

Detailed Conference Programme

DAY ONE

Wednesday 22nd November 2017

International Conference on Ecosystem Resilience and Agricultural Productivity (ICERAP)

Livelihood Pathways under Variable and Changing Climate in sub-Saharan
Africa

Wednesday 22nd November 2017	
08:00 - 09:00	Registration
09:00 - 10:30	<p>COMMONWEALTH BANQUET HALL</p> <p>OPENING CEREMONY <i>Moderators: Professor Frank Kansiime and PRO Makerere University</i></p>
	09:00 – 09:05: Welcome – ICERAP Chairman - <i>Professor Samuel Kyamanywa</i>
	09:05 – 09:10: Welcome remarks – NIDIC Chair – Professor Hannington Oryem-Origa
	09:10 – 09:15: Welcome remarks – Principal CAES – <i>Professor Bernard Bashaasha</i>
	09:15 – 09:25: Welcome Address by Vice Chancellor, Makerere University - <i>Professor Barnabas Nawangwe</i>
	09:25 – 09:35: Remarks by the Norwegian Ambassador to Uganda <i>Ambassador Suzan Eckey</i>
	09:35 – 09:50: Welcome remarks - Director General of NORAD – <i>Mr. Jon Lomøy</i>
	09:50 – 10:00: Cultural Entertainment – School of Liberal and Performing Arts
	10:00 – 10:30: Speech and Official Opening of the Conference – Minister for Education and Sports – <i>Hon. Mrs. Janet Museveni</i>
	Group Photo
10:30 - 11:00	Coffee/ Tea

<p>11:00 - 13:00 PLENARY SESSION 1</p>	<p style="text-align: center;">COMMONWEALTH BANQUET HALL</p> <p style="text-align: center;">P1: Climate Change and Risk Management Chair - Assoc. Prof. Yazidhi Bamutaze and Dr. Edward Mwavu Rapporteur – Mr. Kenneth Balikowa</p> <hr/> <p>1) Keynote Speaker 1: Information and Communication Technologies (ICT) for development - <i>Professor Bjorn Pehrson (KTH Royal Institute of Technology. Stockholm)</i></p> <hr/> <p style="text-align: center;">NORHED, Research Leadership and Capacity Building in Developing Countries</p> <p>2) Adaptive Leadership and Capacity Building in Multicultural Research Settings: Lessons from</p> <ol style="list-style-type: none"> a. CAPSNAC– <i>Samuel Kyamanywa</i> b. REDD-EA - <i>John Tabuti</i> c. WASO-Africa – <i>Edward Klrumira</i> d. WIMEA – <i>Julianne Sansa Otim</i> <p>3) Gender Concerns in NORHED projects at Makerere Univeristy: Emerging Issues and Lessons for Future Institutional Collaboration – <i>Gorettie Nabanoga</i></p> <p>4) Future Funding Processes, Thematic Areas and Collaborations: Proposals from ongoing NORHED projects – <i>Samuel Kyamanywa</i></p>
<p>13:00 - 14:00</p>	<p style="text-align: center;">Lunch Break</p>
<p>14:00-15:30 Parallel Sessions</p>	<p style="text-align: center;">Parallel Session 1 COMMONWEALTH BANQUET HALL</p> <p style="text-align: center;">Adaptation(s) to Climate Change Chair: Dr. Florence Birungi Kyazze Rapporteur: Mr. Lazarus Lugoi</p> <hr/> <p>1. Farmer Technological Options to Adapt to Climate Variability among Small-Holder Farmers in Namutumba and Manafwa Districts, Eastern Uganda - <i>Kyazze, F.B., Mukwaya, P., Talwana, H. and Kyamanywa S.</i></p> <p>2. Determinants of Use of Strategies that Build Smallholder Farmers' Resilience to Rainfall Variability in Mt. Elgon Region,</p>

Eastern Uganda - *Narisi Mubangizi, Florence Birungi Kyazze and Paul Mukwaya*

3. Effectiveness of Climate Variability Adaptation Strategies and Farmer's Well-Being - *Allan, T, Urassa, J, K, and Jumanne, A. M.*
4. On Pathways and Transitions in Participatory Climate Change Policy Making and Development in Developing Countries: Drivers and Concerns in Uganda – *Paul Isolo Mukwaya*
5. Climate and Land Cover Change in Kapoeta, South Sudan: Implication for Livestock Grazing Resources - *Francis Alex Onono*

Parallel Session 2 KALANGALA HALL

Meteorological Instrumentation and Computational Meteorology

Chair: Dr. Julianne Sansa Otim

Rapporteur: Mr. Isaac Mugume

1. Installation and Configuration of an Automatic Weather Station at Julius Nyerere International Airport - *Daudi Mboma, Ombeni Mnzava, Emmanuel Kondela, Amos Nungu and Joseph W Matiko*
2. Comparative Approach Techniques for Computation Task Migration between High Performance Computing Nodes - *Selestine Justus and Joseph W Matiko*
3. A Comparative Analysis of Weather Data from Conventional and Automatic Weather Stations in Tanzania - *Odilia Macha, Ambele Mtafya, Sizah Mwalusepo, Habiba Mtongori, Amos Nungu, Joseph W Matiko*
4. Condition Monitoring and Reporting Framework for an Automatic Weather Station - *Mary Nsabagwa, Julianne Sansa Otim, Isaac Mugume, Yenusu Kiryamwibo, Robert Kasumba, Joshua Muhumuza*

Parallel Session 3 ROYAL CLUB

Climate Change, Carbon and Forestry

Chair: Professor John Tabuti

Rapporteurs: Mr. Narisi Mubangizi & Ms. Esther Kemigisha

	<ol style="list-style-type: none"> 1. The Potential of Agroforestry Farming Systems to Sequester Carbon for Small-Holder Farmers in Namutumba and Manafwa Districts, Eastern Uganda - <i>Nabanoga G., F. Birungi-Kyazze and J. Namaalwa</i> 2. A Model for Estimating Above-Ground Carbon Stock Changes in Mabira Central Forest Reserve – <i>Juma Katongole</i> 3. Determinants of household participation in forestry carbon projects in Uganda: Unlocking poor peoples’ potential for REDD+ uptake - <i>K. Aganyira, R. Kabumbuli, V. Muwanika, J.R.S. Tabutia and D. Sheilc</i> 4. Field Evidence on Greenhouse Gas Emission in Organic and Conventional Cotton Farming Systems in Tanzania - <i>Bwana, T. N., Amuri, N.A., Olesen, J.E. and Semu, E.</i> 5. The contribution of small-holder farmers to increasing tree cover in Kaliro District, Uganda - <i>Cory Whitney, Derrick Kisegu, David Kagaha and John R.S. Tabuti</i> 6. Free, prior and informed consent for a REDD+ pilot project: Implications for sustainability - <i>Philemon Kirunda Mukisa, David M. Tumusiime, Christian Webersik, Emma Liwenga and John RS Tabuti</i>
15:30 - 16:00	Coffee/Tea Break
16:00 – 17:00 Parallel Sessions	Parallel Session 4 COMMONWEALTH BANQUET HALL Ecosystems Productivity Chair: Dr. Asgeir Almas Rapporteur: Ms. Ellen Kayendeke
	<ol style="list-style-type: none"> 1. Diversity of Large Mammals in Awash National Park and its Ecosystem Role and Biodiversity Conservation, Ethiopia - <i>Sintayehu W. Dejene</i> 2. Diversity and Biomass of Livestock Forage under Selected Tree Species in Open Grazing Systems in South Rangelands Agro-Ecological Zone of Uganda - <i>D. Nabasumba, G.Beyihayo Akiiki, R. Muzira, S. Natuha and G. Tugume</i> 3. Impact of Human Activities on Diversity and Distribution of Large Mammal in Nimule National Park –South Sudan - <i>Gordon S. Abdallah, Mwavu E and Kityo R.</i> 4. Seasonal Variability of Pasture Biomass Resources for Grazers in Karamoja Sub-Region - <i>Buyinza Ambrose and Shuaib Lwasa</i> 5. Ecology of the Savanna Elephant in Nimule National Park, South Sudan: Elephant Dung Plant Seeds Germination, Dung

Beetle Community and Genetic Variation - *Lado, T. F., Stephen, A. A., Jibi, W. F. and Moilinga, P. T.*

6. Assessment of Volume productivity of *Pinus caribaea* in Selected Agro-ecological Zones of Uganda -*Thomas Lopeyok Coco Parisio, Daniel Waiswa and Justine Namaalwa*

Parallel Session 5 KALANGALA HALL

Weather and Climate Change Modeling

Chair: Assoc. Prof. Ssetumba Mukasa

Rapporteur: Narisi Mubangizi

1. Classical and Bayesian Markov Chain Monte Carlo Modeling of Extreme Rainfall in Dar es Salaam, Tanzania - *Imani Kapungu, Narsis Mtega, and Edwin Rutalebwa*
2. Assessing the Influence of Indian Ocean Dipole on Monthly Rainfall - *Sam Ogwal and Isaac Mugume*
3. Climate Change Hotspots and Rain-fed Cropping Systems - L. P. Lugoi, Y. Bamutaze, V. Martinsen ; Ø. Dick, Å. R. Almås
4. Sensitivity of WRF Heavy Rainfall Simulations to Selected Cloud Microphysical Parameterization – *Ronald Opio, Isaac Mgume and Alex Nimusiima*

Parallel Session 6 ROYAL CLUB

Gender, Climate Change and Resilient Livelihoods

Chair: Assoc. Prof. Gorettie Nabanoga

Rapporteur: Mr. Kenneth Balikowa

1. Gender Roles and Gendered Adaptation Strategies in Small Scale Fishery in Malawi under the impact of Climate Change - *Moses Majid Limuwa, Gry Synnevå*
2. Gender Stereotyping? Evidence from Gender Differentiated Household Vulnerability to Climate Change in Eastern Uganda - *Kenneth Balikoowa, Gorettie Nabanoga and David Mwesigye Tumusiime*
3. Gender Forest Management, Agro forestry and Climate Change Mitigation and Adaptation Measures - *Peter Fuuna*
4. Gender Roles in Climate Change Adaptation: A case study of the Livestock Water Provision in Wabinyonyi Sub-County,

	<p>Nakasongola District: Uganda - <i>Prossy Nakibengo, Dauda Waiswa and Margaret Kyakuwa</i></p> <p>5. Gender and Benefit Sharing in Forest Conservation: A Case of Mt. Elgon Forest Reserve, Uganda - <i>Batuusa Mariam, John, R. S. Tabuti and Gorettie Nabanoga</i></p> <p>6. Pathways of addressing Gender-based Constraints for Equitable and Sustainable Participation in Profitable Crop Value Chains. - <i>Mnimbo. T. S, Lyimo-Macha. J, Urassa, J.K and Mutabazi. K</i></p> <p>7. The Contribution of ASSP to Socio-economic Empowerment of Rural Women in Zanzibar, Tanzania - <i>Sikira, A.N and Fakhi, A</i></p>
<p><i>Conference Cocktail</i></p>	

DAY TWO
Thursday 23rd November 2017
International Conference on Ecosystem Resilience and
Agricultural Productivity:
Livelihood Pathways under Variable and Changing Climate in sub-Saharan
Africa

Thursday 23rd November 2017	
09:00 -10:30 Parallel Sessions	<p>Parallel Session 7 COMMONWEALTH BANQUET HALL</p> <p style="color: #E67E22;">Climate Change Information and Knowledge Management</p> <p style="color: #00A651;"><i>Chair: Assoc. Prof. Herbert Talwana</i></p> <p style="color: #00A651;"><i>Rappoteur: Dr. Agnes Sirima</i></p> <ol style="list-style-type: none"> 1. Use of Indigenous Knowledge as a Strategy to Forecast Rainfall Patterns among Smallholder Farmers in Namutumba and Manafwa Districts, Eastern Uganda - <i>Kyazze, F.B., Mubangizi, N., Mukwaya, I. P. & Kyamanywa Samuel</i> 2. ICT for Weather Information Dissemination: The way to Improved Agricultural Productivity - <i>Doreen Tuheirwe-Mukasaa, Magne Haveraaenb, Julianne Sansa-Otima, Benjamin Kanagwaa, Kagwa Andrew-Juniora, Godfrey Rwamahe Mujunic</i> 3. Experiences and Challenges of Integrating Weather Information in a single Repository: A case of building a Weather Data Repository for Uganda, Tanzania and South Sudan - <i>Mwesigwa Andrew, Mary Nsabagwa, Julianne Sansa Otim, Joshua Muhumuza, Jovan Muteesasira, Martha Nakuwanda</i> 4. Effectiveness of Communication Channels on Knowledge and Adoption of Improved Common Bean Technologies among Smallholder Farmers' in Tanzania - <i>Charles Byalugaba Lugamara, Justin K. Urassa, Paul Martin Dontsop Nguetzet and Cargele Masso</i> 5. Membership dynamics and Socio economic determinants in Forest User Group: Evidence from Collaborative Forest Management around Mabira Forest Reserve, Uganda – <i>Edmand Aryampika</i>

6. Natural andmo Socio-Economic Resource Base Assessment and Climate Change Adaptation and Mitigation in Wonchi District, Ethiopia: Reflections on Some Observed Gaps in Data acquisition - *Tamrat Bekele, Zemedede Asfaw, Zerihun Woldu¹ and Habtamu Chekol*

**Parallel Session 8
KALANGALA HALL**

Soil Health and Natural Resource Management

Chair: Assoc. Prof. Twaha Basamba Ateenyi

Rapporteur: Mr. Julius Bakadi

1. Effect of crude oil spills, its mass flux and the feasible remedies in the clay soil of Paloich, South Sudan - *Kadmala Lugai Duku*
2. Hydrocarbons in Crude-oil production sites of Sudd-region South-Sudan: Implication on soil fertility and plant species risk - *Ruley Jane Alexander, Alice Amondong, J.B.Tumuhairwe, Oryem-Origa*
3. Linkage of Soil Conservation in Small-Holder Farming Systems to Market Access - *R. Muzira, J.S. Tenywa, T. Basamba and B. Vanlauwe*
4. Phosphorous Use Efficiency and Factors Controlling the Fluxes and Deliveries of labile in Soil Solution - *Asgeir Rossebo Almas*
5. Soil Organic Carbon and Nitrogen Stocks under Different Land Uses in Ethiopia - *Bal Ram Singh and Aweke M. Gelaw*
6. Physical and Chemical Soil Properties that Favour to Cassava Yield in Central Uganda - *Omaidi, G.C., Kwebiiha, A. and Mukasa, S.B.*
7. Improvement of Municipal Solid Waste Compost Quality through Phosphate Rock and Microbial Inoculants - *Julius Lajako Benjamin Bakadi, Giregon Olupot and Alice Amondong Katushabe*

**Parallel Session 9
ROYAL CLUB**

**People, Landscape Transformations and Land
Management**

Chair: Assoc. Prof. Edward Mwavu

Rapporteur: Mr. Juma Obura

	<ol style="list-style-type: none"> 1. Influence of Land use Patterns and Cover Change on Flow of Ecosystem Goods and Services - <i>Halima O. Mangi and Justin K. Urassa</i> 2. Dynamics of Land Use and Land Cover in a Commercial Sugar Cane Growing and Implications for Food Security: Case Study of Busoga Sub-Region- Eastern Uganda - <i>Nybong M. P. Ajang, Waiswa D and Mwavu E.</i> 3. Is small still beautiful? The farm size-productivity relationship revisited in Kenya - <i>Milu Muyanga and T.S. Jayne</i> 4. Natural Resources and Livelihood Sources in Wonchi District: Farmers’ Perspectives Captured in Household Baseline Survey - <i>Zemedede Asfaw, Habtamu Chekol, Zerihun Woldu and Tamrat Bekele</i> 5. Measuring Extent of Restoration Using Coffee (Coffee arabica L.) as a Bioassay Plant Species - <i>Habtamu Chekol</i>
10:30 - 11:00	Coffee/ Tea Break
11:00 - 13:00 PLENARY SESSION 2	<p>COMMONWEALTH BANQUET HALL</p> <p>P2: Ecosystem Sustainability and Natural Resource Management</p> <p><i>Chair: Professor John Tabuti</i></p> <p><i>Rapporteur: Mr. Lazarus Lugoi</i></p>
	1) Keynote speaker 2: Professor Rattan Lal
13.00 – 14:00	Lunch Break
14:00 - 15:30 Parallel Sessions	<p>Parallel Session 10</p> <p>COMMONWEALTH BANQUET HALL</p> <p>Water, Wetland Ecology and Watershed Management</p> <p><i>Chair: Prof. Zemedede Asfaw</i></p> <p><i>Rapporteur: Ms. Susan Lado</i></p>
	<ol style="list-style-type: none"> 1. Impact of land-use change on seasonal flow regime in an upland watershed (Nyangores, Mara River basin, Kenya) - <i>Hosea Mwangi, Karl-Heinz Feger, Stefan Julich</i> 2. Influence of Inundation level on Plant Distribution in a Papyrus Wetland within the Lake Kyoga basin, Uganda - <i>Ellen. J. Kayendeke, Frank Kansiime, Yazidhi Bamutaze, Helen K. French</i>

3. Species composition and diversity of riparian vegetation along the Walga River - *M. Meragiaw, Z. Woldu, B.R. Singh, and V. Martinsen*
4. Evaluation of water quality Status of wetlands and the implication for Ecological health in case of Wonchi District, Oromia Region, Ethiopia - *Balew Yibel Zeleke*
5. The role of papyrus wetland levels in groundwater-surface water interaction on a local scale – *Helen K. French and Ellen Kayendeke*

Parallel Session 11
KALANGALA HALL

Resilient Agricultural Systems
Chair: Professor Bal Ram Singh
Rappoteur: Ms. Esther Kemigisha

1. Helminths Diversity and Transmission Patterns among Wild and Cultured *Clarias Gariepinus* in Central Uganda - *Lado S. Alfred, Masembe C and Akoll P.*
2. Design of an Integrated Ox-Drawn Plough, Planter and Cultivator for Small-Scale Maize Farming in Uganda - *Juma Obura*
3. Intensification of Sorghum and Pearl Millet Production in the Sahelian and Sahel-Sudanian Climatic Zones of Mali - *Adama Coulibaly and Jens B. Aune*
4. Sustainable Agricultural Intensification and its implications to Ecosystem Health in Ihemi Cluster - *Agnes Sirima, Japhet J. Kashaigili, Reuben M.J. Kadigi, Felix Kamau, Anna Sikira and Winfred Mbungu*
5. Optimizing Climate Smart Agriculture practices to enhance productivity and resilience of smallholder maize-based cropping systems to climate variability in Eastern Uganda - *Olga Ayia Charles*
6. Effects of Irrigation on Maize Growth and Yield under Different Fertilizer Levels in Wakiso District, Uganda - *E. Tukube, N. Kiggundu and J. Wanyama*

Parallel Session 12
ROYAL CLUB

Agricultural Production, Food and Energy Security
Chair: Dr. Pasquale Moilinga

	<p style="text-align: center;"><i>Rappoteur: Mr. Juma Obura</i></p> <ol style="list-style-type: none"> 1. Livestock production in and around Mabira forest reserve, Uganda - <i>Dorothy K. Nampanzira, Constantine B. Katongole and John R. S. Tabuti</i> 2. Rethinking the Role of Farmers in Cassava Breeding: An Assessment of Farmer Preferred Traits and Selection Criteria for Cassava Varieties in Eastern Uganda - <i>Mukebezi, R., Mukasa, S. B., Kyazze, F. B., Obaa, B., Opolot, D., Kapiriri, M.N. and Masa, H.</i> 3. Composition and properties of Dioscorea dumetorum (Kunth Pax) and Dioscorea shimeriana (Kunth) of wild yam species in Metu - Moyo District Uganda - <i>Sauda Dehiya Wawa Musa</i> 4. Development of a Weaning Porridge composite flour for Children aged 6-59 Months - <i>Felix Vigilio Kenyi Tombe</i> 5. Adoption of Recommended Maize Production Practices and Productivity among Farmers in Morogoro District, Tanzania - <i>Consolatha J. Gahanga and Justin K. Urassa</i> 6. Impacts of Climate Change on Household Food Availability in Rajaf and Nyarkenye Counties, South Sudan - <i>Sandra Mikelele</i> 7. Performance Starter Pigs Fed Diets Base on Reject Milk and Maize Bran - <i>Lomoli Labahala Oriho</i>
15:30 – 16:00	<p>Coffee/ Tea Break</p>
16:00 - 17:30 Parallel Sessions	<p style="text-align: center;">Parallel Session 13 COMMONWEALTH BANQUET HALL</p> <p style="text-align: center;">Ecosystems Services and Functioning <i>Chair: Prof. Hellen French</i> <i>Rappoteur: Ms. Ellen Kayendeke</i></p> <ol style="list-style-type: none"> 1. Understanding Seasonality of browse herbage in Karamoja region, Uganda - <i>Benon. B. Nabaasa, Shuaib Lwasa, Ambrose Buyinza</i> 2. The status of giraffe in Ethiopia: searching for the elusive southern populations; a potentially unique genetic assemblage - <i>Tilaye Wube Hailemariam</i> 3. The Extent of Illegal Hunting of Wildlife Animals in the Sudd Region of South Sudan - <i>Jubara Nadlin, Vincent Muwanika, Thomas Lado.</i> 4. Fish and water provisioning to the local community by Naigombwa wetland in Iganga District, Uganda - <i>Ohitai, D. O. J; Were, D., Semyalo, R. and Kansiime, F.</i>

5. Ecological Sustainability: Miombo Woodland Conservation with Livestock production in Tanzania - *Peter Rogers Ruvuga, Ismail Said Seleman and Anthony Zozimus Sangeda*
6. Assessment of the impact of the type of Matrix on bird seed dispersal ecosystem service in Mabira Central Forest Reserve - *Kalindi Sadat, Assoc Prof. Vincent Muwanika, Dr. Esaete Josephine*

**Parallel Session 14
KALANGALA HALL**

Agricultural Production, Food and Energy Security
Chair: Associate Professor Denis Mpairwe
Rapporteur: Ms. Susan Lado

1. Status of Sustainable Land Management in Pasture Production Systems in South Western Agro-Ecological zone of Uganda: Implications for Resilience of Livestock Production Systems - *G. A. Beyihayo, D. Nabasumba, R. Muzira, H. Kirunda*
2. The Economic Contribution of Frankincense in Drought-prone areas of Southern Ethiopia - *Yonas Berhanu, Jens B. Aune, Ayana Angassa*
3. An Econometric Analysis of Charcoal Consumption in Three Urban Centers of Tanzania - *G.Z. Nyamoga, Y.M. Ngaga, R. Malimbwi, B. Solberg, H. K. Sjølie and Greg Latta*
4. Profitability of Smallholder Cassava Bioethanol Production: a case for Northern Uganda - *Deogracious Opolot, Settumba Mukasa, Johnny Mugisha, John Ilukor*
5. The Distribution and Uses of the Genus Amaranthus in Ethiopia - *Mekbib Fekadu*
6. Besides Physical Scarcity: A Social Analysis of Water Scarcity in Rural Rakai District, Uganda – *Innocent R. Kamywa and Dauda B. Waiswa*

**Parallel Session 15
ROYAL CLUB**

Starting and Finishing Graduate Studies
Mentoring and Networking Session
Chair: Professor Kyamanywa
Rapporteur: Mr. Narisi Mubangizi

	<p>Reflections from:</p> <ol style="list-style-type: none"> 1. Professor John Tabuti 2. Professor Edward Kirumira 3. Professor Bal Ram Singh 4. Assoc. Profesora Hellen K. French 5. Assoc. Professor Gorettie Nabanoga 6. Dr. Julianne Sansa-Otim 7. Dr. Florence Birungi Kyazze <p>[Participants are graduate students at the conference]</p>
<p>17:30 – 18:30 Summary, Closing and Outlook Plenary</p>	<p style="text-align: center;">Closing Ceremony COMMONWEALTH BANQUET HALL</p> <p style="text-align: center;"><i>Chair: Professor Kyamanywa</i> <i>Rapporteur: Mr. Kenneth Balikowa</i></p> <p>Roundtable and Summary of Main Conference Activities</p> <ol style="list-style-type: none"> 1. Closing Remarks – ICERAP Scientific and Publications Committee - <i>Professor Frank Kansiime</i> 2. Closing remarks – NIDIC Chair – <i>Professor Hannington Oryem-Origa</i> 3. Closing remarks – Principal CAES – <i>Professor Bernard Bashaasha</i> 4. Closing Address by Vice Chancellor, Makerere University - <i>Professor Barnabas Nawangwe</i>
<p style="text-align: center;">19:00 hours <i>Conference Dinner</i> <i>Cultural Entertainment – School of Liberal and Performing Arts</i></p>	