

CURRICULUM VITAE

1. NAMES: Hannington Oryem-Origa

2. YEAR OF BIRTH: 22nd November 1949

3. CITIZENSHIP: Ugandan

4. RANK: Professor

5. POSTAL ADDRESS: Makerere University, Department of Plant Sciences, Microbiology and Biotechnology, P. O. Box 7062, Kampala, Tel: 256 772 624932, 0701 624932, E-mail: horyem-origa@cns.mak.ac.ug, horyemoriga@gmail.com

6. ACADEMIC QUALIFICATIONS

- i) 1974- BSc. Second Class Honours, Upper Division, Makerere University (Botany, Zoology and Chemistry)
- ii) 1977 - MSc. (Plant Physiology) Makerere University
- iii) 1997 – PhD. (Ecophysiology) Makerere University

7. WORKING EXPERIENCE

- i) 1974-1977: Special assistant in the Department of Botany, Faculty of Science, Makerere University
- ii) 1977-1984: Lecturer, Department of Botany, Faculty of Science, Makerere University
- iii) 1984-1999: Senior Lecturer Department of Botany, Faculty of Science, Makerere University
- iv) 1986-1990: Head of Department of Botany, Faculty of Science, Makerere University
- v) 1997-2001: Associate Dean, Faculty of Science, Makerere University
- vi) 1999-2004: Associate Professor of Botany, Department of Botany, Faculty of Science, Makerere University.
- vii) 2001-2005, Dean, Faculty of Science, Makerere University
- viii) 2004 to date- Professor of Botany, Department of Botany, Faculty of Science, Makerere University.
- ix) 2005 to date- Registered as Environmental Practitioner (EP) with NEMA
- x) 2011 to 2013- Ag. Deputy Principal, College of Natural Sciences, Makerere University
- xi) 2013 to date- Registered as an Environmental Auditor with NEMA

8. RESEARCH UNDERTAKEN:

- i) Chemical pollution in Queen Elizabeth National Park 1973. (Internal Report). (Supported by the Uganda Institute of Ecology).
- ii) Ethnobotanical Studies of Mt. Rwenzori National Park/Forested Area, Bundibugyo District, Western Uganda 1992-1997, (Supported by WWF, England and Makerere University)
- iii) The Germination Ecology, Seedling Biology and Some Chemistry of wild Robusta Coffee (*Coffea canephora* Froehner), 1992-1996. (Supported by Makerere University, NUFU Norway and the African Academy of Sciences, Nairobi).
- iv) Study of the polluted area of Queen Elizabeth Biosphere Reserve/National Park,

- 1996-1998, (Supported by UNESCO, Paris)
- v) Ethnobotanical Studies of Mabira Forest Area, Central Uganda, 1999-2003, (Supported by Makerere University).
 - vi) Revegetation of the pyrite trails in Queen Elizabeth National Park, 2001-2003, (Supported by FFEM, France)
 - vii) Natural regeneration studies in the pyrite trail in Queen Elizabeth National Park, Kasese, 2004-2005, (Supported by NORAD. Norway).
 - viii) Trends in natural regeneration in the pyrite trail in Queen Elizabeth national Park, 2007- 2008, (Supported by International Foundation for Science (IFS), Sweden).
 - ix) Restoration of Kasese District 2010-2014 (Supported by Sida Phase III)
 - x) Restoration studies of the polluted and degraded habitats in Kasese District 2010- 2015 Supported by Sida, Sweden. I was the PI and the Co-Investigators are Dr. Muhammad Ntale and Jamilu Ssenku from Makerere University and Professor Ingvar Backeus from Sorderton University, Sweden was our external collaborator

9. RESEARCH GRANTS AWARDED

- i) 1992-1995 Makerere University Research Grants
- ii) 1992-1995 WWF, England
- iii) 1993- 1996 NUFU PRO18/92 PhD Fellowship, Norway
- iv) 1995- 1996 African Academy of Sciences, Nairobi
- v) 1996-1998 UNESCO-Paris
- vi) 1999-2003 Makerere University Research Grants.
- vii) 2001-2003 FFEM, France
- viii) 2003-2004 NUFU, Norway.
- ix) 2004-2005 NORAD, Norway.
- x) 2007-2008 International Foundation for Science (IFS), Sweden.
- xi) 2009-2013 Millennium Science Initiative (MSI), a BSc Biotechnology Degree Programme development and Implementation team member among five under the Uganda National Council of Science and Technology (UNCST). Millennium Science Initiative (MSI) was supported by World Bank. (Core Team Member).
- xi) 2010 -2015 Sida, Sweden for supporting capacity building at Makerere University.

10. AREAS OF TEACHING

- a) My current areas of teaching include **Plant Physiology** and **Ethnobotany**
- b) Courses I teach in the Department of Plant Sciences, Microbiology and Biotechnology

i) Undergraduate courses

- 1)ETB1206- Plant Structure and Functions
- 2) BOT1203- Introduction to Plant Functions
- 3)BBT1204- Basic Plant Physiology
- 4) BOT2202- Plant Physiology (Plant-Water Relations and Mineral Nutrition)

- 5) BCB1202-Ecological Physiology
- 6) BBT2101 Application of Biotechnology in Seed Science
- 7) BOT3101- Plant Biochemistry
- 8) BOT3102- Environmental Science and Energy Relations of Plant Communities
- 9) BOT3103-Crop Weed Biology
- 10) BOT3206- Plant Physiology
- 11) BBT3101- Stress Physiology
- 12) BBT3206-Environmental Biotechnology

ii) Postgraduate courses

- i) BOT7229- Mineral Nutrition in Plants
- ii) BOT7230- Plant-Water Relations
- iii) BOT7231- Stress Physiology and Phytoremediation

11. COURSES ATTENDED

- i) 1994- August-September Visited the University of Vienna, Austria to be exposed to some laboratory techniques for the analysis of plant materials for calcium
- ii) 1995-1996-Attended a 10-week Winter PhD Course in Plant Physiology at the Agricultural University of Norway at Ås
- iii) 2005- Attended a one-week pedagogy training for University Academic Staff, organized by the School of Education, Makerere University
- iv) 2005- Attended the SRA International Research Management Training organized jointly by Makerere University and SRA International

12. SUPERVISION OF POSTGRADUATE STUDENTS IN RELEVANT AREAS

a) MSc students who have completed

- i) Patrick Mucunguzi. MSc. (Botany). Research on "The effect of fire and Bruchids on the germination and seedling establishment of some acacias in Queen Elizabeth National Park, Uganda. (Graduated in 1993).
- ii) John Tabuti. MSc. (Botany). Research on "Calcium partitioning in water hyacinth (*Eichhornia crassipes*) in Lake Victoria. (Graduated in 1996).
- iii) Grace Nabulo. MSc. (Botany). research on "A comparative study of calcium accumulation in selected plant species around Kampala, Uganda. (Graduated in 1998).
- iv) Jamilu Ssenku. MSc. (Botany). Research on "The effects of acid mine drainage on plant diversity and density in Queen Elizabeth National Park. (Graduated in 1998).
- v) B.J.M. Nyangababo (Mrs.) M.Sc. (Botany) "The effect of wood ash on the growth and yield of beans (*Phaseolus vulgaris* L.) and Soya beans (*Glycine max* L.). (Graduated in 1999).
- vi) Betty Pacutho Udongo. MSc (Botany). The effect of calcium and ethylene gas on the ripening of tomato (*Lycopersicon esculentum*) fruits. (Graduated in 1999)

- vii) Polycarp Mwima Musimami. M.Sc. (Environmental Science and Natural Resources), Research on "Effect of Timber Harvesting on the Regeneration of *Khaya anthotheca* in Budongo Forest Reserve, Uganda. (Graduated in 2000).
- viii) Julius Lejju Bunny. M.Sc. (Botany). on "An Assessment of the status of exotic plant species and natural vegetation types of Mgahinga Gorilla National Park, South-western Uganda (Graduated in 2000).
- ix) Dr. David Mugabi. MSc (Environmental and Natural Resources). Traditional Medicinal Plants and the Tepeth Community Around Mt. Moroto Forest Reserve: An Economic Evaluation (Graduated in 2003).
- x) Petronella Nakitoolo. MSc (Botany). Crop-weed competition and calcium utilization. (Graduated in 2005).
- xi) Rukwago, Severino. MSc. (Environmental Science and natural resources) A Comparative Study of Waste Water Treatment by *Cyperus papyrus* and *Colocasia esculenta* Growing in Water and Gravel. (Graduated in 2005)
- xii) Dennis Kamoga. MSc (Botany). Medicinal plants used livestock by pastoralists in Kyotera (Graduated in 2010)
- xiii) Annabel Acipa (Ms). MSc (Environmental Science and Natural Resources). Medicinal and Food Plants of Oyam District, Northern Uganda. (Graduated in 2010)
- xiv) Joyce Adokorach (Ms). MSc. (Environmental Science and Natural Resources). The influence of internal displacement of people on spatial distribution and conservation of indigenous tree resources in the shea parklands of Northern Uganda. (Graduated in Jan. 2011)
- xv) Richard Osaliya. MSc (Environmental Science and Natural Resources). The potential of storm water and effluent from KCCL for re-vegetating the degraded pyrite trail in Queen Elizabeth National Park, Western Uganda (Graduated in Jan. 2011)
- xvi) Cyprian Osinde. MSc (Botany). Medicinal plants used in the treatment of HIV/AIDS opportunistic diseases. (Graduated in January 2011)
- xvii) Robert Bob Okongo Loki. MSc (Environmental Science and Natural Resources). The diversity and nutritional values of wild food plants of the Acholi Sub-region, Northern Uganda (Graduated in July 2011)
- xviii) Godwin Anywar. 2011. MSc. (Botany). Nutri-medicinal plants of selected sub-counties in Nebbi District (graduated in 2015)
- xix) Charlotte Natukunda. 2011. MSc (Botany). Assessment of growth characteristics of selected matooke cultivars from anthesis to senescence (To graduate in January 2016)
- xx) Hector Opika-Opoka 2013. MSc (Environmental Science and Natural Resources). Utilization and conservation status of medicinal plants in Ikumba Sub-county, Luuka District (To graduate in January 2016)
- xxi) Denis Okello 2014 MSc (Botany) Heavy metal accumulation by beans (*Phaseolus vulgaris*) grown in acid-mine polluted environment –Completed but to graduate in 2017.

b) PhD students who have completed

- i) Hosea Muhanguzi. PhD (Forestry). "Regeneration of selected trees of Kalinzu Forest Reserve: The Dynamics of the Early Life Cycle Stages".(Graduated in 2000)
- ii) John Bosco Nkurunungi. PhD (Environmental Science and Natural Resources). "The availability and distribution of fruit and non-fruit resources in Bwindi Impenetrable National Park: Their influence on gorilla habitat use and food choice". (Graduated in 2004).
- iii) Maud Kamatenesi-Mugisha (Mrs.). PhD (Botany) On ``Documentation of some medicinal plants used by traditional medical practitioners in reproductive health care in Western Uganda: Phytochemical and bioactivity evaluation (Graduated in 2005)
- iv) Grace Nabulo. PhD (Botany). Research on ``Assessment of heavy metal uptake by selected food crops and vegetables grown in Kampala City Area (Graduated in 2007)
- v) Edward Andama. PhD (Botany). Research on ``The reproductive patterns and use of Mauritius Thorn (*Caesalpinia decapetala*) to deter crop raiding around Bwindi Impenetrable National Park. (Graduated in 2008)
- vi) Sekabira Kassim. PhD in Botany. Assessment of Heavy Metals in Urban Drainage Systems and Wetlands: The case of Nakivubo Channel, Kampala, Uganda (Graduated in 2011)
- vii) Christine Oryema. 2010. PhD. (Botany). Diversity, uses and nutrient composition of indigenous fruit trees of post conflict districts of Gulu and Amuru. (Gulu University) (Graduated in 2014)
- viii) Jamil Ssenku 2010- PhD (Botany). Phytoremediation of polluted and degraded habitats in Kasese, Western Uganda: A case study of the performance of selected tree species (Graduated in 2016).

(c) On-going MSc students

- i) James Wanichan 2012 MSc (Botany). Assessment of the effects of fertilizer and herbicide use on weed infestation, growth and yield of groundnuts (*Hypogea* sp) in Agro-ecological zones of Masindi District (Writing up his dissertation)
- ii) Gorette Aguttu. 2016 MSc (Botany)

d) On-going PhD students

- i) Mutiso Duncan Chalo (PhD, Botany) 2016. Phytochemical Investigation, Antibacterial and Toxicity Activity of Kenyan Genus *Erythroxylum*
- ii) Sadik Mustafa Abubakar (PhD, Botany) 2016. Mechanisms of Defence Against *Xanthomonas campestris* P.v. *musacearum* Infection in: Towards Rehabilitation of Banana Plantations by Plant Recovery From Banana Bacterial Wilt Disease

13. PUBLICATIONS:

(a) Theses

1. ORYEM-ORIGA, H. 1976. The relationship between cell size and cell number and the distance of phloem initiation in the root tip of groundnuts (*Arachis hypogaea* L. var. Bukene Red), (MSc. Thesis submitted to Makerere University).
2. ORYEM-ORIGA, H. 1996. The germination ecology, seedling biology and some chemistry of wild robusta coffee (*Coffea canephora* Froehner) in Kibale National Park, Uganda, (PhD thesis submitted to Makerere University).

(b) Published Conference Proceedings

- i) **ORYEM-ORIGA, H.** 1995. Utilization of plant resources in protected areas. Proceedings of the First UNESCO-MAB BRAAF National Seminar on "National Parks and community Relations, Mweya, Queen Elizabeth National Park, Uganda", Pp 13-15.
- ii) **ORYEM-ORIGA, H., KAKUDIDI, E.K.Z., BUKENYA-ZIRABA, R., and KATENDE, A.B.** 1997. Utilization of medicinal plants in Bundibugyo District, Uganda. In : Proceedings on Conservation of Indigenous Medicinal Plants and Wild Relatives of Food Crops. UNESCO, Nairobi Office, Pp 75-80
- iii) **ORYEM-ORIGA, H.,** 1997. Conservation of wild Robusta coffee (*Coffea canephora* Froehner) in Kibale National Park, Uganda. Proceedings of the Third UNESCO MAB Regional Seminar on Biosphere Reserves for Biodiversity Conservation and Sustainable Development in Anglophone Africa (BRAAF) held in Cape Coast, Ghana, 9-12th March 1997. Environment Protection Agency, Ghana, Pp. 125-134.
- iv) **KAMATENESI-MUGISHA and ORYEM-ORIGA, H.** 1998. Gender and utilization of plant resources of Queen Elizabeth National Park, Uganda. Proceedings of the Third Uganda National UNESCO/BRAAF Seminar on Gender and Wildlife Management held in Ishaka, Bushenyi, Uganda on 14-17th December 1998. UNESCO/MAB Pp 13-15.
- v) **ORYEM-ORIGA, H.** 2002. Trans-boundary Biosphere Reserves - *The African Experience*. Seville + 5, International Experts Proceedings, Pamplona, Spain, 23-27 October, 2002. UNESCO/MAB Report Series No. 69: 63-65.
- vi) **ORYEM-ORIGA, H.** 2002. Income generating projects by local communities in Queen Elizabeth Biosphere Reserves in Uganda, Supported by BRAAF Project. Seville + 5 International Experts Proceedings. Pamplona, Spain, 23-27 October 2000. UNESCO/MAB Report Series No. 69: 128-131.
- vii) **ORYEM-ORIGA, H and MAKARA, A.** 2002. Revegetation of the pyrite trail in Queen Elizabeth National Park Area. Proceedings of Integrated Lake Management. Lake Workshop Report No. 42:11-12.
- viii) **NABULO, G., ORYEM-ORIGA, H., and MUTUMBA, G.** Community Mobilization for Promotion of Urban Food production and Environmental Health. Community Mobilization and Empowerment for Health. Uganda National Association for Community and Occupational Health (UNACOH). Annual Scientific Conference. 19th -20th September, 2002.
- ix) **KAKUDIDI, E.K.Z., ORYEM-ORIGA, H., and KATENDE, A.B.** Utilization of non-timber forest products by the local communities around Semuliki National

- Park, Western Uganda (Presented at a conference on Year of the Mountains-October 2002 at MAKERERE UNIVERSITY- Proceedings not yet published).
- x) **ORYEM-ORIGA, H**, MAKARA, A, and TUSIIME, F. M 2005. Establishment of Plant Propagules in the acid-mine polluted soils of the pyrite trail in QENP. Uganda Plant Sciences Conference, Feb. 21-25, 2005, held in the Faculty of Science, Makerere University. (Abstract).
- xi) KAMATENESI-MUGISHA, **ORYEM-ORIGA, H.**, OLWA-ODYEK., and KAKUDIDI, E.K. 2005. Medicinal Plants and Gender Integration in Reproductive Health care Delivery: A case Study in Mbarara District, Western Uganda. Plant Science Conference held on Feb.21-25th, 2005 in the Faculty of Science, Makerere University
- xii) KAMATENESI-MUGISHA, **ORYEM-ORIGA, H.**, and OLWA-ODYEK. 2005 Medicinal Plants used Managing Gynaecological Morbidity Conditions in Western Uganda. Plant Science Conference held on Feb.21-25th, 2005 in the Faculty of Science, Makerere University. (Abstract)

(c) Publications in refereed journals

- i) SALIM, K.M., and **ORYEM-ORIGA, H**. 1981. The relationship between cell size and cell number and the distance of phloem initiation in the root tip of groundnuts (*Arachis hypogea* L. var. Bukene Red). *Journal of Experimental Botany* **32**: 813-820.
- ii) **ORYEM-ORIGA, H.**, KAKUDIDI, E.K.Z. KATENDE, A.B. and BUKENYA-ZIRABA, R. 1995. Preliminary Ethnobotanical Studies of the Rwenzori Mountain Forest area in Bundibugyo District, Uganda. *Bothalia*, **25**, **1**: 111-119.
- iii) KAKUDIDI, E.K.Z., **ORYEM-ORIGA, H.**, BUKENYA-ZIRABA, R. and KATENDE, A.B. 1996. Rwenzori Mountain Forest non-timber products. In: The Biodiversity of African Plants. (Ed.) L.J.G. van der Maesen *et al.*, 1996. Kluwer Academic Publishers. Printed in the Netherlands. Pp 732-740.
- iv) MUCUNGUZI, P. and **ORYEM-ORIGA, H**. 1996. Effects of heat treatment and fire on the germination of *Acacia* seeds. *Journal of Tropical Ecology* **12** (1):1-10.
- v) **ORYEM-ORIGA, H.**, MAGAMBO, M.J.S., KASENENE, J.M. 1998. Wild Robusta coffee (*Coffea canephora* Froehner) recruitment and seedling survival in Kibale National Park, Uganda. *Israel Journal of Plant Sciences*, **Vol. 46**: 189-198.
- vi) TABUTI, J.R.S., **ORYEM-ORIGA, H.**, MUTUMBA, G.M and KASHAMBUZI, J.T. 1998. Partitioning of soluble calcium in the water hyacinth (*Eichhornia crassipes*(Maritius) Solms) in Lake Victoria, Uganda. *Botanica Acta* **111**: 297-302.
- vii) **ORYEM-ORIGA, H**. 1999. Fruit and seed ecology of wild Robusta coffee (*Coffea canephora* Froehner) in Kibale National Park, Uganda. *African Journal of Ecology* **Vol. 37**: 439-448.
- viii) LEJJU, B. JULIUS., **ORYEM-ORIGA, H**. and KASENENE, J.M. 2000. Regeneration of Afromontane forest following agricultural encroachment in South-Western Uganda. *Israel Journal of Plant Sciences* **Vol. 48**: 281-288.
- ix) LEJJU, B. JULIUS., **ORYEM-ORIGA, H**. and KASENENE, J.M. 2001. Regeneration of indigenous trees in Mgahinga National Park, Uganda. *African*

- Journal of Ecology* **39**: 65-73
- x) POLYCARP MUSIMAMI MWIMA, JOSEPH OBUA and **HANNINGTON ORYEM-ORIGA**. 2001. Effect of logging on the natural regeneration of *Khaya anthotheca* in Budongo Forest Reserve, Uganda. *International Forestry Review* **3** (2), 131-135.
- xi) **H. ORYEM-ORIGA**, A.B. KATENDE and E.K.Z. KAKUDIDI. 2002. Ethnobotanical Studies of Mabira Forest Area, Central Uganda. *Discovery and Innovation (Special Edition)* Pp 169-181
- xii) HOSEA MUHANGUZI, JOSEPH OBUA & **HANNINGTON ORYEM-ORIGA**. 2002. Influence of Light Quality on the Germination Characteristics of Seeds of Selected Pioneer, under storey canopy Tree Species in Kalinzu Forest Reserve, Uganda. *Uganda Journal of Agricultural Sciences*, **Vol. 7**:25-30.
- xiii) HOSEA D.R.MUHANGUZI, JOSEPH OBUA, **HANNINGTON ORYEM-ORIGA** & OLE VETAAS. 2003. Tree Fruiting Phenology in Kalinzu forest, Uganda. *African Journal of Ecology*, **42**: 171-178.
- xiv) B.J. MBAHEREKIRE, **H. ORYEM-ORIGA**, J. KASHAMBUZI, G.M. MUTUMBA & J.T. NYANGABABO. 2003. Elemental Composition of Beans *Phaseolus vulgaris* L.) and Soy Beans (*Glycine max* L.) Grown on Wood Ash Amended Soil. *Environmental Contamination and Toxicology*, **70**: 817- 823.
- xv) **ORYEM-ORIGA, H.**, A.B. KATENDE and E.K.Z. KAKUDIDI. 2003. Medicinal Plants of Mukono District, Central Uganda. *Uganda Journal* **49**: 56-65
- xvi) **ORYEM-ORIGA, H.**, KASENENE, J.M. and MAGAMBO, M.J.S. 2004. Some aspects of wild Robusta coffee seedling establishment and growth in Kibale National Park, Uganda. *African Journal of Ecology* **42**:34-39
- xvii) **ORYEM-ORIGA, H.** 2004. Some aspects of wild Robusta coffee chemistry and quality. *African Journal of Ecology* **42**: 102-104
- xviii) KAMATENESI-MUGISHA, M and **ORYEM-ORIGA, H.** 2005. Traditional Herbal Remedies Used in the Management of Erectile Dysfunction in Uganda: *African Health Sciences* **5** (1):40-49
- xix) KANSIIME, F, **ORYEM-ORIGA, H** and RUKWAGO, S.2005. Comparative assessment of the value of papyrus and cocoyam for the restoration of the Nakivubo wetland in Uganda. *Physics and Chemistry of the Earth*, **30**: 698-705.
- xx) HOSEA D.R. MUHANGUZI, JOSEPH OBUA, **HANNINGTON ORYEM-ORIGA** & OLE, R. VETAAS. 2005. Forest site disturbances and seedling emergence in Kalinzu Forest, Uganda. *Tropical Ecology* **46** (1): 91-98.
- xxi) KAMATENESI-MUGISHA, M, **ORYEM-ORIGA, H**, and MAKAWITI, D.W. 2005. Ethnobotanical studies of medicinal plants used in gender infertility treatment in Western Uganda. In S.A. Ghazanfar & Beentje, H. (eds.), *Taxonomy and Ecology of African Plants, their Conservation and Sustainable Use- Royal Botanical Gardens, Kew*, Pp 519-530
- xxii) NABULO, G., **ORYEM-ORIGA, H** and DIAMOND, M. 2006. Assessment of lead, cadmium, and zinc contamination of roadside soils, surface films and vegetables in Kampala City. Uganda. *Environmental Research* **101**: 42-52.
- xxiii) MAUDA KAMATENESI-MUGISHA, and **HANNINGTON ORYEM-ORIGA**. 2006. Medicinal Plants used for some menstrual gynaecological ailments in Western Uganda. *LIDIA, A Norwegian Journal of Botany*, **Vol. 6 No.6**: 149-172.

- xxiv) KAMATENESI-MUGISHA, M and **ORYEM-ORIGA, H.** 2007. Medicinal Plants used in uterine contractions during child-birth in Western Uganda. *Journal of Ethnopharmacology* **109** (1): 1-9.
- xxv) MAUDA KAMATENESI-MUGISHA, **HANNINGTON ORYEM-ORIGA** and OLWA ODYEK. 2007. Medicinal Plants used in some gynaecological morbidity ailments in western Uganda. *African Journal of Ecology* **45** (Suppl.1), 34-40
- xxvi) MAUDA KAMATENESI-MUGISHA, DOMINIC , W. MAKAWITI., **HANNINGTON ORYEM-ORIGA**, OLWA ODYEK and JOSEPH NGANGA. 2007. The oxytocic properties of *Luffa cylindrica* (L.) M. Roem. and *Bidens pilosa* L., traditionally used medicinal plants from Western Uganda. *African Journal of Ecology* **45** (Suppl.1), 88-93
- xxvii) **ORYEM-ORIGA, H.**, MAKARA, A, and TUSIIME, F. M. 2007. Establishment of Plant Propagules in the acid-mine polluted soils of the pyrite trail in Queen Elizabeth National Park, Uganda. *African Journal of Ecology* **45** (Suppl.1), 84-90
- xxviii) F. KANSIIME, E. KATEYO, **H. ORYEM-ORIGA** and P. MUCUNGUZI. 2007. Nutrient status and retention in pristine and disturbed wetlands in Uganda: management implications. *Wetlands Ecol. Manage.* **15**: 453-467.
- xxix) HOSEA D.R. MUHANGUZI, JOSEPH OBUA, **HANNINGTON ORYEM-ORIGA**. 2007. The effect of human disturbance on tree species composition and demographic structure in Kalinzu Forest Reserve, Uganda. *African Journal of Ecology* **45** (Suppl.3) 2-9.
- xxx) G. NABULO, **H. ORYEM-ORIGA.**, G. NASINYAMA and D. COLE. 2008. Assessment of Zn, Cu, Pb and Ni contamination in wetland soils and plants. *Int. J. Environ. Sci. Tech.* **5** (1) 413-419.
- xxxii) MAUD KAMATENESI-MUGISHA, **HANNINGTON ORYEM-ORIGA**, OLWA ODYEK and DOMINIC, W. MAKAWITI. 2008. Medicinal Plants used in the treatment of fungal and bacterial infections in and around Queen Elizabeth Biosphere Reserve, Western Uganda. *African Journal of Ecology* **46** (Suppl.1), 90-97
- xxxiii) MUWANGA, A., **ORYEM-ORIGA, H.**, MAKARA, A., HARTWIG, T., OCHAN, A., OWOR, M., ZACHMAN, D and POHL, W. 2009. Heavy Metals and Their Uptake by Plants in the River Nyamwamba-Rukoki-Lake George System, Western Uganda. *African Journal of Science and Technology (AJST)*. Vol. **10**, No. 2 pp. 60-68.
- xxxiiii) K. SEKABIRA; **H. ORYEM-ORIGA**; T.A. BASAMBA; G. MUTUMBA and E. KAKUDIDI. 2010. Assessment of Heavy Metal Pollution in the Urban Stream Sediments and its Tributaries. *Int. J. Environ. Sci. Tech.* **7** (3), 435-446
- xxxv) K. SEKABIRA; **H. ORYEM-ORIGA**; T.A. BASAMBA; G. MUTUMBA and E. KAKUDIDI. 2010. Heavy Metal Assessment and Water Quality Values in the Urban Stream and Rain Water. *Int. J. Environ. Sci. Tech.* **7** (4), 759-770
- xxxvi) K.SEKABIRA, **H. ORYEM-ORIGA**, T.A. BASAMBA, G. MUTUMBA AND E. KAKUDIDI. 2011 Application of algae in biomonitoring and phytoextraction of heavy metal contamination in urban stream water. *Int. J. Environ. Sci. Tech.* **8** (1) 115-128. Winter 2011, ISSN : 1735-1472.
- xxxvii) MAUD M. KAMATENESI, ANNABEL ACIPA and **HANNINGTON ORYEM-**

- ORIGA**. 2011. Medicinal Plants of Otwal and Ngai Sub-counties in Oyam District, Northern Uganda. *Journal of Ethnobiology and Ethnomedicine*. Pp1-14
- xxxvii) K.SEKABIRA, **H. ORYEM-ORIGA**, G. MUTUMBA, E. KAKUDIDI AND T.A. BASAMBA,. 2011. Heavy Metal phytoremediation by *Commelina benghalensis* (L) and *Cynodon dactylon* (L) growing in urban stream sediments. *International Journal of Plant Physiology and Biochemistry* Vol. 3 (8) pp133-142, August 2011, ISSN-2141-2162 Academic Journals,
- xxxviii) OSALIYA, R., KANSIIME, F., **ORYEM-ORIGA, H** and KATEYO, E. 2011. The potential use of storm water and effluent from constructed wetland for revegetating a degraded pyrite trail in Queen Elizabeth National Park, Uganda. 2011. *Physics and Chemistry of the Earth*, volume 36, Issue 14, pp 842-852.
- xxxix) ORYEMA C., **ORYEM-ORIGA, H.**, and NANNA R. 2013. Edible wild fruit species of Gulu District, Uganda. *International Journal of Biology and Biological Sciences*. 2(4). 068-082,
- xxxx) SAVINA ASIIMWE, AGNES NAMUTEBI, ANNA-KARIN BORG-KARISSON, MAUD KAMATENESI MUGISHA, AND HANNINGTON **ORYEM-ORIGA**.2014. Documentation and consensus of indigenous knowledge on medicinal plants used by the local communities of Western Uganda. *J. Nat. Prod. Plant Resour.*, 4(1): 34-42.
- xxxxi) GODWIN ANYWAR, **HANNINGTON ORYEM-ORIGA** and MAUD KAMATENESI MUGISHA. 2014. Wild Plants Used as Nutraceuticals from Nebbi District, Uganda. *European Journal of Medicinal Plants*. 4(6): 641-660
- xxxxii) GODWIN ANYWAR, **HANNINGTON ORYEM-ORIGA** and MAUD KAMATENESI MUGISHA. 2014. Antibacterial and Antifungal Properties of Some Wild Nutraceutical Plant Species from Nebbi District, Uganda. *British Journal of Pharmaceutical Research* 4(14): 1753-1761
- xxxxiii) JAMILU SSENKU, MOHAMMAD NTALE, INGVAR BACKEUS, **HANNINGTON ORYEM-ORIGA**. 2014. Assessment of Seedling Establishment and Growth Performance of *Leucaena leucocephala* (Lam.) De Wit., *Senna siamea* (Lam.) and *Eucalyptus grandis* W. Hill ex Maid. in Amended and Untreated Pyrite and Copper Tailings. *Journal of Biosciences and Medicines*. 2, 34-51.
- xxxxiv) JAMILU EDIRISASSENKU, MUHAMMAD NTALE, **HANNINGTON ORYEM-ORIGA**. 2014. The Efficacy of compost, limestone and growth of *Leucaena leucocephala* (Lam.) de wit, *Senna siamea* (Lam.) and *Eucalyptus grandis* W. Hill ex Maid. for the restoration of bacterial functional diversity in the rhizosphere in copper tailings and pyrite soils. 2014. *Journal of Natural Sciences Research*. ISSN 2224-3186 (Paper) ISSN2225-0921 (online). Vol. 4 No. 10, 2014.
- xxxxv) JAMILU EDIRISA SSENKU, MUHAMMAD NTALE, **HANNINGTON ORYEM-ORIGA**. 2014. Physico-chemical characteristics of copper tailings and pyrite soils in Western Uganda: Implication for phytoremediation. *International Journal of Environmental Monitoring and Analysis* 2(4): 191-193
- xxxxvi) JAMILU EDIRISA SSENKU, MOHAMMAD NTALE, INGVAR BACKEUS, KARI LEHTILA and **H. ORYEM-ORIGA**. 2014. Dynamics of plant species composition during phytostabilization of copper tailings and pyrite soils,

- Western Uganda. *Journal of Environmental Engineering and Ecological Science*. ISSN 2050-1323, Volume 3 Article 4.-Open Access
- xxxxvii) CHRISTINE ORYEMA, H. ORYEM-ORIGA, NANNA ROUS. 2016. Nutrient Contents of Fresh Pulps and Dried Pulp Cakes of *Vitellaria paradoxa* of Gulu District, Uganda. *Pakistan Journal of Nutrition* (01/2016). 15(1) 33-39
- xxxxviii) ANYWAR, GU, ORYEM-ORIGA, H AND M. KAMATENESI. 2017. Proximate Nutrient Composition of Some Wild Edible Medicinal Plants from Uganda. *Afr. J. Food Agric. Nutr. Dev.* 2017:17 (3): 12215-12226

NB: Papers xxxviii)-xxxxvi) were published out of a Sida project I have myself written and used by my PhD student.

d) Chapters in books

- i) NABULO G, ORYEM-ORIGA H, NASINYAMA GW, COLE D and DIAMOND M. (2008). Assessment of heavy metal contamination of food crops in wetlands and from vehicle emissions. In: Cole DC, Lee-Smith, D & Nasinyama GW (eds). *Healthy city harvests: Generating evidence to guide policy on urban agriculture*, CIP/Urban Harvest and Makerere University Press. Pg 111-131.
- ii) K. SEKABIRA, H. ORYEM-ORIGA, T.A. BASAMBA, G. MUTUMBA and E. KAKUDIDI. 2012. Grain Size and Source Apportionment of Heavy Metals in Urban Stream Sediments. In the book "*Water Pollution*" edited by Nuray Balkis, ISBN 978-953-307-962-2, In Tech, February 2, 2012. Chapter 4.
- iii) JAMILU EDRISA SSENKU, MUHAMMAD NTALE, INGVAR BACKEUS and H. ORYEM-ORIGA. 2017. Phytoremediation Potential of *Leucaena leucocephala* (Lam.) de Wit. for Heavy Metal-Polluted and Heavy-Metal Degraded Environments. In: Kuldeep Baudh, Bhaskar Singh, John Korstad (Editors). *Phytoremediation Potential of Bioenergy Plants*. Springer. ISBN 978-981-10-3083-3.

e) Published book

CYPRIAN OSINDE, MAUD KAMATENESI-MUGISHA, HANNINGTON ORYEM-ORIGA. 2012. Nutritional and anti-bacterial properties of selected plant species: Nutrition and anti-bacterial activities of plant species for opportunistic infections. July 2012. Publishers: LAP LAMBERT Academic Publishing. ISBN-10:3659178179, ISBN-13:978-3659178177.

14.CONFERENCES, SEMINARS AND WORKSHOPS ATTENDED

- i) 1991.A UNESCO-MAB Workshop on the Biosphere Reserve Concept and its Applicability in Protected Areas of Uganda, at Mweya, Queen Elizabeth National Park, Uganda. (I was one of the organizers).
- ii) 1993. Fourth East Africa Workshop on Biodiversity, held in Kampala, Uganda.
- iii)1995. UNESCO-MAB BRAAF National Seminar on "National Parks and Community Relations". I presented a paper entitled "Utilization of plant resources in protected areas" held at Mweya, Queen Elizabeth National park, Uganda. (was

- also one of the organizers).
- iv) 1995. NUFU PRO 18/92. First conference on Ecology and Sustainable Natural Resource Management For Development. I presented a paper entitled "Coffee seedling mortality on the forest floor in Kibale National Park" held at Mweya, Queen Elizabeth National Park, Uganda.
 - v) 1996. UNESCO-MAB BRAAF Second Regional Conference on Utilization of Wetland Resources, held at Mweya Queen Elizabeth National Park, Uganda. (I was one of the Organizers).
 - vi) 1996. The National NGO Workshop on the "Convention on Biological Diversity: The role of Non-Governmental Organizations in the implementation of the Convention on Biological Diversity in Uganda" held from 11-12th July 1996 in Kampala. I presented a paper on the "The role of the Uganda MAB National Committee in Conservation of Biodiversity in Uganda".
 - vii) 1996. UNESCO-MAB Regional Conference for Forging Co-operation on Africa's Biosphere Reserves for Biodiversity Conservation and Sustainable Development. I presented a paper on "MAB-BRAAF Experience in Uganda", held in Dakar, Senegal.
 - viii) 1997. UNESCO-MAB BRAAF Third Regional Conference on Biodiversity Conservation: "Modern Concepts and traditional Knowledge". I presented a paper entitled "Conservation of Wild Robusta Coffee (*Coffea canephora* Froehner) in Kibale National Park, Uganda" held from 9-12th March 1997 in Cape Coast, Ghana.
 - ix) 1998: UNESCO-MAB BRAAF Forth Regional Meeting on Land Use Planning for Biodiversity Conservation and Sustainable Development". I presented a paper on "Uganda's Country Report" held from 30th March - 4th April 1998 at Arusha, Tanzania.
 - x) 1998. UNESCO-MAB BRAAF Fourth Regional Meeting on Land Use Planning for Biodiversity Conservation and Sustainable Development". I presented a paper jointly Prepared with E.K.Z., Kakudidi, r. Bukenya and A.B. Katende entitled "Utilisation of Non-timber forest products by the local communities around Semuliki National Park, Western Uganda" held from 30th March - 4th April 1998 at Arusha, Tanzania.
 - xi) 1998. UNESCO-MAB/BRAAF Third National Seminar on "gender and Wildlife Management. Kamatenesi, M. Mugisha and I presented a paper jointly, entitled "Gender and utilization of plant resources of queen Elizabeth National Park" held at Ishaka, Bushenyi December 1998.
 - xiv) 2000. Second Symposium on "Recent Advances in Forestry Research and Management in Africa. I presented a paper entitled "Ethnobotanical studies of Mabira Forest Area, Central Uganda", held in Addis Ababa, Ethiopia from 18-20th September 2000.
 - xv) 2000. Ad hoc Task Force on Transboundary Biosphere Reserves organized by UNESCO. I presented a paper on "The African Experience in Transboundary Biosphere reserves" held in Pamplona, Spain from 20-22nd October 2000.
 - xvi) 2000. International Expert Meeting on the Implementation of the Seville Strategy of the World Network of Biosphere reserves 1995-2000, organized by UNESCO. I presented a paper entitled "Biosphere Reserves for developing Quality

- Economies: The Experience of queen Elizabeth Biosphere Reserve, Uganda", held in Pamplona, Spain from 23-27th October 2000.
- xvii) 2001. NUFU Conference on "Ecological Research for Development" at Makerere University and presented one paper entitled ``Some aspects of wild robusta coffee (*Coffea canephora* Froehner) seedling establishment and growth in the forest under storey in Kibale National Park, Uganda. August 2001).
 - xviii) 2002. Conference on Science and Technology for Sustainable Development at Kyambogo University, 2-4th October, 2002. Presented a paper jointly with KAKUDIDI, E.K.Z., and KATENDE, A.B on ``Medicinal Plants of Mukono District, Central Uganda"
 - xix) 2002. Conference on Year of the Mountains- October 2002 at Makerere University. Presented a paper jointly with KAKUDIDI, E.K.Z., and KATENDE, A.B on ``Utilization of non-timber forest products by the local Communities around Semuliki National Park, Western Uganda".
 - xx) 2002. Workshop on ``Environmental Information and Planning for Lake George Stakeholders". I presented a paper entitled `` Revegetation of the pyrite trail in Queen Elizabeth National Park Area. May 14-15, 2002. Kasese.
 - xxi) 2004. Workshop on ``The Migration of Heavy metals in the Lake George Basin, held. At KCCL Training Centre, Kasese on 23/09/2004. I presented a paper on ``The natural trends in regeneration in the pyrite trail in Queen Elizabeth National Park.
 - xxii) 2005. Plant Sciences Conference, Feb. 21-25, 2005, held in the Faculty of Science, Makerere University. I coauthored a paper with A. Makara and F. M. Tusiime entitled ``Establishment of Plant Propagules in the acid-mine polluted soils of the pyrite trail in QENP, Uganda.
 - xxiii) 2005. Plant Sciences Conference, Feb. 21-25, 2005, held in the Faculty of Science, Makerere University. I coauthored a paper with M. Kamatenesi, Olwa-Odyek and E.K Kakudidi entitled ``Medicinal Plants and Gender Integration in Reproductive Health care Delivery: A Case Study in Mbarara District, Western Uganda.
 - xxiv). 2005. Plant Sciences Conference, Feb. 21-25, 2005, held in the Faculty of Science, Makerere University. I coauthored a paper with M. Kamatenesi and Olwa-Odyek entitled ``Medicinal Plants used in Managing Gynaecological Morbidity Conditions in Western Uganda.
 - xxv) 2006 Conference on Biodiversity and Medicinal Plants organized jointly by the Departments of Botany, Pharmacology and Therapeutics and Zoology, Makerere University held from 16th – 18th October 2006 at Makerere University sponsored by NUFU. I presented a paper jointly with Arthur Makara entitled `` The role of mycorrhiza in the absorption of mineral nutrients by wild robusta coffee (*Coffea canephora* Froehner) in Kibale National Park”.
 - xxvi) 2006 Conference on Biodiversity and Medicinal Plants organized jointly by the Departments of Botany, Pharmacology and Therapeutics and Zoology, Makerere University held from 16th – 18th October 2006 at Makerere University sponsored by NUFU. I presented a paper jointly with Arthur Makara and Felly M. Tusiime entitled `` Natural Regeneration in the pyrite trail of Queen Elizabeth National Park”.
 - xxvii) 2006 Conference on Biodiversity and Medicinal Plants organized jointly by the

- Departments of Botany, Pharmacology and Therapeutics and Zoology, Makerere University held from 16th – 18th October 2006 at Makerere University sponsored by NUFU. I presented a paper jointly with Maud Kamatenesi-Mugisha, Dominic W. Makawiti, Olwa-Odyek, Joseph Nganga, Mwaniki & Karume entitled ‘‘ The oxytocic properties of Luffa cylindrical and Bidens pilosa: traditionally used plants in child birth in Uganda’’.
- xxviii) 2006 Conference on Biodiversity and Medicinal Plants organized jointly by the Departments of Botany, Pharmacology and Therapeutics and Zoology, Makerere University held from 16th – 18th October 2006 at Makerere University sponsored by NUFU. I presented a paper jointly with Hosea, D.R Muhanguzi and Joseph Obua entitled ‘‘The effect of human disturbance on tree species composition and demographic structure in Kalinzu Forest Reserve, Uganda.
- xxix) 2006 Conference on Biodiversity and Medicinal Plants organized jointly by the Departments of Botany, Pharmacology and Therapeutics and Zoology, Makerere University held from 16th – 18th October 2006 at Makerere University sponsored by NUFU. I presented a paper jointly with Paul Okullo and Stein R. Moe entitled ‘‘Spatial structuring of native plants by Macroterme mounds (Isoptera: Macrotermitinae) in the flat-valley areas, Lake Mburo National Park, Uganda’’
- xxx) 2006. AFORNET Scientific Evaluation Workshop of Research Work Done held on 18th December 2006 at MUGA Forestry Research Station, Nairobi, Kenya
- xxxii) ORYEM-ORIGA, H. 2010. Research in Restoration of Pyrite Trail in QENP. 2010. Conservation Symposium at Mweya, QENP from Sept. 16-19, 2010. Organized by the Management of Queen Elizabeth National Park, UWA.
- xxxiii) ORYEM-ORIGA, H., NTALE, M., MAKARA, A and SSENKU J. 2014. The 9th JKUAT Scientific, Technological and Industrialization and Exhibitions held at Jomo Kenyatta University of Agriculture and Technology from 13th – 14th November, 2014. I presented a paper titled ‘‘Preliminary Studies on the restoration of the pyrite trail in Queen Elizabeth National Park Area, Uganda’’.

15. PROFESSIONAL PRACTICE/CONSULTANCIES UNDERTAKEN

- i) 1992. Served on the Uganda Heritage Committee for the preparation of documents for the nomination of World Heritage Sites sponsored by UNESCO. The sites nominated were Bwindi Impenetrable National Park, Rwenzori Mountain National Park and Murchison Falls National Park. Two sites were accepted and inscribed on the World Heritage List by World Heritage Committee of UNESCO in 1994.
- ii) 1993. Worked among a group of scientists including those from Mott MacDonald to carry out an environmental impact assessment of a proposed road from Ntandi to Bundibugyo Town sponsored by Sarafeco Consulting Firm
- iii) 1994. Worked among a group of scientists to carry out an environmental impact assessment on the proposed road from Sironko to Suam via Kapchorwa, sponsored by International Development Co-operation (IDC)
- iv) 1994. Worked among a group of scientists to carry out an environmental impact assessment on the proposed Hoima road from Busunju via Kiboga and Hoima to Butiaba on Lake Albert, sponsored by International Development

- Co-operation (IDC).
- v) 1997. Worked among a group of scientists to carry out an environmental impact assessment at a proposed site for the construction of a hydroelectric power dam on River Muzizi in Uganda and sponsored by Mott MacDonald.
 - vi) 1998. Reviewed the EIA Report on Kapchorwa-Suam Road, supported by Kagga and Partners Consulting Engineers, Ltd in collaboration with Mott MacDonald Ltd UK
 - vii) 1999. Participated together with a team from ACRES International of Canada in the review of the EIA and Socio-Economic impacts of the proposed Hydroelectric power projects on Victoria Nile, supported by Kagga and Partners Consulting Engineers, Ltd in collaboration with International Finance Corporation/World Bank
 - viii) 1999. Participated together with a team of experts from International Finance Corporation/World Bank in a socio-economic survey of the proposed Hydroelectric power projects on Victoria Nile, in collaboration with Kagga and Partners Consulting Engineers, Ltd.
 - ix) 2003. Reviewed the Final Report on Environmental Impact Assessment on Katunguru –Equator - Mpondwe Road
 - x) 2004-2006. Undertook supervision of the environmental aspects of the construction of Katunguru-Kikorongo/Equator-Mpondwe Road Road in collaboration with RITES LTD.
 - xi) 2005. Conducted an environmental scoping for the proposed Tororo-Opuyo-Lira Electric Power line in collaboration with Acres International supported by Kagga and Partners Consulting Engineers.
 - xii) 2005. Conducted an Environmental Scoping for Solid Waste Disposal at Kiteesi supported by Kagga and Partners Consulting Engineers.
 - xiii) 2005. Conducted an EIA for the Feasibility Study and Project Brief of Nile Crossing Bridge in collaboration with Mott MacDonald, UK supported by Kagga and Partners Consulting Engineers.
 - xiv) 2005. Conducted an EIA study for the Improvement of Kampala Markets by Kampala City Council supported by Kagga and Partners Consulting Engineers.
 - xv) 2005 Conducted an EIA for the Sanitation Project of Masindi, Hoima and Mubende Towns supported by Kagga and Partners
 - xvi) 2005-2006 Conducted an EIA for the Feasibility Study for Kampala-Entebbe Road in collaboration with ACE Consulting Engineers , Moharram Bakhoun and Kagga and Partners Consulting Engineers, sponsored by Arab Bank for the Economic Development of Africa (BADEA)
 - xvii) 2006 Participated in a team to develop a strategy to improve solid waste management in Kampala City, in collaboration with Kagga and Partners Consulting Engineers sponsored by World Bank.
 - xviii) 2006, Conducted an EIA of the Mutungo-Namanve Water Main Transmission line Kagga and Partners Consulting Engineers, sponsored by the Government of Uganda
 - xix) 2007 Reviewed the EIA report and updated the EMP on Kabale-Kisoro Road Supported by MottMcDonald and Kagga and Partners
 - xx) 2007- Team Leader (Botanist) in a project for preparing the Design layout for

- Greening of three parishes Kampala City in collaboration with Design Forum
(Supported by the Royal Belgium Government.
- xxi) 2007 Reviewed the EIA report and updated the EMP on Atiak-Moyo Road
(Supported by Kagga and Partners)
 - xxii) 2007 Worked together with MottMcDonald on the Preparation and design of Area-
Wide Output and performance Based Road Contracts (OPRC) Project
 - xxiii) 2008-till now I am working in collaboration with the Consultant's Team of Mott
McDonald and Kagga and Partners and supervising the Contractor's compliance
with the EMP while constructing Kabale-Kisoro Road
 - xxiv) 2009- Conducted the EIA Feasibility Studies for the Rehabilitation of the Maziba
HPP, Kabale District-Western Uganda collaboration with Kagga and Partners
Consulting Engineers
 - xxv) 2009- Conducted the EIA Feasibility Studies for the Grid Extension in the West
Nile Region North-Western Uganda collaboration with Kagga and Partners
Consulting Engineers
 - xxvi) 2009 – Conducted the EIA Feasibility Studies for Gulu-Atiak-Nimule Road in
collaboration with Kagga and Partners Consulting Engineers.
 - xxvii) 2009- Conducted the EIA Feasibility Studies for Ntungamo-Kagitumba/Mirama
Hill Road in Collaboration with Kagga and Partners Consulting Engineers
 - xxviii) 2010- Conducted the EIA Feasibility Studies for Mpanga and Kasese Markets for
development in Collaboration with Kagga and Partners Consulting Engineers
 - xxix) OCT. 2010- Attended a National Stakeholders' Workshop on the Proposed
Environmental Impact Assessment Guidelines Specific to Telecommunications held
in Hotel Imperial Royale, Kampala, organized by NEMA
 - xxx) 2011 Participated in the needs assessment and EIA of Mpondwe-Lhubiriha
Market, Kasese District in Collaboration with Kagga and Partners.
 - xxxi) 2011 Conducted a survey and prepared a scoping report on Low-cost Small Bore
Sewer Technology in Bugembe and Kyotera Towns in collaboration with Kagga
and Partners
 - xxxii) 2011 Conducted an environmental audit for fibre optics infrastructure networks in
Uganda in Collaboration with Telecoms Infrastructure Limited based in Kenya
and Bakshire Technologies based in Kampala.
 - xxxiii) 2012 conducted a Socio-economic impact evaluation of national roads completed
since 2002 in collaboration with Kagga and Partners
 - xxxiv) 2012 Conducted an environmental scoping feasibility study of the bottled water
project for National Water and Sewerage Corporation in Collaboration with
Kagga and Partners.
 - xxxv) 2013 Conducted an environmental scoping survey of the contract for replacement
of the ARMCO pipe culverts on the Jinja-Busembatia railway section in
collaboration with Kagga and Partners.
 - xxxvi) 2013-2014. Supervised compliance with the Environmental and Social
Management Plan (ESMP) by the Contractor who was constructing a`Rail Inland
Container Depot (ICD)` in Mukono, Central Uganda. This is being supervised
by me as the Environmentalist in collaboration with Kagga and Partners
Consulting Engineers -completed.

- xxxvii) 2013 Environmental Scoping and EIA for the Feasibility Study and Design of Low-Cost Small Bore Sewer Technology and Biogas Production in Kyotera And Bugembe. Kagga and Partners-completed
- xxxviii) 2014 Environmental Scoping of Eight (8) Strategic Bridges: Bunadasa-Bugibuni Crossing in Sironko, Rwamabaale in Kibale, Kikasa Swamp Crossing in Lyantonde, Kanyeyite in Mbarara, Kibira in Nebbi, Bukwali in Kabarole, Kyabahanga in Rukungiri and Amua in Moyo in collaboration with Kagga and Partners Consulting Engineers- completed
- xxxix) 2014-2015 Assessment of Biodiversity in a Bulk Water Supply for Multi-purpose uses for Kikatsi-Sanga-Kanyeryeru Project in Kiruhura District, Western Uganda-Kagga and Partners – completed
- xxxx) 2014 Environmental Impact Assessment of the Gravity water supply in Sheema District-Kagga and Partners -Completed
- xxxxi) 2014-2016 Supervision of compliance with Environmental and Social Management Plan (ESMP) during the reconstruction of Kamdini to Gulu Road in Collaboration with Kagga and Partners Consulting Engineers.
- xxxxii) 2015 Environmental Impact Assessment for the improvement of community drainage priorities in Kampala Capital City in collaboration with Kagga and Partners Consulting Engineers- completed.
- xxxxiii) 2015-2016 Environmental Impact Assessment for the Gravity Water Flow supply system in Agago District, Northern Uganda in collaboration with Kagga and Partners Consulting Engineers – On-going
- .
- xxxxiv) 2015-2016. Environmental Impact Assessment for the Feasibility Study, Preliminary Designs and Detailed Designs of Integrated Sanitation Systems of Dokolo, Kitgum and Paidha Towns in Northern Uganda in collaboration with Kagga and Partners' Consulting Engineers..
- xxxxv) 2015 to date- Supervision of compliance with Environmental and Social Management Plan (ESMP) during the reconstruction of Mukono – Katosi/Kisoga-Nyenga Road in Collaboration with KKatt Consult Limited – Ongoing.
- xxxxvi) 2016 to date -Supervision of compliance with Environmental and Social Management Plan (ESMP) for the Rehabilitation of Kirinya-Jinja Wastewater Treatment Plant in Jinja Municipality, Jinja District.

16. DISTINGUISHED AWARDS RECEIVED

- i) The Uganda Society Distinguished Award (USDA) received on 18th December, 2007.
- ii) Fellow of the Uganda National Academy of Sciences (FUNAS), October, 30th 2009.

17. EXTERNAL EXAMINING

- i) 2001- 2004 - Acted as External Examiner for undergraduates in Biology at Mbarara University of Science and Technology
- ii) 2003-2005- Acted as External Examiner for undergraduates in Biology, at Gulu University

- iii) 2007, 2008, and 2009-acted as External Examiner for MSc dissertation for students from Mbarara University of Science and Technology
- iv) 2009, 2010 and 2011, acted as External Examiner to Busitema University in the Department of Biology
- v) 2010 –Acted as External Examiner for undergraduates in Hospitality and Environmental Management at Nkumba University
- vi) 2011-Acted as External Examiner for an MSc dissertation for a student from Nkumba University
- vii) 2011, 2013 Acted as External Examiner for undergraduates in Biology at Kampala International University
- viii) 2012- Acted as an External Examiner for a PhD thesis for a student in Maseno University, Kenya.
- ix) 2012-Acted as External Examiner for a PhD thesis for a student in Mbarara University of Science and Technology
- x) 2013 Acted as External Examiner for the PhD and MSc students for Maseno University, Kenya.
- xi) 2014-Acted as External Examiner for a PhD thesis for a student in the University of Dar-es-Salaam
- xii) 2014 – Acted as External Examiner for a PhD thesis of a student from Mbarara University of Science and Technology
- xiii) 2014- Acted as External Examiner for a PhD Thesis for a student from Nkumba University
- xiv) 2014-Acted as External Examiner for undergraduates in Botany in Dar es Salaam University College of Education
- xv) 2015- Acted as External Examiner for an MSc degree dissertation for a student in Maseno University

18. INSPECTION OF PRIVATE UNIVERSITIES AND TERTIARY INSTITUTIONS ON BEHALF OF NATIONAL COUNCIL FOR HIGHER EDUCATION

- i) 2003- Participated in the inspection of Bishop Stuart University in Mbarara for provisional license to operate as a private university. (Appointed by the National Council of Higher Education)
- ii) 2004- Participated in the inspection of Nkumba University in Entebbe to evaluate it for charter status to operate as a private university. (Appointed by the National Council of Higher Education)
- iii) 2005- Participated in the inspection of the Uganda Pentecostal University in Fort Portal for provisional license to operate as a private university. (Appointed by the National Council of Higher Education)
- iv) 2005- Participated as Team Leader in the inspection of Skills Resource Centre in Kampala for provisional license to operate as a private tertiary institution. (Appointed by the National Council of Higher Education)
- v) 2005- Participated in the inspection of Namasagali University in Kamuli District to verify the inspection report on the application to be granted temporary

- license to operate as a private university. (Appointed by the National Council of Higher Education)
- vi) 2006- Participated as Team Leader in the inspection of Kisubi Brothers University in Entebbe for provisional license to operate as a private university. (Appointed by the National Council of Higher Education)
 - vii) 2007- Participated in the inspection of All Saints University in Lira for provisional license to operate as a private university. (Appointed by the National Council of Higher Education)
 - viii) 2007- Participated as Team Leader in the inspection of the Uganda Bible Institute in Mbarara for provisional license to operate as a private tertiary institution. (Appointed by the National Council of Higher Education)

18. VETTING OF PAPERS FOR PROMOTION

- i) 2002- vetted published papers and books of a candidate for promotion to the rank of Associate Professor from the Faculty of Science, University of Cape Coast, Ghana
- ii) 2005- vetted published papers of a candidate for promotion to the rank of Associate Professor from the Faculty of Forestry and Nature Conservation , Sokoine University of Agriculture, Tanzania.
- iii) 2012- vetted published papers of a candidate for promotion to the rank of Reader in Botany, Department of Botany from the University of Ibadan, Nigeria.

19. SERVICE TO THE UNIVERSITY AND COMMUNITY

- i) 1986-1990- Member of Senate
- ii) 1994-2002- Was Secretary of the Uganda Man and the Biosphere (MAB) National Committee under the auspices of Uganda National Commission for UNESCO
- iii) 2001 to date- Patron of Padibe Community in Kampala
- iv) 2002- 2005- Member of Senate and Senate Examinations Committee
- v) Served on several Ad hoc committees of inquiries appointed by the VC to investigate various Faculties/Schools
- vi) Served on several Ad hoc committees appointed by the DVC (AA) on behalf of the University Appointment Board to vet applications for promotion to the ranks of Associate Professors and Professors from various Faculties/Schools/Institutes/Units.
- vii) Served on several committees in the Department of Botany
- viii) Served on several committees in the College of Natural Sciences
- ix) Organized two World Science Day Exhibition by the Faculty of Science and participants from other Faculties, organizations and another University and the private sector in 2003 and 2004 respectively

20. PROFESSIONAL ASSOCIATIONS

- i) 1995-1997. Member of the East African Wildlife Society
- ii) 1997-till now. Member of the Uganda Wildlife Society

- iii) 2003-till now. Member of the Uganda National Academy of Sciences
- iv) 2009- till now, Fellow of the Uganda Academy of Sciences
- v) 2003-till now. Member of the Uganda Society
- viii)2006- Elected as Honorary Editor of the Uganda Journal
- viii) 2005 till now. Member of the Uganda Environmental Practitioner
- x) 2009 till now Member of Uganda Association of Impact Assessors

21. REGISTRATION AS ENVIRONMENTAL PRACTITIONER

- i) Registered with NEMA as an Environmental Impact Assessor- Reg. No. CC/EIA/029/16 till now
- ii) Registered with NEMA as an Environmental Auditor-Reg. No. CC/EA/018/16- till now

22. EXTENSION WORK UNDERTAKEN

2001-2002 Team Leader of a Feasibility Study on *Flower Gardening, Tree Planting and Landscaping in Decentralized Districts*: conducted in **Kapchorwa, Kasese, Kiboga, Lira, Masindi, Nakasongola, Ntungamo & Soroti**
 2003-2004 Team Leader of a Pilot Study on *Flower Gardening, Tree Planting and Landscaping in Decentralized Districts* conducted in KASESE and SOROTI

23. OTHER ACTIVITIES

- i) 2009 till now Chairman, the Uganda Chapter of the African Technology and Policy Studies Network (ATPS)
- ii) 2008 till 2014- I have been a member of the Professionals for value addition under the Presidential Initiative on Banana Industrial Development (PIBID),
- iii) 2013 till now Chairman, NORHED Institutional Development and Development Committee at Makerere University

24. CERTIFICATION

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

 Professor Hannington Oryem-Origa Date: _____
 [Signature of staff member] Day/Month/Year

 Date: _____
 [Signature of authorized representative of the staff] Day/Month/Year

Full name of authorized representative: _____

Prof. Hannington Oryem-Origa
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