ongoing)
- 6) Laveen M. Safary (N85/25228/2018) - Desalination of Groundwater by Solar Powered Reverse Osmosis as a Sustainable Solution to Safe Drinking Water Crisis in Mombasa County, Kenya.
 - (Ongoing)
- 7) David Simba Nyamweya (N85/38425/2017) - Coupled effects of climate variability and land use pattern on surface water quantity and quality in Kisii County, Kenya
 - (Ongoing)
- 8) Gudere Anne Ngauri (N85/25913/2024) - Sustainable Climate-Resilient Systems in Forage Production on Pastoralists' Household Welfare in Marsabit County, Kenya
 - (Ongoing)
- 9) Harun Mohamed Yusuf (N85/21834/2023) - Effectiveness of Institutional Clean Cooking Through Steam Technology in Expanding Access to Education; A Case of Five (5) Pilot Schools in Kenya.
 - (Ongoing)

1.7 Examination of Postgraduate Theses/Dissertations

1.7.1 PhD Theses examined

1. Sustainable Energy and Water Use for Horticultural Processing by Micro, Small and Medium Enterprises in Kenya
 - Candidate: Obiero Linda Maryanne (A82/52021/2017)

- Institution: University of Nairobi
2. Assessing the Environmental and Socio-Economic Implication of Artisanal and Small-Scale Gold Mining Practices in Kenya
 - Candidate: Tampushi Leonard Leswam (A82/53581/2018)
 - Institution: University of Nairobi
 3. Environmental Security and Governance in Resilience Building in Eastern Mau Forest Communities, Nakuru County, Kenya
 - Candidate: Tampushi Leonard Leswam (A82/53581/2018)
 - Institution: University of Nairobi
 4. Environmental Security and Governance in Resilience Building in Eastern Mau Forest Communities, Nakuru County, Kenya
 - Candidate: David Ochieng Wando (N85/28752/2014)
 - Institution: Kenyatta University
 5. Evaluating Payment Potential for environmental services and Watershed Conservation of Thika Dam, Murang'a County, Kenya
 - Candidate: Kagombe Joram Kimenju (N85/11867/2008)
 - Institution: Kenyatta University
 6. Implications of Biodiversity on Food Security Around Volcanoes National Park, Rwanda.
 - Candidate: Madeline Nyirituza (N85EA/27138/13)
 - Institution: Kenyatta University
 7. Impacts of Decentralized Governance on Forest Conservation and Community Livelihoods In Kakamega and Loita Forests, Kenya
 - Candidate: Mũsingo Tito Edward Mbuvi (N85/15766/05)
 - Institution: Kenyatta University

1.7.2 MSc Theses examined

1. Economic Valuation of Ecosystem Services in Yala Swamp Wetland, Kenya using Choice Experiment Approach
 - Institution: Masinde Muliro University
2. Factors Affecting Adoption and Effect of Irrigation Technologies on Productivity and Profitability among Small-Scale Farmers in Machakos County, Kenya
 - Institution: University of Embu
3. Uptake of Regenerative Agriculture Technologies, Productivity of Selected Cereals and Pulses and Food Security in the Drylands of Embu County
 - Institution: University of Embu
4. Effect Of Development Interventions in Rangelands and Rangeland Management Strategies in Burder, Wajir County, Kenya
 - Institution: Kenyatta University
5. Establishment of Traditional Boundaries for Sustainable Forest Management in Loita Forest, Narok County, Kenya
 - Institution: Kenyatta University

6. Environmental and Socio-Economic Influences on the Purchase of Woven Products in Kisumu County, Kenya
 - Institution: Kenyatta University
7. Determinants for the Purchase of Woven Product Among Consumers in Kisumu County, Kenya
 - Institution: Kenyatta University
8. Risks and Perceptions of Human Excreta Disposal Practices Among Rice Farmers in Mwea Kirinyaga County, Kenya
 - Institution: Kenyatta University
9. Surface Water Harvesting as Climate Change Adaptation and Mitigation Strategy in Mbeere, Embu County, Kenya
 - Institution: Kenyatta University
10. Environmental Planning Compliance at Petrol Stations in Nairobi County, Kenya
 - Institution: Kenyatta University
11. Spatial Patterns of Solar Photovoltaic System Diffusion Kisumu County, Kenya
 - Institution: Kenyatta University
- 1.8 Professional/Consultancy (Editor/Peer review in journals, Networks/Collaborations, External Examiner, Patents)

1.8.1 Membership in Professional Associations

- Lead Expert - National Environmental Management Authority (NEMA)
- Member - Environment Institute of Kenya (EIK)
- Member - Organization for Social Science Research in Eastern and Southern Africa (OSSREA)

1.8.2 Peer Reviewer in journals:

- i) KIPPRA Research Publications
 - <https://repository.kippira.or.ke/handle/123456789/9>
- ii) Agricultural Water Management
 - <https://ees.elsevier.com/agwat/>
- iii) Journal of Environmental & Analytical Toxicology
 - <https://www.omicsonline.org/environmental-analytical-toxicology.php>
- iv) Journal of Development and Agricultural Economics
 - <https://academicjournals.org/journal/JDAE>
- v) British Journal of Applied Science & Technology
 - <https://www.ncbi.nlm.nih.gov/nlmcatalog/101664541>
- vi) Asian Journal of Agricultural Extension, Economics & Sociology
 - <https://www.journalajaees.com/index.php/AJAEES>
- vii) Journal of Physical Science and Environmental Studies

- <https://pearlresearchjournals.org/journals/jpses/index.html>

viii) Journal of Agricultural Extension and Rural Development

- <http://www.academicjournals.org/jaerd>

ix) African Journal of Public Administration and Environmental Studies (AJoPAES)

- <https://journals.co.za/journal/aa.ajopaes>

1.8.3 External Examiner:

1.8.3.1 Lukenya University

- School of Agriculture, Technical Studies and Natural Sciences
 - Department of Agricultural Sciences
 - Department of Natural Sciences
 - Period: 2026 – 2028

1.8.3.2 University of Nairobi

- Faculty of Science and Technology
 - Department of Earth and Climate Sciences
 - Period: 2022 - 2024

1.9 Community Service and Other Engagements

i) National Biosafety Authority of Kenya.

- Socioeconomic Biosafety Expert
- Period: 2016 to date:

ii) Patron, South Eastern University Students Association.

- Kenyatta University, Kenya.
- Period: 2015 to date:

2.0 Affiliation of Professional Bodies

(a) Environmental Institute of Kenya (EIK)

(b) National Environmental Management Authority (NEMA)

(c) Organization for Social Science Research in Eastern and Southern Africa (OSSREA)

3.0 Administrative Positions Held

3.1 Recognized university administrative positions

a) Chairman,

Department of Environmental Science and Education, Kenyatta University, Kenya.

- Period: 2025 to date

- b) Examination Coordinator,
Department of Environmental Science and Education, Kenyatta University, Kenya.
▪ Period: 2023 to date
- c) Quality Management Systems committee member
Department of Environmental Science and Education,
Kenyatta University, Kenya.
▪ Period: 2022 to date
- d) E-Learning Coordinator
School of Agriculture and Environmental Sciences,
Kenyatta University, Kenya.
▪ Period: 2015-2022
- e) Coordinator of the Departmental Board of Postgraduate Studies
Department of Environmental Science and Education,
Kenyatta University, Kenya.
▪ Period: 2015-2017

3.2 Other administrative positions Held

- a) Chairman of the Committee on Agroforestry and Rural Development Programme (Postgraduate).
Department of environmental Science and Education, Kenyatta University, Kenya.
▪ Period: 2015-2017
- b) Member of the Committee on Environmental Resource Conservation Programme (Undergraduate).
Department of environmental Science and Education, Kenyatta University, Kenya.
▪ Period: 2015-2017
- c) Departmental Website Management Committee.
Department of environmental Science and Education, Kenyatta University, Kenya.
▪ Period: 2015 to date

REFEREES

1. Prof. James Kung'u
School of Agriculture and Environmental Sciences
Department of Environmental Science and Education
Kenyatta University
Email: kungu.james@ku.ac.ke

2. Prof. Monica Muna
School of Agriculture and Environmental Sciences
Department of Environmental Science and Education
Kenyatta University
Email: muna.monica@ku.ac.ke
3. Prof. Thomas Kibutu
School of Law, Arts and Social Sciences
Department of Geography
Kenyatta University
Email: kibutu.thomas@ku.ac.ke
4. Prof. John Muriuki
School of Agriculture and Environmental Sciences
Department of Environmental Science and Education
Kenyatta University
Email: muriuki.john@ku.ac.ke