

The RECIRCULATE project – Circular Water Economy in Sub-Saharan Africa. Early insight into (waste) water for energy

Alfonso Jose Lag-Brotos (1), Alastair Martin (1), Lawrence Ezemonye (4), Christopher Emokaro (4), Isioma Tongo (3), and Kirk T. Semple (2)

(1) Engineering Department, Lancaster University, Lancaster, United Kingdom , (2) Lancaster Environment Centre, Lancaster University, Lancaster, United Kingdom. , (3) Department of Animal and Environmental Biology, University of Benin, Benin, Nigeria., (4) Department of Agricultural Economics, University of Benin, Benin, Nigeria

Safe and reliable access to water sources is one of the most pressing issues conditioning Africa's wellbeing. A great share of Africans live without adequate water supply, with rising water pollution in urban areas and high dependence on rainfall for agriculture in rural areas. Different interlinked areas embrace most of the problematics around the access and use of this resource, namely "water for sanitation and health", "water for food production", "water for energy production" and "water, pathogens and health". The RECIRCULATE project is structured precisely around these key areas and aims to grow transformation impact through partnerships with West-African Researchers, working with, in and for their communities. In order to accomplish this aspiration essential elements are capacity building and co-design/co-development of demand-driven research. The aim of this work is to briefly describe the RECIRCULATE project to then focus on the "waste to energy" aspect of it (how resource recovery from organic residues through anaerobic digestion can contribute to achieve UN Sustainable Development Goals?). Several workshops carried out in West Sub-Saharan countries (mainly Ghana and Nigeria) with and by different partners and communities, as well as residency stays at Lancaster (UK) aimed at capacity building will be discussed. Finally, co-designed and planned research activity will be presented.