#### **CURRICULUM VITAE**

#### I. NAME AND ADDRESS

| 1. | Name   | Edward Musungu Mugalavai, PhD   |
|----|--|---|
| 2. | Position   | Senior Lecturer   |
| 3. | Address  | Masinde Muliro University of Science & Technology, School of            |
|    |  | Disaster Management and Humanitarian assistance (SDMHA),                |
|    |  | Disaster Management and Sustainable Development Department              |
|    | (E)  | (DMSD), Email: <u>mugamus@yahoo.com</u> ; <u>emugalavai@mmust.ac.ke</u> |
|    |  | P.O. BOX 190-50100  |
|    |  | Kakamega.   |
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#### II. BRIEF Resume' (Dr. Mugalavai)

Dr Edward M. Mugalavai is an Environmental Earth Scientist. He is a senior lecturer and Coordinator Greening Initiative of Masinde Muliro University of Science and Technology (MMUST). He is the Editor-in-Chief of the International Journal of Disaster Management and Risk Reduction (IJDMRR). He formerly served as Chair Department of Disaster Management and Sustainable Development of MMUST. He holds a PhD in Environmental Earth Sciences with over 16 years teaching experience at University level. He has been instrumental on curriculum review and development for his department with keen interest on enhancing competencies and skills in disaster risk reduction. He has carried out extensive research on environmental issues biased to climatology, disaster risk reduction, and climate change and food security. He has successfully participated in funded local and external research projects in his capacity as PI and/or Co-PI and delivered on donor requirements. His research outputs are centred on strengthening communities in building resilience and adaptation to climate change. He has mentored many postgraduate (MSc. and PhD) and undergraduate students through supervision of theses and/or projects. He has also examined many MSc. and PhD theses. He is a licensed Lead Expert in Environmental and Social Impact Assessment (ESIA) and Environmental Audit (EA) with the National Environment Management Authority, Kenya (NEMA-Kenya) and has been involved in numerous projects including World Bank funded projects in western Kenya. He is also a member of Ecological Society for Eastern Africa (ECSEA), Association of Disaster Management and Conflict Resolution of Kenya (ADMCRK) and the Environmental Institute of Kenya (EIK). His current focus is to engage more in actionable research that empowers communities to solve local problems collaboratively using indigenous solutions. He is registered under the following links:

Researchgate: <a href="https://www.researchgate.net/profile/Edward\_Mugalavai">https://www.researchgate.net/profile/Edward\_Mugalavai</a>;

**ORCID**: https://orcid.org/0000-0001-5289-8180; **Researcher ID**: AAH-8980-2021;

Scopus ID: 16309932900; Google Scholar: https://scholar.google.com/citations?hl=en&user=xM8UKFcAAAAJ

#### III. BIODATA

| 1. | Date of Birth         | 11 <sup>th</sup> , June, 1966 |
|----|-----------------------|-------------------------------|
| 2. | Place of Birth        | Kakamega County               |
| 3. | Marital Status        | Married with four children    |
| 4. | Religious Affiliation | Christian                     |

## IV. EDUCATION

| University 1. 2013 |    | 2013 | PhD, Environmental Earth Sciences    | University of Eldoret    |
|--------------------|----|------|--------------------------------------|--------------------------|
|                    | 2. | 2007 | M.Phil, Environmental Earth Sciences | Moi University, Eldoret  |
|                    | 3. | 2003 | BA, Geography                        | Moi University, Eldoret  |
| Tertiary           | 4. | 1997 | WMO Class II, Diploma                | IMTR, Nairobi            |
| Level              | 5. | 1989 | WMO Class IV, Certificate            | IMTR, Nairobi            |
|                    | 6. | 1988 | Surveying Certificate                | Survey of Kenya, Nairobi |

# V. THESES/DISSERTATION TOPICS

| 1. | PhD         | Seasonal and Spatial Assessment of Agro-Climatic Parameters for Maize Crop   |
|----|-------------|--|
|    |             | Farming: Case of Lake Victoria Basin, Kenya                                  |
| 2. | M.Phil      | A Study of Rainfall Characteristics in a Rainfed Agricultural Establishment: |
|    |             | Case Study of the Kenyan Lake Victoria Basin Region                          |
| 3. | BA          | Climatological Analysis for Maize Crop Production under Rainfed              |
|    | (Geography) | Agriculture: A Case Study of Kakamega District, Kenya                        |

# VI. RESEARCH INTERESTS

| 1. | Climatology               |  |
|----|---------------------------|--|
| 2. | Climate Change Adaptation |  |
| 3. | Agricultural Meteorology  |  |
| 4. | Food Security             |  |
| 5. | Disaster Management       |  |

# VII. WORK EXPERIENCE

| 1. | Senior Lecturer, (April, | Masinde Muliro University of Science and Technology   |
|----|--------------------------|---|
|    | 2021 to Date)            | Department: Disaster Management and Sustainable   |
|    |                          | Development (DMSD)  |
| 2. | Lecturer, (June, 2011 to | Masinde Muliro University of Science and Technology   |
|    | April, 2021)             | Department: Disaster Management and Sustainable   |
|    |                          | Development (DMSD)  |
|    |                          | Teaching Courses:   |
|    |                          | Undergraduate: Earth History and Evolution; Human and Physical Geography; Minerals, Rocks and Soils; Man and Environment; Climatological Aspects of Disaster Management; Global Warming and Climate Change; Ecosystem Management and Conservation; Environmental Law and Policy; Environmental Impact Assessment; Technological Forecasting and Management. |
|    |                          | Postgraduate: Climate Change Science & Global   |
|    |                          | Perspectives: Research Methods; Environmental Health,   |
|    |                          | Water and Sanitation.   |

| 3. | Assistant Lecturer,<br>(September, 2008 to May,<br>2011) | Maseno University, School of Environment and Earth Sciences: Department of Earth Science <i>Teaching Courses:</i>  |
|----|--|--|
|    |  | Undergraduate: Introduction to Earth Science Systems;<br>Surveying 1; Atmospheric Science; Physical Oceanography;<br>Wastewater Treatment Systems; Research Methods;<br>Management of Irrigation Systems; Climate Change and<br>Water Resources. |
| 4. | Meteorological<br>Technologist, (1999 to<br>August 2008) | Moi University, School of Environmental Studies (OIC Moi University Meteorological Station).   |
| 5. | Meteorological Assistant (Jan 1990-1999)                 | Moi University, School of Environmental Studies  |
| 6. | Meteorological Assistant (1989-1990)                     | Ministry of Transport and Communications: Kenya<br>Meteorological Department-KMD   |

# ${\bf VIII.~RESEARCH~/~PROJECTS~(ATTRACTED~RESEARCH~FUNDS)}$

| 1. | Ongoing          | Conducting a study on: Socio-Ecological Determinants of Gender Based Violence and Resilience in Turkana County, Kenya. University Research Funds (URF)  Team Members: Prof. Kennedy Bota (PI); Mr. Kaleb Mwendwa (Co-PI); Dr. Edward Mugalavai (Researcher); Dr. Caroline S. Wekullo (Researcher); Mr. Ronald Michieka (Researcher)  |
|----|------------------|--|
| 2. | Completed (2024) | Influence of Climate Change on Human Security within the L. Victoria Basin, Kenya (2022)- University Research Funds (URF)  Team Members: Prof. Edward Neyole (PI); Prof. Frank Matanga; Prof. Josephine Ngaira; Dr. Ferdinand Nabiswa; Dr. Edward Masibayi; Dr. Edward Mugalavai   |
| 3. | Completed 2022   | MMUST and LEAD-SEA (Malawi) involved in Large Research Project (LRP) entitled "Understanding Spatial characteristics, socio-economic effects and opportunities of <i>Prosopis juliflora</i> and other invasive plant species in drylands of Africa" within the larger BRECcIA Project which was led by the University of Southampton ("UoS") (2021-2022); <i>Fund, grant number NE/P021093/1</i> -(2019-2022)-Amount awarded GBP 22,154.00 <b>Team Members:</b> Kaleb A. Mwendwa, <b>Dr. Edward Mugalavai</b> , Dr. Humphrey Agevi and Dr. Daniel Naburi |
| 4. | Completed (2022) | "Trends in climate variability, land use change, watershed governance and implications on food security in the dryland of Suam River Basin, West Pokot County, Kenya". "This work is funded through the Building Research Capacity for sustainable water and food security in drylands of sub-saharan Africa" (BRECcIA) which is supported by UK Research and Innovation as  |

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|     |  | part of the Global Challenges Research Fund, grant number NE/P021093/1-(2019-2022)-Amount 15,000 GBP.  |
|     |  | <b>Team Members:</b> Namenya Daniel Naburi - Masinde Muliro University of Science and Technology, Kenya• John Obiri - Masinde Muliro University of Science and Technology, Kenya• <b>Edward Mugalavai - Masinde Muliro University of Science and Technology</b> , Kenya• Chengxiu Li – University of Southampton, UK• Daniela Anghileri - University of Southampton, UK• Sospeter Wekesa – Technical University of Kenya• Oscar Kambombe - University of Malawi.   |
| 5.  | Completed (2022)   | Determining the Nexus between Covid 19 Pandemic and Teenage Pregnancies in Selected Counties of Western Region, Kenya. University Research Funds (URF).  Team Members:   |
|     |  | <b>Dr. Edward Mugalavai (PI)</b> ; Dr. Ferdinand Nabiswa (Co-PI); Dr. Ruth Simiyu (Co-PI); & Mr. Odhiambo Canon (Graduate Student Researcher-MSc.)   |
| 6.  | Completed (2022)   | Assessment of the Impact of Covid-19 Pandemic on Food Security within the four Counties of Western region, Kenya. University Research Funds (URF).   |
|     |  | Team Members: Prof. Frank Matanga (PI); Dr. Ferdinand Nabiswa (Co-PI); Dr. Edward Mugalavai (Co-PI); Rev. Dr. Elijah S. Odhiambo (Co-PI); Mr. Peter Otsianda (Graduate student researcher-MSc.)  |
| 7.  | Done 11-12<br>October 2022<br>(Funds<br>mobilization)      | On behalf of MMUST, I chaired the Committee that organized the 8 <sup>th</sup> National symposium on Disaster Risk Reduction and the International Day for Disaster Risk Reduction (IDDRR) 2022 on; Presentation: <i>The role of Masinde Muliro University in advancing Disaster Risk Reduction (DRR) in Kenya (By Dr. Edward Mugalavai-MMUST): The event generated income for the University</i> by Mobilizing <b>Kes. 2,325,000</b> as payment of meals for the National Symposium on Disaster Risk Reduction Symposium 11-12 October 2022 |
| 8.  | 2011-2016<br>(Reports<br>submitted to<br>NIB &<br>NACOSTI) | Conducted a study on 'Water Management for Agricultural and Drinking use in Western Kenya Rice Irrigation Schemes' funded by Ministry of Higher Education, Science and Technology through the National Council for Science and Technology's (NCST) 3 <sup>rd</sup> Competitive Science, Technology and Innovation Grant.   |
| 9.  | 2009-2010  | Conducted a one year research titled 'Integration of Indigenous Knowledge Systems in Adapting to Climate Change and Enhancing Food Security in the Rift Valley, Kenya' funded by International START Secretariat, through US National Science Foundation (GEO-0627839 "Capacity Building for Global Change").  |
| 10. | 2008-2010  | Conducted a two year research titled 'Simulation of rainfall onset, cessation and length of growing season for enhanced agricultural productivity in   |

|  | western Kenya' under the sub-theme-Information Communication |
|--|--|
|  | Technology for Water Resource Management and funded by the   |
|  | Commission for Higher Education, Kenya                       |

#### IX. RESEARCH/TECHNICAL REPORTS

| 1. | Emmanuel C. Kipkorir, Charles K. Songok, <b>Edward M. Mugalavai</b> (2016). Weather and    |
|----|--|
|    | Crop Modeling for Improved Agricultural Planning at Unilever Tea Kenya Limited, Kericho.   |
|    | Prepared for Unilever Tea Kenya Limited, Kericho (July, 2016).                             |
| 2. | Emmanuel C. Kipkorir, <b>Edward M. Mugalavai</b> , Charles K. Songok, Phanuel, O. W. Webi, |

- 2. Emmanuel C. Kipkorir, **Edward M. Mugalavai**, Charles K. Songok, Phanuel, O. W. Webi, Fatuma Daudi, Kipkorir K. G. Kiptoo, Laban K. Lagat (2016). Up-scaling system of rice intensification to farmers fields using farmers field schools (FFS) approach in western Kenya. Submitted to NIB and NACOSTI, pp 25.
- 3. Emmanuel C. Kipkorir, **Edward M. Mugalavai**, Charles K. Songok, Phanuel, O. W. Webi, Fatuma Daudi, Kipkorir K. G. Kiptoo, Laban K. Lagat (2012). Adapting System of Rice Intensification in West Kenya Irrigation Schemes. Pp 49.
- 4. Emmanuel C. Kipkorir, **Edward M. Mugalavai**, Charles K. Songok, Phanuel, O. W. Webi, Fatuma Daudi, Kipkorir K. G. Kiptoo, Laban K. Lagat (2012). Bio-filter construction guide: affordable point of use drinking water treatment method; Western Kenya Rice Irrigation Schemes, pp 25.
- 5. Emmanuel C. Kipkorir, **Edward M. Mugalavai**, Charles K. Songok, Phanuel, O. W. Webi, Fatuma Daudi, Kipkorir K. G. Kiptoo, Laban K. Lagat (2012). Rice productivity, water and sanitation baseline report. Western Kenya Rice Irrigation Schemes (January, 2012), pp 47.
- 6. Emmanuel C. Kipkorir, **Edward M. Mugalavai**, Ben N. Mwasi (2011). Integrating indigenous and scientific knowledge systems on onset of growing season prediction and utilization in western Kenya Farmers; Training Manual (February, 2011).
- 7. E.C., Kipkorir, C.K., Songok and **E.M. Mugalavai** (2010). Integration of indigenous knowledge systems in adapting to climate change and enhancing food security in nandi and keiyo communities, Kenya (July, 2010), pp 46.
- 8. E. C., Kipkorir, **E.M. Mugalavai** and Dirk Raes (2009). Simulation of rainfall onset, cessation and length of growing season for enhanced agricultural productivity in western Kenya; Sub-Theme- Information Communication Technology for Water Resource Management (March, 2009).

#### X. PEER REVIEWED PUBLICATIONS

- 1. **Mugalavai, E. M.** (2025). Leveraging dry spells analysis to mitigate climate change risks on maize crop farming in Lake Victoria Basin, Kenya. *African Quarterly Social Science Review*, 2(2), 270–284. https://doi.org/10.51867/AQSSR.2.2.23
- 2. **Edward M. Mugalavai**, Ferdinand M. Nabiswa, Ruth N. Simiyu, Canon O. Omondi (2025). Factors that Influenced Increase in Teenage Pregnancy of Girls Aged between (10-19) years During the Covid-19 Pandemic: A Comparative Study of Kakamega and Bungoma Counties, Kenya. *African Journal of Empirical Research*, 6 (2) 2025, pp. 412-420 https://ajernet.net.
- Ogenga, J. O., Ngaira, J. K. W., & **Mugalavai**, **E. M.** (2025). Beyond corrective? An assessment of compensatory disaster risk management approach for food security in the context of climate change in Siaya County, Kenya. *African Quarterly Social Science Review*, 2(2), 285–293. https://doi.org/10.51867/AQSSR.2.2.24

4. Noah Eledi Kiguhi, Wekulo Saidi Fwamba, **Edward M. Mugalavai** (2025). Impacts of Rainfall Variability on Maize Production in Tongaren Sub-County, Bungoma County, Kenya. African Journal of Empirical Research, 6 (1) 2025, pp. 295-313, https://ajernet.net 5. Dennis O. Otwori, Edward M. Mugalavai, Samuel S. China (2024). Influence of Climate Variability on Food Security in Nyamira County, Kenya. Journal of the Kenya National Commission for UNESCO, Kenya National Commission for UNESCO is ISO 9001:2015 Certified, 2958-7999, Vol. 5 (1) 2024, https://doi.org/10.62049/jkncu.v5i1.163. 6. Dennis O. Otwori, Edward M. Mugalavai, Samuel S. China (2024). Assessing Climate-Smart Agriculture Practices for Enhanced Food Security in Nyamira County, Kenya: A Scientific Perspective. Journal of the Kenya National Commission for UNESCO, Kenya National Commission for UNESCO is ISO 9001:2015 Certified, 2958-7999, Vol. 5 (1) 2024 https://doi.org/10.62049/jkncu.v5i1.161. 7. BK Mwendwa, EM Mugalavai, SS China (2024). Assessing the Impact of Land Fragmentation on Agricultural Productivity and Rural Development in Vihiga County, Kenya, African Journal of Empirical Research, Vol. 5 (Iss. 3) 2024, pp. 1339-1350, https://ajernet.net. Mudekhere, Stephen Muchaki, Mugalavai, Edward Musungu, Nabiswa, Ferdinand 8. Makhanu (2024). Nexus between Indigenous Knowledge Systems and Adaptation to Climate Change Strategies by Farmers in Kajiado County, Kenya. Vol. 5 (Iss. 2) 2024, pp. 843-858 African Journal of Empirical Research, https://ajernet.net ISSN 2709-2607. 9. Douglas Atamba Miima, Edward Musungu Mugalavai, Jacob W. Wakhungu (2023). Freshwater Aquaculture and Household Performance in Busia County, Kenya. Vol. 4 (2) 2023, pp. 1071-1081, African Journal of Empirical Research https://ajernet.net, ISSN 2709-2607 10. Stephen Muchaki Mudekhere, Edward Musungu Mugalavai, Ferdinand M. Nabiswa (2023). Indigenous knowledge factors influencing farmers' uptake of climate change adaptation strategies in Kajiado County, Kenya. Journal of Water and Climate Change. DOI: https://doi.org/10.2166/wcc.2023.025 11. Agnes Kalekye Kithiki, Edward Musungu Mugalavai, Samuel Soita China (2023). Assessing the Level of Community Resilience to Drought in Kitui County, Kenya, International Journal of Disaster Response and Emergency Management (IJDREM), Volume 6 • Issue 1, http://creativecommons.org/licenses/by/4.0/, DOI: 10.4018/IJDREM.335480 12. Agnes K. Kithiki, Edward M. Mugalavai & Samuel S. China (2023). Evaluation of Strategic Options for Enhancing Community Resilience to Drought in Kitui County, Kenya. The Cradle of Knowledge: African Journal of Educational and Social Science Research Volume 11, No.4 ISSN 2304-2885-p, 2617-7315-e https://dx.doi.org/10.4314/ajessr.v11i4. 13. Mogaito, S.M., Mugalavai, E.M., Muyekho, E.N., (2023). Policy and financing interventions supporting community managed drought resilience strategies. A case of Marsabit County, Kenya. Nairobi Journal of Humanities and Social Sciences, 7(2), https://doi.org/10.58256/xaaf4r74. 14. Opilo Betty Nasambu and Edward Mugalavai (2023). Strategies for Mitigating Flood Risks in Western Region, Kenya. African Journal of Empirical Research, Vol. 4 (Iss. 2) 2023, pp.

Lolemtum J.T, C.K. K. Gachene, A. A. Ali, E.M. Mugalavai and Willy Kiplagat (2023). Impacts of

Namenya Daniel Naburi, **Edward M. Mugalavai**, Kaleb Mwendwa, Gilbert Ouma, Clinton

Ouma. (2022). Dryland Pastoralism Climate Landscape and Food Security in the Suam River

Climate Change on Pastoralist Livestock Production System in West Pokot County, Kenya. *International Journal of Research and innovation in social science* (IJRISS) ISSN No. 2454-6186

Doi: 10.477721 IJRISS, www.rsisinternational.org, Volume VII Issue 1 January 2023.

1063-1070, https://ajernet.net. ISSN 2709-2607

15.

16.

|         | Basin of Kenya. American Journal of Climate Change, 2022, 11, 173-196   |
|---------|---|
|         | https://www.scirp.org/journal/ajcc ISSN Online: 2167-9509 ISSN Print: 2167-9495.  |
| 17.     | Mutie Aaron Kimeu, Stanley Oluchiri Omuterema, <b>Edward M. Mugalavai</b> (2022). Effects   |
|         | of Heavy Metals on Water Quality along Kenya Pipeline in Makueni County, Kenya.   |
|         | International Journal of Scientific Research and Innovative Technology Vol. 9 No. 2;  |
| 10      | September 2022, 9-21.   |
| 18.     | Wekesa Jackline, Mutai Charles, Obiri John, <b>Mugalavai Edward</b> . (2021). Influence of  |
|         | Knowledge, Attitudes and Practices on Breast Cancer Early Detection. <i>International Journal</i>   |
|         | of Medical Science and Clinical Invention 8 (11): 5753-5760, 2021   |
| 10      | DOI:10.18535/ijmsci/v8i11.03 <a href="https://valleyinternational.net/index.php/ijmsc">https://valleyinternational.net/index.php/ijmsc</a> .  Mneria Nelson Kiplangat, <b>Edward M. Mugalavai</b> , Silvery B. B. Oteng'I (2021). Human |
| 19.     | Factors Influencing Management of Aircraft Fire Disasters at International Airports in Kenya.   |
|         | International Journal of Scientific Research and Innovative Technology Vol. 8 No. 7;  |
|         | September 2021, 33-46.  |
| 20.     | James M. Oketch, <b>Edward M. Mugalavai</b> and Nicodemus O. Nyandiko (2021).   |
| 20.     | Determinants of Water-funded Projects in Mitigating Water Risks in Vihiga County, Kenya.  |
|         | International Journal of Pathogen Research 6(3): 15-26, 2021; Article no.IJPR.65729 ISSN:   |
|         | 2582-3876.  |
| 21.     | Namenya Daniel Naburi, John Obiri, <b>Edward Mugalavai</b> (2020). Watershed Governance for   |
|         | Food Security in the Sio River Basin: A Paradox of Kenya's Devolution System. <i>Budapest</i>   |
|         | International Research and Critics Institute (BIRCI-Journal) Humanities and Social Sciences   |
|         | · September 2020, DOI: 10.33258/birci.v3i3.1226, 2465-2478.   |
| 22.     | Joseph T. Lolemtum, Edward M. Mugalavai and Moses L. Atupamoi (2020). Using   |
|         | Indigenous Knowledge for Drought Management and Weather Predictions in West Pokot   |
|         | County, Kenya. IOSR Journal of Environmental Science, Toxicology and Food Technology  |
|         | (IOSR-JESTFT) e-ISSN: 2319-2402,p- ISSN: 2319-2399.Volume 14, Issue 8 Ser. I (August  |
|         | 2020), PP 53-61 <u>www.iosrjournals.org</u> .   |
| 23.     | Maurice Manyonge Pepela, Ferdinand Nabiswa and <b>Edward Mugalavai</b> (2019). Household  |
|         | Indigenous Drought Coping and Adaptation Strategies in Baringo County, Kenya. Asian   |
|         | Journal of Environment & Ecology, 10(4): 1-9, 2019; Article. AJEE.52017   |
|         | ISSN: 2456-690X.  |
| 24.     | Maurice Manyonge Pepela, Ferdinand Nabiswa and <b>Edward Mugalavai</b> (2019). Livelihoods  |
|         | Vulnerability to Climate Change Among Households in Baringo County, Kenya.  |
|         | International Journal of Disaster Response and Emergency Management,  |
| 2.5     | Volume 2 • Issue 2 • July-December 2019, 51-63.   |
| 25.     | Maurice Manyonge Pepela, <b>Edward Mugalavai</b> and Ferdinand Nabiswa (2019). Household  |
|         | Vulnerability to Climate Change among the Residents of Baringo County, Kenya.   |
|         | International Journal of Innovative Research & Development, ISSN 2278 – 0211 (Online)   |
| 26      | Doi No.: 10.24940/ijird/2019/v8/i9/SEP19045, 220-229.   |
| 26.     | Adan Abass Tawane, <b>Edward Musungu Mugalavai (2019).</b> Household Level of   |
|         | Preparedness to Climate Change in Mandera County, Kenya. <i>American Journal of Earth</i>   |
|         | Sciences, 2019; 6(2): 36-63; http://www.openscienceonline.com/journal/ajes, ISSN: 2381-4624 (Print); ISSN: 2381-4632 (Online)   |
| 27.     | Otwori Dennis Otwori, Stanley Oluchiri Omuterema, Edward M. Mugalavai (2019). Energy  |
| 21.     | Saving Strategies for Enhanced Efficiency among Urban Households in Kakamega, Kenya.  |
|         | International Journal of Scientific Research and Innovative Technology, Vol. 6 No. 8;   |
|         | September 2019; 47-61.  |
| <u></u> | Supremoer 2017, 17 01.  |

- 28. **Japheth. O. Ogenga and Edward. M. Mugalavai** (2019). Evaluation of the Mitigation Strategies for Dry Spell impacts on Livestock Production in Homa Bay County, Kenya. *International Journal of Scientific and Research Publications*, Volume 9, Issue 9, September 2019 162 ISSN 2250-3153; 162-166.
- 29. Moses Edapal Nawoton, Ferdinand Nabiswa, **Edward Mugalavai** (2019). Strategies Supporting Institutionalization of Cash and Voucher Initiatives in Humanitarian Responses in Turkana County, Kenya. *International Journal of Innovative Research & Development*, DOI No.: 10.24940/ijird/2019/v8/i11/NOV19022, Vol 8 Issue 11, 124-131.
- 30. Godfrey Engor, Ferdinand Nabiswa, **Edward Mugalavai** (2019). Evaluation of Effectiveness of Early Recovery Strategies in Use against Drought in Turkana Central Sub County, Kenya. *International Journal of Innovative Research & Development*, DOI No.: 10.24940/ijird/2019/v8/i11/NOV19002, Vol 8 Issue 11, 1-7
- 31. Francis Kamau Muthoni, Vincent Omondi Odongo, Justus Ochieng, **Edward M. Mugalavai**, Sixbert Kajumula Mourice, Irmgard Hoesche-Zeledon, Mulundu Mwila, Mateete Bekunda (2018). Long-term spatial-temporal trends and variability of rainfall over Eastern and Southern Africa. *Theoretical and Applied Climatology:*https://doi.org/10.1007/s00704-018-2712-1
- Namenya Daniel Naburi, **Edward M. Mugalavai** and John F. Obiri (2018). Determinants of Watershed Governance and Food Security among Households' In the Lower Sio River Watershed, Busia County, Kenya. *International Journal of Agriculture, Environment and Bioresearch Vol. 3, No. 05; 2018 ISSN: 2456-8643, 184-209.*
- 33. Adan Abass Tawane, **Edward M. Mugalavai** (2018). Evaluation of Mitigation Strategies for Climate Change Adaptation in Mandera County, Kenya. *Int J S Res Sci. Tech.* 2018 July-August-201; 4(9): 163-184.
- 34. Namenya Daniel Naburi; John F. Obiri; **Edward M. Mugalavai** (2018). Households' Perceptions on Rural Watershed Governance and Food Security in the Lower Sio River Watershed, Busia County, Kenya. *International Journal of Agriculture and Environmental Research* ISSN: 2455-6939 Volume: 04, Issue: 04 "July-August 2018", 952-976.
- 35. Japheth O. Ogenga, **Edward M. Mugalavai** and Nicodemus O. Nyandiko (2018). Impact of Rainfall Variability on Food production under Rainfed Agriculture in Homa Bay County, Kenya. *International Journal of Scientific and Research Publications, Volume 8, Issue 8, August 2018 857 ISSN 2250-3153; 857-879.*
- 36. Kennedy O. Ongeko, **Edward M. Mugalavai** and John F. Obiri. (2017). Evaluation of Community Adaptation to Climate Change in Homa Bay County Kenya. *International Journal of Scientific and Research Publications, Volume 7, Issue 8, August 2017 452 ISSN 2250-3153*: 680-688
- 37. Silas O. Rakama, and John F. Obiri and **Edward M. Mugalavai** (2017). Evaluation of land use change pattern of Kajulu-Riat hill peri-urban area near Kisumu City Kenya. *International Journal of Scientific Research and Innovative Technology ISSN: 2313-3759 Vol. 4No. 7: July 2017*: 42-52
- 38. Joseph T. Lolemtum, **Edward M. Mugalavai** and John A. Obiri (2017). Impact of Drought on Food Security in West Pokot County, Kenya. *International Journal of Scientific and Research Publications, Volume 7, Issue 6, June 2017 742 ISSN 2250-3153*: 742-750.
- 39. Silas O. Rakama, **Edward M. Mugalavai** and John F. Obiri (2017). An Evaluation of Conservation Strategies on Plant Biodiversity in a Peri-Urban Set-Up of Kajulu-Riat Hill, Kisumu City, Kenya. *International Journal of Scientific and Research Publications, Volume* 7, Issue 7, July 2017 452 ISSN 2250-3153: 452-462

- 40. Cyrus Asena, **Edward M. Mugalavai** and Nicodemus O. Nyandiko (2017). Enhancing Farmers Resilience to Climate Variability through Agroforestry Practices in Vihiga Subcounty, Kenya. *International Journal of Scientific Research and Innovative Technology ISSN:* 2313-3759 Vol. 4No. 7: July 2017: 74-88
- 41. **Edward M. Mugalavai** and Emmanuel C. Kipkorir (2015). Robust method for estimating grain yield in western Kenya during the growing seasons. *Journal of Water and Climate Change*, **6** (2): 313-324.
- 42. **Edward M. Mugalavai** and Emmanuel C. Kipkorir (2013). Assessing the Potential of Maize Growing Seasons for Western Kenya Using Agro-Climatic Indices. *International Journal of Disaster Management and Risk Reduction (IJDMRR)*, **5** (1): 53-73.
- 43. Kipkorir, E.C., **Mugalavai, E. M.**, and Songok, C.K. (2012). Integrating Indigenous and Scientific Knowledge Systems on Seasonal Rainfall Characteristics Prediction and Utilization, *Kenya J. Sci. Tech. Inn.* 2: 19-29.
- 44. Cheserek, G.J., Kipkorir E.C., **Mugalavai E.M.**, and Songok C.K. (2012). Analysis of Drinking Water Access and Sanitation Levels of Irrigation Rice Producing Households in Western Kenya. *Journal of Emerging Trends in Engineering and Applied Sciences* (JETEAS) **3** (3): 531-539
- 45. Cheserek G.J. Kipkorir E.C., Webi P.O.W., Daudi F. Kiptoo K.K.G., **Mugalavai E.M.**, Kiplagat L.K, and Songok C.K. (2012). Assessment of Farmers Challenges with Rice Productivity in Selected Irrigation Schemes, Western Kenya. *International Journal of Current Research* 4 (8), pp.025-033.
- 46. Julius M. Huho and **Edward M. Mugalavai**. (2010). The effects of droughts on food security in Kenya. *The International Journal of Climate Change; Impacts and Responses*. **2(2)** 62-72.
- 47. **Edward M. Mugalavai**, Emmanuel C. Kipkorir, Dirk Raes, Manchiraju S. Rao (2008): Analysis of Rainfall Onset, Cessation and Length of growing season for western Kenya. *Agricultural and Forest Meteorology*, **148**: 1123-1135.
- 48. **Edward M. Mugalavai**, Emmanuel C. Kipkorir, Manchiraju S. Rao, Stanley O. Omuterema. (2008): Evaluation of criteria for use in determining growing season onset dates in the Kenyan Lake Victoria Basin: International *Journal for Disaster Management and Risk Reduction (IJDMRR)* **1(2)** 87-106.
- 49. Emmanuel C. Kipkorir, Dirk Raes, Rosemary J. Bargerei and **Edward M. Mugalavai** (2007): Evaluation of two risk assessment methods for sowing maize in Kenya. *Agricultural and Forest Meteorology*. **144**: 193-199.

## XI. CHAPTERS PUBLISHED IN BOOKS

- 1. A. Obadina, **E.M. Mugalavai**, J.A.F. Obiri, L. Oyinlola, & I. Olutu (2017). Vulnerability of Fresh cut Vegetables and Ornamental Plants to Climate Change. *In: Agricultural Risk Management in Africa-A contextualized manual for tertiary institutions and development practitioners*. Eds. J.A.F. Obiri., Driver, M.F., Onyekwelu, J.C., Akpoko J.G., Ramasawmy, B., and Drame'-Yaye, A. ANAFE Nairobi, ISBN: 978929059 404 8, pp 273-285.
- 2. Songok, C.K., E.C., Kipkorir, **Mugalavai, E.M.**, Ngweno, C., and Kwonyike, A.K. (2011). Improving agro-pastoralist involvement in risk reduction policy formulation in Kenya. In Leal Filho, W. (ed.) (2011) "Experiences of Climate Change Adaptation in Africa". Springer-Verlag, Berlin (55-68). ISSN: 16102010; ISBN: 978-3-642-22314-3
- 3. Songok, C.K., E.C., Kipkorir, and **Mugalavai, E.M.** (2011). Integrating indigenous knowledge in climate change adaptation in North Rift, Kenya. In Leal Filho, W. (ed.) (2011) "Experiences of Climate Change Adaptation in Africa". Springer-Verlag, Berlin. (69-95).

ISSN: 16102010; ISBN: 978-3-642-22314-3

4. Kipkorir, E.C., **Mugalavai**, **E.M.**, and Bargerei, R.J.(2011). Application of AquaCrop Model for Within-Season Prediction of Maize Yields In: UNW-DPC Publication Series No.7; Capacity Development for Farm Management Strategies to Improve Crop-Water Productivity using Aqua Crop: Lessons Learned. Editors: Reza Ardakanian, Teresa Walter. (Food and Agriculture Organization of the United Nations (FAO).

## XII. CHAPTERS PUBLISHED IN PEER REVIEWED PROCEEDINGS

- 1. **Mugalavai, E. M.**, Kipkorir, E.C., Songok, C. K. & Webi, P.O.W. Using system of rice intensification practices to mitigate climate change effects on rice production in Western Kenya. *RUFORUM Working Document Series* (ISSN 1607-9345), 2018, No. 17 (1): 357-366. Available from <a href="http://repository.ruforum.org">http://repository.ruforum.org</a>
- 2. Ogenga, J.O. & **Mugalavai**, **E.M.** (2018). Analysis of strategies used in mitigating dry spells occurrences on rainfed agriculture in Homa Bay County, Kenya. *RUFORUM Working Document Series* (ISSN 1607-9345), 2018, No. 17 (1): 367-375. Available from <a href="http://repository.ruforum.org">http://repository.ruforum.org</a>
- 3. **Edward M. Mugalavai**, Emmanuel C. Kipkorir & Charles K. Songok (2016). Integrating seasonal climate variability in sustainable agricultural planning of Lake Victoria Basin in Kenya. *In: Proceedings of the conference on Expanding Theoretical and Applied Roles of GIS in a Dynamic Global Environment held at Masinde Muliro University of Science and Technology*, Kakamega, Kenya, 13-14 August 2015: (Paper No. 18) Page 185 199; *ISBN* 978-9966-096-54-8.
- 4. **Mugalavai, E.M.**, Kipkorir, E.C., Songok, C.K. (2012). Evaluation of dry spells during sensitive growth stages for maize crop in Western Kenya. A chapter published in proceedings of the International Conference on Disaster Risk Reduction and Conflict Resolution For Sustainable Development held at Masinde Muliro University of Science Kakamega, Kenya on 18<sup>th</sup>-20<sup>th</sup> July 2012 (pp 329-338). **ISBN: 978-9966-1727-0-9.**
- 5. Kipkorir, E.C., Mugalavai, E.M., Songok, C.K., Webi, P.O.W., Kiptoo, K.K.G., and Daudi, F. (2012). Adapting System of Rice Intensification in West Kenya Irrigation Schemes. A chapter published in proceedings of the International Conference on Disaster Risk Reduction and Conflict Resolution For Sustainable Development held at Masinde Muliro University of Science Kakamega, Kenya on 18<sup>th</sup>-20<sup>th</sup> July 2012 (339-348); ISBN: 978-9966-1727-0-9.
- 6. **Mugalavai E.M.**, Kipkorir E.C. and Rao M.S. (2006). Predicting rainy season potential using growing season onset dates in the Kenyan Lake Victoria. *A chapter published in Proceedings of the International Conference on Disaster Management & Human Security in Africa (DMHSA)held at Bishop Nicholas Stam's Pastoral Centre, Kakamega, Kenya on 11<sup>th</sup> -13<sup>th</sup> October 2006 (pp 148-157); Copyright CDMHA 2006.*

#### XIII. SEMINARS/WORKSHOPS/AWARDS

| S/No | Date                                | Training/Workshops/Awards/Webinar Series   | Place                                       |
|------|-------------------------------------|--|---|
| 1.   | 8 <sup>th</sup><br>November<br>2022 | The Bandit Economy in Kenya Rationale and Impact (Webinar hosted by the Directorate of Research and Postgraduate Support and School of Disaster Management and Humanitarian Assistance-SDMHA); Presentation: <i>The Science of Banditry in Kenya, Ecological &amp; Environmental</i> | Virtual/<br>Masinde<br>Muliro<br>University |

|     |  | Factors (By Dr. Edward Mugalavai-(MMUST) <a href="https://bit.ly/3WQnWYb">https://bit.ly/3WQnWYb</a>   |  |
|-----|--|--|--|
| 2.  | 16 <sup>th</sup><br>September<br>2022                              | Harnessing indigenous knowledge for Disaster Risk Management in the 21st Century (Webinar hosted by the Institute of Indigenous Knowledge and Cultural Studies (IIKCS) and School of Disaster Management and Humanitarian Assistance-SDMHA); Presentation: Mitigation of Climate Change Challenges Using Indigenous Early Warning Systems by Dr. Edward Mugalavai- MMUST) https://bit.ly/3xy1OXu | Virtual/<br>Masinde<br>Muliro<br>University  |
| 3.  | October 2022 Disaster Risk Reduction and the International Day for |  | Masinde<br>Muliro<br>University              |
| 4.  | 28 <sup>th</sup> – 31 <sup>st</sup><br>March 2022                  | Kaleb A. Mwendwa (MMUST Project Lead & Co-Investigator), <b>Dr. Edward Mugalavai (Project Co-Investigator)</b> Dr. Daniel Namenya Naburi (Project Post-Doc) and Prof. Peter Bukhala (Director, Research and Postgraduate support), participated in the BRECcIA Celebratory & Closure workshop held in Ghana. https://bit.ly/3rd2BKl  | Labadi<br>Beach<br>Hotel,<br>Accra,<br>Ghana |
| 5.  | 7 <sup>th</sup> – 10 <sup>th</sup><br>March 2022                   | Participated in Invasive Species Large Research Project (LRP) Data Analysis workshop held in Malawi as part of Building Research Capacity for Sustainable Water and Food Security in Sub-Saharan Africa (BRECcIA) Project-UK Research and Innovation (UKRI)-Global Challenges Research Fund (GCRF).  | Zomba-<br>Lilongwe,<br>Malawi                |
| 6.  | 14 <sup>th</sup> – 15 <sup>th</sup><br>October<br>2021             | Curriculum Review Workshop   | Bishop<br>Stam<br>Pastoral<br>Centre         |
| 7.  | July-October<br>2020   | Quality Assurance in Higher and Tertiary Education<br>Workshops, organized by Association of African<br>Universities (AAU).  | Virtual<br>Training                          |
| 8.  | 15 <sup>th</sup> June-13<br>July 2020                              | Attended the virtual onsite workshop run by BRECcIA and SARIMA over a period of five weeks, held from 15 June to 13 July on research grants and management presented by the Southern African Research and Innovation Management Association (SARIMA)   | Virtual<br>Training                          |
| 9.  | 11 <sup>th</sup> -13 <sup>th</sup><br>March 2020                   | Training of Cost Centre Heads on Financial and Procurement Management.   | Kisumu<br>Hotel<br>Kisumu<br>City            |
| 10. | 4 <sup>th</sup> March-6 <sup>th</sup><br>March 2020                | Review of short courses curriculum workshop (Training)   | Bishop<br>Stam<br>Pastoral                   |

|     |   |   | Centre     |
|-----|---|---|------------|
| 11. | 13 <sup>th</sup> Feb                    | Participated in Researcher Connect Training Organized by    | Acacia     |
|     | 2019                                    | the British Council on the following modules: Foundation;   | Hotel      |
|     |   | persuasive proposals; Abstracts and Academic                | Kisumu     |
|     |   | collaboration.  |            |
| 12. | 22 <sup>nd</sup> August                 | Participated in a training on Transition, Change and Impact | Masinde    |
|     | 2018                                    | Awareness Training for Implementers                         | Muliro     |
|     |   |   | University |
| 13. | 8 <sup>th</sup> June 2018               | Participated in a Field Skills Training                     | Kakamega   |
|     |   |   | Field Fire |
|     | 4 4                                     |   | Training   |
|     | 26 <sup>th</sup> -28 <sup>th</sup>      | Strategic Leadership and Management of higher Education     | Masinde    |
| 14. | March 2018                              | Institutions.   | Muliro     |
|     | 4 4                                     |   | University |
| 15. | 12 <sup>th</sup> to 15 <sup>th</sup>    | Organized Careers week Event (SDMHA Chapter)                | Masinde    |
|     | February                                |   | Muliro     |
|     | 2018                                    |   | University |
| 16. | 13 <sup>th</sup> to 14 <sup>th</sup>    | Participated in an International Conference entitled:       | Masinde    |
|     | August 2015                             | Expanding Theoretical and Applied Roles of GIS in a         | Muliro     |
|     | 1 41-                                   | Dynamic Global Environment.                                 | University |
| 17. | 3 <sup>rd</sup> -6 <sup>th</sup>        | Participated in 2015/2016 MMUST performance contract        | Masinde    |
|     | November                                | negotiation and vetting.                                    | Muliro     |
|     | 2015                                    |   | University |
| 18. | 22 <sup>nd</sup> Oct.                   | Undertook training on performance contracting organized     | Masinde    |
|     | 2015                                    | by MMUST.   | Muliro     |
|     | a and a oth                             |   | University |
| 19. | 23 <sup>rd</sup> -24 <sup>th</sup>      | Participated in the University Multiplication Training      | Masinde    |
|     | January,                                | Workshop on Curriculum Development and Review for           | Muliro     |
|     | 2014                                    | Public Universities in Kenya: Implementation and            | University |
| 20  | 10th 20th T 1                           | Accreditation.  | 3.6 . 1    |
| 20. | 18 <sup>th</sup> -20 <sup>th</sup> July | Participated in organizing for the International Conference | Masinde    |
|     | 2012                                    | on Disaster Risk Reduction and Conflict Resolution for      | Muliro     |
| 21  | 19 <sup>th</sup>                        | Sustainable Development.                                    | University |
| 21. |   | Received the long service award for providing distinguished | Moi        |
|     | September 2007                          | service (18 years) to Moi University.                       | University |
| 22. | 21st June-9th                           | Undertook a certificate course on Environmental Impact      | Moi        |
|     | July 2004                               | Assessment (EIA).   | University |
| 23. | 5 <sup>th</sup> June 2002               | Participated in celebrations of the World Environment Day   | Kakamega   |
|     |   | organized by the District Environment Management            |            |
|     |   | Committee (Kakamega District).                              |            |

# XIV. PROFESSIONAL REGISTRATION, RECOGNITION AND MEMBERSHIP

| 1. | Registered by NEMA as Lead Expert for Environmental Impact Assessment/Audit-Reg.   |
|----|--|
|    | No. 3005.  |
| 2. | Registered Member of Ecological Society for Eastern Africa (ECSEA)-Reg. No. 0280   |
| 3. | Registered Member of Environment Institute of Kenya (EIK)                          |
| 4. | Registered Member of Association of Disaster Management and Conflict Resolution of |
|    | Kenya (ADMCRK)   |

## XV. JOURNAL EDITOR

- 1. Editor-in-Chief, International Journal of Disaster Management and Risk Reduction (JDMRR)
- 2. Member Editorial Board for Journal of Tourism, Hospitality and Sports (JTHS)

## XVI. JOURNAL REVIEWER

| S/No. | Journal Name   | Paper Reviewed   | Remark    |
|-------|--|--|-----------|
| 1.    | Agriculture<br>and Forest<br>Meteorology<br>(Elsevier<br>Series)   | Ms. Ref. No.: AGRFORMET-D-19-00074 Title: Do indigenous forecasts and scientific forecasts influence arable farmers' and pastoralists' estimation of onset and cessation of rains? Empirical evidence from Rwenzori region, Western Uganda Agricultural and Forest Meteorology | Published |
| 2.    | Theoretical<br>and Applied<br>Climatology<br>(Springer-<br>Series) | Empirical analysis of dry spells during growing season with respect to maize crop in Nigeria   | Published |

## XVII. CONSULTANCIES

| 1. | Ngaira Josephine & Mugalavai Edward (2023). Project name: Building Inclusive Climate       |  |  |  |
|----|--|--|--|--|
|    | Change Resilience. Training Title: In-depth Training for County Climate advocacy           |  |  |  |
|    | champions Region to Visit: Bungoma, North Rift Region Date of Visit: 21st to 25th August   |  |  |  |
|    | 2023, Designed Training Manual and Trained over 250 (TOTs) as Climate Change               |  |  |  |
|    | Champions for Bungoma County.  |  |  |  |
| 2. | Herbert Chamwada, Stanley O. Omuterema, Edward M. Neyole, John F. Obiri, Edward M.         |  |  |  |
|    | Mugalavai. (2016). Offered Consultancy on Proposed Classrooms Phase II, Office Block,      |  |  |  |
|    | Anatomy Laboratory and Foot Bridge. Prepared for Masinde Muliro University of Science      |  |  |  |
|    | and Technology (MMUST) P. O. Box 190 – 50100 Kakamega, Kenya.                              |  |  |  |
| 3. | Edward M. Mugalavai, John F. Obiri, Stanley O. Omuterema, (2016). Offered                  |  |  |  |
|    | consultancy on Performance Audit Services for WKCDD & FMP in Western Kenya                 |  |  |  |
|    | <b>Projects</b> covering Siaya, Vihiga, Kakamega, Busia, Bungoma and Trans Nzoia Counties. |  |  |  |
| 4. | Emmanuel C. Kipkorir, <b>Edward M. Mugalavai</b> & Charles K. Songok: (2016). Offered to   |  |  |  |
|    | Consultancy Services Unilever Tea Ltd on Weather and Crop Modeling for Improved            |  |  |  |
|    | Agricultural Planning at Unilever Tea Kenya Limited, Kericho (January-June 2016)           |  |  |  |
| 5. | Edward M. Mugalavai, Obiri, J.F., Omuterema, S.O, Wakhungu, J., Oteng'i, S.B.B,            |  |  |  |
|    | Otsianda, P.D. (2014). Environmental Impact Assessment Project Report for the Proposed     |  |  |  |

- Budalang'i Disaster Management and Training Centre. Prepared for Masinde Muliro University of Science and Technology (MMUST), November, 2014

  6. Edward M. Mugalayai, Denis M. Masika (2014), Environmental Impact Assessment
- 6. **Edward M. Mugalavai,** Denis M. Masika (2014). Environmental Impact Assessment (EIA) Project Report for Construction of Kisieli Fish Pond under Maragoli Natural Resource Users Association (WRUA) in Vihiga County, Submitted to NEMA (April, 2014)
- 7. **Edward M. Mugalavai**, Denis M. Masika (2014). Environmental Impact Assessment (EIA) Project Report for Protection of Viyalo Water Spring, under Maragoli Natural Resource Users Association (WRUA) in Vihiga County, Submitted to NEMA (April, 2014)
- 8. **Edward M. Mugalavai** (2013). Environmental Impact Assessment (EIA) Project Report for Construction and Protection of Six (6) Springs under the Water Resources Management Authority-LCNCA, funded by the **International Development Association (IDA)**. Report submitted to NEMA (March, 2013).

# XVIII. PAPERS PRESENTED AT INTERNATIONAL CONFERENCES/ WORKSHOPS / SYMPOSIA

- Dr. Edward M Mugalavai (2023). Role of Indigenous Knowledge in promoting Pastoralism under the Changing Climate. Paper presented at the 16<sup>th</sup> International Multi-Disciplinary Virtual Conference at Masinde Muliro University of Science and Technology (MMUST), 14<sup>th</sup>-16<sup>th</sup> June, 2023.
- 1. **Dr. Edward Mugalavai (PI)**; Dr. Ferdinand Nabiswa; Dr. Ruth Simiyu and Odhiambo Canon (2021). Determining the Nexus between Covid-19 Pandemic and Teenage Pregnancies in Kakamega and Bungoma Counties of Western Region, Kenya' Paper presented at 1<sup>st</sup> Blended Research Dissemination Conference at Masinde Muliro University of Science and Technology (MMUST) 30-31<sup>st</sup> August, 2021.
- 2. Prof. Frank Matanga (PI), Dr. Ferdinand Nabiswa, **Dr. Edward Mugalavai**, Rev. Dr. Elijah S. Odhiambo, Mr. Peter Otsianda (2021). Assessment of the Impact of Covid-19 Pandemic on Food Security in Kakamega and Bungoma Counties of Western Region, Kenya. Paper presented at 1<sup>st</sup> Blended Research Dissemination Conference at Masinde Muliro University of Science and Technology (MMUST) 30-31<sup>st</sup> August, 2021.
- 3. **Edward M. Mugalavai**, Emmanuel C. Kipkorir, Charles K. Songok and Phanuel O. W. Webi (2018). *Using System of Rice Intensification Practices to Mitigate Climate Change Effects on Rice Production in Western Kenya*. Paper presented at the Regional Universities Forum (RUFORUM) held at KICC Nairobi (Kenya), 22<sup>nd</sup> to 26<sup>th</sup> October 2018.
- 4. J.O. Ogenga and **E.M. Mugalavai** (2018). Analysis of Strategies used in Mitigating Dryspells Occurrences on Rainfed Agriculture in Homa Bay County, Kenya. Paper presented at the Regional Universities Forum (RUFORUM) held at KICC Nairobi (Kenya), 22<sup>nd</sup> to 26<sup>th</sup> October 2018.
- 5. **Edward M. Mugalavai** (2018). Participated in a symposium at International Peace Support Training Centre (IPSTC) on "Enhancing Capacity for Maritime and Infrastructure Disaster Response and Management" as Discussant on: *Youth Participation in Disaster Management: Case of Tana River and Busia Counties* held at New Conference Room, IPSTC Westwood Park Road, Karen on 4<sup>th</sup> October 2018.
- 6. **Mugalavai E.M.**; Kipkorir E.C.; Songok C.K. (2015). Integrating seasonal climate variability in sustainable agricultural planning of Lake Victoria Basin in Kenya in Proceedings of the International conference on Expanding Theoretical and Applied Roles of GIS in a Dynamic Global Environment held at Masinde Muliro University of Science and

| Technology, Kakamega, Ken | ya, 13-14 August. 2015. |
|---------------------------|-------------------------|
|---------------------------|-------------------------|

- 7. **Mugalavai, E.M.**, Kipkorir, E.C., Songok, C.K. (2012). Evaluation of dry spells during sensitive growth stages for maize crop in Western Kenya. *A paper presented at the Masinde Muliro University of Science and Technology International Conference on Disaster Risk Reduction and Conflict Resolution for Sustainable Development (18<sup>th</sup>-20<sup>th</sup> July 2012).*
- 8. Kipkorir, E.C., Mugalavai, E.M., Songok, C.K., Webi, P.O.W., Kiptoo, K.K.G., and Daudi, F. (2012). Adapting System of Rice Intensification in West Kenya Irrigation Schemes. A paper presented at the Masinde Muliro University of Science and Technology International Conference on Disaster Risk Reduction and Conflict Resolution for Sustainable Development (18<sup>th</sup>-20<sup>th</sup> July 2012).
- 9. Kipkorir, E.C., **Mugalavai, E.M**., and Bargerei, R.J (2010) Application of AquaCrop model for within-season prediction of grain maize yields. *Presented at a Workshop on "Improving farm management strategies through AquaCrop: Worldwide collection of case studies"*, October 8-9, 2010, Yogyakarta, Indonesia".
- 10. Songok, C.K.\*, Kipkorir, E.C., and **Mugalavai, E.M**. (2010). Integration of indigenous knowledge systems in climate change adaptation and enhancing food security in Nandi and Keiyo districts, kenya. Presented at a conference *organized by the Ecological Society of Eastern Africa* (19<sup>th</sup>-21<sup>st</sup> May 2010) at Multimedia University, Nairobi.
- 11. Songok, C.K.\*, Kipkorir, E.C., **Mugalavai, E.M.,** Kwonyike, A.C., Ng'weno, C. The participation of agro-pastoralists in climate change adaptation and disaster risk reduction policy formulation: A case of Keiyo district, Kenya. Presented at a conference *Organized by the Ecological Society of Eastern Africa* (19<sup>th</sup>-21<sup>st</sup> May 2010) at Multimedia University, Nairobi.
- 12. Kipkorir, E.C.\*, **Mugalavai, E.M.,** Songok, C.K. and Bargerei, R.J. (2009). Linking indigenous and scientific knowledge systems on rainfall onset prediction and utilization. *Presented in the 5<sup>th</sup> Annual Conference (July 2009) Organized by Moi University, Eldoret, Kenya.*
- Omuterema, S.O., Ogada, T P M., **Mugalavai E.M.** and Imbuga, B.M. (2008). Variation of Bagasse Fuel Factors and Flue gas temperature in Bagasse-Based Boiler. *Presented in the 4<sup>th</sup> Annual Conference (29<sup>th</sup> July 2008-1<sup>st</sup> August 2008) Organized by Moi University, Eldoret, Kenya.*
- 14. **Mugalavai E.M.**, Kipkorir E.C. and Rao M.S. (2006). Predicting rainy season potential using growing season onset dates in the Kenyan Lake Victoria Basin: *Presented in the 1st International Conference on Disaster Management and Human Security in Africa* (11th-13th October 2006) organized by CDMHA-Masinde Muliro University of Science and Technology, Kakamega, Kenya.
- 15. **Mugalavai E.M.**, Kipkorir E.C, Rao M.S Evaluation of criteria for use in determining growing season onset dates in the Kenyan Lake Victoria Basin: *Presented in the 2<sup>nd</sup> National Scientific Conference Tom Mboya Labour College Kisumu (17<sup>th</sup>-19<sup>th</sup> October 2005) Organized by Kenya Agricultural Research Institute and Lake Victoria Environmental Management Project.*
- 16. E.C. Kipkorir, M.S. Rao and **E.M. Mugalavai** (2005). RAIN: A model for determination of rainfall growing season parameters: *Presented in the 1<sup>st</sup> Annual Conference* (14<sup>th</sup> -16<sup>th</sup> February, 2005) Organized by Moi University, Eldoret, Kenya.

17. **E.M. Mugalavai** and M.S Rao (2003). Annual rainfall reliability and drought persistence in the Central Rift Valley. *Presented at the Conference on Environmental Research in ASALs* (18<sup>th</sup>-23<sup>rd</sup> August 2003) at Chambai Hotel, Narok, Kenya-Organized by Moi University, School of Environmental Studies in collaboration with University of Amsterdam, Department of Geography and Planning.

## XIX. POST GRADUATE STUDENTS SUPERVISED TO COMPLETION

| S/No | Student name/Title of Study                                   | Reg. No       | Level | Graduated |
|------|---|---------------|-------|-----------|
| 1.   | Japheth Ogenga: Influence of Disaster                         | CDS/H/01-     | PhD   | 2024      |
|      | Risk Management Approaches on Food                            | 53106/2018    |       |           |
|      | Crop Production under the Changing                            |               |       |           |
|      | Climate in Siaya County, Kenya                                |               |       |           |
| 2.   | <b>Denis Otwori:</b> Climate-Smart Agriculture                | CDS/H/01-     | PhD   | 2024      |
|      | and its Implications on Food Security among                   | 54121/2019    |       |           |
|      | Small-Scale Farmers in Nyamira County,                        |               |       |           |
|      | Kenya   |               |       |           |
| 3.   | Oladapotunde Oguntoyinbo: Factors                             | CDS/H/208/11  | PhD   | 2024      |
|      | Contributing to Disaster Risk Reduction in                    |               |       |           |
|      | Transportation of Petroleum Products in Kenya                 |               |       |           |
| 4.   | Agnes Kalekye Kithikii: The Impact of                         | REG. NO:      | PhD   | 2023      |
|      | Humanitarian Aid in Building Community                        | CDS/H/206/14  |       | _0_0      |
|      | Resilience to Drought in Kitui County,                        |               |       |           |
|      | Kenya.  |               |       |           |
| 5.   | Pepela Mourice Manyonge: Efficacy of                          | CDM/H/05/2015 | PhD   | 2019      |
|      | Humanitarian Agency Responses to Climate                      |               |       |           |
|      | Change Coping and Adaptation Strategies in                    |               |       |           |
|      | Baringo County, Kenya.  |               |       |           |
| 6.   | Namenya Daniel Naburi: Watershed                              | CDS/H/01/14   | PhD   | 2018      |
|      | Governance and its Implications on Food                       |               |       |           |
|      | Security in the Lower Sio River Basin Busia                   |               |       |           |
| 7    | County, Kenya.  | CDC/II/02/15  | DI-D  | 2010      |
| 7.   | Adan Abass Tawane: Nexus between                              | CDS/H/03/15   | PhD   | 2018      |
|      | Climate Change and Human Adaptation in Mandera County, Kenya. |               |       |           |
| 8.   | Kennedy Otieno Ongeko: Climate Change                         | CDS/H/23/09   | PhD   | 2017      |
| 0.   | Impacts and its Relation to Community                         | CDS/11/25/07  |       | 2017      |
|      | Knowledge, Risk Perception and Adaptation                     |               |       |           |
|      | Strategies in Homa Bay County, Kenya.                         |               |       |           |
| 9.   | Douglas Atamba Miima: Influence of                            | CDS/G/003/    | MSc.  | 2023      |
|      | Freshwater Aquaculture on the                                 | 2012          |       |           |
|      | household Socioeconomic                                       |               |       |           |
|      | Performance in Busia County, Kenya                            |               |       |           |
| 10.  | Magoma Shalom Mogaito: Community                              | CDM/G/007/15  | MSc.  | 2023      |
|      | Managed Disaster Risk Reduction Strategies                    |               |       |           |
|      | influencing Drought Resilience in Marsabit                    |               |       |           |

|     | County, Kenya.                               |                    |      |      |
|-----|--|--------------------|------|------|
| 11. | Mutie Aaron Kimeu: Effects of Terrestrial    | CDS/G/215/14       | MSc. | 2022 |
|     | Oil Spills on Water Quality Along Kenya      |                    |      |      |
|     | Pipeline in Makueni County, Kenya            |                    |      |      |
| 12. | Nelson Kiplang'at Mneria: Factors            | CDS/G/04-          | MSc. | 2022 |
|     | Influencing Management of Aircraft Fire      | 56783/2017         |      |      |
|     | Disasters At International Airports in Kenya |                    |      |      |
| 13. | Oketch James Mundia: Determinants of         | CDS/G/05/12        | MSc. | 2021 |
|     | Funded Water Projects on Reducing Water      |                    |      |      |
|     | Risks in Vihiga County, Kenya.               |                    |      |      |
| 14. | Moses Edapal Nawoton: Assessment of          | REG. NO:           | MSc. | 2020 |
|     | Cash Coordination on Efficacy of Cash        | CDM/G/02/15        |      |      |
|     | Transfer Programming In Turkana County,      |                    |      |      |
|     | Kenya.                                       |                    |      |      |
| 15. | Engor Godfrey: Drought Early Recovery        | CDM/G/04/13        | MSc. | 2020 |
|     | Strategies Influencing Sustainable           |                    |      |      |
|     | Livelihood Options among Households in       |                    |      |      |
|     | Turkana County, Kenya.                       |                    |      |      |
| 16. | Otwori Denis Otwori: Evaluation of           | CDS/G/01/2016      | MSc. | 2019 |
|     | Renewable Energy Utilization Among           |                    |      |      |
|     | Households in Kakamega Town, Kenya.          | GD G (G (          | 3.50 |      |
| 17. | Cyrus Asena: Impact of Agro-Forestry         | CDS/G/27/09        | MSc. | 2018 |
|     | Practices on Resilience to Climate           |                    |      |      |
|     | Variability among Farmers in Vihiga Sub-     |                    |      |      |
| 1.0 | County, Kenya.                               | GD G /TT /0.1 /1.4 | 3.50 | 2010 |
| 18. | Japheth Omule Ogenga: Mitigation             | CDS/H/01/14        | MSc. | 2018 |
|     | Strategies for Dry Spells Occurence on       |                    |      |      |
|     | Rainfed Agriculture in Homa Bay County,      |                    |      |      |
| 10  | Kenya.                                       | CDC/C/04/14        | 1.40 | 2017 |
| 19. | Silas Omondi Rakama: Land Use Change         | CDS/G/04/14        | MSc. | 2017 |
|     | and Conservation of Plant Biodiversity in    |                    |      |      |
| 20  | Kisumu City Kenya.                           | CDM/C/02/14        | Man  | 2017 |
| 20. | Lolemtum Joseph Timu:                        | CDM/G/02/14        | Msc. | 2017 |
|     | Assessment of Drought                        |                    |      |      |
|     | Management Strategies for                    |                    |      |      |
|     | Enhanced Food. Security in West              |                    |      |      |
|     | Pokot County, Kenya.                         |                    |      |      |

# XX. ONGOING POST GRADUATE STUDENTS SUPERVISION

| S/No | Student name/Title of Study                 | Reg. No      | Level | Graduated |
|------|---|--------------|-------|-----------|
| 1.   | Mudekhere: Farmers' Indigenous              | CDM/H/01/549 | PhD   | Ongoing   |
|      | Knowledge Practices Influencing Uptake of   | 46/2017      |       |           |
|      | Climate Change Adaptation Strategies in     |              |       |           |
|      | Kajiado County, Kenya                       |              |       |           |
| 2.   | Kaleb Mwendwa: Influence of Socio-          | CDS/H/01/08  | PhD   | Ongoing   |
|      | Ecological Factors on Resilience to Climate |              |       |           |
|      | Change induced Food and Water insecurity in |              |       |           |

|    | Turkana County, Kenya                         |              |      |         |
|----|---|--------------|------|---------|
| 3. | John Mudegu: Farmers' Climate Knowledge       | CDS/H/206/11 | PhD  | Ongoing |
|    | and Climate Change Adaptation for Crop        |              |      |         |
|    | Production in Makueni County                  |              |      |         |
| 4. | Bonface Kibisu Mwendwa:                       | CDS/G/04-    | MSc, | Ongoing |
|    | Influence of Land Fragmentation on Farm       | 56959/2017   |      |         |
|    | Productivity in Vihiga County, Kenya.         |              |      |         |
| 5. | Ouya Dan Obiero: Role of Community            | CDS/G/206/14 | MSc. | Ongoing |
|    | Participation in Post-Disaster Reconstruction |              |      |         |
|    | of Selected Informal Settlements in Nairobi   |              |      |         |
|    | County- Kenya                                 |              |      |         |

# XXI. THESES EXAMINED

| S/No | Student name/Title of Study  | Reg. No                            | Level |
|------|--|------------------------------------|-------|
| 1.   | Opilo Betty Nasimiyu (2023). Impact of Sustainable Land<br>Management Technologies on Flood Risk Reduction in western<br>Region, Kenya                                 | CDS/H/01-<br>53874/2019            | PhD   |
| 2.   | <b>Gregory Wafula Nalianya</b> (2021) Influence of Climate Change and Variability on Smallholder Dairy Cattle Herd Productivity in Bungoma County, Kenya               | CDS/H/205/11                       | PhD   |
| 3.   | <b>Ernest Othieno Odwori</b> (2019). Climate Change and Water Supply in Nzoia River Basin, Kenya   | CDS/LH/01/14                       | PhD   |
| 4.   | <b>Ogara Rose Shieunda:</b> Spatial and Temporal Assessment of Health Risks from Heavy Metal Contamination in River Sosiani Catchment, Kenya.                          | REG NO:<br>CDP/H/04/012            | PhD   |
| 5.   | Martin Ndiwa Talian: Evaluation of the effectiveness of mitigation measures in environmental impact assessment for Urban projects in Kisumu city.                      | REG NO.<br>CDS/H/16/06             | PhD   |
| 6.   | <b>Karuri Thiongo</b> : Farmers coping strategies to drought and their implications to agricultural production in Machakos County, Kenya.                              | REG. NO.<br>CDS/H/12/09            | PhD   |
| 7.   | Ochenje Catherine Ondola: Evaluation of workplace disasters, risk reduction programs and intervention strategies for factory employees in Eldoret municipality, Kenya. | REG. NO.<br>CDM/H/11/10            | PhD   |
| 8.   | Miima Winstone Atamba: Modeling the Impacts of Climate Variability on Discharge of the Upper River Yala Basin, Kenya.  | REG NO.<br>CCA/G/01-<br>53990/2019 | MSc.  |
| 9.   | Maklago Stephen Oduma: Effects of lake victoria water vessel accidents on the social economic development of households in Mbita Sub county Homa Bay county, Kenya     | REG. NO<br>CDM/G/01-<br>58009/2016 | MSc.  |
| 10.  | Justus Wersongur Owino (2023): Simulating Canal<br>Conveyance Efficiency for Ahero Irrigation Scheme using<br>HEC-RAS Model  | <b>REG. NO.</b> CWR/G/03/2015      | MSc.  |
| 11.  | Emily Nasimiyu Kotiano (2023). Factors influencing students' retention in primary and secondary schools in Kakamega Municipality, Kakamega County.                     | GEO/G/04/2016                      | MSc.  |

|     |   | _               |        |
|-----|---|-----------------|--------|
| 12. | <b>Sahal Hassan Abdi</b> (2023). Nexus between selected Faith-Based Organizations Initiatives and Drought Response in | CDM/G/03/2015   | MSc.   |
|     | Garissa County, Kenya.  |                 |        |
| 13. | Nasong'o Nanjala Julita (2023). The Economic Challenges   | GEO/G/08/2016   | MSc.   |
| 13. | Facing Small-Scale Sugarcane Farmers in Malava Sub county,  | GEO/ G/00/2010  | Wisc.  |
|     | Kakamega County   |                 |        |
| 14. | Reggisvale Alwang'a (2022). The Impact of Artisanal and   | GEO/G/01-       | MSc.   |
| 14. | Small scale Gold Mining on the Environment in Kakamega  | 55062/2017      | MISC.  |
|     |   | 33002/2017      |        |
| 1.5 | south Sub County, Kakamega County, Kenya  | GD G /G /00 /10 | 3.40   |
| 15. | Nicholas Kipchumba Kemboi (2022). Influence of Land Use   | CDS/G/02/13     | MSc.   |
|     | on the occurrence of Landslides in Mount Elgon Sub County   |                 |        |
|     | Kenya   |                 |        |
| 16. | Aliseba Akinyi Waga (2022). Effect of Climate Resilient   | CDM/G/201/12    | MSc.   |
|     | Agriculture on Food Security in Kitui County, Kenya.  |                 |        |
| 17. | Winnie Chelangat (2022). Adaptive Strategies to Seasonal  | GEO/G/01-       | MSc.   |
|     | Drought Effects on Small Scale Crop Production in Kakamega  | 52811/2018      |        |
|     | South Sub-county, Kakamega County   |                 |        |
| 18. | Phillip Mutambi Okang'a (2022). The Socio-Economic and  | GEO/G/07/2016   | MSc.   |
|     | Environmental Implications of Commercializing Public  |                 |        |
|     | Toilets in Kakamega Town  |                 |        |
| 19. | Kileteny Timothy: Influence of Livelihoods on Household   | REG NO:         | MSc.   |
|     | Food Security in Pastoral Areas of Narok County, Kenya  | CDS/G/07/07     |        |
| 20. | Ngeny Joseph Kimutai: Contribution of Public Participation  | REG. NO.        | MSc.   |
|     | to Environmental Conservation in Kakamega County, Kenya   | CDS/G/12/10)    | 1.1200 |
| 21. | Lucas C. Esekon: Perception of the Households on  | REG NO:         | MSc.   |
| 21. | Environmental Pollutants and their Effects on the Socio-  | CDM/G/201/201   | Wisc.  |
|     | Economic Wellbeing in Mukuru Informal Settlements of  | 6               |        |
|     | Nairobi County, Kenya   |                 |        |
| 22. | Rael Teresa Adhiambo: The Influence of the Invasive   | REG NO.:        | MSc.   |
| 22. | Psidium Guajava L. on Carbon Stocking Within Kakamega   | SEV/G/03/2015   | MISC.  |
|     | Tropical Rainforest.  | SE V/G/03/2013  |        |
| 22  | -   | DEC NO.         | MCa    |
| 23. | Ehaji Daniel Hyuga: Land Cover Change and its Influence   | REG NO:         | MSc.   |
|     | on the Nature of Agro-Pastoral Livelihoods in Kajiado   |                 |        |
| 24  | West Sub-County, Kenya.   | DEC NO :        | MC     |
| 24. | Opilo Betty: Role of Dykes in Flood Mitigation in Lower   | REG NO.:        | MSc.   |
| 25  | Nzoia River Basin Western Kenya.  | CPD/G/02/15     | MC     |
| 25. | Musinzi Hillary Wafula:   | REG NO.         | MSc.   |
|     | Impact of climate change on spread of malaria amongst   | GEO/G/14/15     |        |
| 0.5 | Children under five years in Vihiga county, Kenya.  | DEG 330         | 3.50   |
| 26. | Rael Ramkat: Restoration strategies and community attitudes   | REG. NO.        | MSc.   |
|     | towards mine pits in Kakamega County, Kenya.  | CDS/G/06/11     |        |
| 27. | Maureen Kaleha Amayi: The role of urban agriculture in  | REG. NO.        | MSc.   |
|     | enhancing nutrition security among households in embakasi   | CDS/G/200/13    |        |
|     | sub-county, Kenya.  |                 |        |
| 28. | Agripina Muranditsi Khalembi: Influence of  | REG. NO.        | MSc.   |
|     | domestic water on quality of milk in Kakamega   | CDS/G/12/11     |        |
|     | county, Kenya.  |                 |        |
|     |   |                 |        |

| 29. | <b>Kiveu N. Wycliffe</b> : Fire disaster preparedness on hospitality | REG. NO.     | MSc. |
|-----|--|--------------|------|
|     | premises in Kisumu City Kenya.                                       | CDS/G/019/04 |      |
| 30. | George Omonge Odero: Contribution of community based                 | REG. NO      | MSc. |
|     | organizations to promotion of secondary education in Homa            | CDS/G/04/05  |      |
|     | Bay County, Kenya.   |              |      |

# XXII. DEPARTMENTAL ASSIGNMENTS

| 1.  | Completed 2 <sup>nd</sup> Term as Chairman of Department (DMSD); Period 15 <sup>th</sup> June 2020 to 16 <sup>th</sup> June 2023 |  |
|-----|--|--|
| 2.  | Completed 1st Term as Chairman of Department (DMSD); Period 16th June 2017 to 15 June 2020                                       |  |
| 3.  | Acting Chairman of Department (DMSD); Period 10 <sup>th</sup> April 2017 to 3 <sup>rd</sup> May 2017                             |  |
| 4.  | Acting Chairman of Department (DMSD); Period 10 <sup>th</sup> Sept. 2015 to 2 <sup>nd</sup> November 2015                        |  |
| 5.  | Presided over students elections in (2014, 2015, 2016, 2017, 2018 & 2019) as SDMHA   |  |
|     | Presiding Officer  |  |
| 6.  | Academic Advisor all PhD (DMSD) Students (2017 to Date)  |  |
| 7.  | Academic Advisor 3 <sup>rd</sup> Year (DMSD) Students  |  |
| 8.  | Examination Coordinator (DMSD); 2012 to 2023   |  |
| 9.  | Team Leader Curriculum Review (DMSD) 2014 to Date  |  |
| 10. | SDMHA Faculty representative to MMUST Careers Committee  |  |
| 11. | SDMHA Faculty representative to School of Graduate Studies (SGS)   |  |

# XXIII. OTHER UNIVERSITY ASSIGNMENTS

| 1. | Coordinator Greening Initiative, Masinde Muliro University of Science and Technology; |  |
|----|---|--|
|    | Period 1 <sup>st</sup> August 2024 to 31 <sup>st</sup> July 2027                      |  |
| 2. | Editor-in-Chief, International Journal of Disaster Management and Risk Reduction      |  |
|    | (IJDMRR)- September 2024 to Date  |  |

# XXIV. REFEREES

| 1. | Prof. Emmanuel C. Kipkorir: School of Engineering, Moi University P.O. Box 3900-030100                      |  |
|----|---|--|
|    | Eldoret, Kenya.; E-mail: <a href="mailto:emmanuel_kipkorir@yahoo.co.uk">emmanuel_kipkorir@yahoo.co.uk</a> . |  |
| 2. | Prof. Samuel S. China, Department of Disaster Management and Sustainable Development                        |  |
|    | (DMSD), Masinde Muliro University of Science and Technology, School of Disaster                             |  |
|    | Management and Humanitarian Assistance (SDMHA), P. O. Box 190-50100, Kakamega,                              |  |
|    | Kenya. Tel; Email: soita_okhwachina@yahoo.com.  |  |
| 3. | Dr. Ferdinand Nabiswa Makhanu, Senior Lecturer Department of Emergency Management                           |  |
|    | Studies (EMS), Masinde Muliro University of Science and Technology, School of Disaster                      |  |
|    | Management and Humanitarian Assistance (SDMHA), P. O. Box 190-50100, Kakamega,                              |  |
|    | Kenya. Email: fnabiswa@mmust.ac.ke.   |  |