### 2019 CLIFF-GRADS Awardees





# Rangarirayi Lucia Mhindu

## Zimbabwe

*Studying at:* Chinhoyi University of Technology, Zimbabwe *Hosted by:* International Livestock Research Institute (ILRI), Mazingira Centre, Kenya

#### What is your academic background?

I'm a PhD student at the Chinhoyi University of Technology, Zimbabwe, where I am studying in the Department of Environmental Science and Technology. My thesis topic is "An assessment of the pollution risk posed by cattle kraals to the environment and the effect of improved management on nitrogen and phosphorus dynamics in smallholder farming areas".

I also work at Midlands State University, teaching courses in environmental chemistry, plant nutrition and soil fertility management in the Department of Land and Water Resources Management. My research interests are nutrient cycling in agroecosystems, waste management and environmental management.

#### Which project have you been selected for?

I have been selected for the project "Greenhouse gas emissions from adequately managed rangelands in Kenya", supervised by Dr. Lutz Merbold and Dr. Sonja Leitner

#### How will this award impact your study?

This award will further develop my skills in the use of technologies for measuring and quantifying GHG fluxes. In particular the use of static chambers and gas chromatography to study GHG fluxes under smallholder farming conditions.

#### Tell us a bit more about yourself?

I am fascinated by how nature is self-sustaining and how efforts to boost productivity often tend to compromise sustainability. My experience with composting makes me question the efficiency of smallholder manure management initiatives in enhancing nutrient cycling and maintaining environmental quality.

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