Unlocking the Potential of Groundwater for the Poor

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Hidden Crisis Malawi

UPGro: A social and natural science approach to enabling sustainable use of groundwater for the benefit of the poor

Patrick Makuluni

Unlocking the Potential of Groundwater for the poor
upgro.org

41st WEDC Conference, Edgerton University, Kenya, 2018

Hidden Crisis

unravelling current failures for future success in rural groundwater supply

THE BIG IDEA

- **Millions of pounds of investment by water users, charities and tax-payers are wasted each year by water points failing soon after construction. Getting a more complete understanding of how to keep water flowing from boreholes will reduce waste and improve water services for Africa's poorest communities**.

RESEARCH AIM / HYPOTHESIS

- The underlying causes of rapid failure of approximately a third of African rural groundwater sources are complex and multi-faceted, but with interdisciplinary approaches can be understood, diagnosed and ultimately anticipated and mitigated

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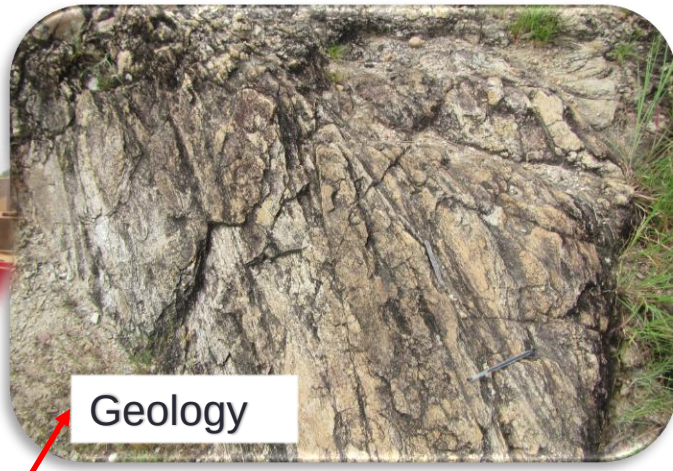
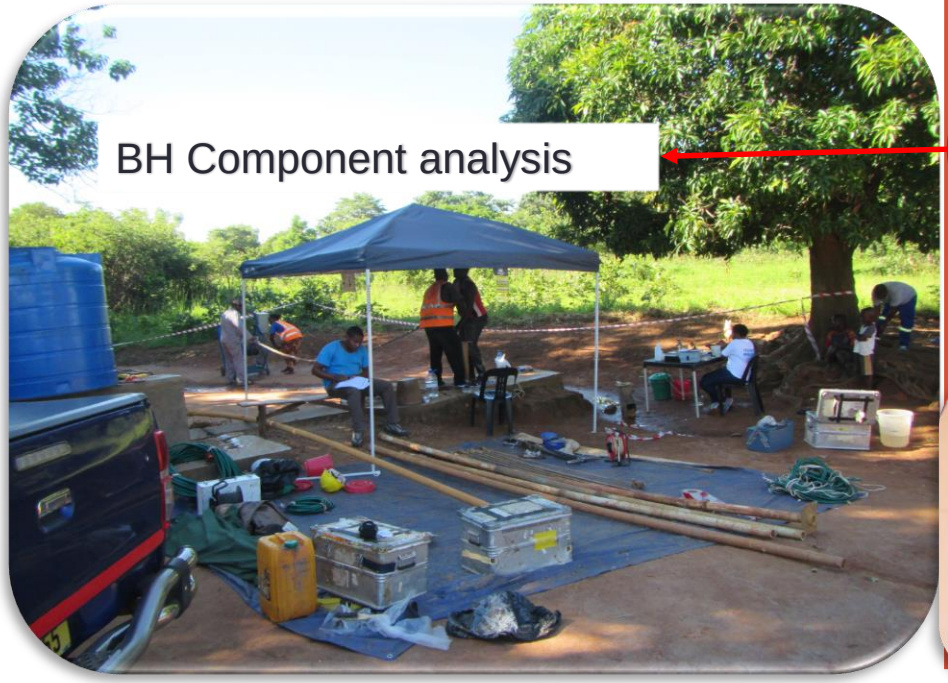
What we did

- Dismantled ~50 BHs in 4 Districts of Malawi
- BH component analysis
- Pumping/recovery test
- Water field chemistry
- Geological Survey
- Interviews with the communities



Geology

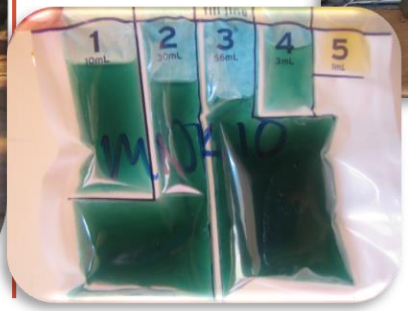


BH Component analysis

Physical /Social

Pumping test

Water Chemistry



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What we found

- We are heading towards data analysis stage however, during data collection stage, we found a few interesting things that may have an impact on functionality of BHs

Poor downhole conditions

Governance problems

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What happens next

- We are yet to do data analysis, compile results, make reports and disseminate the findings

- As for me – I am still involved in the study
- I am a full time lecturer in Mining Engineering Department at University of Malawi
- Looking forward to doing a PhD very soon

skat Swiss Resource Centre and Consultancies for Development
RWSN

UPGro Knowledge Broker:
Skat Foundation, Vadianstrasse 42, CH-9000, St Gallen, Switzerland
in association with the Rural Water Supply Network (RWSN)

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