

Curriculum Vitae

1.0 Personal Information

CHRIS A. SHISANYA (Ph.D) (Associate Professor of Agroclimatology)

C/o Department of Geography Phone +54-20-810901 Ext. 57315/57321 (work)
Kenyatta University +254-722-312767 (Mobile)
P. O. Box 43844 Fax: +254-20-810513 (work)
GPO 00100, NAIROBI
Email: chris.shisanya@iwmnet.eu or shisanya@yahoo.com

P. O. Box 64024-GPO 00620, NAIROBI, KENYA
(PERMANENT)

NATIONALITY:	Kenyan
DATE OF BIRTH:	13-4-1962
PLACE OF BIRTH:	Lusiola Village, Kakamega District, Kenya
MARITAL STATUS:	Married with 3 children (Wilson, Warren, Wendy)
GENDER:	Male

2.0 Qualifications

Academic Record:

- ◆ Associate Professor, 2002-present; Department of Geography, Kenyatta University
- ◆ Ph.D. Agroclimatology, 1996; Universität Trier, Germany
- ◆ M.Sc. Climatology, 1988; Kenyatta University, Kenya
- ◆ B.Ed.(Science) (Hons), 1985; University of Nairobi, Kenya

Scientific Training Workshops:

- 2010: DIES International Dean's Course III on Strategic Issues in Higher Education Management. March 1st – 5th, Addis Ababa, Ethiopia.
- 2009: International Dean's Course Africa 2009/10. May 4-14th, Osnabrueck and Berlin, Germany
- 2008: International IFS/ISAR Workshop on "Enhanced utilization of phosphate rocks for agricultural development. 27th July – 3rd 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. 29th September – 10th October 2003, Arusha, Tanzania.

3.0 Fellowships:

- October – November, 2006: DAAD Visiting scientist at the Institute for Water Studies, University of Siegen, Germany.
- June 2005: START Visiting scientist Fellowship for a 2 months study visit to NASA/Goddard Space Flight Centre at the Earth Sciences Technology Centre and University of Maryland, Department of Geography, USA.
- June 2001 – August 2001: DAAD scholarship for a 3 months visiting scientist to Trier University, Germany.

4.0 Employment History/Work Experience:

- ◆ March 2002 – present: Associate Professor of Agroclimatology, Department of Geography, Kenyatta University
- ◆ October – November 2006: Visiting DAAD Scholar, Forschungsinstitut Wasser und Umwelt (Institute of Water and Environment), University of Siegen, Germany.
- ◆ June 2001 - August 2001: Visiting DAAD Scholar, Faculty of Geosciences, University of Trier, Germany
- ◆ July 1999 – February 2002: Senior Lecturer, Dept. of Geography
- ◆ July 1990 - June 1999: Lecturer in Applied Climatology & Advanced Quantitative Techniques, Dept. of Geography, Kenyatta University
- ◆ January 1996 - April 1996: University of Trier, FB VI - Geosciences: Part-time experimental scientist
- ◆ Researcher 1992-1994: Part-time Kenya Agricultural Research Institute (KARI) scientist at Kiboko
- ◆ April 1988 - June 1990: Tutorial Fellow, Department of Geography, Kenyatta University
- ◆ January 1988 – March 1988: Graduate Teacher, Aquinas High School, Nairobi
- ◆ July 1985 – October 1985: Graduate Teacher, Bukhalalire High School, Busia District

5.0 Administrative Responsibilities:

- ◆ 15-20th July 2010 – Acting Dean, School of Humanities and Social Sciences
- ◆ April 2010 – present: Elected Senate Representative to the University Council
- ◆ July 2007 – present: Chairman, Department of Geography, Kenyatta University
- ◆ July 2007 – present: Member of the School of Humanities Management Board
- ◆ October 2007 – September 2011: Regional Coordinator, European Union Water Facility Project on “*Capacity Building for Integrated Watershed Management in Eastern Africa (IWMNET) – 9ACP RPR 50/10*”.
- ◆ October 2008 – September 2011: Regional Coordinator, European Union EDULINK Project on “*University Capacity Development for Integrated Sanitation Management in Eastern and Southern Africa (UCDISM) – 9 ACP RPR 118 # 10*”.
- ◆ 2006 – 2007: Chairman, Center for Research, Development and Consultancy Board, Kenyatta University.
- ◆ March 2007: Chairman, Proposal for Kilifi Committee

6.0 Postgraduate Supervision:

6.1 *List of Completed and On-going Supervision*

- MAHILANE, S. (2010)(I56/10421/08): Household response to climate variability in kilaleda sub-catchment of pangani river basin, Tanzania (MSc. Thesis)(On-going)
- AUMA, A.J. (2010)(I56/10458/06): Utilization and conservation of papyrus plants for sustainable livelihoods in Kusa swamp, Lake Victoria, Kenya (MSc. Thesis)(On-going)
- 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 (PhD Thesis)(On-going).
- ALUFAH, S. (2010)(156F/10418/2008): Factors influencing the adoption of soil water conservation technologies in Ngaciuma sub-catchment, Upper Tana, Kenya (MSc. Integrated Watershed Management) (MSc. Thesis)(On-going)
- 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) (PhD Thesis)(On-going).
- NGETICH, K.F. (2009)(I84/11873/2008): Enhancing farmers' benefits through improved water use efficiency in the highlands of central Kenya (PhD thesis)(On-going).
- MWANGI, J.K. (2009)(I84/10892/08): Towards developing a payment for environmental services (PES) scheme for Sasumua watershed, Kenya (PhD Thesis)(On-going).
- RECHA, W.C. (2009)(C82/10807/2008): Potential impacts and associated vulnerabilities on water resources and livelihoods at household level in Tharaka District, Kenya)(On-going).
- 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)(Thesis successfully defended in September, 2009 & degree awarded).
- SANG, E.K. (2009)(C50/5836/2003): An assessment of the effects of the 'new' road safety regulations on passenger service vehicle operations in Nairobi, Kenya (MA Thesis, completed & degree awarded).
- 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).
- 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 subcatchment (On-going)
- MAINGI, J.M. (2006)(I84/7007/2002): Nitrogen fixation in promiscuous soybean (*Glycine Max* (L.) *Merril*) Varieties in Eastern Kenya(Department of Plant Microbial Sciences, Kenyatta University) (Degree awarded)
- 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).
- 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).

- 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).
- 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).
- 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).
- 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).
- 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).

6.2 PhD Supervision

- 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 (On-going).
- 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) (On-going).
- NGETICH, K.F. (2009)(I84/11873/2008): Enhancing farmers' benefits through improved water use efficiency in the highlands of central Kenya (PhD thesis)(On-going).
- MWANGI, J.K. (2009)(I84/10892/08): Towards developing a payment for environmental services (PES) scheme for Sasumua watershed, Kenya (PhD thesis)(On-going)
- RECHA, W.C. (2009)(C82/10807/2008): Potential impacts and associated vulnerabilities on water resources and livelihoods at household level in Tharaka District, Kenya)(On-going).
- MAINGI, J.M. (2006)(I84/7007/2002): Nitrogen fixation in promiscuous soybean (*Glycine Max (L.) Merril*) Varieties in Eastern Kenya(Department of Plant Microbial Sciences, Kenyatta University) (Thesis successfully defended on February 13th 2009)
- 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)
- 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)

6.3 Masters Supervision

- MAHILANE, S. (2010)(I56/10421/08): Household response to climate variability in kilalodeda sub-catchment of pangani river basin, Tanzania (MSc. Thesis)(On-going)

- AUMA, A.J. (2010)(I56/10458/06): Utilization and conservation of papyrus plants for sustainable livelihoods in Kusa swamp, Lake Victoria, Kenya (MSc. Thesis)(On-going)
- ALUFAH, S. (2010)(156F/10418/2008): Factors influencing the adoption of soil water conservation technologies in Ngaciuma sub-catchment, Upper Tana, Kenya (MSc. Integrated Watershed Management) (Submitted)
- 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) (On-going)
- 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)
- 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)
- 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)
- 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).
- 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).
- 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).
- 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).

7.0 Conferences/Seminars/Workshops

7.1 Participation/Attendance of Conferences/Workshops

- 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 Millenium 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 27th to 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, 28th May, 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. 27th July–rd 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 3rd 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, 27-30 May 2008, Cresta Golfview Hotel, Lusaka, Zambia
- 2007: 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. 5-8 November, 2007.
- 2007: 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, 17th – 21st September, 2007, pp. 99-119.
- 2007: 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, 17th – 21st September, 2007, pp. 59-70.

- 2007: 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, 3rd -15th, September, 2007.
- 2006: 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, 31st October, 2006.
- 2005: 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, 12-13 September, 2005
- 2004: 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 10-12, 2004.
- 2004: Enhancing research capacity in tertiary institutions in developing countries through North-South interdisciplinary research networks. Paper presented at the VolkswagenStiftung Workshop on Resources, their Dynamics and Sustainability – Capacity Development in Comparative and Integrative Approaches, Nairobi, Septemebr 13-17, 2004.
- 2004: Evaluation of nitrogen fixation and economy of a maize-tepary bean intercrop farming system in semi-arid Kenya using 15N-dilution methods. Paper Presented at the AfNET Symposium, Yaounde, Cameroon, 17th – 21st May, 2004.
- 2003: 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: Enhancing Research Capacity in Institutions of Higher Learning in Developing Countries through North-South Partnership. Paper Presented at a DAAD Workshop, 22nd-November-2002, Trier University, Germany.
- 2002: Enhancing food security in the drylands of South East Kenya through biological nitrogen fixation: The example of drought adapted tepary bean (*Phaseolus acutifolius* A. Gray.var.latifolius) presented at the 10th AABNF Meeting in Accra, Ghana 27th -31st October (with Gitonga, N.M)
- 2002: 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, 5-8th September, 2002, USIU Campus, Nairobi (with Kwena, Z.A.)

7.2 Presentation of papers at academic and professional conferences

- Shisanya, C.A.**, Obando, J.A., Onywere, S.M. Enhancing sustainable water resource management for food security: A case study of Bwathonaro catchment, Kenya. Paper Presented at the Commission for Higher Education Research Dissemination Workshop with the theme “Water as an Avenue to Food Security”, Mombasa Beach Hotel, 20th to 24th June, 2010.
- Shisanya, C.A.**, 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 27th to 29th, 2009
- Shisanya, C.A.** 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, 28th May, 2009, Kenyatta University Conference Centre.

- Shisanya, C.A.:** 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. 27th July–rd August, 2008, Kigali, Rwanda.
- 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 3rd 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, 27-30 May 2008, *Cresta Golfview Hotel, Lusaka, Zambia*
- Shisanya, C.A.:** 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. 5-8 November, 2007.
- A. J. Tenge, M.C. Kalumuna, and **Shisanya, C.A.** 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, 17th – 21st September, 2007, pp. 99-119.
- Okeyo, J. and **Shisanya, C.A.:** 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, 17th – 21st September, 2007, pp. 59-70.
- Shisanya, C.A.:** 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, 3rd -15th, September , 2007.
- Shisanya, C.A.:** 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, 31st October, 2006.
- Shisanya, C.A.:** 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, 12-13 September, 2005
- Shisanya, C.A** and Kwena, Z.A.: 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 10-12, 2004.
- Shisanya, C.A.:** Enhancing research capacity in tertiary institutions in developing countries through North-South interdisciplinary research networks. Paper presented at the Volkswagenstiftung Workshop on Resources, their Dynamics

and Sustainability – Capacity Development in Comparative and Integrative Approaches, Nairobi, September 13-17, 2004.

- Shisanya, C.A.:** Evaluation of nitrogen fixation and economy of a maize-tepary bean intercrop farming system in semi-arid Kenya using ^{15}N -dilution methods. Paper Presented at the AfNET Symposium, Yaounde, Cameroon, 17th – 21st May, 2004.
- Shisanya, C.A.:** 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.
- Shisanya, C.A.:** Enhancing Research Capacity in Institutions of Higher Learning in Developing Countries through North-South Partnership. Paper Presented at a DAAD Workshop, 22nd-November-2002, Trier University, Germany.
- Shisanya, C.A.** and Gitonga, N.M. Enhancing food security in the drylands of South East Kenya through biological nitrogen fixation: The example of drought adapted tepary bean (*Phaseolus acutifolius* A. Gray.var.latifolius) presented at the 10th AABNF Meeting in Accra, Ghana 27th -31st October, 2002.
- Shisanya, C.A.** and Kwena, Z.A. 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, 5-8th September, 2002, USIU Campus, Nairobi.

8.0 Research and Publications

8.1 Articles in Refereed Journals

International Journals

(a) Single Authorship

- Shisanya, C.A. (2005): Yield and nitrogen fixation response by drought tolerant tepary bean (*Phaseolus acutifolius* A. Gray var. latifolius) in sole and maize intercrop systems in semi-arid southeast Kenya. *Journal of Food Technology* **3(3)**: 300-307.
- Shisanya, C.A. (2005): Economic analysis of maize-tepary bean production using a soil fertility replenishment product (PREP-PAC) in semi-arid Eastern Kenya. *Journal of Food, Agriculture & Environment* Vol. **3(2)**: 309-312.
- Shisanya, C.A. (2004): Leaf water potential responses of three bean varieties to water stress during flowering in a semi-arid environment of Kenya. *South African Journal of Botany*: **70(5)**: 713-716.
- Shisanya, C.A. (2003): A note on the response by smallholder farmers to soil nutrient depletion in the East African highlands. *Food, Agriculture & Environment* Vol.1 **(3&4)**: 247-250.
- Shisanya, C.A. (2003): Yield and nitrogen response by drought tolerant tepary bean (*Phaseolus acutifolius* A. Gray var. latifolius) in sole and maize intercrop systems in semi-arid Kenya. *Pakistan Journal of Agronomy* **2(3)**: 126-137.
- Shisanya, C.A. (2002): Improvement of drought adapted tepary bean (*Phaseolus acutifolius* A. Gray var. latifolius) yield through biological nitrogen fixation in semi-arid SE-Kenya. *European Journal of Agronomy* **16(1)**: 13-24.

(b) Multiple Authorship

- Proud, S.R., Rasmussen, M.O., Fensholt, R., Sandholt, I., **Shisanya, C.**, Mutero, W., Mbow, C. and Anyamba, A. (2010): Improving the SMAC atmospheric correction code by analysis of meteosat second generation NDVI and surface reflectance data. *Remote Sensing of Environment*, doi:10.1016/j.rse.2010.02.020.
- Shisanya, C.A., Mucheru, M.W., Mugendi, D.N., Kung'u, J.B. (2008): Effect of organic and inorganic nutrient sources on soil mineral nitrogen and maize yields in central highlands of Kenya. *Soil Tillage Research*, doi:10.1016/j.still.2008.05.016
- Shisanya, C.A., Makokha, M.O., Kimani, S.K., Kalumuna, M., & Tenge, A. (2007): Farmer tree nursery as a catalyst for developing sustainable best management land use practices in Lake Victoria catchments ecosystem. *Journal of Applied Sciences* 7(13): 1755-1761
- Shisanya, C.A. and Khayesi, M. (2007): How is climate change perceived in relation to other socioeconomic and environmental threats in Nairobi, Kenya? *Climate Change*, 85: 271-284.
- Maingi, J.M., Gitonga, N.M., **Shisanya, C.A.** & Hornetz, B. (2006): Population levels of indigenous *Bradyrhizobia* nodulating promiscuous soybean in two Kenyan soils of the semi-arid and semi-humid Agroecological zones. *Journal of Agriculture and Rural Development in the tropics and Subtropics*, 107(2): 149-160.
- Obando, J., **Shisanya, C.** (2006): A review of the DAAD Alumni Summer School 2005 'Topics of Integrated Watershed Management' *FWU Water Resources Publications*, Volume No. 05/2006, ISSN No. 1613-1045, /fb10/fwu/ www/publikationen/volume0506, Participatory Watershed Management Plan for Bwathonaro Watershed, Kenya <http://WaterResourcesPublications.uni-siegen.de>
- Shisanya, C.A., Recha, W., Makokha, G.L., Mutisya, D.N., Okolla, J., & Anyamba, A. (2005): Exploring the possibility to predict southeast Kenya normalized difference vegetation index (NDVI) using seasonal climate forecast. *European Journal of Scientific Research*, 12(1): 276-287.

(c) Publications with students

- Makokha, G.L. & **Shisanya, C.A.** (2010): Trends in mean annual minimum and maximum near surface temperature in Nairobi city. *Advances in Meteorology* Vol 2010, Article ID 676041, doi:10.1155/2010/676041.
- Recha, C.W., **Shisanya, C.A.**, Makokha, G.L., Kinuthia, R.N. (2008): Perception and use of climate forecast information among smallholder farmers in semi-arid Kenya. *Asian Journal of Applied Sciences* 1(2): 123-135.
- 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.

9.0 Books

(a) Single Authorship

- 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. Materialien zur Ostafrika-Forschung, Heft 14, Trier, ISBN 3-921-599-19-9

(b) Multiple Authorship

- Shisanya, C.A. and Khayesi, M. (2010): How is Climate Change Rated and Understood in Nairobi City, Kenya? VDM Verlag, Saabruecken, Germany. ISBN (978-3-639-25954-4).
- Jaetzold, R., Hornetz, B. and **Shisanya, C.A.** (2007): Farm Management Handbook of Kenya Vol II: Natural Conditions and Farm Management Information, Part B, Central Kenya. Ministry of Agriculture, Nairobi.
- Jaetzold, R., Hornetz, B. and **Shisanya, C.A.** (2007): Farm Management Handbook of Kenya Vol II: Natural Conditions and Farm Management Information, Part B, Eastern Kenya. Ministry of Agriculture, Nairobi.
- Jaetzold, R., Hornetz, B. and **Shisanya, C.A.** (2007): Farm Management Handbook of Kenya Vol II: Natural Conditions and Farm Management Information, Part B, Western Kenya. 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*).

10.0 Chapters in Books

- 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: Preharvest Practices***. Kluwer Academic Publishers, Dordrecht, pp. 163-188, ISBN Vol. 1: 1-4020-1698-0.

11.0 Networking and Collaboration with External Organizations

- 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”) - 9 ACP RPR 50/10

12.0 Projects/Research Grants

- 2007 – present: 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).

13.0 National and International Recognition

13.1 National

2009: *Member of the National Technical Working Group on REDD-Readiness Preparation Proposal*

External Examiner in Other Universities within the Country

- September 2009 - present: Department of Geography, Kabianga University College
- April 2005 – 2010: Department of Geography, Moi University, Kenya
- 2004 - 2009: Department of Geography, MARIST University, Nairobi
- 2003 - 2005: Department of Geography, University of Nairobi, Kikuyu Campus
- 2000-2003: Department of Geography, Catholic University of Eastern Africa (CUEA)

Merit awards

2009: Vice Chancellor's Research Award

2002: DAAD Alumni Equipment Grant

2001: Vice-Chancellor's Award on Publications

13.2 International

(a) *External Examiner in Other Universities Outside the Country*

- July 2007 – present: Dar-es-Salaam University College of Education (DUCE)
- June 2006 – present: Department of Geography, Makerere University, Uganda
- May 2005 – 2008: Department of Geography, University of Dar-es-Salaam, Tanzania

(b) *External Reviewer for the following Academic Journals*

- African Journal of Food Agriculture & Nutritional Development
- African Journal of Business Management

(c) Membership to External Proposal Review Commissions

- Pre-selection phase of the DAAD programme “Higher Education Excellence in Development Cooperation (Bonn, Germany, January 2009)
- Final selection phase of the DAAD programme “Higher Education Excellence in Development Cooperation (Berlin, Germany, June 2009)

(d) Consultancy Services

1. January 6th – 10th 2010: DAAD expert workshop on New Funding Initiatives for Africa, DAAD Headquarters, Bonn, Germany.
2. January 17th – March 10th 2010: Intergovernmental Authority on Development (IGAD) (Djibouti) for the assignment “Regional Disaster Risk Management (DRM) Inventory” (Lead Consultant).
3. January 2009: Member of the selection committee of the DAAD Programme “Center of Excellence in Higher Education Institutions”, DAAD Headquarters, Bonn, Germany
4. April 2008: Evaluation of the **SPRING** Programme between the University of Dortmund, Germany and Kwame Nkrumah University, Kumasi, Ghana – DAAD Assignment in Germany and Ghana.
5. February 12th – June 2007: Brochure writing on "Best Practices in Bwathonaro Sub-catchment" (GTZ-Kenya) (Lead Consultant)
6. January 12th – 31st 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)
7. September 2007 - October 2011: Farm Management Handbook of Kenya Revision. (GTZ-Kenya) (Lead Consultant)
8. March – June 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)
9. January - March 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)
10. 29th - 30th April 1997: National Environmental Secretariat, Ozone Office, Nairobi. Resource person in a workshop on Vienna Convention on the protection of the ozone layer and implementation of the Montreal Protocol on Substances that Deplete the Ozone layer (KCCT, Mbagathi).
11. IDRC project on water demand management for Eastern Africa Region, January - March 1997: Member of the team collecting literature on research done on the subject in the East African Region

14.0 Academic Leadership

2007: Initiated an ongoing International Masters of Science Degree Programme in Integrated Watershed Management (MSc. IWM) within the Department of Geography

15.0 Membership to Professional Bodies

1. African Network for Tropical Soil Biology and Fertility (AfNET) (East Africa Representative to the Technical Scientific Committee)

2. Kenya Meteorological Society (KMS)
3. Organisation for Social Science Research (OSSREA) in Addis Ababa, Ethiopia.
4. Kenya DAAD Scholars Association (KDSA)
5. Network Watershed Management Eastern Africa (IWMNET)
6. Network disaster management East Africa (UNEDRA).
7. African Remote Science Society (ARSE)

16.0 Referees

1. Prof. D.N. Mugendi, Deputy Vice Chancellor (Finance, Planning & Development), Kenyatta University, P. O. Box 43844-00100, Nairobi, Kenya. Telephone: +254-20-810901/19 EXT. 57189; Fax: +254-20-811575; Mobile Contact: +254-733601635; E-mail: dmugendi@yahoo.com
2. Prof. N. M. Gitonga, Ag. Dean, School of Agriculture & Enterprise Development, Kenyatta University, P. O. Box 43844-00100, Nairobi, Kenya. Telephone: +254-20-810901/19; Fax: +254-20-811575; Mobile Contact: +254-722380602; E-mail: gitonga35@yahoo.com
3. Dr. Francis Nangayo, African Agricultural Technology Foundation, P. O. Box 30709-00100, Nairobi, Kenya. Telephone: +254-20-4223745; Fax: +254-20-4223701; Mobile Contact: +254-735992203; E-mail: f.nangayo@aatf-africa.org