

Matthew Mamera

PhD Soil Science (*Cand Nat Sci*)

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Identity Number: 8810315983183

Date of birth: 31 October 1988



Profile Summary

Working experience throughout South Africa

Specialist experience with pedology and agriculture.

Specialist expertise include hydropedology, pedology, land contamination, agricultural potential, land rehabilitation, rehabilitation management and wetlands resources.

Experience hydropedological modelling

Areas of Interest

Mining, Farming, Soil and Water quality contamination, Soil Sanitation management, Soil Carbon, Sustainability and Conservation.

Key Experience

- Environmental Impact Assessments (EIA)
- Environmental Management Programmes (EMP)
- Wetland delineations
- Rehabilitation Plans
- Soil taxonomic classification (SA forms and WRB groups)
- Soil Hydropedology assessments
- Agriculture potential assessments
- Land contamination assessments

Country Experience

South Africa: All Provinces
Zambia - Kitwe and Mufulira

Nationality

South African Permanent Residence

Languages

English – Proficient

Ndebele, Xhosa, Shona – Proficient

Qualifications

- PhD (University of the Free States)- Soil Science (Hydropedology, Sanitation and Water quality management)
- MSc (University of Fort Hare) – Soil Science (Hydropedology, Sanitation and Water quality management)
- BSc Honours *Cum laude* (University of Fort Hare) – Soil Science (Hydropedology, wetlands delineation and rehabilitation)
- BSc Agricultural Soil Science
- Cand Nat Sci 116356
- SSSSA- SSSSA 201

OVERVIEW

An overview of the specialist technical expertise include the following:

- Soil classification, soil chemistry and agricultural assessments.
- Soil carbon assessments
- Stripping and stockpiling guidelines.
- Soil rehabilitation plans.
- Soil and stockpile monitoring plans.
- Soil Hydropedological assessments.
- Irrigation potential assessments

TRAINING

Some of the more pertinent training undergone includes the following:

- Workshop on digital soil mapping (QGIS).
- GroundTruth Wetland Basic Course -2022

EMPLOYMENT EXPERIENCE

University of the Free States and University of Fort Hare (January 2016 - December 2021)

- **Researcher** work included; soil and water sampling, soil analysis, soil classifications, project management, Soil Hydropedological surveys and modelling, Sanitation and water quality management and report writing.

CURRENT EMPLOYMENT: The Biodiversity Company (March 2022 – Present)

- **Soil and Hydropedology Scientist, Environmental Specialist: Scientific report writing** to ensure that the relevant standards and requirements have been attained, namely local country legislation, as well as WB, EP and IFC requirements.

ACADEMIC QUALIFICATIONS

University of the Free State (2021): Doctor of Philosophy (PhD) – Soil Science (Sanitation, Water quality and Soil Hydropedology):

Title: *Assessing pollution and managing faecal sludge through biochar applications in Phuthaditjhaba, South Africa*

University of Fort Hare (2018): Masters of Science (MSc) – Soil Science – (Sanitation, Water quality and Hydropedology)

Title: *Pollution potential of on-site dry sanitation systems associated with the Mzimvubu Water Project, Eastern Cape, South Africa*

University of Fort Hare (2015): Bachelor of Science Honours (Hnrs) – Soil Science

Title: *Wetlands water Regimes, Carbon sequestration, Mapping and soil hydro-morphological feature changes as linked to the proposed large dam constructions for the Mzimvubu Water Project (MWP), South Africa.*

University of Fort Hare (2014): Bachelor of Science Agriculture in Soil Science. Majors: Soil Science

SCIENTIFIC PUBLICATIONS

- 2018 - Application of Hydrogeological Information to Conceptualize Pollution Migration from Dry Sanitation Systems in the Ntabelanga Catchment Area, South Africa.
- 2020 - Community Faecal Management Strategies and Perceptions on Sludge Use in Agriculture
- 2020 - Sensitivity and calibration of the FT-IR spectroscopy on concentration of heavy metal ions in river and borehole water sources
- 2021 - Potential Use of Biochar in Pit Latrines as a Faecal Sludge Management Strategy to Reduce Water Resource Contaminations: A Review
- 2022 - Treatment of faecal sludge and sewage effluent by pinewood biochar to reduce wastewater bacteria and inorganic contaminants leaching

CONFERENCE AND WORKSHOP PRESENTATIONS

- 2018 - NLEIP Extended Abstract Barrat Hall, Rhodes University. Title- An overview of research work as University of Fort Hare, in the Ntabelanga catchment area.
 - 2019, 2020, 2022 – Combined Congress Presentations- UFS
 - 2021 - Zambia, SA and Mozambique Trilateral: Joint researchers' midterm project review symposium
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