


# Academic Staff Profile

## Personal Profile

### Personal Details

<p>Name: Benson Kamau Mburu Title/Qualification: Dr. Department: Environmental Science &amp; Education Designation/Position: Lecturer Email: Mburu.benson@ku.ac.ke Contact Address: 2388 Thika Area of Specialization: Climate change impacts Research Interests: -Climate change impacts, mitigation and adaptations -Environmental resources conservation -Urban forestry Google Scholar: <a href="https://scholar.google.com/citations?user=DU1yCB0AAAAJ&amp;hl=en&amp;oi=ao">https://scholar.google.com/citations?user=DU1yCB0AAAAJ&amp;hl=en&amp;oi=ao</a> ORCID ID: <a href="https://orcid.org/0000-0002-5311-9510">https://orcid.org/0000-0002-5311-9510</a></p>	
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### Academic & Professional Qualifications

- 2013: PhD in Environmental Studies; research area - Climate Change Impacts, Mitigation & Adaptations in Arid Land Agricultural Ecosystems. Kenyatta University, Kenya.
- 1995: M Sc. in Environmental Sciences and Technologies, Universidad de Granada (Spain).
- 1988: B Sc. in Forestry (Second Class Honours, Upper Division), Moi University, Kenya.
- 2013: Completed a course on Teaching Methodology at Centre for teaching Excellence and Evaluation, Kenyatta University
- 2014: Competence & Skills Training for PhD supervisors and established scientists, Kenyatta University and AGRA-Wageningen UR. Employment History

### Achievements

- Successfully supervised two PhD candidates and six master students up to completion and graduation.
- Have published several papers in peer reviewed journals

## Publications

### Referred Journals

1. **Mburu, B. K.**, Kung'u, J.B. and Muriuki, J.N. (2015). Climate Change Adaptation Strategies by Small-scale Farmers in Yatta District, Kenya. *African Journal of Environmental Science and Technology*, 9(9), 712-722.
2. **Mburu, B. K.**, Kung'u, J.B. and Muriuki, J.N. (2014). Effects of Climate Variability and Change on Household Food Sufficiency among Small-Scale Farmers of Yatta District, Kenya. *Journal of Environment*, Vol. 03, Issue 02, pp. 19-27. ISSN 2049-8373. Available online at [www.scientific-journals.co.uk](http://www.scientific-journals.co.uk)
3. Mutuku H. M., Kung'u J. B. and **Mburu B. K.** (2018). Tree cover trend analysis for the semi-arid lands of South Eastern Kenya: The case of Matungulu Sub-county, Machakos County. *International Journal of Agriculture, Environment and Bioresearch* Vol. 3, No. 06; 2018 pp 193-199.
4. Mutuku H. M., Kung'u J. B. and **Mburu B. K.** (2018). Farmers' perceptions of climate change and its effects on tree cover in the drylands of South Eastern Kenya: the case of Matungulu Sub-county, Machakos County. *Journal of Natural Sciences Research* Vol. 8, No. 22; 2018 pp74-88.
5. Wamalwa I.W., **Mburu B.K.** and Mang'uriu D. G. (2016). Agro climate and weather information dissemination and its influence on adoption of climate smart practices among small scale farmers of Kisii County, Kenya. *Journal of Biology, Agriculture and Healthcare* Vol.6, No.10, 2016 pp 14-23.
6. Wamalwa I.W., **Mburu B.K.** and Mang'uriu D. G. (2016). Perception of climate change effects and its influence on uptake of climate smart practices among small scale farmers of Kisii County, Kenya. *International Journal of Information Research and Review* Vol. 03, Issue, 05, pp. 2409-2417
7. Chelangat L. J., **Mburu B. K.** and Obade P. (2020). Effects of logging on the diversity of tree species in Kerisoi natural forest, Nakuru County, Kenya. *International Journal of Innovative and Advanced Studies*. Volume 7, issue 2. ISSN: 2394-4404.
8. Muriithi F. M., Kung'u J. and **Mburu B.** (2020). Effects of human encroachment on natural regeneration of indigenous trees seedlings in Kimakia Forest, Murang'a County, Kenya. *Researchjournal's Journal of Forestry* Vol. 7 No. 2

## Books and Books Chapters

None

## Conference/Workshops/Seminar Papers

### Conference Papers

1. Climate Change Adaptation Strategies by Small-Scale Farmers in Yatta District, Kenya. Proceedings of an International Symposium. 25 to 28<sup>th</sup> August 2014, Yaoundé, Cameroon pp. 255-263. Edited by J. F. Obiri, W. Kasolo, F. Fonteh, A. Yaye, A. Ochola, J. Mwazemba and S. Chakeredza
2. **Mburu, K.**, Honrubia, M., Ivory, M. H. and Mwangi, L. M. (1996). Ectomycorrhizae synthesis on indigenous and exotic forest trees in Kenya. In: Mycorrhizas in integrated systems from genes to plant development. Proc. 4th. European Symposium on Mycorrhizas. 11-14th July 1994, Granada, Spain. Edited by C. Azcon-Aguilar and J. M. Barea. ECSC-EC-EAEC, Brussels. Luxembourg. pp 557-560.

### Workshops Papers

None

### Seminar Papers

None

## Student Co-authored Publications

1. Mutuku H. M., Kung'u J. B. and **Mburu B. K.** (2018). Tree cover trend analysis for the semi-arid lands of South Eastern Kenya: The case of Matungulu Sub-county, Machakos County. *International Journal of Agriculture, Environment and Bioresearch* Vol. 3, No. 06; 2018 pp 193-199.
2. Mutuku H. M., Kung'u J. B. and **Mburu B. K.** (2018). Farmers' perceptions of climate change and its effects on tree cover in the drylands of South Eastern Kenya: the case of Matungulu Sub-county, Machakos County. *Journal of Natural Sciences Research* Vol. 8, No. 22; 2018 pp74-88.
3. Wamalwa I.W., **Mburu B.K.** and Mang'uriu D. G. (2016). Agro climate and weather information dissemination and its influence on adoption of climate smart practices among small scale farmers of Kisii County, Kenya. *Journal of Biology, Agriculture and Healthcare* Vol.6, No.10, 2016 pp 14-23.
4. Wamalwa I.W., **Mburu B.K.** and Mang'uriu D. G. (2016). Perception of climate change effects and its influence on uptake of climate smart practices among small scale farmers of Kisii County, Kenya. *International Journal of Information Research and Review* Vol. 03, Issue, 05, pp. 2409-2417

5. Chelangat L. J., **Mburu B. K.** and Obade P. (2020). Effects of logging on the diversity of tree species in Kerisoi natural forest, Nakuru County, Kenya. International Journal of Innovative and Advanced Studies. Volume 7, issue 2. ISSN: 2394-4404.
6. Muriithi F. M., Kung'u J. and **Mburu B.** (2020). Effects of human encroachment on natural regeneration of indigenous trees seedlings in Kimakia Forest, Murang'a County, Kenya. Researchjournali's Journal of Forestry Vol. 7 No. 2

## Other Publications

1. Ivory, M. H., Honrubia, M., **Mburu, B. K.** & Mwangi L. M. (1996). Putative ectomycorrhizal fungi from native and exotic forests in Kenya. In: Mycorrhizas in integrated systems from genes to plant development. Proc. 4th. European Symposium on Mycorrhizas. 11-14 July 1994, Granada, Spain. Edited by C. Azcon-Aguilar and J. M. Barea. ECSC-EC-EAEC, Brussels. Luxembourg. pp 125-127.
2. Ivory, M. H., Honrubia, M., Mwangi L. M., Martin F., **Mburu, B. K.**, Di Battista, C. & Delaruelle, C. (1995). Ectomycorrhiza of indigenous and exotic trees in lowland Kenyan forests. Proc. Third Regional Mycology Conference, 7-10th March 1995, Harare, Zimbabwe.

## Research

- Effects of climate variability and change on dry-land agriculture and the adaptation strategies by small-scale farmers in Yatta District, Kenya (PhD research)
- 1993 – 1996: Research Student - Murcia University, Spain. Project: "Ectomycorrhizas of indigenous and exotic trees of Lowland Kenyan forests". European Union contract TS3-CT92-0124

## Funded Projects

None

## Conferences/Workshops/Seminars Attended

### Conferences Attended

VENUE	YEAR	TITLE AND CONTENTS
Hilton Hotel, Yaounde, Cameroon	2014	The International Symposium on Agribusiness and Agricultural Risks management in Africa: The Role of Tertiary Agricultural Education: 25 – 27 August 2014
Green Hills Hotel, Nyeri	2012	7 <sup>th</sup> Foresters Conference and Dialogue
Berkeley University, California, USA.	1996	First International conference on mycorrhizae (ICOM 1) • Mycorrhizae research

Congress Palace, Granada, Spain	1994	4 <sup>th</sup> European Symposium on Mycorrhizae <ul style="list-style-type: none"> <li>• Mycorrhizae research</li> </ul>
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### Workshops Attended

VENUE	YEAR	TITLE AND CONTENTS
Eastland Hotel, Nairobi	2015	Improving Transparency and Access to Information in Kenya's Forestry Sector
Silver Springs Hotel, Nairobi	2015	Stakeholder consultation on development of Consultation and Participation plan for REDD+
Kenyatta University Business and Student Services Centre	2014	Animal Welfare Education Workshop: 10 – 12 June 2014. Animal Welfare for Sustainability.
Kenyatta University Business Innovation & Incubation Centre	2014	Competence & Skills Training for PhD supervisors and established scientists. Kenyatta University and AGRA-Wageningen UR workshop. 13-15 January 2014
Utalii Hotel, Nairobi	2013	Validation Workshop for the NACOSTI draft regulations
Kenya Wildlife Service Training Institute Naivasha	2002	UNDP/GEF Small Grants Partners Workshop <ul style="list-style-type: none"> <li>• GEF thematic areas</li> <li>• Project proposal writing</li> <li>• Biodiversity conservation</li> <li>• Participatory Rural Appraisals</li> <li>• Wetlands conservation</li> </ul>

### Seminars Attended

VENUE	YEAR	TITLE AND CONTENTS
Kenyatta University Conference Centre	2013	Capacity Building Seminar for newly Graduated PhD holders <ul style="list-style-type: none"> <li>• Theses supervision guidelines</li> <li>• Ethics in research</li> <li>• Plagiarism in academic communication</li> </ul>
Kenyatta University Business and Student Services Centre	2013	Capacity Building Seminar for Staff Mentors
Kicc, Aberdare Hall Nairobi	2013	EMC (E-Waste Management) Regulations, 2013 Stakeholder Consultation Forum
Kenyatta University Conference Center	2009	Capacity Building For Integrated Watershed Management in Eastern Africa
Kenya Forestry	1988	First Kenya National Seminar on Social Forestry

## Supervision of Postgraduate Students

### Masters

#### **Ongoing supervision**

1. Mr. Mamet David Ryan (N50/CTY/21532/2010). Role of vernacular radio stations in coping with climate variability effects on agriculture in Loitokitok Sub-County, Kenya.
2. Ms. Nyaga Marion Marigu (N50/CE/23088/2010). Climate change impact on household food security: a case of community coping strategies in Embu West District, Embu County, Kenya.
3. Murimi Edwin (N50/CTY/PT/33353/2015). Coffee farmers adaptation strategies to climate variability in Kirinyaga County, Kenya
4. Mr. Stephen Mwaniki Muasya (N50/27664/2014). Cassava production as a strategy to climate variability adaptation in Kathiani, Machakos County, Kenya.
5. Joseph Ngungi Kathigia (N50/CE/24736/2012). Effectiveness of Climate Variability Adaptation Strategies by Smallholder Farmers in Mbeere North, Embu County, Kenya.
6. Ofulla Melvin Charles (N50/CTY/PT/33488/2015). Socio-economic factors influencing tree species diversity at the farms in Kisumu West sub County, Kenya.
7. Kibe Nkatha Winnie (N50/29004/2014). Impact of carbon sequestration projects on household income and consumption expenditure of small holder farmers in Meru County, Kenya.

#### **Submitted for examination**

1. Florence M. Muriithi (N50/37672/2016). Effects of human encroachment on natural regeneration of indigenous tree seedlings in Kimakia Forest, Kenya.

#### **Successful supervision/graduated**

- 1 Mr. Mutahi William Gichuki (N50/CE/14483/09). Awareness and Sources of Climate Change Information among Secondary School Students in Nairobi County, Kenya
- 2 Ms. Christine Wanjiku Ngucia (N50/CE/26522/2011). Adoption of NERICA rice farming as a strategy to climate change adaptation in Mwea west, Kirinyaga County, Kenya.

- 3 Mr. Kamau Joseph Gakuo (N50/CE/21200/2012). Climate change effects on food security and the coping strategies by women groups in Gikindu Division, Murang'a East Sub-County, Kenya.
- 4 Ms. Gichohi Jedidah Wambui (N50/CE/14477/09). Effects of Human Activities on the Conservation of Karima Hill Forest. Nyeri County, Kenya.
- 5 Mr. Bosire Dauglas Onyiego (N50/CE/22724/2012). Impacts of climate variability on water availability and the social-economic challenges on adaptation in Masinga sub-county, Kenya.
- 6 Chelang'at Langat Joyce (N50/38008/2016). Effects of human activities on utilization and conservation of Keriso Forest, Kenya.

## Ph.D

### **Ongoing supervision**

1. Ms. Wanjiru Beatrice Nzilu (N85/CE/32326/2015). Role of indigenous environmental knowledge in the conservation of lowland forests of Kitui County, Kenya

### **Successful supervision/graduated**

1. Isaac Wafula Wamalwa (N85/28217/2013). Adoption of climate smart practices among small scale farmers of Kitutu and Nyaribari Chache Sub-counties in Kisii County, Kenya
2. Mutuku Heeran M. (N85/24991/2012). Tree cover perspectives and climate change resilience: Case of Matungulu Sub-County, South Eastern Kenya.

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

### **External examiner**

- Served as an external examiner for several M.Sc. theses in the Institute of Energy and Environment Technology (IEET), Jomo Kenyatta University of Agriculture and Technology.

### **Professional consultancy**

- NEMA accredited Environmental Impact Assessment (EIA) Lead Expert
  1. Environmental and social impact assessment study report for the proposed mini hydropower plant at Uuma falls, Kamuthwa Sub location, Mwala Sub County, Machakos County (2020).
  2. Environmental and social impact assessment project report for the proposed residential building on plot no. Ontulili/Ontulili/b.1 (Katheri 1406) (2020).

3. Environmental and social impact assessment project report for the proposed biomedical waste management system at Outspan Hospital – Nyeri town (2019).
4. EIA for Proposed Recreation Centre development project on plot LR No. 11026/2, Kasarani Division, Nairobi County (2016)
5. EIA for Proposed School of Business development project on plot LR No. 11026/2, Kasarani Division, Nairobi County (2016)
6. EIA for Proposed Machine Cut Quarry Stones on L.R. No. Juja/Juja East Block 1/1540 Juja Sub-County, Kiambu County (2018)
7. Proposed Amendments and Extensions to Church Complex on L.R. No Thika Municipality Block 20/409&410 Ngoingwa Thika Sub-County, Kiambu County (2018)
8. EIA for Proposed earth dam development project for Kenyatta University, Kitui Campus (2016)
9. Environmental Impact Assessment project report for proposed residential development on plot L.R 13631/28 Kahawa Wendani, Ruiru Sub-county, Kiambu County (2016).
10. Environmental Impact Assessment Report for the Proposed KENVERSITY SACCO Office Block on Plot L.R. No. Ruiru/Kiu/Block 3/2656, Kahawa Sukari, Kiambu County (2016).
11. EIA for Proposed underground water storage tank development project for Kenyatta University, Kitui Campus (2015)
12. Environmental Impact Assessment project report for the proposed residential development on plot L.R. No. Ruiru/Ruiru East Block 2/7451, Ruiru Sub-County Kiambu County (2015).
13. Environmental Impact Assessment project report for the proposed go down development on plot L.R. No. Thika Municipality Block 5/130, Kiambu County (2015)
14. Environmental Impact Assessment project report for the proposed go down development on plot L.R. No. Thika Municipality Block 5/135, Kiambu County (2015)
15. Environmental Impact Assessment project report for the proposed go down development on plot L.R. No. Thika Municipality Block 5/138, Kiambu County (2015)
16. Environmental Audit report for the 8-4-4 building–Kenyatta University (2015)
17. Environmental Impact Assessment Project report for proposed residential flats development on plot L.R. No 28656/23 Juja, Kiambu County (2015)
18. Environmental Impact Assessment Project report for proposed residential flats development on plot L.R. No 28656/28 Juja, Kiambu County (2015)
19. EIA for Proposed Development Project on Plot No. J207 within Plot L.R No.4148/15, Kenyatta road, Kiambu County (2015)
20. EIA for Proposed commercial cum residential Project on Plot Number, Thika Municipality/Block 20/310, Kiambu County (2015)
21. EIA for Proposed Bright Star Academy Project on Plot Number Thika Municipality/Block 19/2035, Kiambu County (2014)



22. EIA for Training consultancy for KU-Regional Centre for Capacity Development: USC - EDMOO1 (August 2014)
23. EIA for Proposed development of private mansion on Plot L.R. No. 14870/164, off Police Lane Road, Membley area, Kiambu County (2014)
24. EIA for Proposed School of Education development project on plot LR No. 11026/2, Kasarani Division, Nairobi County (2014)
25. Embu University Health Unit-Clinic Environmental Audit (2014)
26. EIA for Proposed Students' Hostels Development Project on Plot LR. No. Mombasa/Block XXIV/98, Mombasa City (2014).
27. Town House Environmental Audit (2014)
28. Kenyatta University Funeral Home Environmental Audit (2014)
29. EIA for Proposed administration block development project on plot LR. No. Loc.2/Mariira/2372. Karega Secondary School, Murang'a County. (2013)
30. EIA for Proposed residential house development project on plot LR No. 4953/562. Thika sub-county (2013)
31. EIA for Proposed residential housing development project on plots LR No. Block 8/183 Thika sub-county (2013)
32. EIA for Proposed housing development project on the registered land LR No.12861/249&258. Thika sub-county (2013).
33. EIA for Proposed residential housing development project on plots LR No. 10890/38 & 39 Thika area (2012)
34. LWF EIA projects - Boreholes in Turkana West District, Turkana County (2012).
35. EIA for Proposed residential housing development project on plot LR No. 15/35, Thika Municipality (2011)
36. Bamburi Cement and Lafarge Eco Systems Statutory Health and safety audit (2008 and 2009)
37. Nzoia Sugar Statutory Environmental Health and Safety audit (2008 and 2009)
38. EIA for Proposed house development project on parcel no. L.R. 4602, Naivasha road, Nairobi (2008)
39. EIA for Proposed house development project on parcel no. L.R. 4603, Naivasha road, Nairobi (2008)
40. EIA for Proposed commercial/residential house development project on plot No. 2/156, Kiambu Municipality (2009)
41. EIA for Proposed residential flats development on plot LR.no. Ndumberi/Riabai/2760 Kiambu (2009)
42. EIA for Proposed residential house development project on plot LR.no. A181 Umoja inner core sector II, Nairobi city (2010)
43. EIA for Proposed Royal ICT Business Park (EPZ) project on plot LR no. 209/12971/2, Nairobi city

### **Networking and collaborating with external organizations**

- Collaborating with KINGSLINK Ventures Ltd
- Collaborating with ORGUT Consulting Kenya Limited
- Resource person for The Institution of Engineers of Kenya Contract Management Seminars.

## Community Service and Other Engagements

### Member of School Boards

- 2013 to date: Chairman, Board of Management (BOM), Munyu Mixed Day Secondary
- 2010 to 2013: Member, Board of Management (BOM), Munyu Mixed Day Secondary School
- 2016 to date: Chairman, Board of Management (BOM), Gatuanyaga Mixed Day Secondary School.
- 2016 2018: Vice Chairman, Board of Management (BOM), Gatitu Primary School.
- 2019 to date: Member, Board of Management (BOM), Gatitu Primary School.
- 2015 to date: Chairman, Gatitu Primary School Alumni Mentors Group - working with the Gatitu Primary School fraternity in Murang'a County in enhancing education standards.

## Affiliation of Professional Bodies

- Member, Forestry Society of Kenya
- Member Environmental Institute of Kenya

## National and International awards and Recognitions

In 2010, awarded the Competitive Science, Technology and Innovation grant for my Ph.D research proposal by the National Council for Science and Technology worth Ksh. 1, 200,000 (one million two hundred thousand)

## Administrative Positions Held

### Recognized university administrative positions

#### Head of section

- 2017 October to date: Head Academic Data Verification Section.

#### Examination coordinator

- 2012 November to 2016 May: School Examinations Coordinator (School of Environmental Studies).
- 2012 April to 2012 November: Departmental Examinations Coordinator (Department of Environmental Education).

### **Membership of Senate/University Board Committees**

- Member 41<sup>st</sup>, 42<sup>nd</sup>, 43<sup>rd</sup>, 44<sup>th</sup>, 45<sup>th</sup>, 46<sup>th</sup>, 47<sup>th</sup> and 48<sup>th</sup> graduation ceremony organizing committees
- Committee to guide on the integration of blended learning in the regular mode of study
- Committee to guide on the review of programmes and unit codes after rationalization of schools and departments
- Committee to review the key performance indicators (KPIs) in the Examination administration section
- Committee to implement reports to guide on the review of programme and unit codes after rationalization of schools and departments and report to determine actual and reliable students' bio-data at Kenyatta University
- Committee to investigate alleged examination irregularities in the school of law during the first semester 2019/2020 academic year examination sitting
- Standing committee to review publications in academic division
- Committee to develop a mechanism through which parents/guardians can track academic progression of students
- Committee to formulate policy and procedures on administration of make-up continuous assessment tests (CATs)
- Customer satisfaction survey committee for 2018/2019 Academic year
- Customer satisfaction survey committee for 2019/2020 Academic year
- Customer satisfaction survey committee for 2020/2021 Academic year
- Advisory committee on maximum utilization of space and facilities at Kitui Campus
- Fees fraud and emerging cases of tampering with marks committee
- Committee to monitor implementation of strategic plan, divisional work plan, risk/opportunity register and performance contracts
- Committee to review and compile a consolidated document of policies in the academic division
- International accreditation of university programmes
- Committee to guide on the process of expediting change of students online status
- Erroneous discontinuations of students and 'X' posting committee
- University staff establishment committee
- Sensitization and implementation of two thirds class attendance rule committee
- Institutional self-assessment committee
- Missing marks elimination committee
- Procedures for processing requests for semester off committee

### **Membership of Departmental Committees**

- Departmental corruption prevention committee
- Departmental marks verification committee

## Other administrative positions Held

- 2016 June to 2017 September: Ag. Head Academic Data Verification Section.
- Departmental field trips coordinator
- Staff mentor

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