


Academic Staff Profile Template

1.1 Personal Profile

1.1.1 Personal Details

<p>Name: Rebecca Karanja Title/Qualification: Dr Department: Plant Sciences Designation/Position: Senior Lecturer Email:karanjarebecca@ku.ac.ke Contact Address: 43844-00100 Nairobi C/O Plant Sciences Department Area of Specialization: -Ecosystem Services -Plant Ecology Research Interests: -Pollination Biology -Climate Change Impacts on Flora -Environmental Impact Assessments Google Scholar: ORCID ID: https://orcid.org/0000-0001-9650-2969,</p>	
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1.1.2 Academic & Professional Qualifications

- Jomo Kenyatta University of Agriculture and Technology (PhD Plant Sciences- Ecosystem Functions -Pollination). Thesis Title: Pollination *Of Coffea arabica* L. And Associated Awareness Of Pollination Significance Among Farmers In Kiambu District, Kenya
- Kenyatta University: Msc. Plant Ecology: (Thesis title: Conservation of Rare Endemic Plant Species in Mount Kenya Forests)
- Kenyatta University: B.Ed (Science) Botany/Zoology/Education

1.1.3 Employment History

- Kenyatta University (2017-Present)
- Jomo Kenyatta University (2002-2016)
Catholic University of Eastern Africa (2005- Part time Lecturer)
- Tangaza College an Affiliate Campus of St Marys' University of Minnesota (2004-2006)- Part time Lecturer
- Teacher Service Commission-

1.1.4 Achievements

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1.2 Publications

1.2.1 Referred Journals

1. Nyamwamu, N.C, **Karanja, R.** & Mwangi, P.N (2019) Diversity of Weed Species in Farms Kisii Central Sub-County, Western Kenya. Journal of Horticulture and Plant Research.
2. Wambugu A.W, **Karanja R** and Wakibia J (2017) Impacts of Farm Management Practices on Levels of Nitrates And Phosphates in water Along the Kithinu And Mutonga Rivers Catchment Areas, Kenya. Quest Journals Journal of Research in Environmental and Earth Science Volume 3~ Issue 5 (2017) pp: 75-82 ISSN(Online)
3. Wangai N. Laura, Brenda Wamae Waithera, Muriira Geoffrey Karau, Ndura Boniface Koimburi, Philip Karanja Ndura, **Karanja Rebecca**, Michael Kimani Gitau and Peter Kirira (2015); Investigation of the in vitro antioxidant activity, in vivo antidiabetic efficacy and safety of *Capparis tomentosa* aqueous roots extracts in male alloxanized mice. Journal of Medicinal Plants Studies 2015; 3(1): 42-47.

4. Kariuki, C. W., Muia, A. W. Moturi, Ngigi A and Karanja R. (2015). Relationships between Soil Physico-chemical Properties and Bacteria Counts in Nzoia Sugar Company Farms of Western Kenya. *Egerton Journal of Science and Technology*. Volume 15: 123-131. ISSN No. 2073 – 8277.
5. Kimtai RK, Karanja B and Karanja R (2014); Adoption of Purple Tea Farming as A Coping Mechanism to Climate Change, Kericho County, Kenya . *International Journal of Science and Research (IJSR)* ISSN (Online): 2319-7064 Index Copernicus Value (2013): 6.14 | Impact Factor (2015): 6.391
6. **Karanja R** H.N., Gikungu M. W., Grace N. Njoroge & L.E. Newton (2014) Pollination Efficiency of bee species pollinating *Coffea arabica* in Kiambu County Kenya. **Current Research Journal of Biological Science**.
7. **Karanja R.** H.N., Mary W. Gikungu, Grace N. Njoroge, L.E. Newton and John M. Kihoro (2013). *The role of bee pollinators in improving berry weight and coffee cup quality*. *Asian Journal of Agricultural Sciences* Vol. 5(3): 52-55, 2013
8. Kuja J O., Robert R. Jackson, Godfrey O. Sune, **Karanja R.** N.H., Zipporah O. Lagat and Georgina E. Carvell (2012). *Nectar Meals Of A Mosquito-Specialist Spider*. *Psyche: A Journal of Entomology*. Volume 2012, Article ID 898721, 7 pages: doi:10.1155/2012/898721
9. **Karanja R** H.N., Mary W. Gikungu, Grace N. Njoroge, L.E. Newton and John M. Kihoro (2011). *Comparison of Bee Pollinators of Coffee in Organic and Conventional Farms*. *Asian Journal of Agricultural Sciences* 3(6): 469-474, 2011 ISSN:2041-3890
10. **Karanja R H.N.**, Njoroge, G.N, Gikungu, M.W & Newton, L.E. (2010) Bee interactions with wild flora around organic and conventional coffee farms in Kiambu district, central Kenya. *Journal of Pollination Ecology*, 1(2), 2010 pp 7-12.
11. **Karanja R.H.N.** (2009). *Conservation status of exploited endangered species, Mount Kenya*. VDM Publishing house.
12. Njoroge, G.N, Ngamau, K., Wanjala, C. & **Karanja R. H.N** (2008). Pollination studies in various cropping systems in Mwingi: Case study of Agrobiodiversity. Project report F.A.O 2008.

1.2.2 Books and Books Chapters

1. - **Karanja, R.** (2010). ISBN No.978-3-639-20863-4. *Conservation status of exploited endangered species, Mount Kenya*. Utilization and conservation status of rare endemic tree and liana species
2. **Karanja, R.**, Muriuki, J.M., Mwangi, M. & **Ngumburu, Rebecca** (Ed).(2007). *Excel in Biology. A complete KCSE revision guide with answers*. Focus Publication Limited.

1.2.3 Conference/Workshops/Seminar Papers

1.2.3.1 Conference Papers

1. - *Pollia condensata*: The Plant with the Shiniest Fruits in the World. Living Light 2018 conference in Cambridge, UK.
2. - Waiganjo, R., **Karanja, Rebecca.H.N** & Mburu J.K(2012). A comparative study of Coffee effluents on physico-chemical parameters of Komothai river-Kenya. Proceedings of JKUAT Scientific, Technological and Industrialisation Conference 2012.
3. Njoroge, G.N. & **Karanja, Rebecca.H.N.** (2007). Economic value of weeds: Their management for sustainable pollination services in agroecosystems. HAK (Horticultural Association of Kenya) Workshop held at University of Nairobi from 28th November to 1st December 2007.
4. Floral Biology and pollination of highland coffee *Coffea arabica* in Kiambu District. Published in Proceedings of JKUAT Scientific, Technological and Industrialisation Conference 2006.

5. *Conservation status and utilization of rare and highly exploited liana species in Mount Kenya area.* Published in Proceedings of JKUAT Scientific, Technological and Industrialization Conference 2005.

1.2.3.2 Workshops Papers

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1.2.3.3 Seminar Papers

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1.2.5 Student Co-authored Publications

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1.2.4 Other Publications

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1.3 Research

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1.4 Funded Projects

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Title of the Project	Economic Valuation of Selected Sustainable RangeLand Management Practises in Isiolo County, Kenya (2019 to 2020). GIZ
Title of the Project	An Innovative Approach on the Use of Managed Bees (Honeybees) as Biocontrol Agents Vectors for Increased Coffee Production in Kiambu County. Funded by Jomo Kenyatta University
Title of the Project	An investigation into the interdependence of species with rainforest understory plant <i>Pollia condensata</i> Alborada Cambridge /Africa Fund 2016. African Collaborator with Cambride University
Title of the Project	Assessment of residual herbicides in soils of Western Kenya sugar belt: their removal by native bacteria and their effects on non-target organisms. National Council of Science and Technology/ Egerton University/Jomo Kenyatta University/Multi-Media University

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1.5 Conferenced/Workshops/Seminars Attended

1.5.1 Conferences Attended

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1.5.1 Workshops Attended

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1.5.1 Seminars Attended

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1.6 Supervision of Postgraduate Students

1.6.1 Masters

Jane Muthoni Macharia	Honeybees (<i>Apis mellifera</i>) As Vectors of Bio-control Agent (<i>Trichoderma asperellum</i>) Against Grey Mold Disease, and their effect on strawberry Quality and Yield.(A Case Study of Jomo Kenyatta University of Agriculture and Technology (JKUAT) Experimental Farm in Juja).	Data analysis
Kevin Kiprotich	Pollination Of Watermelon In Greenhouse Using Stingless Bee Species In Nairobi County, Kenya	Proposal 2019
Edwin Luguba Kadiori University of Chinese Academy	Reproductive Strategies in Response to Climate Change in Alpine Plants: a Meta-Analysis	Graduated 2017
Brenda Waithera Wamae Jomo Kenyatta University of Agriculture and Technology	Investigation of the phytochemicals, antioxidant activity and anti-diabetic efficacy and safety of <i>Capparis tomentosa</i> roots	Graduated (2016)
Regina Wambui Waiganjo Jomo Kenyatta University of Agriculture and Technology	Impacts of enclosures on range productivity in Chepararia, West Pokot, Kenya.	Graduated (2015)
Anita Owino University of Chinese Academy	Variations of physiological and biochemical characteristics of exotic species <i>Alternanthera philoxeroides</i> in different ecotypes with atmospheric CO2 increment	Graduated 2017
Ronald Kimtai Kirichwa Jomo Kenyatta University of Agriculture and Technology	Determining The Socio-Economic And Technical Factors Hindering Adoption Of Purple Tea Farming By Farmers As An Adaptation Mechanism In Tea Sector To Climate Change In Kericho County	Graduated June 2019
Ann Wanjiru Wambugu Jomo Kenyatta University	Assessment Of Impacts Of Irrigating High Value Crops On Water Quality Along The Kithinu And Mutonga Rivers Catchment Areas	Graduated June 2019
Gladys Chebet Kenyatta University	Abundance, Survival, And Conservation Status Of <i>Prunus Africana</i> (Hook. F) Kalkm. In Western Mau Forest, Kenya	Defended June 2019
Sheilla Koech Kenyatta University	Species diversity and abundance of macadamia pollinators in different locations and farming methods in Kenya	Proposal write up
Lilian Nyanchama	Abundance And Diversity Of Bee Pollinators Along A Disturbance Gradient In Borabu Sub County Nyamira County	Thesis Write up 2019

Charles Nyarang'o Nyamwamu	Abundance and Diversity Of Weeds In Farms In Kisii Central Sub County, Western Kenya	Graduated 2019
Ronald Kimtai Kirichwa Jomo Kenyatta University of Agriculture and Technology	Determining The Socio-Economic And Technical Factors Hindering Adoption Of Purple Tea Farming By Farmers As An Adaptation Mechanism In Tea Sector To Climate Change In Kericho County	Graduated June 2019
Ann Wanjiru Wambugu Jomo Kenyatta University	Assessment Of Impacts Of Irrigating High Value Crops On Water Quality Along The Kithinu And Mutonga Rivers Catchment Areas	Graduated June 2019
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Sheilla Koech Kenyatta University	Species diversity and abundance of macadamia pollinators in different locations and farming methods in Kenya	Data collection
Lilian Nyanchama	Abundance And Diversity Of Bee Pollinators Along A Disturbance Gradient In Borabu Sub County Nyamira County	Thesis write up
Charles Nyarang'o Nyamwamu	Abundance and Diversity Of Weeds In Farms In Kisii Central Sub County, Western Kenya	Graduated 2019
Mercy Kariuki Jomo Kenyatta University of Agriculture and Technology	Antibacterial Properties Of Medicinal Plants Used Among The Maasai Community In Kenya	Data collection
Mercy Njoki Kimani Jomo Kenyatta University of Agriculture and Technology	Wild Famine Food Plants At Ngoliba, Kiambu County; Their Diversity, Morphological Guide And Market Presence	Data collection
Stephen Ngoima Jomo Kenyatta University of Agriculture and Technology	Determination Of Influence Of Trees Introduced To Smallholder Farmers In Middle And Lower Nyando Basin, Western Kenya	Data Collection
Rose Cherotich Cheruiyot Jomo Kenyatta University of Agriculture and	Evaluate the impact of <i>Brachiaria</i> cultivars on improving soil physical, chemical and biological characteristics of Acrisol in	Data collection

Technology	Trans Nzoia County	
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1.6.2 Ph. D

Student	Thesis/Proposal Title	Thesis Progress
Angelina Nduta Mwenda (PhD). Wageningen University	Spatial Information in Public Consultation within Environmental Impact Assessments	Graduated (2015)
Teresa Njeri (PhD): Jomo Kenyatta University of Agriculture and Technology	Quantification and economic valuation of selected ecosystem services in small scale farms in Maragua subcounty	Thesis write up
Justus Eregae Jomo Kenyatta University of Agriculture and Technology	Economics of Ecosystem Services (ES), Resource Utilization and Impact on stock and flow of benefits within Water Catchment Ecosystems in Kenya	Data Collection
Mary Stella Wekhanya Kenyatta University	Reproduction Biology And Associated Indigenous Knowledge Of Prosopis Juliflora In Baringo County, Kenya.	Proposal Development
Edwin Luguba Kadiori Jomo Kenyatta University	Breeding System, Floral and Pollination Biology of the Purple Passion Fruit (<i>Passiflora edulis Sims</i>) in Kenya	Data collection
Regina Waiganjo Kenyatta University	Impact Of Stingless Bees On The quality and Productivity Of Strawberry at ICIPE, Nairobi County In Kenya	Proposal Development

1.7 Professional/Consultancy (Editor/Peer review in journals, Networks/Collaborations, External Examiner, Patents).

Patent KE691 Koimburi B.N., Gitau, M.K, Wangai, L.N, Karau, G.M., Karanja R.H.N & Ndura, P.K (2015): *Capparis tomentosa*; Medicinal product used in management of chronic diseases (2015).

	Economic valuation of Dedha system in Isiolo among the pastoral Community as a means of livelihoods and Sustainable Rangeland Management Practise (2019 to 2020). GIZ
	Name of Assignment: Consultancy Services To Carry Out Community Proposal Appraisal (Both Desk And Field), Implementation Monitoring And Evaluation As An Independent Oversight Agent. Client: IFAD Positions held: Team Leader
MAINSTREAMING COMMUNITY CONSERVANCIES AS AN APPROACH TO COMMUNITY BASED NATURAL RESOURCE MANAGEMENT IMPLEMENTATION. Client: Kenya Wildlife Conservancies Association-KWCA	
INDEPENDENT EVALUATION OF TWO (2) AFDB-FUNDED AGRICULTURE PROJECTS IN KENYA: Kimira OLUCH Integrated Water and Sanitation Project and Kenya Green Zones Development Support Project for Climate change adaptation and mitigation. Client: AFRICAN DEVELOPMENT BANK.	
Name of Assignment: Desk and Field Appraisal of Common Interest groups for IFAD Upper Tana Natural Resources Management Projects Phase 2. Client: IFAD	

<p>Name of Assignment: Upper Tana Natural Resources Management Project Phase 1 Mid Term Evaluation Client: IFAD Positions held: Biodiversity/Environment Team Leader</p>
<p>Name of Assignment: Environmental Baseline studies component/Water catchment Management strategies for Nyimur Multi purpose water catchment.Client: NILE BASIN INITIATIVE. Position: Lead Biodiversity/Environment Consultant</p>
<p>Name of Assignment: Environmental And Social Baseline Report For The Proposed Sio-Sango Irrigation Development And Catchment Management Project Water Project Within Bungoma And Kakamega Counties, Kenya.Lot 3: Nelsap/Ncore/Cs/014. Position: Lead Environment Consultant</p>
<p>Name of Assignment: Midterm Evaluation of Community Development Trust Fund Environment projects for Youth and Women Enterprises in Narok, Migori, Kilgoris, Kapenguria and Laikipia Client: EUROPEAN UNION/DANIDA.Positions held: Biodiversity/Environment Team Leader</p>
<p>Name of Assignment: Midterm Evaluation of projects geared towards Mainstreaming Sustainable Land Management In Agro pastoral Production Systems In Kenya (Daadab, Kyuso, Mbeere and Narok) Client: UNDP (United Nations Environmental Program). Positions held: Principal Investigator</p>
<p>Name of Assignment: Baseline assessment of Sustainable Land Management Practices in Laikipia County region in line with the COMDEKS approach (Community Development and Knowledge Management for the Satoyama) and identification of gaps for Small Grant Program- Individual Consultancy. Client UNDP Client. Positions held: Biodiversity Expert/Principal Investigator</p>
<p>Name of Assignment: Study on Opportunities and Threats of Irrigation Development in Kenya's Drylands (Arid Lands). Client: FAO .Positions held: Lead Environment Expert/Biodiversity Expert</p>
<p>Name of Assignment: Team leader, Technical Evaluation of Community Proposals, Field Verification, ESIA and Training communities on Proposal Writing (For the Vulnerable Groups, Youth and Women Groups) for Community Development Trust Fund (CDTF/Agricom Consultants)</p>
<p>Name of Assignment: Building Ecosystem Services Research Capacity In Semi-Arid Africa (Bessa) .Biodiversity Appraisal In The Sasumua Water Catchment .</p>

I have conducted over 50 Environmental and Social Impact Assessments for projects amongst them:

<p>Name of Assignment: Trainer of Trainers in Environmental and Social Impact Assessment Client: Environment Institute of Kenya (EIK) Position: Lead Environment Trainer</p>
<p>Name of Assignment: FEASIBILITY STUDIES, DETAILED DESIGN AND TENDER DOCUMENTS FOR AMAYA DAM WATER PROJECT (Environmental and Social Impact Assessment)</p>
<p>Name of Assignment: FEASIBILITY STUDIES, DETAILED DESIGN AND TENDER DOCUMENTS FOR THE NYIMUR MULTIPURPOSE WATER PROJECT (Environmental Baseline studies component/Water catchment Management strategies).Northern Uganda and Southern Sudan</p>
<p>Name of Assignment: Environmental And Social Baseline Report For The Proposed Sio-Sango Irrigation Development And Catchment Management Project Water Project Within Bungoma And Kakamega Counties, Kenya.Lot 3: Nelsap/Ncore/Cs/014.</p>
<p>Name of Assignment:Feasibility Study, Preliminary & Final Designs, Environmental And Social Impacts Assessment For The Proposed Upper Narok Dam Project In Narok County .</p>
<p>Name of Assignment: Environmental impact assessment for the Proposed hydropower Generation from Chania River Outfall</p>

Name of Assignment: Environmental and Social Impact Assessment (ESIA) for the proposed LOWER MURANG'A INTEGRATED DEVELOPMENT PROJECT, MURANG'A COUNTY.
Name of Assignment: Environmental and Social Impact Assessment (ESIA) Project for the proposed KEBEN MULTIPURPOSE DAM DEVELOPMENT PROJECT, NANDI COUNTY.
Name of Assignment: Environmental and Social Impact Assessment (ESIA) Project for the proposed Rehabilitation and construction of a new canal at Bura Irrigation scheme.
Name of Assignment: Environmental and Social Impact Assessment (ESIA) Project for the proposed Samburu Irrigation Cluster.
Name of Assignment: Environmental and Social Impact Assessment (ESIA) Project for the proposed Suba Cluster Irrigation Development Project, Homa Bay, Mbita and Suba.
Name of Assignment: Environmental and Social Impact Assessment (ESIA) Project for the proposed Muringa Banana Irrigation Project, Tharaka Nithi.
Name of Assignment: Environmental and Social Impact Assessment (ESIA) Project for the Proposed Rahole Irrigation Development Project, Garissa County.

1.8 Community Service and Other Engagements

- Board of Governor Member – Mukurwe-ini Technical Training College (2014-2019)-
Chairperson Academic Committee
- Board of Management Member – Othaya Girls Secondary School (2015--Present)-
Chairperson Academic Committee

1.9 Affiliation of Professional Bodies

- Curriculum and Program Reviewers Commission for University Education.
- Vetted Climate Change and Resilience Expert for UNDP
- Member, of Environment Institute of Kenya
- Registered Environmental Impact Assessment and Audit Lead Expert, National Environmental Management Authority, Kenya (NEMA). **Registration Number 2680**
- Member, Ecological Society of Eastern Africa (ESEA)
- Member, Society for Conservation Biology (SCB) (2005-2018)
- Patron, Jomo Kenyatta Model Of United Nations (JKMUN) (2007-2013)

2.0 National and International awards and Recognitions

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2.1 Administrative Positions Held

2.1.1 Recognized university administrative positions

- University Examination officer (2009-2016)
- Timetabler (2006-2008)
- Coordinator Biotechnology Program (2006-2008)
- Environment officer in charge of Environment Quality Management Services (2012-2016)

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2.1.2 Other administrative positions Held

- Academic advisors 300 unit series
- Chairman Research and Linkages committee
- Member Examination Moderation Committee
- Member Staff Welfare Committee
- Member Board of Undergraduate Studies

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