

KOECH OSCAR KIPCHIRCHIR (BSc, MSc, Ph.D)

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A. PERSONAL INFORMATION

Date of birth	27 th July, 1985
Nationality	Kenyan
Gender	Male
Languages	English, Swahili, Luhya and Nandi
Marital status	Married

PROFESSION: Range Scientist specializing in Rangeland Management, Integrated Soil-crop-livestock production systems, Grassland Ecology, Livestock Nutrition, and Feed Resources in drylands, dryland production systems and Nature based Enterprises (NBEs) for dryland ecosystems sustainability.

B. PROFESSIONAL SUMMARY

I have over 10 years' experience in rangeland management, integrated crop-livestock production systems, soil and land management/rehabilitation, grassland ecology and environmental conservation. I have been involved in many consultancies and research in Kenya, Ethiopia, Somalia and Sudan in areas of Sustainable Rangeland Management, Pastoralism, Drylands Feed Resources, Livestock Nutrition, Environmental Conservation, and Nature based enterprises development and Management of invasive species. I have also been active in consultancy in areas of baseline survey, mid and end of project evaluations in the field of rangeland management, natural resource management, drylands livelihoods and WASH projects. I have also worked widely in the Arid and Semi-Arid areas of Kenya in support pastoral livelihoods and food security projects in Narok, Kajiado, Tharaka Nithi, Meru, Nandi, Mandera, Wajir, Marsabit, Garissa, Isiolo, Samburu, Tana River, Turkana and Baringo counties among others. I have worked in numerous research projects in areas of climate change and adaptation, done consultancies for International and local organizations in areas of natural resource management, Integrated Soil-crop-Livestock production systems and environmental conservation. I have recently been the Project Scientific Consultant for International Atomic energy Agency (IAEA) in an integrated crop-livestock production systems (ICLPS), Supporting regional RAF 5090 project that seek to optimize productivity while reducing environmental effects in the region. I have also provided support to regional training courses for IAEA on sustainable livestock production systems and environment conservation. I have also been the technical team lead in establishment of the pioneer Aroori

Livestock Centre of excellence (ALCE) in Somaliland, Aroori research station, focusing on Adaptive research and sustainable rangeland management and feed resources production, conservation and utilization.

C. PROFESSIONAL MISSION STATEMENT

To be able to apply to the best of my ability, the theoretical and practical knowledge I have acquired in my professional training, to work and cultivate teamwork efficiency, personal responsibility and accountability in management and administration of organizations for the better performance and well-being of the society and the Nation at large.

D. EDUCATION BACKGROUND

- 2011-2014** **PhD in Dryland Resource Management (Dryland Production Systems, Grassland Ecology)** University of Nairobi, Department of Land Resource Management and Agricultural Technology, Faculty of Agriculture, Kenya. Thesis title '*Comparative evaluation of six indigenous rangeland grasses for pasture production under varying soil moisture contents in Tana River county, southeastern Kenya*'
- 2008-2010** **MSc. in Range Management (Range Ecology and Livestock Nutrition)** University of Nairobi, Department of Land Resource Management and Agricultural Technology, Faculty of Agriculture, Kenya. Thesis title '*Effects of Prosopis juliflora seedpod meal supplement on weight gain of weaner Galla goats in Baringo district, Kenya*'.
- 2004-2008** **BSc. in Range Management**
University of Nairobi, Kenya (**First Class Honours**)
- 2003** **Certificate in computer applications**
St. Peters Computer College, Kapsabet, Kenya
- 2002** **KCSE Certificate (B+)**, Vihiga Boys high school, Vihiga, Kenya
- 1998** **KCPE Certificate**, Kamurguiywa Primary School, Kapsabet, Kenya

E. PROFESSIONAL QUALIFICATIONS & SKILLS

- [1] Competent in: Ms Word, Ms Access, and Ms excel, Ms PowerPoint, page maker and Ms Publisher among others.
- [2] Project planning, implementation and Management skills
- [3] Monitoring and evaluation of projects
- [4] Feasibility studies for project in natural resource, environment and agriculture
- [5] Data analysis, Report writing and database management.

F. PROFESSIONAL SPECIALISED TRAINING

- [1] 13th to 17th September, 2021. Asynchronous teaching and learning. Faculty of Education, University of Nairobi
- [2] June 7, 2021 – June 30, 2021: PedaL Online Training on Technology for Transformative Pedagogy by the University of Nairobi Pedal Training in Collaboration with Partnership for African Social and Governance Research (PASGR). University of Nairobi

- [3] June 19th - 21st 2019: Pedagogy and Andragogy training at the University of Nairobi, Central Catering Unit.
- [4] March 2018: ESPA's Professional Development Course (PDC) on Ecosystem Services for Poverty Alleviation held at Kenyatta University, Nairobi, from 5th to 7th of March 2018.
- [5] October 2015: Scientific Research Paper Writing training at ILRI Campus, Addis Ababa Ethiopia offered by Beca and ILRI.
- [6] September 2015: Pedagogy Training, organized by School of Education, University of Nairobi.
- [7] March 2012: Tropical Biology Africa training on Designing research projects in the field at Mt. Rock Bantu Lodge, Naro Moru, Nanyuki.
- [8] August 2012: Effective Teaching Strategies for Biological & Environmental Scientists at Esella Country, Hotel, Kampala Uganda
- [9] May 2008: First aid training for emergency response by Kenya Red Cross society.
- [10] June 2006: Leadership Training by the Steadman Group. K.C.B. Training Center, Karen, Nairobi

G. PROFESSIONAL MEMBERSHIP

- [1] Grassland and Rangeland Society of Kenya (GRASK)-Member GRASK/0011
- [2] Ecological society for Eastern Africa (ESEA)
- [3] Nairobi University Range management student's society, (NURMSS).
- [4] Nairobi University Agricultural students association (NUASA)
- [5] Wildlife clubs of Kenya

H. WORK & RESEARCH EXPERIENCE

- [1] **Dec 2023-Present: Senior Lecturer**, University of Nairobi, Faculty of agriculture, Department of Land Resource Management and Agricultural Technology, Range management section
Responsibilities: Teaching undergraduate and post graduate courses in Integrated crop-livestock systems, feed resources, livestock production and nutrition,, livestock nutrition, land management, grassland ecology to students taking PhD, BSc. Range Management and BSc. Agriculture, BSc. Agro ecosystems and environment management. Student supervision, carry out research and other departmental roles assigned to me.
- [2] **December 2015-Dec 2023: Lecturer**, University of Nairobi, Faculty of agriculture, Department of Land Resource Management and Agricultural Technology, Range management section
Responsibilities: Teaching undergraduate and post graduate courses in feed resources, livestock production, livestock nutrition, land management, grassland ecology to students taking PhD, BSc. Range Management and BSc. Agro ecosystems and environment management. Student supervision, carry out research and other departmental roles assigned to me.
- [3] **January 2012 - 2014: Tutorial Fellow**, University of Nairobi, College of agriculture and veterinary sciences, Department of Land Resource Management and Agricultural Technology

- Responsibilities:** Teaching undergraduate and post graduate courses to students taking BSc. Range Management and BSc. Agro ecosystems and environment management. Student supervision and other departmental roles assigned to me.
- [4] **March-June 2016:** Post Doc Visiting Research fellow, Institute of Biological and Environmental and Rural sciences (IBERS), Aberystwyth University, United Kingdom: Research in methane gas measurements techniques from feed resources and livestock feeding in quest to abate GHGs from livestock production systems
- [5] **Jan, 2010-Dec 2012:** Research Associate, Sustainable Rural and Urban development consultants (SRUDC) Ltd.
Responsibilities: Head of Livestock and livelihoods research, field work planning, Enumerator training and conducting a Participatory Rural Appraisal (PRA) and Focus Group Discussion
- [6] **June 2011: Consultant team** for Livelihoods survey study for African Conservation Centre -Maasai mara and Amboseli Ecosystems
Responsibilities: Researcher and coordinated data collection, analysis and report writing.
- [7] **Sept-Dec 2012:** Consultant team for World Vision Somalia on certified holistic Rangeland management and disaster risk reduction in Puntland and Somali land.
Responsibilities: Design of Holistic Range Management Curriculum, carry out feasibility studies on its applicability, assess the existing disaster risk reduction strategies and how they can be improved.
- [8] **2012: PhD. Research project** on Fodder production in the ASALs of Kenya to provide strategic feed resources for livestock. Project funded by National Irrigation Board (NIB), DAAD Kenya and NCST & I.
- [9] **2011: Consultant for Action Aid-** Food security assessment for project planning and design to implement food security projects in Isiolo, Mbeere and Kitui
Responsibilities: Conducting survey, FGDs, PRAs, and development of feasible project plans in the area to come up with project proposals and reports
- [10] **May 2010-2011:** Part time Lecturer at the Mt. Kenya University
Responsibilities: Sourcing and preparing relevant lecture notes on Research methods, principles of range management, Climatology and agroforestry and teaching.
- [11] **Dec 2008 to 2011:** Head of Livestock production systems Analyst, **SEDPA LIMITED**, Nairobi, Kenya
Responsibilities: In charge of research in livestock production systems designs, evaluations including Grazing systems planning and management, Nutrition management and pastures.
- [12] **2009-2010: PI, MSc Research student:** University of Nairobi (College of Agriculture and Veterinary sciences) Projects Research in my MSc. Range Management-Livestock nutrition at Kenya Agricultural research institute (KARI)-Marigat in Baringo district). Project title: Effects of *Prosopis juliflora* seedpods as a strategic supplement for Weaner Galla goats in the ASALS.
Responsibilities: Principle Researcher, collecting data, entry, analysis and reporting findings
- [13] **April 2010:** Reviewer, **World Vision** East Africa office food security Projects

Responsibilities: Evaluating World Vision projects Reports for the Eastern African Region for Monitoring and evaluation of projects progress.

- [14] **March 2010:** Research Assistant to PhD student at the University of Nairobi
Responsibilities: Enumerator training and conducting a Participatory Rural Appraisal (PRA) and Focus Group Discussion for a study on Climate Variability and Livestock Insurance among the Maasai Pastoral community in Laikipia North district, Kenya.
- [15] **January 2010:** Research Assistant to MSc Student at the University of Nairobi
Responsibilities: Enumerator training to carry out a survey on Climate Variability and Poverty among Pastoral and Agropastoral communities in the larger Baringo district, Kenya
- [16] **July-Sept, 2008:** Research assistant in **ACCCA Project** .Addressing livelihoods under climatic variability and change; strengthening the adaptive capacity of rural poor to water scarcity in Kenya's Dry lands.
Responsibilities: Enumerator training and conducting a Participatory Rural Appraisal (PRA) and Focus Group Discussion.

I. GRANTS, AWARDS, FELLOWSHIPS

- [1] Technical consultancy services around grazing plans management, Natural Resources Management, livestock market feasibility analysis, nature-based enterprises and tree nursery management; for projects in Tsavo Conservancies & Greater Amboseli Ecosystem. International Foundation for Animal Welfare (IFAW). **2023 USD. 75,918.2**
- [2] Engaging policy makers to address bottlenecks that stop sustainable utilization of Prosopis pods by marginalised communities in Mexico and Kenya' Fund No. (RIS 15934659/ RIS H58126, funded by GCRF. 2023 USD 13000 (**KES 1,382,919**)
- [3] GCRF Interdisciplinary Research Project Award 2019. Studying the Use of Mezquite to Improve Welfare of Communities in Arid and Semi-arid Zones of the World (RIS CONTRACT REF 2418006 / RIS PROJECT REF 1775401). Grant amount: **USD 21,559**
- [4] Sept 2017-Sept 2020: Second phase Collaborative research grant on ways to propagate Frankincense *Boswellia* tree species (*Boswellia Sacra*, *Boswellia frereana*) in Somaliland and management and utilization of Prosopis juliflora as feed. Funded by World Vision Somalia and Australian government. **Grant amount: USD 163, 840**
- [5] Kenya Accelerated Value Chain Development (AVCD) program Livestock component. Funded by USAID funded under FEED THE FUTURE. Project partners; ILRI, KLMC. **Grant amount:** USD 1 Million for three years, 2016-2018
- [6] Jan 2017: Collaborative research grant on ways to propagate Frankincense *Boswellia* tree species (*Boswellia Sacra*, *Boswellia frereana*) in Somaliland. Funded by World Vision Somalia. **Grant amount: USD 36, 710**
- [7] Jan- June 2017: Field Attachment Programme Award (FAPA) RU 2017 FAPA – CRP Dry land Cereals Post Doc by the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM). Working on Sorghum as Feed resource in drylands. **Grant amount: USD 10, 000**

- [8] March-June 2016: Post Doc Visiting Research fellow, Institute of Biological and Environmental and Rural sciences (IBERS), Aberystwyth University, United Kingdom: Research in methane gas measurements techniques from feed resources and livestock feeding in quest to abate GHGs from livestock production systems. **Grant amount:** USD 21000
- [9] 2014-2015: Enhancing Resilience Of Livestock-based Livelihoods in Northern Kenya. This project is supported by IGAD Applied Research in Drylands Grants Facility (ARDGF) from 1st July 2014 to 31st October, 2015. Heading pastures reseeding and bulking activities in Marsabit and Isiolo Counties in North eastern Kenya.
- [10] 2012-2014: National Council for Science and Technology (NCST) Science, Technology and Innovation (ST&I) grant for your PhD research proposal entitled 'Comparative growth and interspecific competition responses of irrigated range grasses to varying watering schedules in the rangelands of Kenya'
- [11] 2011-2014: German Academic Exchange Service (DAAD Kenya) In-country and in-Regional postgraduate studies scholarship
- [12] National Irrigation Board Research grant on Fodder production in the ASALs of Kenya to provide strategic feed resources for livestock. Project funded by National Irrigation Board (NIB) in Tana River (Bura) and Turkana County (Katilu)
- [13] 2008-2010: MSc Scholarship granted by the University of Nairobi

J. ADMINISTRATIVE RESPONSIBILITIES AT THE COLLEGE

a) Faculty of Agriculture

2023 – Agro-conference Organizing committee Chair

Main responsibilities:

- To coordinate and plan for AGRO-CONFERENCE 20123

2022-Present: Member Gender Committee

Main responsibilities:

- I represent the department in the Faculty of Agriculture Gender Committee

2019– Present: Committee Chairperson, Nairobi International Trade Fair (NITF) and Shows.

Main responsibilities:

- To coordinate and plan for College participation in the NITF
- Prepare budgets and ensure preparation of college units for participation to the NITF and shows
- Write and produce reports of the college participation to the NITF and shows
- Represent the CAVS in the main show committee at Main campus during planning and participation to the NITF and other shows
- Plan for the college competition entries to the NITF and prepare to participate

2014 – Present: Chairperson, Post graduate student-led seminar Committee on PhD candidate's presentation of research findings in the Faculty of Agriculture

Main responsibilities:

- To coordinate and plan PhD seminar series for the Faculty
- Write and produce PhD seminar series proceedings
- Provide academic Mentorship to new PhD students who enroll in the faculty and induct them to seminar series
- Ensure PhD seminar series program is coordinated and running
- Communicate to PhD candidates on important communications including research calls and invitations for seminar lectures
- Write and produce PhD seminar series proceedings

2016 – 2020: Chairperson, Faculty of agriculture field attachment Co-coordinator

Main responsibilities:

- Organizing for placement of third years students in the faculty
- Organizing for field attachment supervision by staff in the faculty
- Providing letters of support to students for field attachment applications
- Linking students with industry for placement opportunities
- Mentoring students on internship opportunities, networking and preparation for internship period

2014 – Present: Member, Student mentorship programme

Main responsibilities:

- Organizing guest visitor's invitation to give talk to students
- Orientation and guidance to new enrolled first year students
- In charge of fourth year students mentorship in the Range management section

b) Department of LARMAT

2014 – Present: Department of LARMAT Examination officer

Main responsibilities:

- To assist the Chairman to coordinate and plan for examination processes including submission of exam drafts, collection and submission of reviewed exams to Exam office in Chiromo.
- Support the department in the preparation and presentation of departmental results to the Faculty board

2014 – 2021: Department of LARMAT, Range section Internship co-coordinator

Main responsibilities:

- To assist the Chairman to coordinate and plan for BSc. Range Management internship opportunities during their year.
- Plan and co-ordinate range section student supervision during internship

2018 – Present: Department of LARMAT, Co-coordinator of Curriculum review

Main responsibilities:

- To assist the Chairman to coordinate and plan for curriculum review, communication to review teams and documentation of review process

- Support the Chairman during the presentation of reviewed/developed curriculum to the faculty Board and College Academic Board

c) **Upper Kabete Faculty Club welfare group**

2016 to Present – Clubs Secretary

Main responsibilities:

- Supervise on the day to day operations of the club
- Writing minutes of the management committee meetings and AGM
- Custodian of all the clubs assets records and staff records
- In charge of staff welfare and management
- Plan and co-ordinate clubs calendar activities like AGM, tree planting

K. PUBLICATIONS (REFEREED JOURNALS)

- [1] **Galwab, A. M., Koech, O. K., Wasonga, O. V., & Kironchi, G. (2024).** Gender-Differentiated Roles and Perceptions On Climate Variability Among Pastoralist And Agro-Pastoralist Communities In Marsabit, Kenya. *Nomadic Peoples*, 28(1), 41-71.
- [2] **Galwab, A. M., Koech, O. K., Wasonga, O. V., & Kironchi, G. (2023).** Analysis of Rainfall Spatiotemporal Variability and Its Impact on Livelihood in Marsabit, Kenya. *East African Agricultural and Forestry Journal*, 87(3&4), 20-20.
- [3] **Galwab, A. M., Koech, O. K., Wasonga, O. V., & Kironchi, G. (2023).** Assessment Of Temporal Variability of Temperature and Precipitation Trends In Kargi, Maikona, Dakabaricha and Sololo Wards Of Marsabit County, Kenya. *Tropical and Subtropical Agroecosystems*, 27(1).
- [4] **Rotich, H. K., Koech, O. K., Onwonga, R., & Mbau, J. S. (2023).** Effects of Grazing Management on Greenhouse Gas Emissions in Southern Rangelands of Kenya. *Journal of Rangeland Science*, 13(1), 89-98.
- [5] **Yahya Sabdow Kasai; Moses Nyangito; Oscar Koech (2023).** Effects of grass-weed interactions on morpho-ecological traits and weeding benefits of range grasses in southern Kenya rangelands. *Tropical and Subtropical Agroecosystems* 2023-05-02. DOI: 10.56369/tsaes.4584
- [6] **Mungoche, J. M., Nyangito, M. M., & Koech, O. K. (2023).** Evaluation of Soil Mineral Nitrogen under Different Organic and Inorganic Fertilization in Central Kenya. *Open Access Library Journal*, 10(12), 1-14.
- [7] **Kisambo, B. K., Wasonga, O. V., Kipchirchir, O. K., Karuku, G. N., & Kirwa, E. C. (2023).** Forage yields and quality of *Cenchrus ciliaris* and *Panicum maximum* ecotypes under varied harvest intervals in a semi-arid environment in Kenya. *International Journal of Tropical Drylands*, 7(2).
- [8] **Kisambo, B. K., Wasonga, O. V., Koech, O. K., & Karuku, G. N. (2022).** Morphological and productivity responses of Buffel grass (*Cenchrus ciliaris*) and Guinea grass (*Panicum maximum*) ecotypes to simulated grazing in a semi-arid environment. *Grassland Research*, 1(4), 290-300.

- [9] **Wafula, W. M., Wasonga, O. V., Koech, O. K., & Kibet, S. (2022).** Factors influencing migration and settlement of pastoralists in Nairobi City, Kenya. *Pastoralism*, 12(1), 1-14. <https://doi.org/10.1186/s13570-021-00204-6>
- [10] **Jirde, M. I., Koech, O. K., & Karuma, A. N. (2021).** An analysis of perceptions, knowledge, and management of rainwater harvesting (RWH) technologies among agropastoralists in Odwayne district, Somaliland. *Tropical and Subtropical Agroecosystems*, 24(3)
- [11] **Bone, G., Parr, T., Brameld, J., Elmes, M., Gonzalez-Carranza, Z., & Koech, O. (2021).** 98 The effect of mezquite pod flour in a wheat-based diet on broiler chicken growth performance. *Elsevier Animal - Science proceedings*, 12(1), 77. <https://doi.org/10.1016/j.anscip.2021.03.099>
- [12] **Rotich, H. K., Onwonga, R., Koech, O., & Mbau, J. (2020).** Projected Changes in Soil Organic Carbon Stocks over a 50-Year Period under Different Grazing Management Systems in Semi-Arid Grasslands of Kenya. *Journal of Rangeland Science*, 10(4), 1-10.
- [13] **Kamau, H. N., Koech, O. K., Mureithi, S. M., Wasonga, O. V., & Gachene, C. K. K. (2020).** Grass species for range rehabilitation: Perceptions of a pastoral community in Narok North sub-county, Kenya. *African Journal of Agricultural Research*, 16(8), 1204-1212.
- [14] **Kagwiria Dorcas, Oscar K. Koech, Josiah M. Kinama, George N. Chemining'wa & Henry Fred Ojulong (2019).** Sorghum Production Practices In An Integrated Crop-Livestock Production System In Makueni County, Eastern Kenya. *Tropical and Subtropical Agroecosystems*, 22 (2019): 13-23
- [15] **Hillary Kipngetch Rotich, Richard Onwonga, Judith Syombua Mbau, Oscar Kipchirchir Koech. (2018).** Soil Organic Carbon Content and Stocks in Relation to Grazing Management in Semi-Arid Grasslands of Kenya. *Journal of Rangeland Science*, 2018, Vol. 8, No. 2
- [16] **Hillary Kipngetch Rotich, Judith Syombua Mbau, Richard Onwonga, Oscar Kipchirchir Koech. (2018).** Vegetation Dynamics in Relation to Grazing Management Practices in Semi-arid Grazing Lands of Makueni County, Kenya. *Journal of Rangeland Science*, 8(3), 227-239.
- [17] **Austine Otieno, George Karuku, James Raude, and Oscar Koech (2018).** Accumulation Of Nitrogen And Phosphorous By Vetiver Grass (*Chrysopogon Zizanioides*) In A Model Constructed Wetland Treatment System For Polishing Municipal Wastewater. *International Journal of Innovation and Applied Studies* 22(4) 2018, pp. 291-298 <http://www.ijias.issr-journals.org/>
- [18] **Ombega, N. J., Mureithi S. M, Koech O. K., Karuma A. N, & Gachene C. K. K. (2017)** Effect of rangeland rehabilitation on the herbaceous species composition and diversity in Suswa catchment, Narok County, Kenya. *Ecological Processes* 6(1)41 DOI 10.1186/s13717-017-0109-1
- [19] **Jawuoro, S. O., Koech, O. K., Karuku, G. N., & Mbau, J. S. (2017).** Organization and Performance of Water Resource Users' associations in the Southern Rangelands of Kenya. *Tropical and Subtropical Agroecosystems*, 20(3) (2017): 401 – 4011. <http://www.revista.ccba.uady.mx/ojs/index.php/TSA/article/view/2302>

- [20] **Otieno, A. O., Karuku, G. N., Raude, J. M., & Koech, O. (2017).** Effectiveness of the Horizontal, Vertical and Hybrid Subsurface Flow Constructed Wetland Systems in Polishing Municipal Wastewater. *Environmental Management and Sustainable Development*, 6(2), 158-173.
- [21] **Jawuoro, S. O., Koech, O. K., Karuku, G. N., & Mbau, J. S. (2017).** Effect of piospheres on physio-chemical soil properties in the Southern Rangelands of Kenya. *Ecological Processes*, 6(1), 14.
- [22] **Jawuoro, S. O., Koech, O. K., Karuku, G. N., & Mbau, J. S. (2017).** Plant species composition and diversity depending on piospheres and seasonality in the southern rangelands of Kenya. *Ecological Processes*, 6(1), 16.
- [23] **Jawuoro, S. O., Mbau, J. S., Koech, O. K., & Karuku, G. N. (2017).** Community Based Water Resource Conservation in the Southern Rangelands of Kenya. *International Journal of Environmental Sciences & Natural Resources*, 3(3), 77-84.
- [24] **Onekon Walter Angwere and Koech Oscar Kipchirchir (2016).** Assessing the Effect of Charcoal Production and Use on the Transition to a Green Economy in Kenya. *Tropical and Subtropical Agroecosystems*, 19(3)2016: 327 - 335
- [25] **Kuria S G, Koech O K, Adongo A O, Murithi S, Njoka J T and Kamande P 2016:** Cost of production, marketing and revenue generation from Somali camel breed in Isiolo and Marsabit counties of northern Kenya. *Livestock Research for Rural Development*. Volume 28, Article #229. Retrieved December 2, 2016, from <http://www.lrrd.org/lrrd28/12/kuri28229.html>
- [26] **Koech, OK, Kinuthia RN, G.N. K, Mureithi SM, Wanjogu R. 2016.** Irrigation levels affects biomass yields and morphometric characteristics of range grasses in arid rangelands of Kenya. *Springerplus*. 5(1):1-15.
- [27] **Koech, O. K., Kinuthia, R. N., Karuku, G. N., Mureithi, S. M., & Wanjogu, R. (2016).** Field curing methods and storage duration affect the quality of hay from six rangeland grass species in Kenya. *Ecological Processes*, 5(1), 1-6
- [28] **Kuria S G, Adongo A O A, Murithi S, Koech O K, Njoka J T and Kamande P (2016).** Acquisition and management of Somali camel breed for pastoral resilience within peri-urban Isiolo and Marsabit counties of Northern Kenya. *Livestock Research for Rural Development*. Volume 28, Article #172. Retrieved from <http://www.lrrd.org/lrrd28/9/kuri28172.htm>
- [29] **Walter Angwere Onekon and Koech Oscar Kipchirchir (2016)** Assessment of Consumer Awareness on Environmental Effects of Charcoal Production and Use in Nairobi City, Kenya. *International Journal of Science and Research (IJSR) ISSN (Online):* 5(1)2319-7064.
- [30] **Koech, O. K., Kinuthia, R. N., Karuku, G. N., Mureithi, S. M., & Wanjogu, R. (2015).** Water use efficiency of six rangeland grasses under varied soil moisture content levels in the arid Tana River County, Kenya. *African Journal of Environmental Science and Technology*, 9(7), 632-640.
- [31] **Kipchirchir, K. O., Ngugi, K. R., Mwangi, M. S., Njomo, K. G., & Raphael, W. (2015).** Water Stress Tolerance of Six Rangeland Grasses in the Kenyan Semi-arid Rangelands. *American Journal of Agriculture and Forestry*, 3(5), 222-229.

- [32] **Koech O. K., Kinuthia R. N., Mureithi S. M., Karuku G.N, Wanjogu R (2014).** Effect of Different Soil Water Content and Seed Storage on Quality of Six Range Grasses in the Semi-Arid Ecosystems of Kenya. *Environment and Ecology Research* 2(2): 261-271, 2014 <http://www.hrpub.org> DOI: 10.13189/ eer.2014.020701
- [33] **Koech, O. K., Kinuthia, R. N., Mureithi, S. M., Karuku, G. N., & Wanjogu, R. K. (2014).** Effect of Varied Soil Moisture Content on Seed Yield of Six Range Grasses in the Rangelands of Kenya. *Universal Journal of Agricultural Research* 2(5): 174-179, 2014
- [34] **Kipchirchir, K. O. (2013).** Food Security: In the Pastoral Communities in Arid and Semi-arid Lands of Africa.
- [35] **Koech O. Kipchirchir, Kinuthia R. Ngugi and R.G. Wahome, 2011.** Use of Dry Land Tree Species (*Prosopis juliflora*) Seed Pods as Supplement Feed for Goats in the Arid and Semi-Arid Lands of Kenya. *Environmental Research Journal*, 5: 66-73
- [36] **Koech O.K., R.N. Kinuthia, R.G. Wahome and S.K. Choge, 2010.** Effects of *Prosopis juliflora* Seedpod Meal Supplement on Weight Gain of Weaner Galla Goats in Kenya. *Research Journal of Animal Sciences*, 4: 58-62

L. CHAPTERS IN BOOKS

- [1] Austin Otieno and Oscar Koech (2017): Effectiveness of Different Flow Arrangements under Subsurface Flow Constructed Wetland Systems in Effluent Polishing (pp. 56-85). In *constructed wetlands for wastewater management*. In LAP Lambert Academic publishing, by Austine Otieno, George Karuku and James Raunde.
- [2] Kipchirchir, K. O., Kinuthia, N. R., & Githaiga, W. R. (2014). Use of *Prosopis juliflora* Seedpod as Livestock Feed Supplement in the Arid and Semi-arid Rangelands of Kenya. In *Science, Policy and Politics of Modern Agricultural System* (pp. 197-209). Springer Netherlands, by Behnassi, M., Shahid, S. A., & Mintz-Habib, N

M. PAPERS PRESENTED IN CONFERENCES/WORKSHOP

- [1] The effect of mezquite pod flour in a wheat-based diet on broiler chicken growth performance. *Animal Science conference*. <https://doi.org/10.1016/j.anscip.2021.03.099>
- [2] Effect of species interaction on performance of indigenous range grasses under varying soil moisture contents. AGRO Conference presentation on 24th Oct 2019, University Of Nairobi, CAVS. Theme: "Catalyzing Sustainable Food and Nutrition Security through Research, Technology and Innovation".
- [3] Urban farming practices and effects on environment; Case of Nairobi. Third International Conference on Drylands, Centre for Dryland Agriculture, Bayero University, Nigeria on 24-28th September 2018. Conference theme: Resource constraints, conflicts, and changing climate in drylands: Options for attaining SDGs
- [4] Reflections: Imperatives for Successful CSA Scaling in Africa Scaling Climate Smart Agriculture: Lessons from ESPA Synthesis". Sino-Africa Joint Research Centre (SAJOREC) Botanical Gardens, Jomo Kenyatta University for Agriculture and Technology. Dates: 16th January 2018

- [5] Intensification of pastures in the tropics should consider Enteric Methane Emission to the environment to save the climate: An in vitro CH₄ analysis from common intensified range pastures in Kenya. 2016 Fifth African Higher Education Week and RUFORUM: Biennial Conference. RUFORUM Working Document Series (ISSN 1607-9345) No. 14 (3): 341-344. Available from <http://repository.ruforum.org>
- [6] Community perception of importance, trends, and variations of indigenous grasses in Southern Kenya. 2016 Fifth African Higher Education Week and RUFORUM: Biennial Conference. RUFORUM Working Document Series (ISSN 1607-9345) No. 14 (2): 807 - 817. Available from <http://repository.ruforum.org>
- [7] Effect of stage of maturity, curing and storage methods on the quality of hay from six indigenous grass species of Kenyan rangelands. 2nd International Conference on Drylands (12th – 16th December 2016): Agricultural Diversification - Panacea To Food Insecurity In Drylands, Bayero University, Kano, Centre For Dryland Agriculture
- [1] Challenges Facing Pasture Production and Use in the Northern Rangelands of Kenya: A Case Study of Marsabit County. 2nd International Conference on Drylands (12th – 16th December 2016): Agricultural Diversification - Panacea To Food Insecurity In Drylands, Bayero University, Kano, Centre For Dryland Agriculture
- [2] Ndung'u, P. L. N., Wasonga, O. V., Mnene, W. N., Koech, O. K., & Elhadi, Y. A. M. (2016). Community perception of importance, trends, and variations of indigenous grasses in Southern Kenya. In Fifth African Higher Education Week and RUFORUM Biennial Conference 2016, "Linking agricultural universities with civil society, the private sector, governments and other stakeholders in support of agricultural development in Africa", Cape Town, South Africa, 17-21 October 2016 (pp. 807-817). RUFORUM.
- [3] Methane measurement workshop, Aberystwyth University, Institute of Biological, Environmental & Rural Sciences (IBERS), UK from 10 - 11 May 2016
- [4] Strategic fodder production in the drylands: Evaluation of indigenous rangeland grasses production under irrigation. NIB workshop presentation on research findings and proposals: Naivasha, Morendat training and conference centre: 9th -10th July 2015
- [5] Effects of supplementing mesquit (*Prosopis juliflora*) seedpod meal on the performance of weaner Galla goats in the drylands of Kenya. RUFORUM regional capacity building conference: 20 – 24 September, 2010. Entebbe, Uganda
- [6] The importance of trees and shrubs as livestock feed in the arid and semi-arid rangelands of Kenya: Case of *Prosopis juliflora* in Baringo district. RUFORUM regional capacity building conference: 20 – 24 September, 2010. Entebbe, Uganda

N. POSTERS PRESENTED IN WORKSHOPS

- [1] **Koech Oscar:** Policy Brief Poster: Somaliland Gold under Threat of Extinction! Frankincense Trees! Nairobi AGRO 2019 Conference & Exhibition. Dates: 22nd to 24th October 2019. Venue: College of Agriculture and Veterinary Sciences
- [2] **Koech OK, Mureithi SM, Jesse NT, Kamande P:** Pasture Week across 5 ASAL Counties: Accelerating Value Chains Development (AVCD) for smallholder Farmers and Pastoralists with Technologies and Innovations in Kenya: Livestock Value Chain (LVC) Component

(Wajir, Turkana, Isiolo, Garissa and Marsabit). Kenya Pastoralists Week 2018, 10 -13th April 2018

[3] **Koech OK, Kinuthia RN¹, Mureithi SM¹, Wanjogu R², Karuku GN:** Irrigated pasture production for enhanced resilience of pastoral livelihoods in Kenya. Kenya Pastoralists Week 2018, 10 -13th April 2018

[4] **Koech OK, Mureithi SM, Jesse NT, Kamande P:** Pastoral Community Training to Increase Pasture Production, Value addition and Trade: Supported by Accelerated Value Chain Development (AVCD project) in 5 Counties (Wajir, Turkana, Isiolo, Garissa and Marsabit) Kenya Pastoralists Week 2018, 10 -13th April 2018

O. TEACHING DUTIES AT UNIVERSITY OF NAIROBI

a) Under graduate

Teaching course in Range Livestock Nutrition, Pastoral Production Systems, Principles of Range Management, Research Methods and Communication

Course units: (Each 45 hours)

ALR 3303/AFN311 Food Security and Nutrition

ARM 301 Principles of Rangeland Management

ALR3304/ARM 304 Range Livestock Nutrition

ARM 410 Range Research Methods

ARM 409 Range Livestock Production Systems

b) Post Graduate

Teaching course in Range livestock Nutrition, Management of Rangelands for Grazing, Range Research Methods, Integrated livestock production systems

Course units:

ALR6106/ARM 507 Range Animal Nutrition

ARM 501 Management of Rangelands for Grazing

ALR 8118/ADR 717 Animal Feed Resources in Drylands

ARM500 Range Graduate Seminar

P. POST-GRADUATE STUDENTS SUPERVISION

No.	Name of student	PhD/MSc	Title
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ONGOING POST GRADUATE SUPERVISION

1.	Bosco Kidake	PhD Ongoing	<i>Effects of Simulated Grazing and Watering Regimes of Grass Ecotypes on Productivity and Soil Properties in Southeastern Kenya</i>
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- | | | | |
|----|---|-----------------|---|
| 2. | Armara,
Macimiliam
Galwab | PhD
Ongoing | <i>Impacts of climate variability on household livelihoods resilience and gender roles in Marsabit County, Kenya</i> |
| 3. | Sani Abdullahi
Kende | PhD-
Ongoing | <i>Evaluation of Multitiered Livestoponics and Anaerobic Digestion in the production of Azolla pinnata, Lemna paucicostata, Echinochloa scabra and Mutton in Wetland-Kebbi, Dryland-Nigeria</i> |
| 4. | Mustafe Ibrahim
Sh. Mohamed
Jirde | MSC-
Ongoing | <i>Agropastoralists Practices and Attitude Towards Rainwater Harvesting Technologies And Utilization In Odwayene District, Somaliland</i> |
| 5. | Ibrahim
Mohamed Abdi | MSC-
Ongoing | <i>Evaluation of the Impacts of Fuelwood and Charcoal Production on Socio-Economic, Land Use and Land Cover Changes in Dolow, Somalia</i> |
| 6. | Jackline Jemutai
Kemboi | MSC-
Ongoing | <i>Evaluation of Prosopis Juliflora, Acacia Tortilis And Range Grass Feed Block Rations Quality and Storability In Turkana County</i> |
| 7. | Kiprop Abel | MSC-
Ongoing | <i>Assessing The Role Of Livestock In Spreading Prosopis Juliflora in Baringo County</i> |
| 8. | Yassin Yahye | MSC-
Ongoing | <i>Evaluation Of The Effect Of Bush Thinning On Communal Kallo Enclosures In Southern Ethiopia</i> |
| 9. | Luiza Njeri | MSC-
Ongoing | <i>Effects of Acacia Reficiens on Soil Physical And Chemical Properties And Understorey Vegetation In Laikipia And Samburu Regions, Kenya</i> |

COMPLETED AND GRADUATED

- | | | | |
|----|------------------------|---------------------------|--|
| 1. | Ahmed M.
Musa | PhD
2020 | <i>Analysis of The Effects of Institutional Changes on Livestock Trade in Berbera Corridor of Somaliland</i> |
| 2. | Walter Wafula | MSC-
Graduated
2022 | <i>Characterization Of Urban And Peri-Urban Pastoral System In Nairobi City County, Kenya</i> |
| 3. | Josphat
Mungoche | MSC-
Graduated
2022 | <i>Yield and soil Greenhouse gas Emissions from Brachiaria brizantha xaraes under organic and inorganically amended Humic Nitisol soils of Central Kenya</i> |
| 4. | Kakusu Edwin
Maingi | MSC-
Graduated
2022 | <i>Morphological And Anatomical Effects Of Drought On Roots And Buds Of Range Grasses, Kajiado County, Kenya</i> |
| 5. | Kennedy
Nganga | MSC-
Graduated
2022 | <i>Micropropagation and Molecular Diversity Of Fankincense Tree Ecotypes from Somaliland</i> |

- | | | | |
|-----|-----------------------|---------------------------|---|
| 6. | Ngithi Margeret Nyaga | MSC-
Graduated
2020 | <i>Assessment Of Woody Species Diversity In Rusinga Island, Homa Bay County, Kenya</i> |
| 7. | Bakari Ahmed Maugunja | MSC-
Graduated
2016 | <i>Assessment of Plant Diversity and Utilization of Wild Medicinal Species by Households Proximate to Arabuko Sokoke Forest in Kilifi County of Kenya</i> |
| 8. | Stanly Jawuor | MSC-
Graduated
2017 | <i>Evaluation of the effects of artificial water sources and their management on plant species composition, diversity and soil organic carbon in Kajiado county</i> |
| 9. | Austine Owuor Otieno | MSC-
Graduated
2017 | <i>Evaluating effectiveness of constructed wetland treatment system for polishing effluent from Gusii water treatment plant in Kisii, Kenya</i> |
| 10. | Hanna Kamau | MSC-
Graduated
2018 | <i>Evaluating Suitability of Indigenous Grass Species for Rehabilitation of Degraded Semi-Arid Rangeland in Suswa, Kenya</i> |
| 11. | Joseph Ombega | MSC-
Graduated
2017 | <i>Effect Of Land Rehabilitation On Soil Physico-Chemical Properties And Diversity Of Herbaceous Layer In Suswa Catchment, Narok County</i> |
| 12. | Dorcus Kagwiria | MSC-
Graduate
2018 | <i>Effect Of Organic And Inorganic Fertilizer Regimes And Levels On Grain Sorghum (Sorghum Bicolor L. Moench) Growth, Yield And Feed Quality</i> |
| 13. | Milcah Ndegwa | MSC-
Graduate
2017 | <i>Assessment Of The Effects Of Urban Farming Practices On Environment With A Specific Focus On The Air, Soil And Water Pollution: Case Study Of Kawangware Settlements, Nairobi County</i> |
| 14. | Walter Onekon Angwere | MSC-
Graduate
2016 | <i>Charcoal Production And Use In Nairobi: Drawbacks To Rooting A Green Economy In Kenya</i> |
| 15. | Hillary Rotich | MSC-
Graduated
2017 | <i>Influence Of Different Grazing Management Practices On Soil Organic Carbon And Greenhouse Gas Emissions In Semi-Arid Grasslands Of Makueni County</i> |

Q. THESIS EXAMINED

- | | | | |
|----|-------------------------|-----|---|
| 1. | Mayaka Kwamboka | MSc | <i>Effects of Climate Variability on Food Security in Oloolua Area of Kajiado County, Kenya.</i> |
| 2. | Mustafe Abdirisak Artan | MSc | <i>Characterization Of Camel Production Under Pastoral Management In Benadir Region, Somalia</i> |
| 3. | Dut Malual Dut's | MSc | <i>Adoption Of Improved Forage Technologies And Its Impact On Household Income Among Dairy Farmers In Bomet County, Kenya</i> |

4. John Ndungu Wairore	MSc	<i>Influence of enclosure management systems on rangeland rehabilitation in Chepararia, west Pokot County, Kenya</i>
5. Miss Lalampaa Kushi Priscilla	MSc	<i>Influence of Holistic Grazing Management on Herbaceous Species Diversity, Range Use Patterns and Livestock Production In Laikipia County, Kenya</i>
6. Ms. Gitau Angela Nduta	MSc	<i>MSc thesis titled: "Influence of organic management practices on vegetation attributes, soil organic carbon and greenhouse gases in semi-arid rangelands of Laikipia County, Kenya"</i>
7. Ms. Mayaka Kwamboka	MSc- Kenyatta University	<i>MSc thesis titled: "Effects of Climate Variability on Food Security in Oloolua Area of Kajiado County, Kenya".</i>
8. Muia Waceke Mary	PhD 2022	<i>Analysis of Integration of Climate Smart Initiatives by Micro, Small and Medium Enterprises in Beef Value Chain in Kajiado County</i>

R. CONFERENCES/WORKSHOPS ATTENDED

- ✓ Experiential Field Learning Opportunity among African experts on Integrated Soil-Crop - Livestock-Tree Production system for sustainability in Africa. 2nd December 2022
- ✓ Regional Training Course on Advanced Climate Smart Agricultural Practices and Integrated Cropping Livestock System for Enhanced Crop and Livestock Production, Nairobi, Kenya. 5th to 9th December 2022
- ✓ Regional (AFRA) Training Course on Integrated Cropping Livestock Production System with a Focus on Soil Fertility, Nairobi, Kenya. 28th November-2nd December 2022
- ✓ Participatory rangeland management plan development for transboundary community resource sharing. 28th Feb - 4th March 2022. County technical officers
- ✓ Shared conferences between Argentina and Kenya: Strategies to overcome periods of forage restriction in the arid and semiarid zones FOAR project "Improving livestock production in Kenya" December 16, 2021 Virtual, 1 hour 40 minutes; 09 AM Argentina; 03 PM Kenya
- ✓ NUTEC Plastics: Nuclear Technology for Controlling Plastic Pollution Roundtable for African Region, on Thursday, 2 September 2021
- ✓ Workshop of service providers by Agricultural Sector Development Support Programme II (ASDSP II) on Capacity Building and Innovation Grants Mechanisms, a five year Programme (2017-2022) financed by the Government of Kenya, the Government of Sweden and the European Union (EU) on 4th-5th March 2020 at Kaputiei Safariland Hotel, Kitengela
- ✓ Inaugural conference on Climate Smart Agriculture (CSA) Campus Forum at the College of Agriculture and Veterinary Sciences, University of Nairobi, 844 Building .Thursday, 20th February 2020 from 2:00 PM to 4:30 PM.
- ✓ Workshop to finalize on the Rangelands and Pastoralism Strategy for Kenya for the year 2018 – 2028 from 10th to 13th March 2020, at Bomen hotel, Isiolo
- ✓ Stakeholders workshop on "Studying the use of Mezquite to improve welfare of communities in arid and semi-arid zones of the world at Kenya Forestry Research Institute (KEFRI) Conference Centre, Baringo County, Marigat Town on 20th -22nd January 2020

- ✓ Workshop on studying the use of Mezquite to improve welfare of communities in arid and semi-arid zones of the world” Kindoroko Mountain Lodge, Mwanga District. Kilimanjaro, Tanzania: Date: 11th – 14th January 2020
- ✓ Research feedback workshop by students Philemon Ngasike, Ahmed Musa and Bulle Dabasso from the department of Land Resource Management and Agricultural Technology (LARMAT) in Garissa County, on 11th June 2019 at Palm Oasis Hotel, Garissa
- ✓ Workshop on the stakeholder engagement and development of Rangelands and Pastoralism Strategy for Kenya for the year 2018 – 2028 at Bomen Hotel in Isiolo from 26-27 February 2019.
- ✓ Workshop on Ranching Curriculum and National Operation Standards for Ranch Practitioners for National Industrial Training Authority (NITA) on 20th -27th Jan 2019 Held at NITA Mombasa
- ✓ The National Stakeholders Consultative Forum on the Draft National Rangelands and Pastoralism Strategy for Kenya; 26th -27th Feb 2019 Held at Bomen Hotel, Isiolo
- ✓ Workshop on Regreening Kenya with Trees: Mapping a Collaborative Approach at the World Agroforestry Centre’s (ICRAF), Nairobi. Date: October 11, 2018
- ✓ Third International Conference on Drylands on 24-28th September 2018, Centre for Dryland Agriculture, Bayero University, Nigeria. Theme: Resource constraints, conflicts, and changing climate in drylands: Options for attaining SDGs
- ✓ Meeting on Partners learning event on advancing localization and capacity development at SKA, Mogadishu in Somalia on July 11th 2018
- ✓ ESPA’s Professional Development Course (PDC) on Ecosystem Services for Poverty Alleviation held at Kenyatta University, Nairobi, from 5th to 7th of March 2018.
- ✓ Sino-Africa Joint Research Centre (SAJOREC) Botanical Gardens, Jomo Kenyatta University for Agriculture and Technology. Date: 16th January 2018
- ✓ Pasture Value Chain Stakeholders Workshop in Kajiado County. Pasture stakeholder’s workshop. Monday 16th April 2018 at Enchula Resort in Kajiado.
- ✓ “Scaling Climate Smart Agriculture: Lessons from ESPA Synthesis” Sino-Africa Joint Research Centre (SAJOREC) Botanical Gardens, Jomo Kenyatta University for Agriculture and Technology 16th January 2018
- ✓ Stakeholders workshop event organized at the Cooperative Retreat and Conference Centre (CRCC), Hall 1, Cooperative University of Kenya, Date: 18th January 2018
- ✓ Rangeland Communities Exchange Conference: Theme: Examining the Interface between Community Resource Management Practices and Governance Frameworks in the Kenyan Rangelands at Kenya Commercial Bank Leadership Centre - Karen, Nairobi 18th and 19th December, 2018
- ✓ Workshop on Participatory assessment of land degradation and sustainable land management in grassland and pastoral systems, held at Ole Sereni hotel on 24th and 25th January, 2018. Funded by Global Environment Facility (GEF)

S. POLICY DOCUMENTS

- ✓ Policy Brief: Koech OK. (2023). Extinction! Somaliland Critical Biodiversity Conservation: In-Situ Conservation of Geedka Deeble Botanic Garden. Government of Somaliland.

- ✓ Policy Brief: Koech OK. and Gitonga P (2022). Community Animal Health Workers! Forgotten Link to Livelihoods, Food and Nutritional Security in Somaliland (2022). Government of Somaliland.
- ✓ Policy Brief: Kuria, S. G., Adongo, A. O., Murithi, S., Koech, O. K., Njoka, J. T., & Kamande, P. (2022). A Policy Brief on Adopting the Somali Camel for Enhanced Profitability and Pastoral Resilience in Northern Kenya.
- ✓ Range Management Strategy. 2021 – 2031, Federal Government of Somalia, 2021-2031.
- ✓ Range Management and Pastoralism Strategy. 2021 – 2031, Government of the Republic of Kenya, 2021.
- ✓ Policy Brief: Somaliland Gold under Threat of Extinction! Frankincense Trees! Frankincense trees: Aug 2019
- ✓ Regional Rangeland Management Strategic Framework for Arid and Semi-Arid Lands in the IGAD Region. 2019, IGAD Centre for Pastoral Areas and Livestock Development (ICPALD)
- ✓ Wajir County Feed Policy (2017) Department Of Agriculture, Livestock And Fisheries, County Government of Wajir
- ✓ Policy Brief: Sustainable Rangeland Management in Wajir County: Critical Issues And Tough Choices. May 2014
- ✓ Policy Brief: Cultural Tourism And Community Game Scouts: A Pathway To Sustainable Wildlife Conservation And Improved Livelihoods. May 2015
- ✓ Is Irrigated Pasture Production the Future of Pastoralists in the ASALS of Kenya? Oct 2014

T. TECHNICAL REPORTS

- ✓ Technical consultancy report on the developed of grazing plans, Natural Resources Management, livestock market feasibility analysis, nature-based enterprises for projects in Tsavo Conservancies (Mbale, Wushumbu, Kutima, and Maungu) & Conservancy management plan development for Greater Amboseli Ecosystem (Eselenkei conservancy). The project is funded by USAID. Implemented by SRUDC technical team for UNES. **Date:** Nov 2023-May, 2024. **Client:** International Foundation for Animal Welfare (IFAW), Taita Taveta Wildlife Conservancies Association (TTWCA), and Amboseli Ecosystem Trust (AET).
- ✓ Technical Training Facilitation report on Sustainable Rangeland Management & Pasture Production. Date: 19th to 23rd February 2024. Client: Caritas Kitui, Catholic Diocese of Kitui
- ✓ Technical Training report on Field Monitoring Technical teams from Conservancies on Rangeland Inventory, Monitoring and Assessment Training for Conservancies within the Maasai Mara Ecosystem. Date: 17-21 April, 2023
- ✓ Technical training report on Sustainable Rangeland Management for Conservancies in Maasai Mara Rangeland Ecosystems in Kajiado County. February 2023 for Maasai Mara Wildlife Conservancies Association.

- ✓ Technical Assistance Reports on the establishment and management of Aroori Livestock Centre of excellence in Somaliland, supported by Somaliland Development Fund (SDF-2) implemented by Somaliland Ministry of Livestock and Fisheries Development.
- ✓ Technical Baseline report for Sustainable Rangeland Management, Pasture production and conservation and Transboundary Resource management in West Pokot and Turkana Counties for GIZ. January 2023.
- ✓ Technical report on Professional Review of the Irish Aid Fellows Programme for applicants from Sudan, Kenya, Eritrea, Somalia to study in Ireland Institutions. October-December 2022 for Irish Embassy, Kenya.
- ✓ Management plan for the Nasaru-Olosho conservancy in Kajiado County. September – November 2022. World Wildlife Foundation (WWF)
- ✓ Investment plan for the Nasaru-Olosho conservancy in Kajiado County. September – November 2022. World Wildlife Foundation (WWF)
- ✓ Technical support for Annual Resilience Measurement for Somali Resilience Programme (SomReP) Dec 2020-Jan 2021 for World Vision
- ✓ Technical support to USAID, 2020. End-term Performance Evaluation of the Kenya Resilient Arid Lands Partnership for Integrated Development (Kenya RAPID) Activity. Washington, DC., USAID Water, Sanitation, and Hygiene Partnerships and Learning for Sustainability (WASHPaLS) Project for USAID
- ✓ Technical support on the Development of Sustainable community Rangeland Management Plans for Mandera County and Dolow Somalia and Dolow Ethiopia Ecosystem. March 2020 for Care International
- ✓ Technical report on Professional Review of the Irish Aid Fellows Programme for applicants to study in Ireland Institutions. March 2020 for Irish Embassy
- ✓ Technical report - End of Project Evaluation in Odweyne Area Rehabilitation Program – Phase 2 supporting Dryland Agriculture, rangeland management and Wash activities in Somaliland. November 2019 for Worlds Vision
- ✓ Technical report on Assessment of Natural Resource Management to support Agriculture and Agroforestry in Shire Region of Ethiopia, December 2019 for Norwegian Refugee Council
- ✓ Training report on Participatory approaches in project planning and management held at Cradle hotel, in Lodwar, Turkana county from 2nd to 6th October 2018 for GIZ

- ✓ Technical report - End of Project Evaluation for the Providing Analytical Services for Informed Farming in Kenya (PASIFIK) Project: The Project targeted twelve thousand (12,000) dairy-producing households in six (6) counties namely Uasin Gishu, Bomet, Nandi, Nyeri and Nyandarua. Date: December 2017-Jan 30th 2018
- ✓ Technical report on End of Project Evaluation for the Providing Analytical Services for Informed Dairy Farming in Kenya (PASIFIK) Project. Dec 2017-Feb 2018 for Heifer International
- ✓ Baseline Survey report: Devolved Climate Change Community Prioritized Investments in Kitui, Makueni, Garissa and Wajir Counties. April – June 2016 for International Institute for Environment and Development (IIED)-UK
- ✓ Technical report on Baseline survey study on food for all project Kenya in Meru, Embu, Machakos, Makueni and Tharaka Nithi Counties. September – October 2015 for Solidaridad Eastern & Central Africa Expertise Centre
- ✓ Technical report on Scoping study to evaluate the food safety standards of fresh fruits and vegetables (FFV) in selected domestic markets in Kenya. April – May 2015 for SNV Netherlands Development Organization, hortIMPACT project
- ✓ Technical Study report: Study to Strengthen Rangeland Management in Wajir County: Study on Dfid Funded Strengthening Community Resilience Project in Wajir. May 2014
- ✓ Technical Consultancy Report for assessing the potential of fish development among small-scale fishermen of Ewaso Ngiro South. December 2014 – January 2015 for African conservation Centre
- ✓ Livelihoods survey study Report for African Conservation Centre in Maasai mara and Amboseli. June 2014 for African conservation Centre
- ✓ Technical Study Report to strengthen rangeland management consultancy: study on DFID funded strengthening community resilience project in Wajir. May 2014 for Oxfam Kenya
- ✓ Technical End of project evaluation Report for the program to support the emergency in water and livelihood in Somalia. July 2013 for Adventist Development and Relief Agency (ADRA), Somalia.
- ✓ Technical Baseline study report on Snap production and marketing in Kenya, Uganda and Tanzania, under “Validation of snap bean integrated crop management technologies for improved livelihoods. May 2013 for the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA).

- ✓ Value chain assessments of Livestock, Fodder, Milk Production and Marketing in Arid and Semi-Arid Lands of Kenya under “Promotion and Strengthening Enterprises and Market Systems and Drought-Prone ASAL Areas. April 2013 for Netherland Development Organization (SNV).
- ✓ Technical report on Certified Holistic/Rangeland Management for Somaliland/Puntland Food Security & Livelihood Project. 2012 for World Vision Somalia

U. TRAINING MANUALS DEVELOPED

- ✓ Pasture production and conservation training manual for Somaliland (English and Somali Versions). Ministry of Livestock and Fisheries development, Government of Somalia 2022.
- ✓ Guideline for Participatory Rangeland Management Guideline for Transboundary Community Resource Sharing and Development. State Department of Livestock, Government of Kenya, 2022
- ✓ Oscar, K. and Kibet, S. (2021). Pasture production and conservation training manual. <https://idl-bnc-idrc.dspacedirect.org/bitstream/handle/10625/60747/1520ad77-4930-40df-9525-cfaad53aa1d9.pdf?sequence=1>
- ✓ 2020: Dr. Koech Oscar.: Management of Invasive And Alien Species
- ✓ 2019: Dr. Koech Oscar.: Range Livestock Production Systems In Drylands
- ✓ 2018: Dr. Koech Oscar Participatory approaches in Rangeland Resource Management and Utilization, Participatory land use planning and sustainable Income activities in the rangelands.
- ✓ 2018: Dr. Koech Oscar, Dr. Stephen Mureithi and Pauline Atapo Lochipo: Fodder production and conservation manual. Manual for the Field Extension Workers in ASAL Counties, Kenya
- ✓ 2017: Dr. Koech Oscar and Dr. Stephen Mureithi: Fodder Production and Conservation Training Manual. Enhancing Resilience of Livestock-Based Livelihoods in the Drylands. African Drylands Institute for Sustainability (ADIS)
- ✓ 2017: Dr. Koech Oscar: Frankincense Management and Utilization Training Manual in Somaliland
- ✓ 2017: Dr. Koech Oscar and Prof. Geoffrey Kironchi: Training manual on Sustainable Rangeland Natural Resource Management in Somaliland

- ✓ 2017: Dr. Koech Oscar: Training Manual on *Prosopis Juliflora* Management and Utilization as feed, energy and other uses
- ✓ 2017: Dr. Koech Oscar, Dr. Yazan Ahmed, Dr. Caroline Ngw'eno and Dr. Kevin Momanyi: Training Modules on Sustainable Wildlife and Natural Resource Management and Improved Livestock Production System for Mara Training Centre, Enonkishu conservancy, Maasai mara
- ✓ 2012: Prof. Moses Nyangito, Dr. Oscar Koech and Dr. Yazan Ahmed: Training manual of Holistic Rangeland Management in Somaliland and Puntland. For World Vision Food Security & Livelihood Projects in Somalia

V. TECHNICAL AND COMMUNITY TRAININGS CONDUCTED

- ✓ Technical training of Field Monitoring Technical teams from Conservancies on Rangeland Inventory, Monitoring and Assessment Training for Conservancies within the Maasai Mara Ecosystem. Date: 17-21 April, 2023
- ✓ Technical training on Sustainable Rangeland Management for Conservancies in Maasai Mara Rangeland Ecosystems in Kajiado County. February 2023 for Maasai Mara Wildlife Conservancies Association. 14th to 17th February 2023
- ✓ Series of Technical staff and community trainings in Somaliland during the establishment and Management of Livestock Centre of Excellence including Fodder Production, adaptive research, rangeland management, livestock breeding, livestock feeding, feed production and conservation in Somaliland. Dates between May 2022 – Dec 2023 for Ministry of Livestock and Fisheries Development/ Somaliland Development Fund (SDF).
- ✓ Regional (AFRA) Training Course on Integrated Cropping Livestock Production System with a Focus on Soil Fertility, Nairobi, Kenya. 28th November-2nd December 2022
- ✓ Regional Training Course on Advanced Climate Smart Agricultural Practices and Integrated Cropping Livestock System for Enhanced Crop and Livestock Production. Nairobi, Kenya. 5th to 9th December 2022
- ✓ Training Facilitation of Pastoral and Rangeland Management (Sustainable Livestock production, land rehabilitation, pasture production and conservation, emerging trends affecting feed resources). Workshop 23rd to 25th March 2022. Participatory Ecological Land Use Management Association (PELUM) Kenya
- ✓ Training of Committee Members on the Management of Range Resource under the Project "Building Drought Resilience in Samburu through Sustainable Rangelands Management (DR-SRM)-Biovision Project. 14th -19Th March 2022. Vétérinaires Sans Frontières Suisse (VSF-Suisse)

- ✓ Training on utilization of *Prosopis juliflora* for sustainable feed and energy in Samburu County, Kenya. Building Drought Resilience in Samburu through Sustainable Rangelands Management (VSF-Swiss DR-SRM) - (Biovision Project No.:BV_DPA_008/March 2020-February 2022). Lerata, Samburu County, February 14th – 20th, 2022
- ✓ Technical Fellowship training for Burundi Staff from Ministry of Agriculture experiential training on Feed production, conservation and Feed quality analysis at the Faculty of Agriculture, Department of LARMAT and Animal Production. Jan 3rd 2022 to Feb 3rd 2022
- ✓ Community Outreach and Extension on Rangeland Restoration and Sustainable Rangeland Management and Utilization, Masinga, Machakos County. 8th January 2022
- ✓ Training of Trainers on Economic Utilization of Invasive Species (*Prosopis juliflora*) as animal feed and feed value addition. Building Drought Resilience in Samburu through Sustainable Rangelands Management (VSF-Swiss DR-SRM) - (Biovision Project No.:BV_DPA_008/March 2020-February 2022). Maralal, Samburu County, December 14 – 17, 2021
- ✓ Technical Trainer in Workshop on Rangeland Restoration and Resource Sharing Manual Development, Gillian Hotel, Machakos. State Department for Livestock. 19th - 24th December 2021
- ✓ Trainer in National Sensitization workshop on Mainstreaming Climate Smart Agriculture Frameworks and Technologies in the Practices of Range Management and Pastoralism in ASAL areas of Kenya, Venue: Waterbuck Hotel, Nakuru. Date: 6th – 10th Dec, 2021
- ✓ Technical support on Development of National feed inventory and feed balance spearheaded by National Feed Secretariat at the State Department for Livestock. Bontana Hotel, Nakuru. 30th Aug -3rd Sept 2021
- ✓ Supported National Training Course On Livestock Forage Production And Conservation Techniques for National Agricultural Research Institute (NARI), Ministry of Agriculture, Asmara, Eritrea 18-29 October 2021
- ✓ Training On Development Of Community Cross-Border Natural Resource Use, Sharing And Management Agreement In Mandera County. BORESHA project. Venue: Red Sea Hotel, Mandera 24th -25th August 2021
- ✓ Technical staff training on Holistic Rangeland Management training in Five ASAL counties (Garissa, Wajir, Isiolo, Marsabit and Turkana) Facilitated by the African Drylands Institute for Sustainability (University of Nairobi) with support from the USAID Kenya RAPID Program through the County Capacity Building Fund Dates: Monday 29th June to Friday 3rd July 2020

- ✓ Community training on the Use of *Prosopis Juliflora* (Mezquite) to Improve Welfare of Communities in the Arid Baringo County; Venue: Baringo County, KEFRI station. Date: 18th – 24th January 2020
- ✓ Counties Extension/fields staff training from Garissa, Wajir, Isiolo, Marsabit and Turkana on Integrated Rangelands Management and Livestock Production supported by KRAPID and Millenium Water Alliance, on 19th to Friday 23th August 2019 at University of Nairobi
- ✓ Community Training on Prosopis Management and Utilization as Feed and Energy in Somaliland from 3rd to 4th April 2019; Venue: Oodwayne, Somaliland
- ✓ Extension and Field Staff Training on Agronomy and Agroforestry at ISTVS in Somaliland from 30th March to 1st April 2019. Venue: IGAD Sheikh Technical Veterinary School (ISTVS)
- ✓ Community Farmers Field Training on Agronomy and Agroforestry at ISTVS in Somaliland 26th to 27th March 2019 Venue: IGAD Sheikh Technical Veterinary School (ISTVS)
- ✓ Community training on utilization of *Prosopis juliflora* as animal feed and charcoal briquettes in Mandera County, Kenya. DATE: 29th April – 5th May 2019
- ✓ Community trainings on sustainable Management and Utilization of *Prosopis Juliflora* as feed and Charcoal briquettes in Dolow, Gedo Region of Somalia, 5th to 13th March 2019
- ✓ Community Training of Olare Orok Motorogi conservancy members on Sustainable Rangeland Management for better livestock production and marketing in 18-25th June 2019
- ✓ Turkana County staff Capacity Development in participatory approaches in Rangeland Resource Management and Utilization. Venue: Lodwar, Cradle Hotel supported by GIZ-technical cooperation facility, Kenya (GIZ-IGAD). October 2-8th 2018.
- ✓ Community Training on Vegetative propagation of the Frankincense trees at Biyo-dhacay and Daw-daw villages, Elafwein District in Somaliland on 13th-16 September 2018
- ✓ Community training on management and utilization of *Prosopis juliflora* as feed and energy through value addition in Beereto Village, Oodwayne region of Somaliland: 14th June to 18th September 2018
- ✓ Introduction of tissue culture orange flesh sweet potato to Somaliland for increased food security and adapt agropastoralists to climate change by University of Nairobi, September 2018

- ✓ Community training on land preparation for pasture production and reseedling technologies to Namon Rangeland Development Group in Turkana County in June 14th 2018
- ✓ Community training on pasture conservation and utilization in Lokongae Ward, Lokangae Community Environment and Livelihood Group in Turkana County in June 13th 2018
- ✓ Community trainings on sustainable agronomic practices, agroforestry, apiculture and land and water management 2018 in Oodwayne region of Somaliland: 28th June to 6th July 2018
- ✓ Technical Training on Vegetative propagation of the Frankincense trees at IGAD Sheikh Technical Veterinary School (ISTVS) in Somaliland on 26-28 June 2018
- ✓ Continuous trainings: Producers and Practitioners Short course trainings. I am the main trainer at Mara Training Centre on Sustainable Rangeland Management and Livestock husbandry.
- ✓ Community training on land management and sustainable livestock production as a business during the launch of the Turkana County pastures and fodder week. Supported by Feed the Future: Accelerating Value Chains Development (AVCD) for smallholder Farmers and Pastoralists with Technologies and Innovations in Kenya. 22nd March 2018:
- ✓ Community training of land management and sustainable livestock production as a business during the launch of the Garissa County pastures and fodder week. Supported by Feed the Future: Accelerating Value Chains Development (AVCD) for smallholder Farmers and Pastoralists with Technologies and Innovations in Kenya. 18 May 2017
- ✓ Wajir Pasture Week Training to Increase Production, Value addition, Access and Trade in pastures: Supported by USAID Accelerated Pasture Value Chain Development (AVCD project) in Wajir County. 25th May 2017
- ✓ Training on Pasture Harvesting and Storage and Monitoring of planted farms in Marsabit County, Saku Sub County. Supported by Feed the Future Accelerating Value Chains Development (AVCD) for smallholder Farmers and Pastoralists with Technologies and Innovations in Kenya. 29th May 2017
- ✓ Training on agricultural biodiversity and management for Horticultural Crops Development Authority staff supported by DLV Plant- Netherlands and Kenya Flower Council. December 2015:
- ✓ Training on Climate Change, Carbon footprint and water foot print for Horticultural Crops Development Authority staff supported by DLV Plant- Netherlands and Kenya Flower Council. December 2015:

W. MEMBERSHIP OF EDITORIAL COMMITTEES OF JOURNALS

- [1] Reviewer; Pastoralism Journal; Springer
- [2] Reviewer; Ecological Processes; Springer
- [3] Horizon Research Publishing (HRPUB)
- [4] American Journal Of Experimental Agriculture
- [5] Journal Of Agriculture And Ecology Research
- [6] British Journal of Applied Science and Technology
- [7] Asian Journal of Agricultural Extension, Economics and Sociology

X. PUBLIC LECTURES ATTENDED

- ✓ Improving Water Security for the Poor: Scholars from University of Oxford, University of Dhaka, Water and Land Resource Centre - Ethiopia and the University of Nairobi. Date: Thursday 6th April 2017 at 2.30-5.00pm. Venue: Lecture Theatre 401, 4th Floor University of Nairobi Towers
- ✓ The Value of Space technology' by Prof. George Maeda of Kyushu Institute of Technology (KYUTECH), Japan at Manu Chandaria Auditorium, UoN towers, 6th floor on Tuesday, March 20, 2018 at 3:00 -5:00 pm.
- ✓ Assessment of Climate Change Impacts on Regional Security: a case study of Kajiado District, at Wangari Maathai Institute for Peace and Environmental Studies Public Seminar by Amane Kobayashi on Monday 23rd March, 2015 at 2:00pm, College of Agriculture and Veterinary Sciences (CAVS), Faculty of Veterinary Medicine, in the Small Pathology Lecture Theatre

Y. RESEARCH PARTNERSHIPS AND LINKAGES

- ✓ Technical Assistance for the Establishment and Management of Livestock Centre of Excellence including Fodder Production in Xaaxi, Somaliland. Date: May 2022 – Aug 2023 for Ministry of Livestock and Fisheries Development/ Somaliland Development Fund (SDF)
- ✓ GCRF Interdisciplinary Research Project partnership between the University of Nottingham and the University of Nairobi and other partners from Mexico and Tanzania, for the Global Challenges Research Fund (GCRF) 2019. Project entitled “Studying the Use of Mezquite to Improve Welfare of Communities in Arid and Semi-arid Zones of the World” (RIS CONTRACT REF 2418006 / RIS PROJECT REF 1775401).
- ✓ Irish Embassy and the University of Nairobi on partnership to strengthen collaboration in research training and internships in 2019/2020
- ✓ Acre Africa, African Coffee Roasters on Opportunities for Partnership with UoN to Support Agricultural Training and Curriculum Development to address the current farmers need Held on 29th Jan 2019 at LARMAT Board Room
- ✓ University of Nairobi and world vision Somalia research collaboration on frankincense propagation, management and utilization in Somaliland

- ✓ University of Nairobi and IGAD Sheikh Technical Veterinary School (ISTVS) on Research on tissue culture propagation of Frankincense and Prosopis Juliflora management and utilization
- ✓ University of Nairobi, RUFORUM and ICRISAT on Field Attachment Programme Award (FAPA) RU 2017 FAPA – CRP Dry land Cereals Post Doc research fellowship
- ✓ University of Nairobi and Institute of Biological and Environmental and Rural sciences (IBERS), Aberystwyth University, United Kindom, Post Doc Visiting Research fellow on methane gas measurements techniques from feed resources and livestock feeding in quest to abate GHGs from livestock production systems
- ✓ Kenya Agricultural Research Institute (KARI), Marsabit Research Centre. Collaboration through the IGADs Applied Research in Drylands Grant Facility (ARDGF)
- ✓ Pastoralist Community Initiative and Development Assistance (PACIDA). Collaboration through the IGADs Applied Research in Drylands Grant Facility (ARDGF)
- ✓ Ministry of Agriculture, Livestock and Fisheries Development, Marsabit County. Collaboration through the IGAD"s Applied Research in Drylands Grant Facility (ARDGF)
- ✓ Ministry of Agriculture, Livestock and Fisheries Development, Isiolo County. Collaboration through the IGADs Applied Research in Drylands Grant Facility (ARDGF)

Z. NEGOTIATED MEMORANDA OF UNDERSTANDING AND COLLABORATIVE AGREEMENTS

- ✓ January 2023: University of Nottingham and the University of Nairobi on Engaging policy makers to address bottlenecks that stop sustainable utilization of Prosopis pods by marginalized communities in Mexico and Kenya' Fund No. (RIS 15934659/ RIS H58126, funded by GCRF.
- ✓ 2019: University of Nottingham and the University of Nairobi on collaborative GCRF Research grant
- ✓ 2017: Memorandum of Understanding (MOU) between World Vision Somalia UoN and IGAD Sheikh Technical Veterinary School (ISTVS) in Somaliland.
- ✓ Collaboration Research and Outreach agreement between World Vision Somalia UoN and IGAD Sheikh Technical Veterinary School (ISTVS) in Somaliland
- ✓ 2016: Aberystwyth University, Institute of Biological, Environmental & Rural Sciences (IBERS), UK and the University of Nairobi, Kenya
- ✓ 2016: MoU between Ol Pejeta Conservancy and the University of Nairobi (UoN)
- ✓ 2017: Memorandum of Understanding (MOU) between Soil4Climate, Maasai Centre for regenerative project (MCRP) and the University of Nairobi

AA. PERSONAL ASSESSMENT AND ABILITIES

I have the Ability to work under minimum supervision, Honest, Team player, Hardworking and Self-discipline. I have good Leadership and Organizational skills, Analytical Thinking, Self-motivation, Team player, Diligent, Computer and Internet skills, and Professionally confident.

LIST OF REFERENCES

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