

November 2017

Funding for a PhD Study (Agricultural Economics): Ex ante socio-economic, environmental and institutional viability of decentralized sanitation services to local communities

The Pollution Research Group, School of Engineering (Howard College Campus, University of KwaZulu-Natal, Durban, South Africa), has secured funds from the Bill & Melinda Gates Foundation for a research and development project on faecal sludge management and the field testing of reinvented toilet prototypes. The overall goal of the project is to understand the economic drivers and barriers to the reuse of products from faecal sludge management in agriculture. As partners of this project, the Disciplines of Agricultural Economics and Crop Science have been tasked to undertake a study on "Ex ante socio-economic, environmental and institutional viability of decentralized sanitation services to local communities".

At this stage, focusing on the innovative systems developed for the management of human excreta, this sub-project will focus on ex ante analysis aiming to:

- examine the economic and social costs and benefits of using on-site sanitation systems versus traditional centralized Wastewater Treatment Works (WWTW);
- assess the environmental economics of fertilizers, mulch, insects, biochar and other residuals from human excreta;
- assess the regulatory barriers and drivers related to the use of human excreta derived products for use in agriculture;
- understand consumer preferences of agricultural produce from fertilizers and biochar from excreta streams;
- assess the environmental impacts of decentralized sanitation services to local communities; and
- identify the institutional opportunities, challenges and innovations required in developing, commercializing and upscaling decentralized sanitation services to communities.

The expected outcome is to generate knowledge that will enable the relevant stakeholders pave the way towards commercializing and upscaling the products and services from the project. It also aims to design a regulatory framework to look at the role of decentralized sanitation services in communities and the extent to which it can be run as a utility service.

The research will require a versatile and self-motivated candidate with strong knowledge in sustainable agriculture/food systems, natural resources and environmental economics, impact assessment, econometrics, policy analysis, and rural household survey. The disciplines are looking for a **PhD fellow** who is committed to complete his/her study full time.

The position will start from January 2018. A total bursary of **R 450 000** will be provided for the **PhD position** (maximum of 4 years). Payment is made on set deliverables being achieved. The project will also cover the cost of a computer, tuition fees and all research operating expenses for conducting field work.

UKZN is an equal opportunities employer. If you are interested in this position, please submit an electronic copy of your academic transcript, degree certificates and a CV with two referees and a covering letter explaining your motivation to **Professor Edilegnaw Wale** (walee@ukzn.ac.za), with a copy to Ms **Susan Mercer** (mercer@ukzn.ac.za). Only shortlisted applicants will be contacted and the application closes **31 December 2017**.

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