

Proposal

To be a Host Institution for the African Climate Change
Fellowship Program

Submitted to:

START/IRA/AAS under the ACCFP Call Invitation

By

Makerere University,
PO Box 7062, Kampala, Uganda



Coordinating Units:

Department of Geography, Makerere
University

Makerere University Institute of
Environment and Natural Resources

June 2008

1.0 Proposing Host Institution

1.1 Name of Institution

Makerere University

1.2 City and Country of Location

Kampala, Uganda

1.3 Type of Institution

University

1.4 Primary mission

The primary mission of Makerere University is teaching and research.

1.5 Secondary mission

Makerere University through its academic and non academic staff is also engaged in community outreach, advocacy and provision of consultancy services.

1.6 Main thematic areas

All disciplines are covered in the various faculties, schools and institutes at Makerere University including water, agriculture and development.

1.7 Working Language

The working language at Makerere University is English

2.0 Project Leader

2.1 Name:

Prof. Charles Peter Basalirwa

2.2 Title:

Ag. Head of Department (Geography)

2.3 Mailing Address

Department of Geography, Makerere University, PO Box 7062, Kampala, Uganda

2.4 Telephone

Office: +256 414 531 261
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2.5 E-mail

cbasalirwa@arts.mak.ac.ug

3.0 Collaborating Institutions

In our case, we are not collaborating with another institution and the program will generally be solely implemented by Makerere University. Where supervision is required from outside, it will be solicited from people who are associated with Makerere University, such as part-time lecturers who teach on various university academic programmes or are already recognized as research supervisors. In our case, we shall have collaborating units within the university. However, it is worth noting that the program implementation will involve the participation and resource leveraging (staff, office space, library space, computing facilities and reading rooms) from various units of the university (Departments, Institutes, Schools and faculties), although coordination will be undertaken by Makerere University Institute of Environment and Natural Resources (MUIENR) and the Department of Geography.

4.0 Fellowship Experience

Makerere University has enormous and long term fellowship experience. At undergraduate level, Makerere University has participated in student exchange with the University of Dar es Salaam, Sokoine University of Agriculture, Ardhi University, Mhimbili University College of Medicine through the Inter-University Council of East Africa for over 30 years. It also has the highest number of international students at both undergraduate and graduate level in East Africa. Makerere University therefore has a reasonable grasp of international education and dealing with international students. It has also has experience in scholarship management including Carnegie and Rockefeller Foundation Scholarship fund for both undergraduate and graduate students; and a special gender mainstream programme (female focused scholarship programme).

At graduate level, Makerere University has been a host as well as a beneficiary in various academic visitation programmes. Various units (Departments, Institutes, Faculties, schools) at Makerere University have previously hosted research fellows and visiting staff from Africa and overseas. The academic staffs of Makerere University have also been beneficiaries of visitation program abroad. With respect to the proposed programme, there are many areas where Makerere University can competitively offer experience to the research fellows as illustrated below;

1. Teaching. For fellows who qualify to teach at the university i.e. Masters and Ph.D. degree holders for undergraduate and graduate academic programmes respectively, we can avail teaching opportunities to them. Most of our academic programmes (Natural Resource Management, Meteorology, Environmental Management, Land Use Planning, Integrated Rural Planning, Disaster Management, Ecosystems Management, Regional Planning and Development, etc) at both undergraduate and graduate levels are embedded with core course units on global environmental change (climate and land use change issues). Our programmes therefore provide a strong niche for the visiting scientist, especially early career scientists to further build and enhance the professional competences in the field of climate change and adaptation through participation in teaching and regular academic seminar given in respect of these contemporary issues. A bachelor's degree on Meteorology with a strong component on climate change is in the offing at Makerere University and it will provide enormous opportunities for teaching and research supervision. Through the participation in teaching, the fellows especially earlier career scientists will be mentored by the senior staff at Makerere University.
2. Research opportunities. There are many ongoing research projects at Makerere University dovetailing climate change/variability and, mitigation and adaptation. The research fellows will definitely benefit from the ongoing researches and the possibility of joint research and co-publishing with Makerere University staff. In the context of the ongoing research coupled with the level of training and research interest, the visiting fellows will participate in the data collection, analysis and writing.
3. Climate Change Study Facilities. Makerere University does possess great facilities for the study of climate change adaptation. Currently, the Meteorology Unit at Makerere University is running an adapted regional climate change model called PRECIS. Fellows with an interest in modeling can greatly benefit from this facility coupled with the existing national datasets. Makerere University also has a real time climatic data downloading facility including some satellite imagery and synoptic meteorology station. Other facilities include Libraries, ICT and computer labs.

5.0 Administrative and Cost issues

Administrative Issue	Response	Remark
No of visiting fellows who can be hosted at a time	5	2 on long term (8-24 months) and 3 on short term (1-4 months)
Specific Dates	May-August for short term fellows Long term are not restricted but short start prior to the beginning of the semester	Semester break offers more facilities to the fellows and gives more time for interaction. Fellows to participate in the teaching need to come a month before the scheduled semester time (for course allocation)
Living costs for the fellows per month	Approx. US\$ 500	Housing (\$150), meals (\$250), Incidentals (\$100), Library research carrol. They will be accommodated at DAG, MISR or at CAEC
Registration and Administrative costs	\$200 for short term, \$500 for long stay	One time payment for
Registration costs	\$100 bench fees per month	No registration fees from the university, unless the fellow registers for a course unit and requires a certificate at the end. The bench fee is however required for the administering faculty.
Other requirement	Prior notification, at least 6 weeks before the planned date of arrival	To facilitate planning and arranging for accommodation and linkages with scientific supervisors

6.0 Qualifications of the Host Institution

6.1 Institutional Capacity;

Makerere University possesses reasonable capacity in terms of staff and facilities to facilitate a comfortable stay of a visiting fellow. Over the years, Makerere University has been developing its infrastructure with the support of both the

Ugandan government and development partners. To-date, Makerere University boasts of Uni-wide reasonable and stable ICT facilities for internet and e-mail services, computer laboratories and office space. The Makerere University library has also been modernized with online access to over 5000 electronic journals on the university network. A new library block has also been opened giving more space for researchers. There are also numerous computer laboratories in the university for the researchers. For graduate student in need of special research space for independent research, there is provision for research carrels in the Makerere University main library. Apart from the main library, there are departmental and faculty libraries with a disciplinary focus in terms of book collections and electronic sources to ease accessibility for students.

6.2 Project Experience:

(a) SELECTED RELATED PROJECTS/WORKSHOPS

1. Prof. Basalirwa: Climate change impacts on water resources in Uganda
2. Dr. Abel: Climate and land use change impacts on carbon dynamics
3. Prof. Majaliwa: Land use and land cover change effects on carbon and livelihoods in the Lake Kivu region.
4. Prof. Tenywa and Prof. Majaliwa: Carbon sequestration in agro-ecosystems in Uganda
5. Mr. Mukwya Isolo – Can urban form be harnessed to reduce transport energy use: Solutions to reducing greenhouse gas emissions problems in Kampala City
6. Enhancing community adaptation to climate change/variability Sironko district
7. Yazidhi Bamutaze: The impact of land use and land cover changes on livelihoods in the Lake Victoria Basin
8. Mr. Wasige. Climate variability and change impacts on maize production in Uganda.
9. DR. Lwasa. Land use change and climate change impacts on flood dynamics in Kampala
10. National Symposium on the Human Dimensions of Global Environmental Change IHDGEC Uganda Chapter June 9th 2006
11. International conference on the Global Change Network on African Mountains (GLACHOMORE) held in July 2007
12. International Conference on Ground Water and Climate June 24th – 28th 2008 Kampala Uganda

6.3 Publications Record: (selected publications)

Basalirwa, 2006. Assessing the impacts of climate change and variability on water resources in Uganda: developing an integrated approach at the sub-regional scale. START Final Report

Contributing authors: (*lead authors in italics*), *T.D. Mitchell, T. Allan, E. Stakhiv, E. van Beek, Acreman, J. Alcamo, R. Connor, C. Figueres, P. Kabat, W. Cosgrove, H. Hoff, J.M. Fritsch, J. Aerts, H. Savenije, A.Y. Hoekstra, C. Pahl-Wostl, R. Schulze, J. Rockstrom, R. Boers, J. Veraart, R. Feddes, G. Können, Z. Kundzewich, T. Buex, A. Tuinhof, A. Sonoski, H. van Schaik, C. van de Guchte, Donald Boyd, M. Helmer, M. Maksimovic, R. Hafkenschied, J. Francis, F. Kansiime, P. Balabanis, T. Bresser, K. Dorland, C. Jaeger, J. Kwadijk, J. Rasmussen*, (additional contributors). Dialogue on water and climate. First "White" (Position paper), Version 28-02-02

Lufafa, 2006. Land use and climate change effects on terrestrial C stocks in Uganda's cattle corridor. START Technical Report.

Tenywa, M.M., J.G.M. Majaliwa, M.K. Magunda, R. Lal, and G. Taulya. 2005. Dynamics of Carbon Sequestration in Various Agroclimatic Zones of Uganda. In : Lal, R., Uphoff, N., Stewart, B.A., and Hansen, D.O., Climate change and global food security, pp 501-514

Note:

Depending on the interests of a fellow, suitable supervisors will be solicited from a pool of 1300 lecturers at Makerere University

6.4 Experience in Hosting Fellows in the last 5 years:

6.4.1 Post-doctoral fellows

4 students

6.4.2 Doctoral fellows

10 students

6.4.3 Policy Fellows

5 students

6.4.4 Teaching fellows

12 students

6.4.5 Other types

Hirabe Nur – Masters student at the Department of City and Community Planning University of British Columbia Canada (Research fellow on a

training and research programme on “Decentralization and Urban Environmental Change in Kampala”

Leonie Rhode – Masters student at the Free University Berlin Germany – Research fellow on a research and training programme on Urban Environmental Change and Open Space Protection in Kampala City”

Students from the University of East Anglia in the United Kingdom often come for fieldwork in Uganda through collaboration with the Geography Department, Makerere University.

Students from the Agricultural University of Norway and the Norwegian University of Science and Technology annually come for studies at Makerere University (8 weeks) through jointly developed programmes funded by NORAD.

7.0 Qualifications of the Collaborating Institution

This is not applicable in our case.

8.0 Supervisor/Mento

- (a) Prof. C.P.K. Basalirwa
- (b) Prof. F. Kansiime
- (c) Prof. Moses Makooma Tenywa
- (d) Prof. Sandy Stevens Tockdri-Togboa
- (e) Prof. Majaliwa Mwanjalolo
- (f) Dr. Lwasa Shuaib
- (g) Dr. Paul Musali

9.0 Interest in Applicant Review

Yes we would be interested in reviewing the proposals from the applicants to enable us ascertain their interest and match them with the appropriate staff for supervision during their stay at Makerere University

CV's Potential Supervisors/Mentors

Charles Basalirwa

Department of Geography

Makerere University, Kampala Uganda

EDUCATION

1991 Ph.D. University of Nairobi, Kenya. *Meteorology*
1984 M. Sc. Hydrology, University College Galway University of Ireland,
Ireland
1981 M. Sc. Meteorology, University of Nairobi, Kenya. Addis Ababa
University
1975 Certificate Weather Forecasting E. A. Inst. for Met. Training and Research,
Nairobi, Kenya
1975 PGD Meteorology, University of Nairobi, Kenya
1974 B.Sc. (Honours, 2nd Upper) Maths & Stat. University of Dar-Es-Salaam, Tanzania

Area of field of specialization

Rainfall Climatology, Hydrological studies, Statistical Research Methods and synoptic meteorology

PROFESSIONAL EXPERIENCE

2007- Ag. Head, Department of Geography, Makerere University, Kampala
1999-Present Coordinator Met. Unit, Geography Dept. Makerere University, Kampala
funded by NORAD
1999 Associate Professor, Department of Geography, Makerere University,
1998: Associate Fellow, Royal Meteorological Society, UK.
1998-2002 Lead Author, IPCC- Third Assessment Report (TAR) Chapter 10
"Africa", IPCC, Secretariat, Geneva, Swiss.
1997: Chairman, Uganda Meteorological Society.
1997-98 National Consultant on Climate observation Network under
GCP/RAF/286/ITA - Nile Basin Water Resources by the Food and
Agricultural Organization of the United Nations (FAO)
1995-99: Senior Lecturer, Department of Geography, Makerere University,
Kampala, Uganda
1991-95: Lecturer, Department of Meteorology, University of Nairobi, Kenya
1986-91: Lecturer, Department of Geography, Makerere University,
Kampala, Uganda
1984-86: Lecturer (Prob.) Dept. of Geography; Makerere University,
Kampala, Uganda
1985-86: Lecturer (part-time) Uganda Institute of Public Administration
(IPA - Geography in Administration)
1980- 85 Senior Meteorologist, Uganda Meteorological Department,
Kampala
1977-80: Meteorologist (Contract), Kenya Meteorological Department,
Nairobi, Kenya
1974-77: Meteorologist, East African Meteorological Department, Nairobi, Kenya

Synergetic Activites

- 2005: Principal Investigator on Assessing the Impacts of Climate Change and variability on water resources in Uganda. START Project cosponsored by the International Geosphere-Biosphere Programme (IGBP), World Research Programme (WCRP), and International Human Dimensions Programme on global environmental Change (IHDP), Kampala
- 1996: Magezi, S.A.K., Basalirwa, C.P.K, and Muramira, E.T., Incremental Costs of Green house gases mitigation in the Transport Sector of Kampala, a study report supported by the Global Environment Facility (GEF)- Uganda Department of Meteorology, Kampala.
- 2000: Consultant on Climatology & Hydrology impacts on Bugala Island, Kalangala District, Palm oil Project

SAMPLE PUBLICATIONS (5 related to this work)

- 1996: Regional climate of the Upper Nile Basin and its Impact on Water Resources. Nile 2002 Conference Proceedings, Kampala, 24- 28 February 1996.
- 1995: The delineation of Uganda into climatological rainfall zones using the method of Principal Component Analysis. *International Journal of Climatology* Vol.15 No.10 pp1161-1177
- 1999: Basalirwa, C.P.K., Odiyo, J.O., Mngodo, R.J. and Mpeta, E.G.: The Climatological regions of Tanzania based on the rainfall characteristics. *International Journal of Climatology*.
- 1998: Basalirwa, C.P.K. The impact of climate on water resources in the upper Nile basin. The Rwenzori Mountains Nation Park, Uganda. Osmaston, H., Tukahirwa, J., Basalirwa, C. and Nyakaana, J. Editors, Pub. Geography Dept. Makerere University, Uganda 1998.
- 1986: "Re-assessment of Uganda's Semi-arid Lands for Agriculture and Range land Development: The Integrated Development Approach."(co-author with Prof. Mrs. M.V Mwaka). Project proposals submitted at RSCSSMRS, Kasarani, Nairobi.

COLLABORATORS IN THE LAST FOUR YEARS:

Prof Frederick Semazzi, NCSU, US

Prof L Ogallo, Director, IGAD Climate Prediction and Applications Centre (ICPAC)

Dr Richard Taylor, University College London, UK

Mr SAK Magezi Uganda Meteorological Department Kampala

Mr. A W Majugu, Uganda Meteorological Department, Kampala

GRADUATE STUDENTS

More than 10 Masters Graduates and currently I am the lead Adviser to 2 Masters and Chair of the Doctoral Advisory Committee for 5 Ph.D. students at this University

CURRICULUM VITAE

A: General

Names: Frank Kansiime
Sex: Male
Marital Status: Married with three children
Nationality: Ugandan
Date of Birth: 28th November, 1961
Contact: Makerere University,
Institute of Environment &
Natural Resources,
P.O. Box 7298, Kampala-Uganda.
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(ii) fkansiime@hotmail.com

EDUCATIONAL BACKGROUND

(i) ACADEMIC QUALIFICATIONS

Year	Qualification	Institution
1999	PhD Environmental Ecotechnology	International Institute for Infrastructural, Hydraulic and Environmental Engineering (IHE) and Wageningen Agricultural University (WAU), in The Netherlands.
1993	M.Sc Sanitary (Environmental) Engineering	International Institute for Infrastructural, Hydraulic and Environmental Engineering (IHE), The Netherlands.
1991	M.Sc Applied (Environmental) Microbiology	University of Dar es Salaam, Tanzania.
1988	B.Sc with Educ. (Biol. Chem. & Educ.)	University of Dar es Salaam, Tanzania

EMPLOYMENT RECORD AND PROFESSIONAL EXPERIENCE

<u>SEPTEMBER 2005 TO DATE</u>	Director, Makerere University, Institute of Environment & natural Resources
<u>JANUARY 2005 TO DATE</u>	Associate Professor at the Institute of Environment and Natural Resources, Makerere University.
<u>SEPTEMBER 2000 TO DECEMBER 2004</u>	Senior Lecturer at the Institute of Environment and Natural Resources, Makerere University.
<u>DEC.1991 – AUGUST 2000</u>	Lecturer at the Institute of Environment and Natural Resources, Makerere University in; water Resources Management, Water Quality Assessment, Waste Management (solid and liquid), Wetlands Ecology and Management, Pollution Control, Energy, environmental microbiology and Research Methods.
June 1993 - August 1997	PhD research fellow (carrying out research in Uganda, under Makerere University Institute of Environment & Natural Resources) at International Institute for Infrastructure, Hydraulic and Environmental Engineering (IHE) and Agricultural University of Wageningen, The Netherlands; investigating the use of Natural Wetland Systems (Nakivubo Swamp, bordering Inner Murchison Bay, Lake Victoria - Uganda) in Waste Water Treatment and Control of Pollution with emphasis on Processes and Implications. Supervised a number of MSc and PhD students.
1993 to date	Supervised a number of MSc and PhD students.
1989 to 1991	Guiding under graduate students in Environmental Microbiology practicals, University of Dar es Salaam, Tanzania.

PUBLICATIONS

(I) ARTICLES IN REFEREED JOURNALS

1. Kansime, F., Saunders, M.J. and Loisel, S.A. (2007). Functioning and dynamics of wetland vegetation of Lake Victoria; an Overview. *Wetlands Ecology and Management* : 15 (6): 443-451
2. Kansime, F., Kateyo, E., H. Oryem-Origa, H., and Mucunguzi, P. (2007). Nutrient retention in pristine and disturbed wetlands. *Wetlands Ecology and Management*. 15 (6): 453-467
3. van Dam, A., Dardona, A., Kelderman, P. and Kansime F. (2007). A simulation model for nitrogen retention in a papyrus wetland near Lake Victoria, Uganda (East Africa). *Wetlands Ecology and Management*. 15 (6): 469-480
4. Kelderman, P., Kansime, F., Tola, M. A. and van Dam, A. (2007). Press and already on line). Plug-flow modelling of phosphorus retention in papyrus wetlands. *Wetlands Ecology and Management*. 15 (6): 481-488
5. Saunders, M., Mike, J. and Kansime, F. (2007). Carbon and water cycles in tropical papyrus wetlands. *Wetlands Ecology and Management*. 15 (6): 489-498
6. Azza, N., van de Koppel, J. Denny, P. and Kansime, F. (2007). Shoreline vegetation distribution in relation to wave exposure and bay characteristics in a tropical great lake, Lake Victoria. *Journal of Tropical Ecology*. **23**: 353-360
7. Mugisha P., Kansime, F., Mucunguzi, P and Kateyo, E (2007). Wetland vegetation and nutrient retention in Nakivubo and Kirinya wetlands in the Lake Victoria basin of Uganda. *Journal of Physics and Chemistry of the Earth*. **32**: 1359-1365
8. Azza, N., Denny, P., van De Koppel, J. and Kansime, F (2006). Floating mats: their occurrence and influence on shoreline distribution of emergent vegetation. *Freshwater Biology*, **51**: 1286–1297
9. Kaggwa, R.C., Kasule, D., van Dam, A. A., and Kansime, F. (2006). An initial assessment of the use of wetland plants as substrates for periphyton production in seasonal wetland fishponds in Uganda. *International Journal of Ecology and Environmental Sciences*, **32**(1): 63-74
10. Byamukama, D., Farnleitner, A. H., Kansime, F., Manafi, M., Martina Burtscher, M and Mach, R. L. (2005) Contrasting occurrence of *Chromobacterium violaceum* in tropical drinking water springs

- of Uganda. *Journal of Water & Health* **3**: 229-238
11. Mwiganga, M. and Kanssiime, F. (2005). The impact of Mpererwe landfill in Kampala – Uganda, on the surrounding environment. *Journal of Physics and Chemistry of the Earth*. **30**: 744-750
 12. Kanssiime, F., Oryem-Origa, H., and Rukwago, S. (2005). Comparative assessment of the value of papyrus and cocoyams for the restoration of the Nakivubo wetland in Kampala, Uganda; *Journal of Physics and Chemistry of the Earth*. **30**: 698-705
 13. Kyambadde, J., Kanssiime, F. and Dalhammar, G. (2005). Nitrogen and phosphorus removal in subsurface-free pilot constructed wetlands with horizontal surface flow in Uganda. *Water, Air and Soil Pollution*, **165**: 37-59
 14. Byamukama, D., Mach, R. L., F. Kanssiime, F., Manafi, M. and Farnleitner, A. H (2005). Discrimination efficacy of fecal pollution detection in different aquatic habitats of a high-altitude tropical country, using presumptive coliforms, *Escherichia coli*, and *Clostridium perfringens* spores. *Applied and Environmental Microbiology* **71**: (1) 65-71.
 15. Kyambadde, J., Kanssiime, F., Gumaelius, L. and Dalhammar, G. (2004). Hydraulic loading, stability and water quality of Nakivubo wetland, Uganda, *African Journal of Aquatic Science*, **29**(2): 213–220
 16. Nsubuga, F. B., Kanssiime, F. and Okot-Okumu, J. (2004). Pollution of protected springs in relation to high and low-density settlements in Kampala – Uganda. *Journal of Physics and Chemistry of the Earth*, **29**: 1153-1159
 17. Kyambadde, J., Kanssiime, F., Gumaelius, L. and Dalhammar, G (2004). A comparative study of *Cyperus papyrus* and *Miscanthidium violaceum*-based constructed wetlands for wastewater treatment in a tropical climate. *Water Research* **38**: 475–485.
 18. Kanssiime, F. and Mwesigye P. (2003) Potential impacts of Kirinya wetland in treating secondary municipal effluent from Jinja stabilisation ponds. *African Journal of Tropical Hydrobiology and Fisheries*, **11**: 158-173.
 19. Lwanga, M. S., Kanssiime, F., Denny, P. and Scullion, J. (2003) Heavy metals in Lake George, Uganda, with relation to metal concentrations in tissues of common fish species. *Hydrobiologia*, **499**: 83-93.
 20. Kanssiime, F., Nalubega, M., van Bruggen, J.J.A., and Denny, P. (2003) The effect of wastewater discharge on biomass production and nutrient content of *Cyperus papyrus* and *Miscanthidium Violaceum* in the Nakivubo Wetland, Kampala-Uganda. *Water Science and Technology*, **38**(5): 233-40
 21. Kipkemboi, J; Kanssiime, F. and Denny, P. (2002). The response of *Cyperus papyrus* (L.) and *Miscanthidium violaceum* (K. Schum.) Robyns to eutrophication in natural wetlands of Lake Victoria, Uganda. *African Journal of Aquatic Science*. **27**: 11-20.
 22. Kanssiime, F. (2002). Introduction to water and development: ensuring equity and efficiency. *Journal of Physics and Chemistry of the Earth*. **27**: 801-803
 23. Kanssiime, F. and van Bruggen J.J.A. (2001). Distribution and retention of faecal coliforms in the Nakivubo wetland in Kampala, Uganda. *Water Science and Technology*. **44** (11-12): 199–206
 24. Azza, N.G.T., Kanssiime, F., Nalubega, M. and Denny, P. (2000). Differential permeability of papyrus and *Miscanthidium* root mats in Nakivubo swamp, Uganda. *Aquatic Botany*. **67**: 169-178.
 25. Byamukama, D., Kanssiime, F., Mach, R. L and Farnleitner A. H. (2000) Determination of *Escherichia coli* with chromocult coliform agar showed a high level of discrimination efficiency for differing fecal pollution levels in tropical waters of Kampala, Uganda. *Applied and Environmental Microbiology*. **66** (2): 864 – 868.
 26. Kanssiime, F. and Nalubega, M. (1999). Natural Treatment by Uganda’s Nakivubo Swamp. *Water Quality International*, March/April Issue, pp. 29 - 31.
 27. Gijzen, H. J. and Kanssiime F. (1996). Comparison of start-up of upflow anaerobic sludge blanket reactor and polyurethane carrier reactor. *Water Science and Technology*. **34**: 509 - 515.
 28. Kanssiime, F. Nalubega, M. Bugenyi, F.W.B. and Tukahirwa E.M. (1994). The role of Nakivubo swamp in maintaining the water quality of Inner Murchison Bay - Lake Victoria. *Journal of Tropical Hydrobiology and Fisheries*. **5**: 79 - 87.

(II) CHAPTERS IN BOOKS

29. Loisel, S., Cózar, A., van Dam, A. A., Kanssiime, F., Kelderman, P., Saunders, M and Simonit, M. (2006). Development of tools for wetland ecosystem resource management in Eastern Africa, Focus on Lake Victoria papyrus wetlands. *In: Verhoeven J.T.A, Beltman B., Bobbink, R. and Whigham D.F (eds). Wetlands and natural resources management (Volume 190) Ecological Studies.* Springer-Verlag Berlin, Hiedelberg
30. Kanssiime, F; Opio, A; Mafabi, P. and Busulwa, H. (2005) Kinawataka wetland: a functional ecosystem that can be used as a reference to conserve other wetlands in Uganda. *In: Vymazal J. (Editor), Natural and constructed wetlands: Nutrients, Metals and Management, pp 369-381; Backhuys Publishers, Leiden, The Netherlands.*
31. Kaggwa, R. C., Kanssiime, F., Denny, P. and van Dam, A.A. (2005). A preliminary assessment of the aquaculture potential of two wetlands located in the northern shores of Lake Victoria, Uganda. *In: Vymazal J. (Editor), Natural and constructed wetlands: Nutrients, Metals and Management, pp 350-368; Backhuys Publishers, Leiden, The Netherlands.*
32. Pokorny, J., Prikryl, I., Fiana, R., Kanssiime, F., Kaggwa, R., Kipkemboi, J., Kitaka, N., Denny, P., Bailey, R.G., Lamtane, H.A. and Mugaya, Y.D. (2005). Will fish pond management principles from the temperate zone work in tropical fingerponds? *In: Vymazal J. (Editor), Natural and constructed wetlands: Nutrients, Metals and Management, pp 382-399; Backhuys Publishers, Leiden, The Netherlands.*
33. Kanssiime, F. (2001). The influence of *Cyperus papyrus* on the distribution of nitrifiers and their activity and dissolved oxygen in wetlands. *In: Mbwette, T.S.A., Katima, J. H. Y. and Jorgensen, S.E. Application of wetland systems & waste stabilisation ponds in water pollution control. Institute of Kiswahili Research, University of Dar es Salaam, Tanzania. pp 128-142. ISBN 9976-911-55-6*
34. Opio, A., Kanssiime, F., Bugenyi, W. F. and Mafabi, P. (2001). Buffering capacity of Kinawataka Wetland: total suspended solids, faecal coliforms and removal. *In: Mbwette, T.S.A., Katima, J. H. Y. and Jorgensen, S.E. Application of wetland systems & waste stabilisation ponds in water pollution control. Institute of Kiswahili Research, University of Dar es Salaam, Tanzania. pp 180-198. ISBN 9976-911-55-6*
35. Nalubega M., Kanssiime F., and van Bruggen J.J.A. (1996). Challenges and prospects of wastewater recycling in Uganda. *In: Recycling the resource; Ecological Engineering for Wastewater Treatment. Environmental Research Forum, volumes 5-6. pp 405-408. Transtec Publications Ltd, Switzerland.*

(III) PUBLICATIONS IN PROCEEDINGS

36. Mtethiwa, A.H.N., Denny, P., Kaggwa, R., Van Bruggen, J. A.A and Kanssiime, F. (2005). Extent of initial plankton colonisation in fingerponds. In Safaloah, A.C.L., Gowela, J.P. and Mtethiwa, A.H.N. 2nd Bunda College Research Dissemination Conference Proceedings; pp 16-21 (ISSN 1816-2930).
37. Mwiganga, M. and Kanssiime, F. (2004) The Impact of Mpererwe Landfill in Kampala-Uganda, on the surrounding environment. In the Proceedings of the fifth WaterNet /WARFSA symposium on integrated Water Management and the millennium development goals, managing water for peace and prosperity, 2-4, 11, 2004, Windhoek Namibia
38. Kanssiime, F., Oryem-Origa, H. and Rukwago, S. (2004). Assessment of ecological characteristics of papyrus and cocoyams for the restoration of Nakivubo wetland in Kampala-Uganda. In the Proceedings of the fifth WaterNet /WARFSA symposium on integrated Water Management and the millennium development goals, managing water for peace and prosperity, 2-4, 11, 2004, Windhoek Namibia
39. Nsubuga, F. B., Kanssiime, F. and Okot-Okumu, J. (2003). Pollution of protected springs in relation to high and low-density settlements in Kampala – Uganda. *In: Proceedings of the 4th WaterNet/WARFSA Symposium on Water, Science, Technology and Policy: Convergence and Action by All, Gabarone- Botswana, 15-17, October, 2003*
40. Byekwaso, E., Kanssiime, F., Logstrum, J., and Andersen, S. (2002). The optimisation of a reedbed filter for effluent treatment at Kasese Cobalt Company Limited – Uganda. *In: Proceedings of the 8th International Conference on Wetland Systems for Pollution Water Control, Arusha – Tanzania, pp 660 – 668.*
41. Kanssiime, F; Nalubega, M.; Van Bruggen J. J. A. and Alderink R. H. (1996) . Effects of waste

- water discharge on the nutrient content and biomass production of *Cyperus papyrus* growing in Nakivubo swamp, Kampala - Uganda. Poster presented at the *Fifth International Conference on Wetlands Systems for Water Pollution Control*. Vienna - Austria, September 15 – 19, 1996.
42. Kanssiime, F. (1996). *Wetlands and waste water treatment*. In: *Proceedings of the Regional Seminar of Biosphere Resources for Sustainable Development in Anglophone Africa*. Mweya, Queen Elizabeth National Park, Uganda, Feb. 18 - 24, 1996.
 43. Wozei, E., Nalubega, M. and Kanssiime, F. (1996). Waste water purification using wetlands. In: Pickford et al., (eds.) *Proceedings of the 21st WEDC Conference on Sustainability of Water and Sanitation Systems*. September 4 - 8 1995, Kampala - Uganda. pp 245 - 247.
 44. Nalubega, M. Kanssiime, F. Lijklema, L. Van Bruggen, J.J.A. Aalderink, R.H. Alaerts, G.J.F.R., Bugenyi, F.W.B. (1994). An approach to mass transport and nutrient retention in a tropical wetland receiving secondary effluent. In: *Proceedings of the 4th Conference on Wetland Systems for Water Pollution Control*. November 6 - 10, 1994; Guangzhou, China. pp 412 - 420.
 45. van Bruggen, J.J.A. Okia, O.T and Kanssiime, F. (1994). Wastewater purification by the tropical macrophyte *Cyperus papyrus* in a segmented channel in the green house. In: *Proceedings of the 4th Conference on Wetland Systems for Water Pollution Control*. November 6 - 10, 1994; Guangzhou, China. pp 337 - 344.
 46. Gijzen, H.J. and Kanssiime, F. (1989). Anaerobic wastewater treatment: A potential technology for developing countries. IN: Khan, M.R. and Gijzen, H. J. (eds.). *Proceedings on Environmental Pollution and it's Management in Eastern African Region*. Dar es Salaam, Tanzania pp 309 - 314.
 47. Kanssiime, F. and Gijzen, H.J. (1989). Anaerobic wastewater treatment and biogas production in an Upflow Sludge Blanket Reactor. IN: Nkunya, M. H. H., Khan, M. R., Dagne, E. and Muhehe, G. L. (eds.) *Proceedings of 3rd Symposium on Natural Products and their Applications*. Arusha, Tanzania.

(IV) REPORTS

48. Kanssiime, F (editor), (2003). *The Vision and strategy framework for the management and development of Lake Victoria Basin*. Uganda Country Report.
49. Kateyo, E., Kanssiime, F. and Kasoma, P.M.B. (2002). *Economic development and its impacts on environment in Uganda*. Report prepared by the UNESCO/MUIENR Chair in Ecotechnology.
50. Kanssiime, F. (2000). *The Nakivubo wetland in Kampala: an overview of the existing information and legal issues related to its conservation and management*. Report prepared for the Wetlands Inspection Division, Ministry of Water Lands and Environment.
51. Okot - Okumu, J., Kateyo, E. and Kanssiime, F. (1997). *Effects of nutrient distribution on plankton ecology of Murchison Bay Uganda*. Technical report, Makerere University Institute of Environment and Natural Resources Kampala, Uganda.
52. Kanssiime, F. (1996). *Likely effects of using chemicals in controlling the water Hyacinth on the Water quality of Lake Victoria*. Report prepared for Aquatics Limited.
53. Kanssiime, F. and Bugenyi, F.B.W. (1996). *Specific Studies on the Limnology and Hydrology of the Greater Lakes of East Africa: A Case Study of Nutrient and Pollutant Loading into the Northern Region of Lake Victoria*. Report prepared for UNESCO - ROSTA.
54. Kanssiime, F. (1995). Our Wetlands and Water quality. In: *Wetnews; Newsletter of Uganda National Wetlands Conservation and Management Programme*. Kampala- Uganda. July – September, Issue.
55. Kanssiime, F., Kateyo, E. and Okot-Okumu, J. (1995). *Effects of pollution of Inner Murchison Bay (Lake Victoria - Uganda) on the distribution and abundance of plankton*. Technical report, Makerere University Institute of Environment and Natural Resources Kampala, Uganda.
56. Kanssiime, F. (1993). *The role of floating Cyperus papyrus purifying wastewater in a segmented constructed wetland*. MSc. Thesis, EE 124, IHE, Delft, The Netherlands.
57. Kanssiime, F. (1992) Biogas: Alternative Energy. IN: *New Vision*; 7: (13). The New Vision Printing and Publishing Corporation; Kampala, Uganda.
58. Kanssiime, F. (1991). *Growth and maintenance of bacteria during high-rate anaerobic waster water treatment*. MSc. Thesis, University of Dar es Salaam, Tanzania.
59. Kanssiime, F. (1989). The role of environmental microbiology in solving the problem of pollution of rivers, lakes and sea in Tanzania by refuse and sewage in towns. IN: *Sunday News*. Tanzania Standard News Papers, no. 1984.

60. Kansiime, F. (1988). *Presence of methanogenic bacteria inside the ciliate Nyctotherus ovalis*. Technical report, Microbiology unit University of Dar es Salaam, Tanzania.

(V) PUBLISHED BOOKS

61. Joker, L., Beukman, R., Nyabaze, W.R., Kansiime, F. and Kgarebe, B.V. (2002). *Integrated Water Resources Management: theory, practice, cases*. Physics and chemistry of the Earth. Volume 27, nos 11-12. ISSN 1474-7065
62. Kansiime, F. and Nalubega, M. (1999). *Wastewater Treatment by a Natural Wetland: the Nakivubo Swamp, Uganda. Processes and Implications*. PhD Thesis, A.A. Balkema Publishers, Rotterdam, The Netherlands. ISBN 90 5410 420 1

CURRICULUM VITAE

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EDUCATION

1990-93: Ph.D. The Ohio State University, Columbus, Ohio (Soil and Water Management)

1988-90: M.Sc. Agric., Makerere University, Kampala, Uganda

1984-87: B.Sc. Agric., Makerere University, Kampala, Uganda

PUBLICATIONS

PUBLISHED REFEREED INTERNATIONAL JOURNAL

Siriri D., **Tenywa M.M.**, Raussen T., and Zake J.K. 2005. Crop and soil variability on terraces in the highlands of SW Uganda. *Land Degradation & Development* 16(6): 569-579.

Gowing J., Payton R . and **Tenywa, M.** 2004. Integrating indigenous and scientific knowledge on soils : recent experiences in Uganda and Tanzania and their relevance to participatory land use planning. *Uganda Journal of Agricultural Sciences* 9: 184-191.

Semalulu O. Magunda, M. Majaliwa M., Ssali, H., **Tenywa, M.** and Abesiga, N. 2004. An integrated approach to sustainable utilization of land resources for a better environment. *Uganda Journal of Agricultural Sciences* 9: 294-302.

Payton, R.W., Barr, J., Martin, A., Sillitoe, P., Deckers, J., Gowing, J., Hatibu, N., Naseem, S., **Tenywa, M.** and Zuberi, M., 2003. Contrasting approaches to integrating indigenous knowledge about soils and scientific soil survey in East Africa and Bangladesh. *Geoderma*, 111: 355-386.

Majaliwa M.J.G. Magunda M.K., **Tenywa, M.M** and Isabirye M. 2003. Effect of topography on Soil erodibility in Kakuuto Micro-Catchment, Uganda. *E. Afr. Agric. For. J* 69(1): 19-27.

Lufafa, A., **Tenywa, M.M.**, Isabirye, M., Majaliwa, M.J.G. and Woome, P.L. 2003. Prediction of soil erosion in a Lake Victoria Basin catchment using GIS-based Universal soil loss model. *Agricultural Systems* 76(2003):883-894.

Wasige, E.J. **Tenywa, M.M.**, Byalebeka, J.B. Majaliwa, M.J.G. and Lufafa, A. 2002. Evaporation measurement and validation of meteorological models. *MUARIK bulletin* 5:88-91. ISSN 1563-3721.

Tenywa, M.M., Lal, R. and Majaliwa, M.J.G. 2001. Characterization of the stages of Soil Resilience to Degradative Stresses: Erosion. In: D.E. Stott, R.H. Mohtar and G.C. Steinhardt (eds.). *Sustaining the Global Farm-Selected papers from the 10th ISCO meeting held West Lafayette, Indiana-USA.* pp.606-610. Website <http://topsoil.nserl.purdue.edu/nserlweb/isc99/pdf/isco99pdf.htm>

Tenywa, M.M., Zake, J.Y.K., Sessanga, S., Majaliwa, J.G.M., Kawongolo, J.B., and Bwamiki, D. 2000. Changes in water infiltration along a catena prior to mechanized clearing operations and after two cropping seasons. *African Crop Sci. J.* 8(3):233-242.

Tenywa, M.M., Isabirye, M.I., Lal, R. Lufafa, A. and Achan, P. 1999. Cultural practices and production constraints in smallholder banana-based cropping systems of Uganda's Lake Victoria Basin. *African Crop Sci. J.* 7(4):613-623.

Bananuka, J.A., Rubaihayo, P.R. and **Tenywa, M.M.** 1999. Reactions of *Musa* genotypes to drought stress. *African Crop Sci. J.* 7(4):333-339.

Majaliwa-Mwanjalolo, J.G. and **Tenywa, M.M.** 1998. Infiltration characteristics of soils of Kyetume ridge, Kabanyolo, Uganda. *MUARIK bulletin* 1:57-65. ISSN 1563-3721.

Kisu-Kisira, H.B., **Tenywa, M.M.** and Wajja, N.M. 1998. Soil fertility regeneration potential by selected agroforestry tree species and Napier grass fallows. *MUARIK bulletin* 1:39-49. ISSN 1563-3721.

Published Book Chapters/Proceedings articles

Tenywa M.M., Majaliwa, J.G.M., Magunda, M.K., Lal, R. and Taulya G. 2005. Dynamics of carbon sequestration in various agroclimatic zones of Uganda. In: R. Lal, N. Uphoff, B.A. Stewart and D.O. Hansen, (Eds.). *Climate Change and Global Food Security* pp. 501-513. CRS. Taylor and Francis Publishers. ISBN 0-8247-2536-0.

Tenywa, M.M., Majaliwa, J.G.M. and Lufafa, A. 2002. Soil Resilience. *Encyclopedia of Soil Science* pp. 1129-1132 Copyright ©2002 by Marcel Dekker, Inc.

Magunda M.K and Tenywa, M.M. 2001. Soil and Water Conservation in Uganda. In: J. Mukiibi (Ed.), *Agriculture in Uganda; Volume I-General Information* pp. 145-168. Copyright: NARO. Published by Fountain Publishers LTD. ISBN 9970-02-243-1.

Tenywa, M., Amamure, J. and Oruka, F., 2000. . A study of indigenous knowledge of soil and water, Wera village, Katakwi district, Uganda. Natural Resources Institute, University of Greenwich, UK. 18pp.

Tenywa, M.M. 1998. Agricultural potential in the Rwenzori Mountains; special reference to the lower slopes in Bwamba. In: H.Osmaston, J.Tukahirwa, C. Basalirwa and J. Nyakaana (Eds.). *The Rwenzori Mountains National Park, Uganda*. pp. 180-189. Copyright: Department of Geography, Makerere University. Published by Fountain Publishers LTD, ISBN 9970-429-01-9.

Tenywa, M.M. and R. Lal. 1998. Impact of Landscape position on soil erodibility. In: L.S. Bhusan, I.P. Abrol and M.S.R.M. Rao (Eds.) *Soil and Water Conservation; Challenges and opportunities*. Proc. of 8th ISCO Conference held December 4-8, 1994, in New Delhi, India. Published by Indian Association of Soil and water Conservationists, Dehra Dun, India. ISBN 81-204-1080-3. Vol. 1:263-270.

Isabirye, M., Tenywa, M.M., Deckers, S., Serneels, S., Payton, R., Magunda, M. and Gowing, J. 1999. Use of remote sensing materials for participatory land resources mapping. Proceedings of the 17th Conference and Silver Jubilee celebrations of the Soil Science Society of East Africa. pp. 239-242. ISBN 9966-879-27-7.

Tenywa, M.M., Magunda, M.K., Payton, R.W., Gowing, J. Hatibu, H., Martin, A., Deckers, S., Isabirye, M., Byalebeka, J.B. Oruka, F., and Amamure, J. 1999. Potential for combining scientific and indigenous knowledge for land productivity improvement. Proceedings of the 17th Conference and Silver Jubilee celebrations of the Soil Science Society of East Africa. pp. 252-259. ISBN 9966-879-27-7.

Magunda, M.K., Tenywa, M.M., Majaliwa, M.J.G. and Musiitwa, F. 1999. Soil loss and runoff from agricultural landuse systems in the Sango bay micro-catchment of the Lake Victoria. Proceedings of the 17th Conference and Silver Jubilee celebrations of the Soil Science Society of East Africa. pp. 227-230. ISBN 9966-879-27-7. `

Lufafa, A., Isabirye, M. and Tenywa, M.M. 1999. Effect of relief on soils and land use of a selected microcatchment of the Lake Victoria Basin. pp. 243-246. ISBN 9966-879-27-7.

Tenywa, M.M. 1997. Concepts and Techniques in Soil and Water Conservation. In: M.M. Tenywa and M.A. Bekunda (Ed.). Past, Present and Prospects of Soil and Water Conservation in Uganda Proceedings of the launching workshop for the Soil and Water Conservation Society of Uganda (SWCSU) held March 28, 1996 at Kampala International Conference Centre. pp. 28-30. Earnest Publishers.

Tenywa, M.M., M.L. Nagaya and D. Bwamiki, 1994. Soil sampling criteria for spatially variable soils. SSSEA Conference held November 21-25, 1994, in Mbarara, Uganda. In: M.C. Rwakaikara-Silver, M.A. Bekunda and J.S. Tenywa. (Eds.). Proceedings of the Soil Science Society of East Africa Conference, pp. 229-235.

Zake, J.Y.K. and M.M. Tenywa. 1992. The effect of ash and nitrogen on the yield and quality of *Amaranthus lividus* subsp. *oleraceus*. In: P. Henderlong, E.N. Sabiiti, F.B. Bareeba and S.N. Mwebaze, (Eds.), Proc. of the First Uganda Pasture Networkshop (UPANE), held at Makerere University, Kampala, Uganda, December 14-17, 1987, p.44-49.

BOOKS/PROCEEDINGS EDITED

Tenywa, M.M. and M.A. Bekunda. (Eds.). 1997. Past, Present and Prospects of Soil and Water Conservation in Uganda. Proceedings of the launching workshop for the Soil and Water Conservation Society of Uganda (SWCSU) held March 28, 1996 at Kampala International Conference Centre, Earnest Publishers.

Tenywa, M.M, Bekunda, A..M., Lufafa, A.. and Taulya, G. (Eds.). 1999. Participatory soil fertility and Land management in Uganda; challenges and opportunities. Proceedings of the "Towards building a participatory soil fertility initiative for Uganda workshop" for the Soil and Water Conservation Society of Uganda (SWCSU) held 5-6th May, 1999 at Cardinal Nsubuga Leadership Training Centre, Kampala, Uganda.

BOOKS UNPUBLISHED

Briggs, S., Tenywa, M.M. and Nakileza, R. (Eds.). 1998. Research and development issues in the highlands of Uganda with particular reference to Mt. Elgon; a literature review. A report submitted Silsoe Research Institute (SRI), Department for International Development (DFID), United Kingdom and National Agricultural Research Organization (NARO), March, 1998.

Tenywa, M.M. (Ed.). 2000. Barehills; origin, nature, evolution and development prospects in south-western Uganda.

OTHER UNPUBLISHED MANUSCRIPTS

Tenywa, M.M. and R. Lal. 1994. Prediction of overland flow and soil erosion from spatially variable soils.

Tenywa, M.M. 1992. Evaluation of the economic feasibility of irrigating vegetable crops on Mr. Van Meters farm located in Scioto River Valley, Pike County, Southern Ohio.

Tenywa M.M. 1992. Irrigation development in Malaysia-an evaluation of the MUDA irrigation scheme.

Tenywa, M.M. 1992. Processes and patterns of glacial erosion.

Tenywa, M.M. 1992. Root growth and soil strength.

Tenywa, M.M. 1992. Landscape-soil relationships in Uganda.

Tenywa, M.M. 1990. Urban development-flood control sediment control and irrigation water supply at Kenny road farm. Urban pre- and post-development hydrologic evaluation project.

Published Newsletter articles

Tenywa, M.M. 1999. Soil testing and management. Farmers voice magazine. Reproduced in the monitor of Saturday 3rd April, 1999.

Tenywa, M.M. 1998. Research on soils and search for souls. Faculty of Agriculture and Forestry Newsletter Vol. 1 No.1.

Tenywa, M.M. 1998. Soil and water conservation society of Uganda; seminar on bare hills. Faculty of Agriculture and Forestry Newsletter Vol. 1 No.1.

Tenywa, M.M. 1997. Erosion in Uganda. Wildlife club magazine Issue 1.

Graduate supervision

Completed

A number of MSc (16) and PhD (3) have been completed under my supervision since 1994.

Ongoing

6 MSc. and 5 Ph.D

EVOLUTION OF RESEARCH EXPERIENCE

On-going Collaborative Research Projects

1. Beneficial conservation and sustainable use of natural resources. SSA-CP FARA funded project. **PI** and involving International Crops Research Institute for the semi-arid tropics (ICRISAT), International Water Management Institute (IWMI), Syndicat de Defense des Interets Paysans (SYDIP) Nord-Kivu, Institut des Sciences Agronomiques du Rwanda (Rwanda Agricultural Research Institute-ISAR), Plate Forme Diobass, Sydicat des agri-eleveurs du Rwanda (IMBARAGA), Soil and Water Management Research network of ASARECA.
2. Efficient Use of crop residues-Animal Feed versus Conservation Agriculture. ASARECA funded project involving Uganda, Ethiopia Agricultural Research Organizaion (EARO), Selian Agricultural Research Institute, Tanzania and KARI, Kenya.
3. GIS applications to strengthening local government planning in decentralized systems: case of Bugiri District. RUFORUM funded project. **PI**
4. Focus cities: Turning environmental burdens into livelihood benefits: building a sustainable neighbourhood through waste recycling, agro-enterprise and a cohesive community in Kampala, Uganda. Funded by IDRC and involving KCC, Makerere University, Environmental Alert, Minsitry of Agriculture, Animal Industry and Fisheries (MAAIF), National Envrironmental Management Authority (NEMA), ILRI, CIAT and International Water Management Institute (IWMI).

Completed Collaborative Research Projects

1. Combining Systematic and Participatory Approaches for Developing and Promoting Sustainable Land and Water Management..EU –funded project 1996-1999. National Principal Investigator **PI**

2. Soil Erosion Studies phase I in a selected micro-catchment of Lake Victoria Basin. Rockefeller Foundation funded project.1998-2000. **PI**
3. Water balance studies in the Lake Kyoga basin. Rockefeller Foundation funded project. 2000-2002. **PI**
4. Soil erosion studies phase II. Rockefeller Foundation funded project.2000-2002. **PI**
5. Development of Decision Support systems data base for banana-based cropping systems. Rockefeller Foundation funded project..2001-2002. **PI**
6. I@mak.com “ Capacity building for using uptodate decision aid tools for sustainable soil resource management in decentralized system. Rockefeller Foundation/World Bank funded project.. 2002-2003. **PI**
7. The World Bank IDA/GEF funded project: Lake Victoria Environmental Management Project. Established soil erosion/runoff plots in pastures, bananas, coffee and annual cropping systems and monitoring runoff and soil loss, and pollution loadings into Lake Victoria.

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Professional qualifications

1999-2004 : PhD (Makerere University, Soil Science)
1995-1998: Master Environnemental Sciences (Makerere University)
1986-1988: Licence appliquée à l'enseignement de la Physique (Institut Supérieur Pédagogique de Bukavu- D.R.C)
1983-1986 : Graduat en Physique et Technologie (Institut Supérieur Pédagogique de Bukavu- D.R.C)

Work Experience:

2008: Assoc. Professor, Makerere University Institute of Environment and Natural Resources
2005-2008: Part time Lecturer Soil Science Department, Faculty of Agriculture, Makerere-University
1988-1989: Part time Lecturer, Institut Supérieur de l'Audio-visuel, Bukavu-D.R.C
1989-1995. Assistant lecturer, Institut Supérieur Pédagogique de Bukavu, D.R.C

Consultancy Work:

January 2007: Carbon credit evaluation for New Forest Company (Uganda)
2005: Biohazard survey, client Kampala City Council (Uganda)
2005: Land evaluation, client Prof. Wangoola
2005: Land evaluation, client ECOSAN-KCC
2004: Soil mapping of Oruchinga refugee settlement, client UNHCR/IDRC-Uganda
2004: Soil erosion hazard mapping in the Lake Victoria Basin, client LVEMP
2004: Analysis of Bbale Kayunga Districts soils: client Save the Children Uganda
1994: Afforestation of Muhungu (Bukavu D.R.C) ridge, client GTZ (D.R.C)
1994: Analysis of Itombwe (D.R.C) World Heritage reserve survey, client IUCN/PIL

Collaborative Research Grants:

- Bridging restoration and multi functionality in degraded forest landscape of eastern Africa and Indian Ocean (2005-2009). EU funded project, Amount €1,500,000.
- GIS Applications to strengthen decentralized local government planning and decision making in rice production systems of Uganda. Donor: Rockefeller Foundation (2004-2006). Amount: \$65000
- Lake Victoria Environmental Management Project, World Bank funded project (1998-2005), \$40,000,000
- Enhancing stakeholders' capacity to manage natural resources using participatory approaches in Uganda. Donor: Network of Ugandan Researchers and Research Users (2002). Amount: \$7000
- Combining Systematic and Participatory Approaches for Developing and Promoting Sustainable Land and Water Management. Donor: European Union (2000-2002). Amount: \$123000

- Water balance studies to mitigate drought induced crop failure in the Lake Kyoga basin. Donor: Rockefeller Foundation (2001-2003). Amount: \$75000.

Publications:

Journal papers

1. Mubiru J., Karume K., Majaliwa M., Banda E.J.K.B, and Otiti T. 2006. Investigating methods for Interpolating solar radiation in Uganda. *Journal of Theoretical and Applied Climatology*. Springer Verlag Vienna.
2. Abesige , N.K.C, Magunda, M.K., Huising, J.E., and Majaliwa, J.G.M. 2003. The Effect of water harvesting on species diversity and overall rangeland recovery in Kagera micro-catchment. *African Journal of Tropical Hydrobiology and Fisheries*, Vol 11, NO 1:128-144
3. Magunda, M.K., Majaliwa, J.G.M, Tenywa M.M. and Musitwa F. 2003. Runoff, soil and nutrient losses from major agricultural land-use practices in the Lake Victoria basin, Uganda. *African Journal of Tropical Hydrobiology and Fisheries*, Vol 11, NO 1:87-103
4. Majaliwa J.G.M., Magunda, M.K, Tenywa, M.M., Isabirye M. 2003. Interrill erodibility pattern of a toposequence in a selected micro-catchment of the Lake Victoria Basin. *East African Journal of Agriculture and Forestry*, pp 15-19.
5. Magunda M.K. and Majaliwa J.G.M. 2002. A review of the effects of population pressure on watershed management practices in the Lake Victoria Basin. *African journal of tropical hydrobiology and fisheries*, pp 79-91.
6. Majaliwa, J.G.M, Magunda, M.K., Tenywa M.M., and Semalulu, O. 2003. Soil erosion and pollution loading Magunda, M.K., Majaliwa, J.G.M., Tenywa, M.M. and Musitwa F. 2003. Runoff, soil and nutrient losses from from agricultural land in Bukoora sub-catchment. *Uganda Journal of Agricultural Sciences*: 305-312.
7. Lufafa, A., Tenywa, M.M., Isabirye, M., Majaliwa, J.G.M. and Woome, P.L. 2002. Prediction of soil erosion in a Lake Victoria Basin catchment using GIS-based Universal soil loss model. Accepted 1st March 2002 in *Agricultural Systems*. Copyright ©2002 Published by Elsevier Science Ltd.
8. Wasige, E. J., Tenywa, M.M., Byalebeka, J. B., Majaliwa, M. J. G., and Lufafa, A., 2001. Evaporation measurement and validation of meteorological models. *MUARIK BULLETIN*, vol 5, 88-91
9. Tenywa, M.M., Zake, J.Y.K., Sessanga, S., Majaliwa, J.G.M., Kawongolo, J.B., and Bwamiki, D. 2000. Changes in water infiltration along a catena prior to mechanized clearing operations and after two cropping seasons. *African Crop Sci. J.8(3):233-242*.
10. Majaliwa J.G.M, and Tenywa M.M. 1998. Infiltration characteristics of soils of the Kyetume ridge, Kabanyolo-Uganda. *MUARIK BULLETIN*, Vol. 1, pp 57-65, 1998.

Book chapters

1. Tenywa, M.M., Majaliwa, J.G.M. and Lufafa, A. 2002. Soil Resilience. *Encyclopedia of Soil Science ENCL 66-10/10/2001-01558*. Copyright ©2002 by Marcel Dekker, Inc.
2. Tenywa, M.M., J.G.M. Majaliwa, M.K. Magunda, R. Lal, and G. Taulya. 2005. Dynamics of Carbon Sequestration in Various Agroclimatic Zones of Uganda. In : Lal, R., Uphoff, N., Stewart, B.A., and Hansen, D.O., *Climate change and global food security*, pp 501-514