

## **Makerere University and partners receive a grant worth 6,962,820 Euros.**

Makerere University, together with 28 other partners across Africa and Europe have been awarded funding of EUR 6,962,820 by the European Union's Horizon 2020 to collaborate and implement a five-year project "Renewable Energies for Africa: Effective Valorization of Agri-food Wastes (REFFECT AFRICA)."

The project seeks to demonstrate innovative, reliable, and adapted sustainable energy solutions based on the valorization of biomass wastes from the agri-food industry. REFFECT AFRICA will build biomass gasification demonstrators at three African locations including Ghana, Morocco, and South Africa. The project will cover both urbanized and rural contexts in Africa, as well as the different socio-economic backgrounds. The demonstrators will be adapted and optimized to a wide variety of biomass wastes available in the specified locations, producing electricity for productive use.

Beyond electricity, the installed demonstrators will provide a range of secondary uses to communities to close the energy-food-water cycle. These include heating or cooling, biochar, steam for sterilization or food processing, water and pathogen analysis. Other business model approaches in REFFECT AFRICA include biomass supply and logistics. Beyond these, the partners in REFFECT AFRICA will take advantage of digital tools to: 1) achieve more useful and profitable exploitation pathways for plant operators and entrepreneurs, 2) impact policymakers in order to boost the transition to renewables in Africa and 3) train and raise awareness on a new generation of African stakeholders.

The roles of Makerere University team on the project include: characterization of the main agri-food value chains and wastes available in Uganda, identification of water needs and regulatory issues in Uganda, giving technical support to partners on various project tasks including demonstration of the gasification plants, assessment of soil fertility situation at the proposed demo-sites, setting up living labs, and assessment of the agronomic performance of biochar.

Other roles include setting up water laboratories and testing at the demonstrators, establishing training needs of their renewable energy workforce, preparation of training modules, and organizing an expansion workshop in Uganda, where the results of the project will be disseminated. The lead partner and coordinator of REFFECT AFRICA is Universidad de Jaen (UJA), Spain.

At Makerere University, Dr. Peter W. Olupot from the Department of Mechanical Engineering, in the College of Engineering, Design Art and Technology (CEDAT) is the Principal Investigator. Other team members on the project include Ms. Jacintha Gumoteyo Nayebare and Dr. Emmanuel Menya. A Kick-off meeting for the project was held on 17-18th November 2021 at Universidad de Jaen (UJA), Linares, Spain.



Photo: Kick-off meeting for the project partners held on 17-18th November 2021 at Universidad de Jaen (UJA), Linares, Spain