

Press Release: June 2019

Climate change information needed for East African decision-making: Hon James Acidri (Uganda Member of Parliament) and Bob Natifu (Uganda Deputy Commissioner for Climate Change) open the HyCRISTAL “Research into Policy” Conference in Kampala, Uganda, 21-22 May 2019.

“Climate Change is already affecting our society and all regions of Uganda,” said Mr. Bob Natifu (Uganda Deputy Commissioner for Climate Change). His keynote address left attendees at the final annual [HyCRISTAL](#) (Integrating Hydro-Climate Science into Policy Decisions for Climate-Resilient Infrastructure and Livelihoods in East Africa) meeting in little doubt of the need to integrate climate change into decision making in East Africa.

Similarly, the Hon James Acidri, Member of Uganda Parliament, delivered the final keynote saying, “In Uganda climate change has become a reality. The days when we used to think there is abundant food and we don’t need to plan for shortage are long gone. We think climate change is still far but it has already started seriously impacting on us.”

The need to act now to make our future societies more resilient is of course widely appreciated by individuals and institutions, but there are relatively few instances where what we know will happen due to climate change, or may happen, has been used in long-term decision making. Integrating such information into decisions in East Africa was one aim of the HyCRISTAL project, the other aim being to improve predictions of climate change and its impacts in the region.

HyCRISTAL’s success in meeting these aims was clear in many of the closing statements of the meeting. Joseph Okotto-Okotto (Victoria Institute for Research on Environment and Development, VIREN, Kenya) noted, “There is great science here. Science to transform lives”. Andrew Clenaghan (Practical Action) noted that HyCRISTAL had transformed and was not just a research project, but also a “movement for change.”

HyCRISTAL’s annual meeting was attended by delegates from across Uganda, Kenya, Tanzania, Ethiopia, the UK and USA. Attendees worked with the HyCRISTAL team to develop approaches to use climate change information within HyCRISTAL’s five “pilot studies”. These pilots span urban water and sanitation, rural livelihoods, water management, transport on Lake Victoria and tea production, and share lessons learnt more widely for use in other decisions and sectors.

The meeting was opened with Mr. Natifu’s keynote address, which highlighted the seriousness of climate change in Uganda through its impacts on all sectors and emphasised that it is the research of HyCRISTAL and the interactions at this meeting and others like it that will enable action, “I’m very much encouraged that through today’s conversations and the interactions that are going to come out – we shall collectively propel ourselves to practical solutions to save tomorrow’s climate today.”

Hon Acidri highlighted other linked environmental issues, “Our national forest coverage is now only at 8%, rapid degradation and loss of wetlands.” He emphasised the need to reduce emissions as well as adapt, assess vulnerabilities and increase resilience, “Tackling climate change is not only about the predictions but requires clear focus on community and household resilience and understanding livelihood strategies. Understanding the context for future planning is critical.”

HyCRISTAL is led by Dr John Marsham (water@leeds, Priestley International Centre for Climate, University of Leeds and National Centre for Atmospheric Science, UK), who emphasised “Recent weather events in East Africa have highlighted vulnerabilities that will grow as the effects of climate change increase. We all look forward to building on HyCRISTAL

to ensure that decisions being made now ensure that the region is prepared for the changes ahead.”

Dr Dave Rowell (UK Met Office) highlighted some major successes, “HyCRISTAL has both reduced uncertainty and exposed previously underestimated risks, delivering major new knowledge of future rainfall accumulations and seasonality with explanations of recent drying - the so-called ‘East African Climate Change paradox’. HyCRISTAL has shown how increases in flooding are likely underestimated in all global climate model predictions. By working with decision makers, HyCRISTAL has synthesised this knowledge into user-oriented narratives of possible future climates.”

Dr David Macdonald (British Geological Survey) who is HyCRISTAL Water Management Lead, highlighted the opportunity that has been provided “to develop the essential relationships that are needed between climate scientists, water specialists and those responsible for future water supplies.” Dr Callist Tindimugaya, (Commissioner for Water Resources Planning and Regulation, Ministry of Water and Environment, MWE, Uganda) emphasised that “HyCRISTAL’s work will enhance what we are doing and ensure climate issues are addressed and our plans are well grounded in climate science” and that “the work of HyCRISTAL will be very important for the country to take informed decisions.”

Professor Barbara Evans, HyCRISTAL Urban Lead (water@leeds and University of Leeds) said, “With the support of Jomo Kenyatta University of Agriculture and Technology, we are working with communities, city authorities, water companies and other key decision makers in Kisumu and Kampala. We aim to develop cost-effective interventions that will enable current and future water and sanitation systems to be more resilient to the increased flooding we expect in the years to come.” Dr Felix Mutua, Jomo Kenyatta University of Agriculture and Technology, highlighted the ongoing HyCRISTAL work to understand the likely impacts on infrastructure and livelihoods associated with potential changes in the Lake Victoria levels.

Professor Ros Cornforth (Director of the Walker Institute, University of Reading) who is HyCRISTAL Rural Lead, said: “HyCRISTAL has paved the way for new collaborative research and decisive partnerships between researchers and policy implementers in Uganda and Kenya to address the pressing realities of climate change impacts on the rural communities living near Lake Victoria and struggling to adapt. Working together we have used our collective expertise, interdisciplinary research and innovative approaches to capacity building to pull the new science through to better support the livelihood choices of rural communities.”

Collaboration, community focus and capacity development initiatives have been key to HyCRISTAL. Dr Pascal Waniha (Tanzania Met Agency) urged HyCRISTAL to “continue the network” and Dr Geoffrey Sabiiti (Makerere University, Uganda) stated “there is a need for sustaining the capacity developed, knowledge transfer and involvement of Early Career Researchers who are the future research leaders in the region.” Priscilla Kabiru (Konkuey Design Initiative) who delivered the second keynote reflected that “it is amazing seeing scientists collaborate with governments and local partners to find local solutions.”

This was HyCRISTAL’s final annual meeting, but its activities will continue until at least March 2020. The networks and relationships that have been built up through HyCRISTAL will remain allowing for the legacy of the project to continue to have a meaningful impact within the East African climate change community of decision-makers and researchers.

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HyCRISTAL stands for Integrating Hydro Climate Science into Policy Decisions for Climate Resilient Infrastructure and Livelihoods in East Africa. It is funded by the UK Department for International Development and the Natural Environment Research Council (NERC) under the Future Climate for Africa programme. For more information please visit the Future Climate for Africa website: www.futureclimateafrica.org.

The HyCRISTAL consortium includes: The University of Leeds (UK), British Geological Survey (UK), Centre for Ecology and Hydrology (UK), Evidence for Development (UK), Jomo Kenyatta University (Kenya), Loughborough University (UK), Makerere University (Uganda), Maseno University (Kenya), Met Office (UK), National Centre for Atmospheric Science (UK), North Carolina State University (USA), Practical Action (UK), Stony Brook University (USA), Tanzanian Meteorological Agency (Tanzania), Ugandan Ministry of Water Resources (Uganda), Ugandan National Meteorological Authority (Uganda), University of Connecticut (USA), Walker Institute at the University of Reading (UK).

Selected Academic Outputs from the Research:

Enhanced future changes in wet and dry extremes over Africa at convection permitting scale:
<https://www.nature.com/articles/s41467-019-09776-9>

Later Wet Seasons with more Intense Rainfall Over Africa under Future Climate Change:
<https://journals.ametsoc.org/doi/full/10.1175/JCLI-D-18-0102.1>

[Evaluation of rainfall simulations over Uganda in CORDEX regional climate models](#)

<https://link.springer.com/article/10.1007/s00704-018-2643-x>

Implications of improved representation of convection for the East Africa water budget using a convection-permitting model.

<https://journals.ametsoc.org/doi/10.1175/JCLI-D-18-0387.1>

Selected Resources for download:

Brief: Possible Futures for rural East Africa under a changing climate: <https://futureclimateafrica.org/resource/possible-futures-for-rural-east-africa-under-a-changing-climate/>

Infographic: Possible Futures for rural East Africa under a changing climate: <https://futureclimateafrica.org/resource/possible-futures-for-rural-east-africa-under-a-changing-climate-2/>

Brief: Possible Futures for urban East Africa under a changing climate: <https://futureclimateafrica.org/resource/possible-futures-for-urban-east-africa-under-a-changing-climate/>

Infographic: Possible Futures for urban East Africa under a changing climate: <https://futureclimateafrica.org/resource/possible-futures-for-urban-east-africa-under-a-changing-climate-2/>

Brief: CI4T Briefing note for Kenya

<https://futureclimateafrica.org/resource/ci4t-briefing-note-for-kenya/>

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