
Curriculum Vitae

Prof. Christopher Allan Shisanya

Department of Geography

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Organizational, Technical & Personal Competencies

Management:

- Ability to effectively manage human and financial resources as demonstrated in my most recent senior management position as Dean, School of Humanities and Social Sciences at Kenyatta University (2011-2018), with an annual operating budget of KES 400 million. Prior to becoming Dean, Shisanya managed the department of geography at Kenyatta University, as department chair from 2007-2011. The 50+ person department included academic professors; research & technical staff; postdoctoral associates; graduate students; and undergraduate students. Department research, tuition and other revenues exceeded USD 2million per annum with annual growth rate exceeding 10%.
- Ability to conceptualize, fully resource, and manage major international research projects involving multiple partner institutions across continents.
- Demonstrated capability to develop and implement project management protocols for local, national, and international agencies, including United Nations agencies such as the United Nations Educational Scientific & Cultural Organization (UNESCO).
- Ability to implement Monitoring and Evaluation Frameworks, Results Based Leadership trainings, Conduct Tracer Studies, among others.

Technical/Analytical:

- Possesses world-class technical and scientific capability in the fields of satellite remote sensing; environmental assessment and monitoring; climate diagnostics; and regional climate modelling.
- Capacity to provide scientific analysis for critical environmental issues, particularly energy/environment relations, climate change, drought, desertification, floods, erosion, and environmental change, as well as issues related to alternative sustainable energy sources.

- Possesses a very thorough knowledge of the broad issues of natural resource management and environmental sustainability.
- Possesses strong analytical ability to diagnose development issues from multi-sectoral points of view, put them in proper perspectives and proffer workable suggestions and solutions.
- Published over 40 research papers on a broad range of environmental issues in top rated academic journals and presented more than 50 papers at professional meetings all over the world.
- Secured external research funding in excess of USD 100M as Principal and/or co-Principal Investigator from agencies such as NASA, the US National Science Foundation (NSF) and many others.

Advisory, Advocacy and Dialogue:

- Capable of providing strategic policy advice on issues of development, particularly issues on resource management and environmental sustainability.
- Consults regularly with government (National, State and Local), international agencies, civil society organisations, research institutions and other stakeholders on a wide range of environmental issues, including the urban environment, agriculture, and sustainable development.

Networking & Interdisciplinary Collaboration:

- Ability to develop and nurture an extensive interdisciplinary network of USA, African and European States based and international collaborators to accomplish both short and long-term goals.
- Relates very well with colleagues from diverse cultures and ability to motivate for teamwork success. Capable of leading technical teams on formulation and monitoring of development programs, including those related to natural resource management, environment (physical and human) and climate change.
- Demonstrated capacity to organize large international conferences, workshops, seminars and produce reports to meet stated requirements and deadlines.

Education

- 2010 – Present **Full Professor of Geography - Agro - climatology**, Kenyatta University, Kenya
- 2002 –2010 **Associate Professor of Geography - Agro-climatology**, Kenyatta University Kenya
- 1991 - 1996 **Ph.D. Agro-climatology**, Universität Trier, Germany
- 1985 - 1987 **M.Sc. Climatology**, Kenyatta University, Kenya
- 1981 - 1985 **B.Ed. Science (Hons)**, University of Nairobi, Kenya

Summary of Skills

1. Ability to manage major international research projects involving multiple partner institutions across continents.
2. Demonstrated capacity to organize large international conferences, workshops, seminars and made several presentations at many high-profile international conferences as keynote speaker.
3. Ability to develop and nature extensive inter-disciplinary network of international collaborators to accomplish both short and long-term goals.
4. Demonstrated capacity in conceptualizing, writing project & research grant proposals and consequently raising funds for the research projects
5. Experience in mentoring students for both academic and research purposes
6. Meticulous in preparing scientific papers, research reports, policy briefs and technical reviews and consequently publishing in reputable scientific journals as principal and co-author.
7. Proven organizational, analytical and management acumen with administrative experience in handling finances and strategic planning.
8. Proficient in computer usage including specialty applications such as Spatial and Mapping tools

Awards and Recognition

Member, International panel for recruitment of staff for the Pan African University, Institute of Water and Energy Sciences (including Climate Change) (PAUWES), Tlemcen University, Algeria, 2014

Member, DAAD Higher Education Excellence in Development Cooperation programme selection, Berlin, Germany, 2009

Member, National Technical Working Group on REDD-Readiness Preparation Proposal, Kenya, 2009

External Reviewer, African Journal of Food Agriculture & Nutritional Development and African Journal of Business Management

Vice Chancellor's Research Award, Kenyatta University, Kenya 2009

Initiator, International Masters of Science Degree Programme in Integrated Watershed Management (MSc. IWM) within the Department of Geography, Kenyatta University, Kenya, since 2007

DAAD Alumni Equipment Grant, DAAD, Germany, 2002

Vice-Chancellor's Award, the Highest number of Peer-reviewed Scientific Publications, Kenyatta University, Kenya, 2001

Fellowships

Stellenbosch Institute for Advanced Study (STIAS), Three months (July - September, 2016)

DAAD Visiting Scientist, two months, Institute for Water Studies, University of Siegen, Germany, October – November 2006

START Visiting Scientist, two months, NASA/Goddard Space Flight Centre, Earth Sciences Technology Centre and University of Maryland, USA, July - August 2005

DAAD Visiting Scientist, Trier University, Germany, June – August 2001

Academic Work Experience

2010 –Present Full **Professor** of Geography - Agro-climatology, Department of Geography, Kenyatta University, Kenya

2002 – 2010 **Associate Professor** of Geography -Agro-climatology, Department of Geography, Kenyatta University, Kenya

1999 - 2002 **Senior Lecturer**, Department of Geography, Kenyatta University, Kenya

1990 - 1999 **Lecturer**, Applied Climatology & Advanced Quantitative Techniques, Department of Geography, Kenyatta University, Kenya

1988 - 1990 **Tutorial Fellow**, Department of Geography, Kenyatta University, Kenya

1985 - 1985 **Graduate Teacher**, Bukhalalire High School, Teachers Service Commission

Administrative Work Experience

8th July, 2019 – 20th September, 2019, **Ag. DVC (Administration)**, Kenyatta University

2011 - 2018 **Dean**, School of Humanities and Social Sciences, Kenyatta University, Kenya,

April 2017 **Acting Deputy Vice Chancellor (Academic)**, Kenyatta University, Kenya

March 2017 **Acting Deputy Vice Chancellor (Administration)**, Kenyatta University, Kenya

July 2012 **Acting Deputy Vice Chancellor (Academic)**, Kenyatta University, Kenya

- Jul 2010 **Acting Dean**, School of Humanities and Social Sciences, Kenyatta University, Kenya,
- Apr 2010 - 2012 **Elected Senate Representative**, The University Council, Kenyatta University, Kenya,
- 2007 - 2011 **Chairman**, Department of Geography, Kenyatta University, Kenya,
- 2007 **Member**, School of Humanities Management Board, Kenyatta University, Kenya,
- 2007 - 2011 **Regional Coordinator**, European Union Water Facility Project, Capacity Building for Integrated Watershed Management in Eastern Africa (IWMNET),
- 2008 - 2011 **Regional Coordinator**, European Union Water Facility Project, University Capacity Development for Integrated Sanitation Management in Eastern and Southern Africa (UCDISM),
- 2006 - 2007 **Chairman**, Centre for Research, Development and Consultancy Board, Kenyatta University, Kenya,
- 2007 **Chairman**, Proposal for Kilifi Committee, Kenya,
- 2010 – 2012 **Member**, Sealing Committee, 8th Kenyatta University Council, Kenya,
- 2010 - 2012 **Member**, Honorary Degrees Committee, 8th Kenyatta University Council, Kenya,
- 2010 - 2012 **Member**, Senior Disciplinary Committee, 8th Kenyatta University Council, Kenya.

Professional Trainings

- 2011: DIES International Training Course "University Graduates' Tracer Study Course Part II (UNITRACE), University of Kassel, Germany, August 3-17, 2011.
- 2010: DIES International Training Course "University Graduates' Tracer Study Course Part I (UNITRACE), University of Kassel, Germany, October 10 -23, 2010.
- 2010: DIES International Dean's Course III on Strategic Issues in Higher Education Management. March 1-5, Addis Ababa, Ethiopia.
- 2009: International Dean's Course Africa 2009/10. May 4-14, Osnabrueck and Berlin, Germany
- 2008: International IFS/ISAR Workshop on "Enhanced utilization of phosphate rocks for agricultural development. 27 July - 3 August, 2008, Kigali, Rwanda.
- 2007: International Winter School 2007 "e-Learning in the Environmental and Geosciences", Free University, Berlin, Germany, January 10-24, 2007

- 2006: International Summer School 2006 "Integrated Watershed Management", Bwathonaro Watershed, Meru, 15-29 July, 2006.
- 2006: UNEDRA Workshop on Geo-information for Environmental Risk Management in Africa, June 12-23, Regional Centre for Mapping of Resources for Development (RCMRD), Nairobi.
- 2006: International Winter School 2006 "e-Learning in the Environmental and Geosciences", Free University, Berlin, Germany, January 07-21, 2006
- 2005: International Summer School 2005 "Integrated Watershed Management", University of Siegen, Germany, 12-29 April, 2005.
- 2003: Participatory Approaches and Scaling Up Workshop for African Soil Biology and Fertility Network. 29 September - 10 October 2003, Arusha, Tanzania.

Ph.D. Supervision

- PHILIP O. SAGERO (2019)(I84/30690/2015). Assessment of past and future projections of climate change and likely impacts over Kenya. Kenyatta University, School of Humanities and Social Sciences, Department of Geography (Graduated in July, 2019)
- JOHN NYANGENA (2019)(N85/20288/2010). Drought, land use change and livelihood diversification among pastoral communities in Oltiasika, Kajiado County, Kenya. Kenyatta University, School of Environmental Studies, Department of Environmental Planning and Management (Graduated in July, 2019).
- JOSEPH M. MACHARIA (2019)(C82/26405/2013). Quantification of greenhouse gas fluxes under climate variability in Kenya. School of Humanities and Social Sciences, Department of Geography (Graduated in July, 2019).
- ANNE N. KARANJA (2018)(A99/33462/2014). Reducing uncertainty in quantifying greenhouse gas emissions and carbon stocks in maize-based cropping systems in Siaya County, Kenya. School of Agriculture and Enterprise Development, Kenyatta University (Thesis submitted for examination)
- THANDAR, N. (2014)(N85F/24868/2011). Understanding and improving agronomic use efficiency in cassava based farming systems in central Africa. Department of Environmental Sciences, School of Environmental Studies, Kenyatta University (Completed and Degree awarded in December 2014).
- NGONZO, C.L. (2011): Downstream-upstream farmers' response capacity to implement green water saving schemes in different climatic environments of Eastern Kenya. Department of Geography (Completed and Degree awarded in June, 2013).
- KANSIIME, M.K. (2011)(A99EA/20972/2010): Effectiveness of technological options for minimizing agricultural production risks under variable climate in Eastern Uganda.

Department of Agribusiness Management and Trade, Kenyatta University (Completed and Degree awarded in December, 2014).

- KWENA, Z.A. (2010)(C82/14619/2009): Prevalence and risk factors for sexual concurrency among married fishermen couples along Lake Victoria in Kisumu County, Kenya. Department of Geography, Kenyatta University (Completed and degree awarded in June, 2014).
- WANGARE, N. L. (2010)(A99/12344/2009): An analysis of efficiency of rural markets in the highlands of central Kenya. Department of Agribusiness Management and Trade, Kenyatta University (Completed and degree to be awarded in December, 2014).
- MORGAN, M. (2009): Impacts of sustainable land management strategies at multiple scales in complex highland ecosystems: A dynamic systems modeling approach (PhD thesis registered at the School of Socio-economic and Natural Sciences of the Environment (SENSE) of Wageningen University, The Netherlands) (Degree awarded in January 2014)
- NGETICH, K.F. (2009)(I84/11873/2008): Enhancing farmers' benefits through improved water use efficiency in the highlands of central Kenya (PhD thesis)(Completed and degree awarded in December, 2012).
- MWANGI, J.K. (2009)(I84/10892/08): Towards developing a payment for environmental services (PES) scheme for Sasumua watershed, Kenya (PhD thesis)(Degree awarded in June, 2014)
- RECHA, W.C. (2009)(C82/10807/2008): Potential impacts and associated vulnerabilities on water resources and livelihoods at household level in Tharaka District, Kenya)(Completed and degree awarded in June, 2013).
- MAINGI, J.M. (2006)(I84/7007/2002): Nitrogen fixation in promiscuous soybean (*Glycine Max* (L.) *Merrii*) Varieties in Eastern Kenya(Department of Plant Microbial Sciences, Kenyatta University) (Degree awarded in 2010)
- WAMBUGU, S.K. (2005)(C82/7618/99): An analysis of the nature and extent of integration of maize markets in Kenya (Ph.D. Thesis, Department of Geography, Kenyatta University) (Degree awarded in 2009)
- MAKOKHA, G.L. (2003)(I84/7595/95): Modification of the microclimate in a changing tropical urban environment: The case of Nairobi city (Department of Geography, Kenyatta University) (Degree awarded in 2007).

MSc. Supervision

- NORVIXOXO, S.K. (2010)(I56F/12156/2009): The poverty-wealth nexus as a determinant of participation in watershed management: A case study of Bwathonaro sub-catchment, Kenya. Department of Geography (MSc thesis completed and degree awarded in 2012).
- MAHILANE, S. (2010)(I56/10421/08): Household response to climate variability in Kiladeda sub-catchment of Pangani river basin, Tanzania (MSc. Thesis) (Degree awarded in 2012).

- AUMA, A.J. (2010) (I56/10458/06): Utilization and conservation of papyrus plants for sustainable livelihoods in Kusa swamp, Lake Victoria, Kenya (MSc. Thesis) (Degree awarded in 2012).
- ALUFAH, S. (2009) (156F/10418/2008): Factors influencing the adoption of soil water conservation technologies in Ngaciuma sub-catchment, Upper Tana, Kenya (MSc. Integrated Watershed Management) (Degree awarded in 2011)
- MATHENGE, J. (2009) (I56/10100/07): Evaluating the role of the legal and institutional framework and its effectiveness in the management of water resources: A case of Ngaciuma-Kinyaritha sub-cathment (MSc. Integrated Watershed Management) (Degree awarded in 2011)
- OWILLA, B. (2008) (I56/10460/06): An analysis of efficiency of irrigation water use in Mwea irrigation scheme of Kirinyaga district, Kenya (MSc. Integrated Watershed Management) (Degree awarded in 2010)
- NGONZO, C. L. (2007) (I56/10078/07): An evaluation of efficient use of agricultural watershed resources under fluctuating rainfall regimes at Muooni dam site, Machakos district (MSc. Integrated Watershed Management) (Degree awarded in 2009)
- OKEYO, J.M. (2005): Analysis of spatial variation of soil fertility in Vihiga district, Kenya: Identification of factors affecting soil fertility management. (Masters of Science in Environmental Science, Kenyatta University) (Degree awarded in 2007)
- ONG'ARE, D. (2002): Nitrogen fixation in tepary bean in semi-arid Makueni District, SE-Kenya (MSc. Thesis, Department of Botany, Kenyatta University) (Degree awarded in 2004).
- KAYI, C.O (2002): Effects of the 1997/98 El Niño rainfall on input costs and productivity on road freight transport enterprises in Nairobi (M.A. Thesis, Department of Geography) (Degree awarded in 2004).
- OBIERO, K. (1998): Climatological characteristics of thunderstorm hazards and their impacts on the ecosystem in the Lake Victoria basin (M.A. Thesis, Department of Geography) (Degree awarded in 2000).
- MAINGI, J. M. (1998): A study of biological nitrogen fixation in cultivars of legume crops in semi-arid areas of Makueni District, Kenya (MSc. Thesis, Department of Botany) (Degree awarded in 2000).

External Examiner

Department of Environmental Science, University of Botswana, 2016 - 2019

Department of Geography, Egerton University, Kenya, 2013-present

Department of Geography, University of Dar es Salaam, Tanzania, 2014 - present

Venda University, South Africa, 2014 - present

Dar es Salaam University College of Education (DUCE), 2015 - present

Department of Geography, Kabinga University College, 2009 - 2012

Department of Geography, Moi University, Kenya, 2005 - 2010

Department of Geography, MARIST University, Kenya, 2005 - 2010

Department of Geography, University of Nairobi, Kenya, 2013 - present

Department of Geography, Catholic University of Eastern Africa (CUEA), Kenya, 2000 - 2003

Conference Participation

2017: Future of agriculture in Kenya in the context of climate change. **Keynote address** at the Agricultural Productivity Research Project - End of Project Conference, 25-27th April, 2017, KALRO Headquarters Conference Hall, Nairobi.

2017: Role of epistemology in social science research. Resource Person. CODESRIA College of Academic Mentors Institute 2017 Session, Nairobi, 10th - 20th April, 2017.

2015: C.A. Shisanya: Comparative Research Through the Lenses of Quantitative Research Methods: Theoretical and Practical Considerations. Keynote Address Presented at the CODESRIA CRN 2015 Workshop, 6-8th May, 2015, Dakar, Senegal.

2014: C.A. Shisanya: Climate Change Response Strategy and Action Plan for Kenya. Keynote Address Presented at the Regional Policy Level Seminar on Mitigating Climate Change in Africa Through Social Forestry, 16 - 21st February, 2014, KEFRI HQ, Nairobi.

2014: C.A. Shisanya: The Role of Academia in National Climate Adaptation in Kenya. Keynote Address Presented at the CHIESA 3RD Annual Regional Workshop, 24-25th March, 2014, ICIPE, Duduville Campus, Nairobi.

2013: C.A. Shisanya: Mainstreaming climate adaptation into agricultural planning development planning: Case of Nigeria. Paper Presented at the Second Workshop of the Advisory Council on Agricultural Resilience in Nigeria (ACARN), Abuja, Nigeria, 6-8th November, 2013.

2013: C.A. Shisanya: Adaptation to climate change in tropical Africa. Keynote address presented at the 5th Regional Training Course on Mitigating Climate Change in Africa through Social Forestry. 21st October - 22nd November, 2013, Kenya Forestry Research Institute HQ, Nairobi.

2013: C.A. Shisanya: Building Resilience in Nigeria's Agriculture Value-Chains through "Climate-Smart" Policies and Actions: Lessons from Kenya. Paper Presented at the 1st ACARN Workshop, 17-18th September, Abuja, Nigeria.

2013: C.A. Shisanya: Land use/cover change in Mount Elgon area. Paper presented at a Stakeholders Workshop on Climate Change Actions for Mt Elgon "Resilience Framework for Climate Change (RFCC)". 11-12th July, 2013. Kisumu Hotel.

- 2013: C.A. Shisanya: Best practices in Integrated Watershed Management: Examples from Kenya. Paper Presented at the 2nd Workshop on Integrated Watershed Management Research and Development Capacity Building. Piketberg, South Africa. 21-25, May 2013.
- 2012: C.A. Shisanya: New Developments in Graduate Tracer Studies: UNITRACE Part 3, 2012. 18– 25th October, 2012, Bali, Indonesia
- 2012: C.A. Shisanya: Design and implementation of curriculum for building transdisciplinary climate change adaptation capacity. Workshop on Transdisciplinary Research Methods, Curriculum for Building Climate Change Adaptation Skills and Review of Proposal for Grants. 23-24th April, 2012, University of Nigeria, Nsukka, Nigeria
- 2012: C.A. Shisanya: Research without borders: The experience of Kenyatta University. Workshop on Steering Rice Production to Resilience. 17-19th April, 2012, KARI Headquarters, Kaptagat Road, Nairobi
- 2011: C.A. Shisanya: Use of Remote Sensing to Support NCAS Development in Kenya. Kenya Forest Service Consultative Workshop. 30 - 31st May, 2011, Lake Naivasha Sopa Lodge (Member of the National Scientific Committee of NCAS).
- 2011: C.A. Shisanya: National Carbon Accounting/Monitoring/Reporting & Verification Systems. Exposure Workshop. 6- 10th June, 2011, Canberra, Australia (Member of the National Scientific Committee of NCAS).
- 2011: C.A. Shisanya: Global Water partnership – Eastern Africa & Sudan Water Partnership. Water and Food Security under Changing Climate Regional Workshop. 11-13th May 2011, Meeting Hall, Ministry of Irrigation and Water Resources, Khartoum, Sudan (Resource Person).
- 2011: C.A. Shisanya: Lake and Catchment Research Symposium (LARS-2011). Water, Sanitation and Energy for Sustainable Livelihoods. Kenyatta University Conference Center. 14-18th March, 2011 (Convenor).
- 2010: C.A. Shisanya: Understanding the socio-economic context of climate change: A survey on awareness and perception among respondents in the city of Nairobi, Kenya. Paper presented under Session 4A (Decision-Making for Adaptation) of The African Climate Change Fellowship Programme Round 1 Culmination Conference, 8-10th December 2010, Le Meridian President Hotel, Dakar, Senegal.
- 2010: C.A. Shisanya: Climate variability, food security and seed fairs in the drylands of eastern Kenya. Keynote Paper presented at the 5th HOA REN Conference on "Climate Change, Ecosystems and Livelihoods", Methodist Guest House, Nairobi, 4-8th, October, 2010.
- 2010: C.A. Shisanya: DRM Research capacity in the IGAD region. Presentation made at the Regional Workshop on Validation of DRM Research in the IGAD Region, Merica Hotel, Nakuru, June 28-30th, 2010.
- 2010: C.A. Shisanya, Obando, J., Onywere, S.: Enhancing sustainable water resources management for food security: A case study of Bwathonaro catchment, Kenya. Paper

presented at the Commission for Higher Education Research Dissemination Workshop, Mombasa Beach Hotel, 20 - 24th June, 2010.

- 2010: C.A. Shisanya: Land degradation, natural resources and indigenous knowledge in Vihiga District, Kenya. Technical Session Paper presented at the International Conference on Strategic Management of Energy, Environment and Disaster for Sustainable Development (ICONS MEEDS). Banaras Hindu University, Vanarasi, India, 11 - 15th January, 2010.
- 2010: C.A. Shisanya: Sustainable water resources management in Kenya. Keynote Paper presented at the International Conference on Strategic Management of Energy, Environment and Disaster for Sustainable Development (ICONS MEEDS). Banaras Hindu University, Vanarasi, India, 11 - 15th January, 2010.
- 2009: C.A. Shisanya: Research and consultancy strategic plan for the department of Geography, Kenyatta University (2009 – 2013). Paper presented at the Deans Course Part II Regional Workshop "Research, Quality and Strategic Management in Higher Education in East Africa", Kenyatta University Conference Center, 29 - 30th October, 2009.
- 2009: C.A. Shisanya: Addressing the Millennium Development Goals through Capacity Building: Contribution of the Master of Science Programme in Integrated Watershed Management at Kenyatta University. Paper Presented at the Conference "Knowledge Transfer in Development Cooperation: Capacity Building, Research and Consultancy in Watershed Management", University of Siegen, Germany, 6 – 10th July, 2009.
- 2009: C.A. Shisanya, Obando, J.A., Onywere, S.M.: Sustainable water resource management for food security in Bwathonaro catchment, Kenya. Paper presented at the First Kenyatta University Research Conference April 27 - 29th, 2009
- 2009: C.A. Shisanya: Response of Kenyatta University to training needs in integrated watershed and sanitation management. Paper presented at the Capacity Building for Integrated Water Resources and Sanitation Management, 28May, 2009, Kenyatta University Conference Centre.
- 2008: C.A. Shisanya: Economic analysis of maize tepary bean production using a soil fertility replenishment Minjingu based product (PREP-PAC) in semi-arid Eastern Kenya. Paper presented at the International IFS/ISAR Workshop on "Enhanced utilization of phosphate rocks for agricultural development. 27 July -3 August, 2008, Kigali, Rwanda.
- 2008: A.J. Tenge, M.C. Kalumuna, **C.A. Shisanya**: Farmer's perception on climate change and its impacts: Case study of Magu, Tanzania. Paper Presented at the 3 SADC-EU International Scientific Symposium - Towards Meeting the Challenges of Climate Change: Institutional Structures and Best Practices in Land and Water Management in Southern Africa, 27 - 30th May 2008, CrestaGolfview Hotel, Lusaka, Zambia
- 2007: C.A. Shisanya: Improvement of grain legume production in Dryland farming systems of Kenya through biological nitrogen fixation: Experience with tepary bean (*Phaseolus acutifolius* A. Gray var. *latifolius*). Paper Presented at the IFS Workshop on Traditional

Grains for Low Environmental Impact and Good Health. Pretoria, South Africa. 5 - 8th November, 2007.

- 2007: C.A. Shisanya: Social and economic factors for the adoption of agroforestry practices in Lake Victoria catchment, Magu, Tanzania. Analysis of spatial variation of soil fertility gradients in smallholdings in tropical Africa using Geostatistical techniques: Case studies from Vihiga and Siaya districts of western Kenya. Proceedings of the AfNet International Symposium, Arusha, Tanzania, 17-21 September, 2007, pp. 99-119.
- 2007: C.A. Shisanya: Analysis of spatial variation of soil fertility gradients in smallholdings in tropical Africa using Geostatistical techniques: Case studies from Vihiga and Siaya districts of western Kenya. Analysis of spatial variation of soil fertility gradients in smallholdings in tropical Africa using Geostatistical techniques: Case studies from Vihiga and Siaya districts of western Kenya. Proceedings of the AfNet International Symposium, Arusha, Tanzania, 17-21st September, 2007, pp. 59-70.
- 2007: C.A. Shisanya: Shallow wells: A sustainable and inexpensive alternative to drilling boreholes in semi-arid Kenya. Paper presented at a DAAD Summer School Workshop on "*Wasser und Brunnenbau*", Hof, Germany, 3 -15th, September, 2007.
- 2006: C.A. Shisanya: Capacity building in integrated watershed resources management in Sub-Saharan Africa through North-South collaboration: The case of IWMNet in Eastern Africa. Paper presented at a GTZ Workshop on "*Betrifft Wasser-EZ trifft Wissenschaft: Wasser-Ernaerung-Umwelt*", Eschborn, Germany, 31 October, 2006.
- 2005: C.A. Shisanya: Towards integrating disaster management in geography curriculum at Kenyatta University, Kenya. Paper presented at an International Workshop on University Network for Disaster Risk Reduction in Africa, Makerere University, 12-13th September, 2005
- 2004: C.A. Shisanya: An analysis of accessibility and pricing of rural domestic water supply: A case study of Kakamega district, Kenya. Paper Presented at the Lake Abaya Research Symposium (LARS 2004), Hilton Hotel, Addis Ababa, Ethiopia. November 10-12th, 2004.
- 2004: C.A. Shisanya: Enhancing research capacity in tertiary institutions in developing countries through North-South interdisciplinary research networks. Paper presented at the Volkswagen Stiftung Workshop on Resources, their Dynamics and Sustainability – Capacity Development in Comparative and Integrative Approaches, Nairobi, September 13-17th, 2004.
- 2004: C.A. Shisanya: Evaluation of nitrogen fixation and economy of a maize-tepyary bean intercrop farming system in semi-arid Kenya using ¹⁵N-dilution methods. Paper Presented at the AfNET Symposium, Yaounde, Cameroon, 17-21st May, 2004.
- 2003: C.A. Shisanya: Land resources information and services for land use planning. **Key Note Paper 1** presented at the 21st Conference of the Soil Science Society of East Africa Conference, Sirikwa Hotel, Eldoret, Kenya. 1-5th December, 2003.

- 2002: C.A. Shisanya: Enhancing Research Capacity in Institutions of Higher Learning in Developing Countries through North-South Partnership. Paper Presented at a DAAD Workshop, 22November-2002, Trier University, Germany.
- 2002: C.A. Shisanya: Enhancing food security in the drylands of South East Kenya through biological nitrogen fixation: The example of drought adapted tepary bean (*Phaseolusacutifolius* A. Gray.var.latifolius) presented at the 10th AABNF Meeting in Accra, Ghana 27-31 October (with Gitonga, N.M)
- 2002: C.A. Shisanya: An analysis of accessibility to rural domestic water supply: A case study of Kakamega District, Kenya. 5th International Conference on Sustainable Management of Headwater Resources, 5-8 September, 2002, USIU Campus, Nairobi, Kenya.

Conference Paper Presentations

1. Shisanya, C.A. (2016). Are Women Reservoirs of Local Ethnobotanical Knowledge? Empirical Evidence from Western Kenya. Paper Presented at the STIAS Seminar Series, Thursday 26th August, 2016.
2. Shisanya, C.A. (2015). Implementing New Research Strategies for National Transformation. Keynote Address Presented at the 10TH UNILAG Annual Research Conference and Fair, University of Lagos Multipurpose Halls, Akoka, Lagos, Nigeria. November 24-26th, 2015.
3. Shisanya, C.A. (2015). Climate Change and National Transformation in Nigeria. Plenary Paper Presented at the 10TH UNILAG Annual Research Conference and Fair, University of Lagos Multipurpose Halls, Akoka, Lagos, Nigeria. November 24-26th, 2015.
4. Shisanya, C.A. (2015). Sustainable water resources management for food security in Kenya: Case of wathonaro catchment. Paper Presented at the 12TH Kenya Meteorological Society International Conference, Kisumu Hotel, Kisumu County, 11-13th November, 2015.
5. Ndubuto, N.I., **Shisanya, C.A.**, Asemphah, M. & Mukuna, T.E. (2015). Determinants of agricultural production in Kenya under climate change. Paper Presented at the 12th Kenya Meteorological Society International Conference, Kisumu Hotel, Kisumu County, 11-13th November, 2015.
6. Shisanya, C.A. (2014). Catchment Management Planning as a Tool for Addressing Climate Change Impacts: Case of Bwathonaro, Kenya. Paper presented at the Enhancing the Horn of Africa Responsive Capacity to Climate Change Impacts workshop. Nairobi, 27-28 November, 2014.
7. Shisanya, C.A. (2014). Water sector reforms in Kenya: Ten years on. Paper presented at the Integrated Watershed Management Research & Development Capacity Building Training Workshop. 9 - 14 October, 2014, Piketberg, South Africa.
8. Shisanya, C.A. (2014). Sustainable water resources management in Kenya: From theory to

practice. Paper presented at the Integrated Watershed Management Research & Development Capacity Building Training Workshop. 9 - 14 October, 2014, Piketberg, South Africa.

9. Shisanya, C.A. (2014). Kenya's SLEEK programme: From inception to implementation. Paper presented at The South African Climate Change Monitoring & Evaluation (M&E) of Agriculture, Forestry and other Land Use (AFOLU). 30th September - 01st October 2014. Leribe Hotel and Spa - 245 End Avenue, Centurion, Gauteng, South Africa.
10. Okeyo, A.I., Mecheru-Muna, M., Mugwe, M.M., Ngetich, J., Mugendi, D.N., Diels, J. & **Shisanya, C.A.** (2013). Enhancing adaptation to climate variability in rainfed farming systems: The role of soil conservation technologies in the central highlands of Kenya. Paper Presented at the Third Annual Conference on Climate Change and Development in Africa (CCD-III), United Nations Conference Centre, Addis Ababa, Ethiopia, 21-23 October, 2013.
11. Obando, J. & Shisanya, C.A. (2012). Institutionalising tracer studies in higher education institutions in Africa: Experience of Kenyatta University. Paper Presented at the the Conference on New Developments in Graduate Tracer Studies: UNITRACE Part 3, 2012. 18 - 25 October, 2012, Bali, Indonesia
12. Ngetich, K. F., **Shisanya, C. A.**, Mugwe, J., Mucheru-Muna, M., Mugendi, D. N. and Diels, (2011). Tillage and surface management effects on soil water content and maize productivity in the Central Highlands of Kenya. Conference paper presented during Lake and Catchment Research Symposium (LARS) 2011. 14-18 March 2011, Kenyatta University, Kenya.
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- Maingi, J.M., **Shisanya, C.A.**, & Gitonga, N.M. (2001): Population level of bean rhizobia in the soil of semi-arid south-east Kenya and assessment of symbiotic behaviour. *East African Journal of Science* 3(1): 13-18.
- Maingi, J.M., **Shisanya, C.A.**, Gitonga, N.M., & Hornetz, B. (2001): Nitrogen fixation by common bean (*Phaseolus vulgaris* L.) in pure and mixed stands in semi-arid south-east Kenya. *European Journal of Agronomy*, 14: 1-12.

Books

Single authorship

- Shisanya, C.A. (2011): Determinants of Sustainable Utilization of Plant Resources in the Former Kakamega District, Kenya. OSSREA, Addis Ababa. ISBN: 978-99944-55-57-7
- Shisanya, C.A. (1996): Chances and risks of maize and bean growing in the semi-arid areas of SE-Kenya during expected Deficient, Normal and Above Normal rainfall of the short rainy seasons. MaterialienzurOstafrika-Forschung, Heft 14, Trier, ISBN 3-921-599-19-9.

Multiple authorship

- Bangura, K.A., Obando, J.A., Munene, I.I. & **Shisanya, C.** (Eds)(2019). Conducting Research and Mentoring Students in Africa: CODESRIA College of Mentors Handbook. CODESRIA, Dakar, Senegal. ISBN: 978-2-86978-833-6, 420pp.
- Mukuna, T.E. & **Shisanya, C.A.** (Eds)(2015). Milestones in Green Transition and Climate Compatible Development in Eastern and Southern Africa. OSSREA. Addis Ababa., 315pp, ISBN: 978-99944-55-86-7
- Shisanya, C.A.** and Khayesi, M. (2010): How is Climate Change Rated and Understood in Nairobi City, Kenya? VDM Verlag, Saabruucken, Germany. ISBN:978-3-639-25954-4.
- Jaetzold, R., Hornetz, B. and **Shisanya, C.A.** (2013): Farm Management Handbook of Kenya Vol II: Natural Conditions and Farm Management Information, Part C, East Kenya, Subpart C2, Coast Province.-2nd Edition, Ministry of Agriculture, Nairobi.

- Jaetzold, R., Hornetz, B. and **Shisanya, C.A.** (2012): Farm Management Handbook of Kenya Vol II: Natural Conditions and Farm Management Information, Part B, Central Kenya, Subpart B1b, Northern Rift Province.-2nd Edition, Ministry of Agriculture, Nairobi.
- Jaetzold, R., Hornetz, B. and **Shisanya, C.A.** (2011): Farm Management Handbook of Kenya Vol II: Natural Conditions and Farm Management Information, Part B, Central Kenya, Subpart B1a, Southern Rift Province.-2nd Edition, Ministry of Agriculture, Nairobi.
- Jaetzold, R., Hornetz, B. and **Shisanya, C.A.** (2010): Farm Management Handbook of Kenya Vol II: Natural Conditions and Farm Management Information, Part A, West Kenya, Subpart A 2, Nyanza Province.-2nd Edition, Ministry of Agriculture, Nairobi.
- Jaetzold, R., Hornetz, B. and **Shisanya, C.A.** (2006): Farm Management Handbook of Kenya Vol II: Natural Conditions and Farm Management Information, Part B, Central Kenya, Subpart B2, Central Province.-2nd Edition, Ministry of Agriculture, Nairobi.
- Jaetzold, R., Hornetz, B. and **Shisanya, C.A.** (2006): Farm Management Handbook of Kenya Vol II: Natural Conditions and Farm Management Information, Part C, East Kenya, Subpart C 1, Eastern Province.-2nd Edition, Ministry of Agriculture, Nairobi.
- Jaetzold, R., Hornetz, B. and **Shisanya, C.A.** (2005): Farm Management Handbook of Kenya Vol II: Natural Conditions and Farm Management Information, Part A, West Kenya, Subpart A1, Western Province.-2nd Edition, Ministry of Agriculture, Nairobi.
- Hornetz, B., **Shisanya, C.A.** and Gitonga, N.M. (2000) Studies on the ecophysiology of locally suitable cultivars of food crops and soil fertility monitoring in the semi-arid areas of southeast Kenya. *Materialien zur Ostafrika-Forschung*, Heft 23, Trier, ISBN 3-921-599-43-1
- Kenya: Atlas of Our Changing Environment (UNEP 2009). ISBN: 9789280729955 (*Contributor & Member of the Editorial Team*).

Chapters in Published Books

- Shisanya, C.** (2019). Epistemological paradigms in social research. In: Bangura, K.A., Obando, J.A., Munene, I.I. & Shisanya, C. (Eds)(2019). *Conducting Research and Mentoring Students in Africa: CODESRIA College of Mentors Handbook*. CODESRIA, Dakar, Senegal, pp. 39-58
- Munene, I.I., **Shisanya, C.**, Obando, J.A., & Doctoral Students (2019). Brief descriptions of qualitative research methods. In: Bangura, K.A., Obando, J.A., Munene, I.I. & Shisanya, C. (Eds)(2019). *Conducting Research and Mentoring Students in Africa: CODESRIA College of Mentors Handbook*. CODESRIA, Dakar, Senegal, pp. 59-116.
- Munene, I.I., **Shisanya, C.**, Obando, J.A., & Doctoral Students (2019). Brief descriptions of quantitative research methods. In: Bangura, K.A., Obando, J.A., Munene, I.I. & Shisanya, C. (Eds)(2019). *Conducting Research and Mentoring Students in Africa: CODESRIA College of Mentors Handbook*. CODESRIA, Dakar, Senegal, pp. 117-146.

- Shisanya, C.** & Munene, I.I. (2019). The art, science, and politics of publishing. In: Munene, I.I., Shisanya, C., Obando, J.A., & Doctoral Students (2019). Brief descriptions of qualitative research methods. In: Bangura, K.A., Obando, J.A., Munene, I.I. & Shisanya, C. (Eds)(2019). *Conducting Research and Mentoring Students in Africa: CODESRIA College of Mentors Handbook*. CODESRIA, Dakar, Senegal, pp. 248-284.
- Onsongo, E., Mutisya, E. & **Shisanya, C.A.** (2019). Co-designing knowledge systems for sustainable development in Kenya. In: C. Aguirre-Bastos, J. Chaves-Chaparo & S. Arico, eds. *Co-Designing Science in Africa: First Steps in Assessing the Sustainability Science Approach on the Ground*. UNESCO, Paris, pp.101-125. ISBN:978-92-3-100319-6
- Shisanya, C.A. (2018). Natural resource management. In: Khayesi, M. (Ed.). *Rural Development Planning in Africa*. Palgrave Macmillan Publishers, New York, 17-51. doi.org/10.1057/978-1-349-95297-7_2, ISBN 978-1-349-95296-0
- Shisanya, C.A. (2017). Role of traditional ethnobotanical knowledge and indigenous institutions in sustainable land management in western highlands of Kenya. In: *Indigenous Peoples* (<http://www.intechopen.com/books/indigenous-people>)(Chapter 9), INTECH Publishers, 161-185.
- Obando, J. A., Luwesi, C. N, Förch, N, Ogutu, A.O., **Shisanya, C.A.** and Förch, G. (2017): Kenya Success Story In Water Resources Management: Participatory Capacity Building in Integrated Watershed Management. In: Ondieki C. (Eds.) *Hydrology and Best Practices for Managing Water Resources in Arid and Semi-Arid Lands*. IGI Global (www.igi-global.com)
- Luwesi, C.N., Obando, J.A., Beyene, A., **Shisanya, C.A.** & Wawire, N.H.W. (2017): Economic Viability of Agricultural Water Investments: Conventional Valuation Methods that Work for Arid and Semi-arid Lands. In: Luwesi, C.N. and Beyene, A. (Eds.). *Innovative Water Finance in Africa: A Guide for Water Managers Vol. 2: Economics and Principles of Financial Innovations*. (In Press).
- Luwesi, C.N., Wawire, N.H.W., **Shisanya, C.A.**, & Obando, J.A. (2017): Innovative Financing for Agricultural Water Development: Contingent Benefits' Variation of Payments for Watershed Services. In: Luwesi, C.N. and Beyene, A. (Eds.). *Innovative Water Finance in Africa: A Guide for WATER Managers Vol. 2: Economics and Principles of Financial Innovations*. (In Press).
- Obando J. A., S. M. Onywere, **C. A. Shisanya**, A. O. Ndubi, D. Masiga, Z. Irura, N. Mariita and H. O. Maragia (2016), Impact of short-term flooding on livelihoods in the Central Kenya Rift Valley Lakes; Book Chapter, *Geomorphology and Society*, Editors E. Meadows, Michael and Lin Jiun-Chuan Series - *Advances in Geographical and Environmental Sciences*, eBook ISBN 978-4-431-56000-5, Available at: <http://www.springer.com/us/book/9784431559986> , Springer Japan.
- Shisanya, C.A. (2015). Mainstreaming climate adaptation into agricultural planning and development in Kenya. In: Mukuna, T.E. & Shisanya, C.A. (Eds). *Milestones in Green*

Transition and Climate Compatible Development in Eastern and Southern Africa. OSSREA, Addis Ababa, pp. 24-58.

Shisanya, C.A. (2015). Conclusion and perspectives. In: Mukuna, T.E. & **Shisanya, C.A.** (Eds). Milestones in Green Transition and Climate Compatible Development in Eastern and Southern Africa. OSSREA, Addis Ababa, pp. 24-58.

Shisanya, C.A., Luwesi, C.N., & Obando, J.A. (2014): "Innovative but Not Feasible: Green Water Saving Schemes at the Crossroad in Semi-Arid Lands". In: OSSREA (eds.), Innovative Water Resource Use and Management for Poverty Reduction in Sub-Saharan Africa: An Anthology (ISBN: 978-99944-55-75-1), Addis Ababa, Ethiopia, pp. 137-172

Shisanya, C.A. (2014). Vulnerability assessment of maize and sorghum crops to climate variability and change in Kenya. In: Dietrich, K., Padgham, J. and Virji, H. (2014). Vistas of African Science: Advancing Knowledge Through STARTS's Grants for Global Environmental Change Research Africa Program. START, Washington, DC., pp.14-15.

Shisanya, C.A. (2012). Climate variability, food security and seed fairs in the drylands of Eastern Kenya. In: Musyoki, A. & Khayesi, M. (Eds.). Environment and Development: Selected Themes from Eastern and Southern Africa. Bay Publishing (Pty), Gaborone, ISBN 978-99912-914-1-3, pp. 286-301.

Felix K. Ngetich, **Chris A. Shisanya**, Jayne Mugwe, Monicah Mucheru-Muna & Daniel Mugendi (2012): The Potential of Organic and Inorganic Nutrient Sources in Sub-Saharan African Cropping Systems. In: Whalen, J. A. 2012. *Soil Fertility Improvement and Integrated Nutrient Management - A Global Perspective* (Ed). ISBN 978-953-307-945-5

Ngonzo, C.L., **Shisanya, C.A.** and Obando, J.A. (2011). "Towards a Hydro-Economic Approach for Risk Assessment and Mitigation Planning of Water Disasters in Semi-Arid Kenya" (Chapter 2). In: Mateo, S. (Ed.). "Risk Management in Environment, Production and Economy", ISBN 978-953-307-313-2, <http://www.intechopen.com/source/pdfs/19859/InTech-Toward_a_hydro_economic_approach_for_risk_assessment_and_mitigation_planning_of_water_disasters_in_semi_arid_kenya.pdf

Ngonzo, C. L., **Shisanya, C. A.** and Obando, J. A. (2010) Land use and water demand under a Changing Climate: Experiences of Smallholder Farmers from Muooni, In: **Climate Change** (eds. S. P. Saikia), International Book Distributors, India, pp. 117-140.

Shisanya, C. A., Anyamba, A., Okolla, J., Recha, W. C. and Small, J. (2010) Climate Variability and Agricultural Production in Arid and Semi Arid Kenya, In: **Climate Change** (eds. S. P. Saikia), International Book Distributors, India, pp. 218-217.

Shisanya, C.A. and Gitonga, N.M. (2007): Evaluation of nitrogen fixation using ¹⁵N dilution methods and economy of a maize-tepyary bean intercrop farming system in semi-arid SE-Kenya. In: Bationo, A., Waswa, B., Kihara, J., Kimetu, J.(Eds), *Advances in Integrated Soil Fertility Management in Sub-Saharan Africa: Challenges and Opportunities*. Springer, Dordrecht, The Netherlands, pp. 389-400, ISBN-13978-1-4020-5759-5 (HB).

- Obando, J. and **Shisanya, C.A.** (2006): A review of the DAAD Alumni Summer School 2005 "Topics of Integrated Watershed Management", S. Thiemann, R. Winnegge & G. Foerch (Eds.), DAAD Alumni Summer School 2006 – *Participatory Watershed Management Plan*. Weiterbildung in Siegen (WIS) 20, pp. 43-47, ISBN-978-3-932604-20-1.
- Shisanya, C.A. (2006): Legumes for soil fertility, food, fodder and cash. In: Mugendi, D.N., Mucheru-Muna, M.W. and Mugwe, J.N. (Eds.), *Soil Fertility: Enhancing Community Extension*. Munila Publishers, Nairobi, pp. 58-72, ISBN-9966-9821-1-6.
- Shisanya, C.A. (2005): Agricultural needs in Sub-Saharan Africa: The challenges of agricultural biotechnology. In: Dris, R. (Ed.), ***CROPS: Growth, Quality and Biotechnology***. WFL Publisher, Helsinki, Finland, pp. 1196-1205, ISBN 952-91-8601-0.
- Shisanya, C.A. (2005): An analysis of accessibility to rural domestic water supply: A case study of Kakamega District, Kenya. In: Jansky, L., Haigh, M.J. and Prasad, H. (Eds.), ***Sustainable Management of Headwater Resources: Research from Africa and India***. United Nations University Press, Tokyo, pp. 178-201, ISBN 92-808-1108-8.
- Shisanya, C.A. (2004): Improvement of grain legume production in semi-arid Kenya through biological nitrogen fixation: The experience with tepary bean (*Phaseolus acutifolius* A. Gray var. latifolius). In: Dris, R. and Jain, S.M. (Eds). ***Production Practices and Quality Assessment of Food Crops. Vol. 1: Pre-harvest Practices***. Kluwer Academic Publishers, Dordrecht, pp. 163-188, ISBN Vol. 1: 1-4020-1698-0.

External Research Collaboration

- 2011-2016: Climate Change Impacts on Ecosystems Services and Food Security in Eastern Africa: Increasing Knowledge, Building Capacity and Developing Adaptation Strategies (CHIESA Project). Financed by Ministry for Foreign Affairs of Finland, ICIPE & Partner Organizations.
- 2010- 2013: Integrated Sorghum and Livestock Production Technologies for Adaptation to Climate Change in Eastern and Southern. Project funded by the **Kenya National Council for Science and Technology**. Collaborating partners are: KARI Embu, KARI Katumani, Chuka University and Embu Food Industries
- 2010 - 2013: Community of Excellence in Neglected Vector Borne Zoonotic Diseases (*CERNVec*). Project funded by the **Consortium for National Health Research (CNHR)**. Collaborating Partners are ICIPE, JKUAT, MoPHS and KEMRI).
- 2009-2013: University of Siegen, Makerere University, Dar es Salaam University, University of Zambia (Partners in the European Union EDULINK Project on "*University Capacity Development for Integrated Sanitation Management in Eastern and Southern Africa*")
- 2008-2011: University of Siegen, Makerere University, Dar es Salaam University, University of Zambia (Partners in the European Union EDULINK Project on "*University Capacity*")

Development for Integrated Sanitation Management in Eastern and Southern Africa” (UCDISM) – 9 ACP RPR 118 # 10.

2008- Present: Ohio University, USA (Joint Research proposal development and staff exchange).

2007-2012: University of Siegen, Makerere University, Dar es Salaam University (Partners in the European Union Project on “*Capacity Building for Integrated Watershed Management in Eastern Africa” (IWMNET)*) - 9ACP RPR 50/10

Projects and Research Grants

2018-2019: Strengthening National Institutions in Kenya to Meet the Transparency Requirements of the Paris Agreement and Supporting the Coordination of National, Regional and Global Transparency-related Activities in Kenya (KU-PI)(Conservation International, GEF, GoK Funding of USD 2.154 Million).

2017-2022: Building Research Capacity for Sustainable Water and Food Security in Drylands of Sub-Saharan Africa (BRECCIA)(KU-PI)(GCRF Funding of 5 Million British Pounds)

2017-2020: African Trans-regional Cooperation Through Academic Mobility (ACADEMY)(KU-PI)(EU-Funding of Euros 1,379,550).

2017-2020: Towards quantifying greenhouse gas emissions and deriving emission factors from organic and inorganic fertilizer from organic and inorganic farming systems of Kenya (KU-Co-PI)(NRF Funding of KES 20 million).

2014-2017: System for Land-based Emissions Estimations (SLEEK). Clinton Climate Initiative (CCI) (KU-PI)(KES 42 Million)

2016: Gender and pro-poor agricultural growth: Nonfarm/farm linkages and village dynamics in sub-Saharan Africa. Lund University, Sweden, Department of Geography (USD 13,080).

2012-2015: Understanding the Environment, Promoting Health in Lake Baringo/Bogoria Drainage Basin, Kenya. Research Grant Number NCST/RCD/ST&I/5TH CALL/R/137. (Co-PI) (KSH. 6,000,000).

2012-2014: Analysis of Household GHG Emissions/Sink Levels Using ALU Software – A Case Study of Juja and Bahati Constituencies. Research Grant NCST/ST&I/RCD/2ND CALL/POST DOC/010 (Co-PI) (KSH. 850,000)

2010 - 2013: Integrated Sorghum and Livestock Production Technologies for Adaptation to Climate Change in Eastern and Southern Kenya. Project funded by the Kenya National Council for Science and Technology. Collaborating partners are: KARI Embu, KARI Katumani, Chuka University and Embu Food Industries (\$ 75,000)

2010 - 2013: Community of Excellence in Neglected Vector Borne Zoonotic Diseases (*CERNVec*). Project funded by the Consortium for National Health Research (CNHR)(Co-investigator) (Collaborating with ICIPE, JKUAT, MoPHS, KEMRI) (\$ 694,000) (www.cernvec.org).

- 2007 - 2020: DAAD MSc. Scholarship grants to foreign students to the tune of USD 100,000 per academic year
- 2009 - 2012: European Union, Brussels "University Capacity Development for Integrated Sanitation Management in Eastern and Southern Africa (Co-investigator) (Collaborators: Prof. Foerch - University of Siegen, Prof. Mwanjalolo - Makerere University, Prof. Mtalo - Dar es Salaam University, Prof. Nyambe – University of Zambia) (586,000 Euros)
- 2007-2011: European Union, Brussels "Capacity Building for Integrated Watershed management in Eastern Africa (IWMNET)" (Co-investigator) (Collaborators: Prof. Foerch University of Siegen, Prof. Tenywa - Makerere University, Prof. Mtalo - Dar es Salaam University (2.5 Million Euros)
- 2006 - 2009: Danish Scientific Council "Developing new methodologies for agricultural and rangeland applications in the tropics based on new generation satellite data" (Co-investigator) (Collaborators: Dr. Ras – University of Copenhagen, Dr. Anyamba – NASA) (2.5 Million SEK).
- 2005-2008: The Rockefeller Foundation, New York, USA: "Exploring the multiple potentials of soybeans in enhancing rural livelihoods and small industry in East Africa." (Co-investigator) (Collaborators: Dr. Vanlauwe – TSBF) (USD 500,000)
- 2004-2005: START/PACOM (National Science Foundation), Washington, USA: "Vulnerability assessment of maize and sorghum crops to climate variability and change in Kenya" (Principal Investigator)(Collaborators: Dr. Anyamba – NASA) (USD 20,000)
- 2004-2007: Inter-university Council for East Africa, Kampala, Uganda: "Transferring soil carbon sequestering (SCS) best management practices (BMP) to smallholder farmers in Lake Victoria catchments ecosystem." (Principal Investigator)(Collaborators: Dr. Tenge – Dodoma University, Dr. Kalumuna – Mulingano Agricultural Research Institute, Tanzania) (USD 150,000).
- 2003-2007: Flemish Interuniversity Council (VLIR) Own Initiatives, Belgium: "Integrated soil fertility management strategies to enhance food security in the central highlands of Kenya" (Co-investigator)(Collaborators: Dr. Mugendi – Kenyatta University)(350,000 Euros).
- 2003-2004: OSSREA, Addis Ababa, Ethiopia: "The magnitude and impact of HIV/AIDS on the sugarcane sub-sector: A case study of western Kenya" (Co-investigator)(Collaborators: KEMRI) (USD 20,000).
- 2003: IFS, Stockholm, Sweden: "Economic analysis of maize-tepyary bean production using a soil fertility replenishment product (PREP-PAC) in semi-arid Eastern Kenya" (Principal Investigator)(USD 12,000).
- 2002-2005: Volkswagen Stiftung, Hannover, Germany: Studies on the possibility of expanding soybean (*Glycine max* (L.) Merrill) cultivation by smallholders in different agroecological zones of Kenya (with special reference to varieties with ability of promiscuous nodulation

and spatio-temporal patterns of chances and risks for cultivation (Principal Investigator)(Collaborator: Prof. Hornetz – University of Trier, Germany) (200,000 Euros).

Consultancy Services to date

1. April – September 2020: Kenya Water Towers Agency (Tender Number: KWTA/005/2019/2020) – Developing criteria for identification and cataloguing of water towers in Kenya. Amount: USD 26,860
2. June - September 2018: Kenya Water Towers Agency (Tender Number: KWTA/RFP No/006/2017-19) to develop a Coordination Policy and Bill on Kenya Water Towers. Amount: USD 136,000

3. CURRICULUM AND INSTITUTIONAL REVIEW FOR THE COMMISSION FOR UNIVERSITY EDUCATION

- I. Bachelor of Science in Geological Sciences Technology, Dedan Kimathi University of Technology, March 2018
 - II. MSc (Climate Change and Agroforestry), South Eastern Kenya University, June 2017
 - III. MA (Geography), Mount Kenya University, September, 2014
 - IV. BA (Geography), Daystar University, July 2012
4. May 2015 - Aug 2015: **Organisation for Social Science Research in Eastern and Southern Africa (OSSREA):** To review and select submitted draft book chapters as well as perform technical and content editing of the book entitled the **Milestones in Climate Compatible Development in selected countries of Eastern and Southern Africa**
 5. July – Dec 2015: SAFEGE-Prospect-ADETEF-Eco: To carry out a mission in Kampala, Uganda within the framework of the contract concluded between the Consortium and the ACP Group of States, for Work Order N° 51 under the project “Technical Assistance to the GCCA Climate Support Facility under the 10th EDF Intra-ACP Financial Framework” with identification number FED/2012/292-331. The tasks included the following:

Develop three interdisciplinary study course modules on climate analysis within the existing MSc. ENR and proposed MSc. FEMD Programme curricula. The targeted course modules included: (i) Climate change modelling; (ii) Vulnerability assessment and monitoring; (iii) climate change adaptation programming.

Tasks for the three course modules to be developed include:

- Identify the needs of the University on climate change teaching. Assess the constraints, gaps and opportunities within the existing courses on climate change and adaptation and the existing MSc. ENR and proposed MSc. FEMD Programme curricula

- Examine the teaching methods, tools and equipment of the courses on climate change and adaptation, the existing MSc. ENR and proposed MSc. FEMD Programme curricula
- Discuss the findings above with the national coordinator and propose a course outline for the following course modules on climate analysis: (i) Climate change modelling; (ii) Vulnerability assessment and monitoring; (iii) climate change adaptation programming, within the specialised existing MSc. ENR and proposed MSc. FEMD Programme curricula
- Propose a teaching plan, including a relevant list of reading resources; practical activities and their outcomes; and a method for course evaluation for the new course modules. Present and discuss this with the national coordinator. Develop a final teaching plan to accompany the new courses within the designated Master's programmes
- Undertake training of trainer's i.e. particular academic staff selected by the department in consultation with the national coordinator, on climate change modelling, vulnerability assessment and climate change adaptation programming. Their names and any other relevant details will be provided by the national coordinator
- In close consultation with the national coordinator and in collaboration with the trained trainers, deliver lectures/tutorials on the newly developed course modules: (i) Climate change modelling; (ii) Vulnerability assessment and monitoring; (iii) climate change adaptation programming, within the context of the above-mentioned Master's degree programme
- Undertake development of relevant information and integration of the new course modules: (i) Climate change modelling; (ii) Vulnerability assessment and monitoring; (iii) climate change adaptation programming, into the existing MSc. ENR and proposed MSc. FEMD Programme curricular;

Outputs delivered included:

For each course module: (i) Climate change modelling; (ii) Vulnerability assessment and monitoring; (iii) Climate Change adaptation programming:

- Well-structured course modules developed Teaching plan for the new course modules, including power point presentations Training of trainers on climate analysis on the newly developed course modules undertaken
 - Concepts and modules of the new climate analysis courses are integrated into the MSc. ENR and MSc. FEMD programmes
 - Mission report to the beneficiary and to the ACP Secretariat, including the above deliverables as Annexes. The Outputs should be delivered in a form and structure that can be easily shared on a web-platform with other users of the Programme
6. Jul-Aug 2015: Pan Africa University Institute of Water and Energy Sciences (including climate change) PAUWES, Tlemcen, Algeria. Member of the selection committee for recruitment of short-term staff for PAUWES.
 7. June 2015: Pan Africa University Institute of Water and Energy Sciences (including climate change) PAUWES, Tlemcen, Algeria. Member of the selection committee for MSc students in various graduate courses.

8. Jun 2014 - Aug 2014: **Organization of Social Science Research in Southern and Eastern Africa (OSSREA):** To undertake capacity building and development of a Post Graduate Curriculum on Climate Change, Disaster Risk Reduction and Social Protection for Sustainable Development. Tasks undertaken included:
- Preparing a comprehensive curriculum that is multi-disciplinary, multi-sectoral and intra-disciplinary exclusively for Maasai Mara University on Climate Change, Disaster Risk Reduction and Social protection for sustainable development.
 - Designing and Developing Curriculum Content, References, Outlines of Training Modules and Teaching Aids.
 - Developing Curricula to be used in training of Postgraduate students and trainers.
 - Standardizing Training Materials and Content.
 - Recommending instructional materials, supplies, equipment, and visual aids designed to meet training needs of students and trainers.
 - Developing tests, questionnaires, and procedures that measure the effectiveness of curricula, and use these tools to determine whether program objectives are being met.
 - Observing work of participants during the round table conference to evaluate performance, and to recommend changes that could strengthen teaching skills.
 - Capacity building for the lectures of Maasai Mara University so that they embrace the curriculum for its effective implementation.
 - Putting the technical aspects of the three inter-related disciplines to ensure quality of the curriculum. Ensuring that the curriculum has a purpose, objectives (linked to Vision 2030, the Constitution of Kenya and the Maasai Mara Vision and Mission), content (course descriptions), Evaluation procedures and references.
9. May 2014: German Academic Exchange Service (DAAD) to undertake the review of CVs and short-listing of academic staff for long term and short term assignments for the Pan African University of Water and Energy Sciences (PAUWES), in Tlemcen, Algeria.
10. 2013-2014: The study aimed to obtain insight into the graduates' employment situation after graduation. The main objective of the Tracer Study was to establish the location of the graduates, institutions in which they are employed, how they are performing in respect to the RUFORUM outcomes, and in respect to the needs of the employers, the competitiveness of the graduates, retention rates after employment, regional distribution, and other relevant factors. The study also generated new ideas that would be considered for new RUFORUM investments in future training programs and research grants schemes. It was also to provide feedback on how the RUFORUM model/brand for training and research can be improved.
11. May-Aug 2013: SAFEGE-Prospect-ADETEF-Eco-climate Modelling expert under the project: Technical Assistance to the GCCA Climate Support Facility under the 10th EDF Intra-ACP Financial Framework (FED/2012/292-331; Work Order No. 17).

12. Sep-Nov 2012: Ministry of Planning & National Development/ UNDP: Consultancy to develop the 7th Human Development Report for Kenya. Contract Number 0125/2012; Project Number 0060354.
13. Jul-Oct 2012: Ministry of Planning & National Development/ UNDP: Consultancy to develop the 7th Human Development Report for Kenya. Contract Number 0125/2012; Project Number 0060354.
14. Jul-Oct 2012: Ministry of Environment and Mineral Resources (MEMR) and Regional Centre for Mapping Resources for Development (RCMRD): Consultancy on Assessment and Mapping of Five Areas of Environmental Priority in Kenya.
15. Jul-Oct 2012: Ministry of State for Special Programmes: Consultancy Services to Undertake a Risk Hazard Vulnerability and Capacity Assessment/Mapping for Western, Nyanza, Nairobi and Central provinces in Support of Disaster Risk Management (Tender No. MOSSP/15/2011-2012).
16. Jul-Oct 2011: Ministry of State for Special Programmes: Consultancy Services to Undertake a Risk Hazard Vulnerability and Capacity Assessment/Mapping for Coast, Eastern, North Eastern, Rift Valley in Support of Disaster Risk Management (Tender No. MOSSP/14/2011-2012).
17. Jan-Mar 2010: Consultant for Inter-Governmental Authority on Development (IGAD). Undertook Regional DRM Mainstreaming into National planning in five States of IGAD.
18. Jan-Mar 2010: DAAD expert workshop on New Funding Initiatives for Africa, DAAD Headquarters, Bonn, Germany.
19. Jan-Mar 2010: Intergovernmental Authority on Development (IGAD) (Djibouti) for the assignment "Regional Disaster Risk Management (DRM) Inventory" (Lead Consultant).
20. Jan 2009: Member of the selection committee of the DAAD Programme "Centre of Excellence in Higher Education Institutions", DAAD Headquarters, Bonn, Germany.
21. Apr 2008: Evaluation of the SPRING Programme between the University of Dortmund, Germany and Kwame Nkrumah University, Kumasi, Ghana – DAAD Assignment in Germany and Ghana.
22. Feb 2007: Brochure writing on "Best Practices in Bwathonaro Sub-catchment" (GTZ-Kenya) (Lead Consultant).
23. Jan 2004: End term Evaluation of the Northern Kenya Conflict Resolution Initiative Project of the Rural Livelihoods Programme (Intermediate Technology Development Group of East Africa (ITDG-EA) (Lead Consultant).
24. 2007-2011: Farm Management Handbook of Kenya Revision. (GTZ-Kenya) (Lead Consultant).

25. Mar-Jun 2002: Mid-term Evaluation of the East Africa Energy and Technology Development Network and the Regional Energy Project of the Intermediate Technology Development Group of East Africa (ITDG-EA) (Lead Consultant).

26. Jan-Mar 2001: End of Term Evaluation of the Marginal Farmers Project (MFP) under the Rural Agriculture and Pastoralist Programme (RAPP) of the Intermediate Technology Development Group of East Africa (ITDG-EA) (Lead Consultant).

Current Professional Association Membership

1. CODESRIA (Council for the Development of Social Science Research in Africa), Dakar, Senegal
2. CERNVec (Community of Excellence in Neglected Vector Borne Zoonotic Diseases)
3. African Network for Tropical Soil Biology and Fertility (AfNET) (East Africa Representative to the Technical Scientific Committee)
4. Kenya Meteorological Society (KMS)
5. Organisation for Social Science Research (OSSREA) in Addis Ababa, Ethiopia.
6. Kenya DAAD Scholars Association (KDSA)
7. Network for Watershed Management Eastern Africa (IWMNET)
8. Network disaster management East Africa (UNEDRA).
9. African Remote Science Society (ARSE)

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Declaration

I hereby confirm that the information given above is accurate and truthful to the best of my knowledge.



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