MAKERERE UNIVERSITY

COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES

MAKERERE UNIVERSITY CENTRE FOR CLIMATE CHANGE RESEARCH AND INNOVATIONS (MUCCRI)

SHORT COURSE ON '*CLIMATE RESILIENT URBAN DEVELOPMENT AND GREEN CITIES – 2ND – 6TH MAY 2017*

According to UN Habitat, more than half of the world population (54%) lives in urban areas and generate 70% of the world's GDP. By the middle of this century urban population will rise to 66% of the world population. In Uganda, while a small proportion of Uganda's population is urban (18.4%), the rate of urbanization is very high estimated at more than 5% per year over the last decade, which is almost double the rural population growth (2.8%) over the same period. With this trend of urban growth, more than 50% of the Uganda's population could be urban within the next 50 years or even less, and this will have a marked impact on landuse change, environment management, employment, poverty levels as Uganda moves towards an upper middle income status in line with the Uganda Vision 2040.

While urban areas are important centres for economic growth and development, urban centres more especially in developing countries face major challenges: extreme poverty, poor living conditions, lack of basic infrastructure services, and vulnerability to natural disasters and climate change. Therefore, it will take careful intervention and planning to ensure that the poor benefit from city growth in a sustainable way. At the same time, it is also necessary to limit the potentially negative environmental and climate change impacts associated with rapid urban growth.

Climate change is one of the key emerging issues that urban areas must contend with. Urban areas are both drivers and victims of climate change. Cities are drivers of climate change through greenhouse gas (GHG) emissions. UN Habitat (2011) observes that whereas cities cover less than 1% of the earth's surface, they account for more than 50% of the world's population, consume 75% of the world's energy and are responsible for 40 to 70% of the global emissions. For example, between 1950 and 2005, the level of urbanization increased from 29% to 49%, while global carbon emissions from fossil fuel burning increased by almost 500%. Cities face significant impacts from climate change, both now and into the future. These impacts include heat waves, floods and droughts, which can compound one another, making climate change risk management more complex. These impacts have potentially serious consequences for human health, livelihoods, and assets, especially for the urban poor, informal settlements, and other vulnerable groups.

Doing nothing to protect urban systems from the impacts of climate change will continue to hinder the achievement of sustainable urban and negatively affect livelihoods of the urban population, more especially the poor. Ultimately, failure to address climate change could undermine the ability of all countries to achieve the global Sustainable Development Goals (SDGs), launched in 2015. The SDGs reflect a global aspiration for faster progress over the next 15 years and the need for a profound structural transformation that will overcome the obstacles to sustained prosperity. SDG 11 of the sustainable development agenda urges countries to make cities and human settlements inclusive, safe, resilient and sustainable. In addition, SDG 13 urges countries to take urgent action to combat climate change and its impacts.

While there various urban related climate change challenges, urbanization offers many opportunities to develop mitigation and adaptation strategies to deal with climate change especially through urban planning and design. For example, promoting green cities can help in adapting to climate change impacts and reducing GHG emissions. The design and use of the built environment is a critical area for climate change mitigation because the built environment consumes about one- third of the final energy used in most countries, and a significant share of electricity. Many efforts can potentially be put in place to build urban resilience and developing socio-ecological adaptive capacity. These include investment in green infrastructure, such as parks, gardens, wetlands, and green roofs that contribute to resilience under a changing climate and deliver ecosystem services. Acting now to support cities to plan this investment in a low carbon and integrated way, before they are locked into unsustainable development paths, will help them become centres of sustainable, long-term economic growth, with infrastructures that maximize agglomeration economies and resilience to future climate changes.

This course provides an introduction on how to address climate change in cities and in urban areas. The short learning programme such as this one will not turn participants into climate change experts; however, it will provide an informed platform for knowledge capacity to build urban resilience to climate change. The course highlights the background of climate change risk and vulnerabilities in urban areas, adaptation and mitigation in urban areas and emphasizes the importance of resilience and the green economy in promoting sustainable urban development.

Course Objectives

*The **overall objective*** of the course is to increase capacity for enhancing urban climate change resilience through effective integration of climate change into urban development and management policy, programmes, projects.

The ***immediate objective*** is that all course participants are equipped to effectively address climate change in the framework of urban development and promoting green cities through their jobs.

Couse outcomes

This course will enable the participants to:

- Understand the climate change risks and vulnerabilities for urban areas

- Identify how climate change is related to and affects the urban socio-ecological systems and the achievement of sustainable urban development
- Understand the appropriate approaches and options for increasing urban resilience to climate change and building green cities and urban areas
- Effectively and meaningfully contribute to the debate and practical action on resilient cities and green economy in the context of a changing climate
- Explore own job functions and role in relation to climate change and find ways of integrating climate change response actions

Couse dates and duration:

One week 2nd – 6th May 2017

Learning approach

The learning process will require active involvement of all participants before, during and after the course. The process will involve the following learning approaches:

- Flipped classroom and e-learning activities at your organization before meeting at Makerere University. This will involve online presentations, which provide important introductions to climate change, urban resilience and green cities. This will allow for more efficient use of time during stay at Makerere University for debates, exercises and excursions, while still building a solid climate change knowledge platform.

- Class activities (presentations, exercises, debates), excursions, and case-based group work during the study at Makerere University, adding further knowledge and insight to the learning started in participants' organisations, and participant work with organisational Climate Change Action Plan.

Couse modules/topics

A. Introduction to climate change and sustainable urban development
B. Climate impacts, risks and vulnerabilities for urban socio-ecological systems
C. Climate change adaptation as a way of building urban resilience.
D. Integration of Climate change mitigation in urban development process as an avenue to promoting green urban economies
E. Integrating climate change in urban development policy, programmes and projects

Couse Funding:

The fee for this short course is USD 500. This course is funded under a scholarship by a USAID supported project entitled the *USAID/Uganda Education and Research to Improve Climate Change Adaptation* (ERICCA) Activity. ERICCA is designed to help establish the Makerere University Centre for Climate Change Research and Innovations (MUCCRI) as a recognized national and regional hub of academic, professional development and research excellence in climate science, research, climate adaptation, and related disciplines. The fee, paid by ERICCA, is a non-refundable amount of USD 500 per participant for the entire duration of the course. The funding includes study fees, course materials, one field

excursion, lunch and refreshments. As a way of co-funding, the participants are responsible for providing for their daily transport to commute to and from Makerere University.

Place of Study:
Makerere University, College of Agricultural and Environmental Sciences.

Targeted group
The course targets participants working or interested in the physical planning, urban development planning and disaster risk management related sectors, programmes and projects. To that end, the participants may come from different organisations and can be policy and decision makers, academicians and researchers or civil servants in the central or local governments or they may work for NGOs or private companies. Good working knowledge of English is required as well as commitment to participate actively in learning activities before, during, and after the course. The participants must have access to internet to participate in the e-learning activities prior to the main course at Makerere University. If possible, we welcome two to three participants from each organisation, as it facilitates the work with the action plan and strengthens the learning process during their work back at the organization.

Application and Registration
To register for the short course please fill an online application/registration form found at www.muccri.mak.ac.ug and upload scanned copies of the following:

1. A recommendation letter from your supervisor
2. Highest academic qualification/document
3. A job/institutional identity card (not national ID).

For further inquiries please contact the following:

1. MUCCRI Coordinator - Dr. Revocatus Twinomuhangi at rtwinomuhangi@gmail.com.
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