



The Sanitation Research Fund for Africa



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IWA FSM3 Conference
Hanoi
Vietnam



South African

Water Research Commission

Supporting sustainable development through research funding, knowledge creation and dissemination



About the SRFA Project

- 💧 Joint initiative between the BMGF and the WRC
- 💧 Total cost of nearly USD 3 million
- 💧 12 Research Teams USD200k
- 💧 Project to be completed over 2.5 years
- 💧 The SRFA Project aims:
 - 💧 Develop local capacity for faecal sludge management on the African continent (S & E Africa)
 - 💧 Provide scientific data on the characteristics of faecal sludge
 - 💧 To provide stimulus for African scientists & innovators to develop products for desludging and beneficiation of faecal sludge



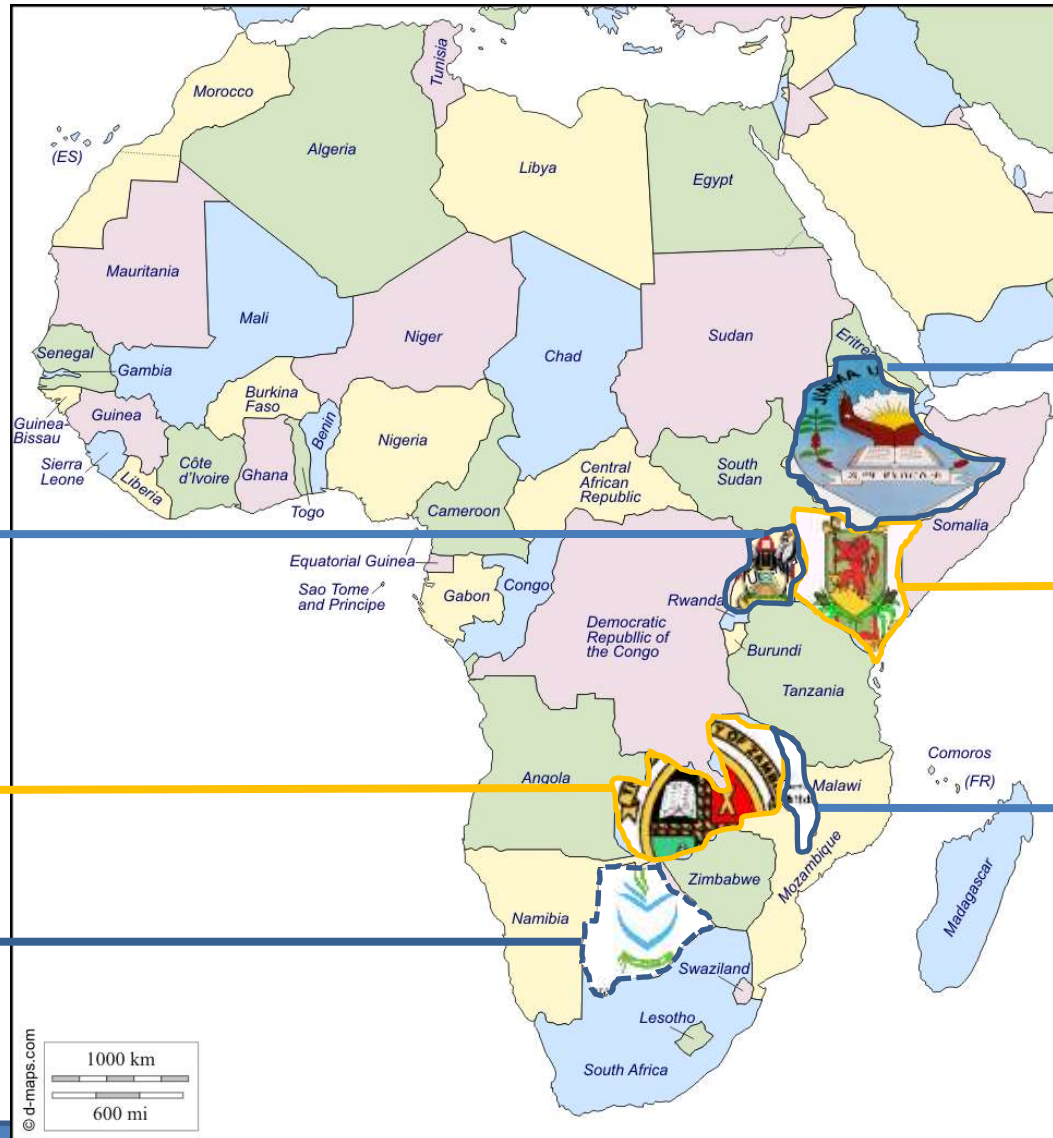
<http://www.sowetanlive.co.za/goodlife/2011/08/01/home-made-car-to-display-in-soweto>



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Research Teams: Characterisation

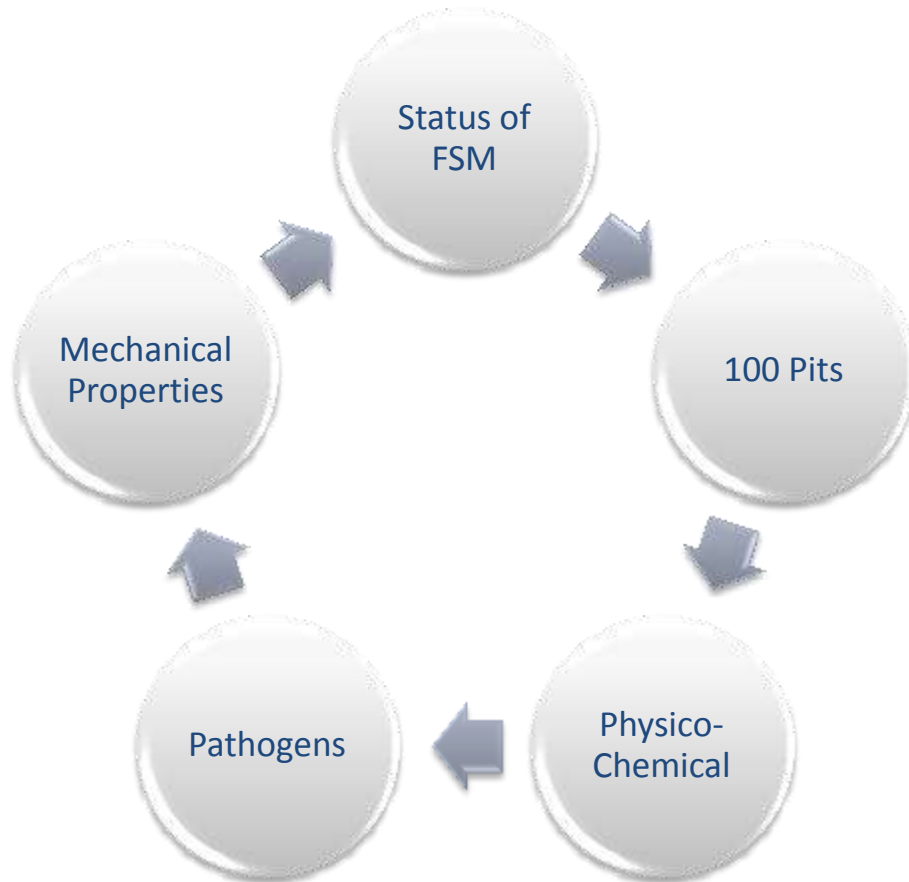


UNIVERSITY OF BOTSWANA



University of Malawi
The Polytechnic



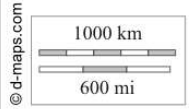


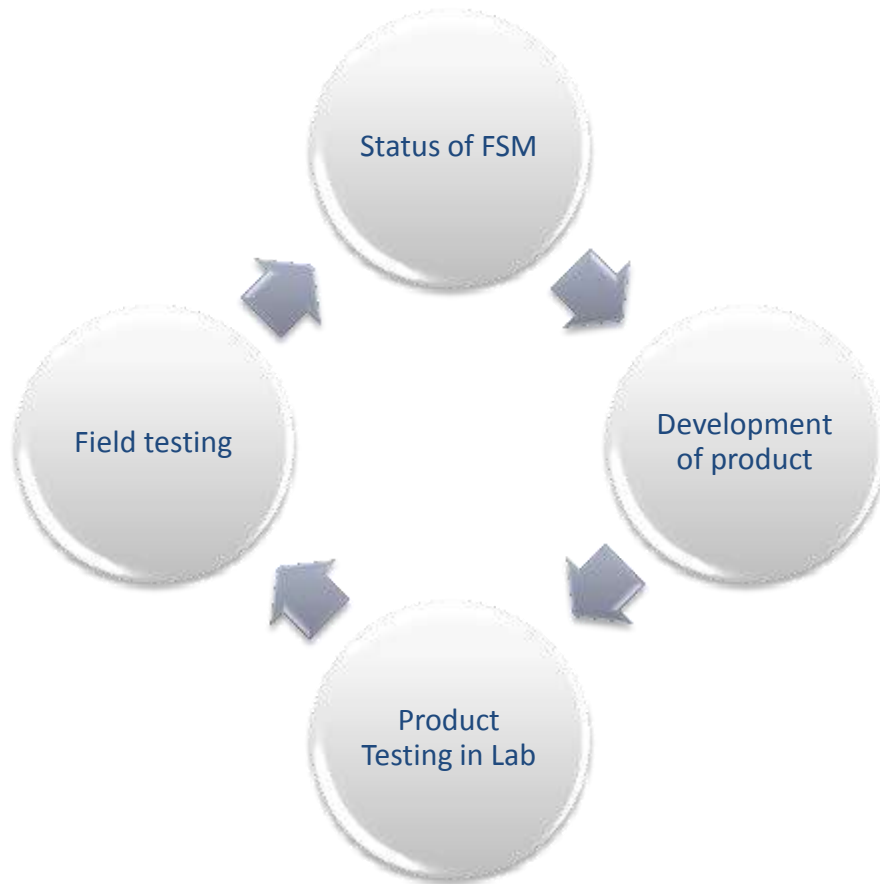
Co-ordination
of sampling
and analytical
strategy





Research Teams: Desludging & Beneficiation





Botswana

- Proliferation of latrines since 1980s
- Single vault then DVIP became the norm.
- WHO/UNICEF data indicated increase coverage from 38 to 64% (2011)
- FSM involves transportation to drying beds near WWTP
- No PES for emptiers

Ethiopia

- 403 households surveyed in Addis Ababa
- Sanitation coverage similar to WHO/UNICEF Report (~70%)
- 63% with superstructure
- Odour & pest problem noted
- 97% without hand washing facility
- 88% rely on municipal pit emptying services
- Need emptying x2/year
- Long waiting periods with nearly 50% full or nearly full



Kenya

- Survey by research team
- Simple unimproved pit latrines most common systems
- VIPs represent 15% of total
- City or municipality responsible for pit emptying
- Sludge mixed with domestic wastewater
- Treated in stabilisation ponds
- Potential re-sale of sludge products

Malawi

- 221 households surveyed in Ntopwa
- 67% are private
- Simple pits most common system (62%)
- Open defaecation around 26%
- How is pit emptied
 - 17% mechanical
 - 24% manual labour
 - 32% own
 - 23% abandoned
- 90% indicated pit needs emptying every 2 years
- Half population do not think FSM is a problem



South Africa

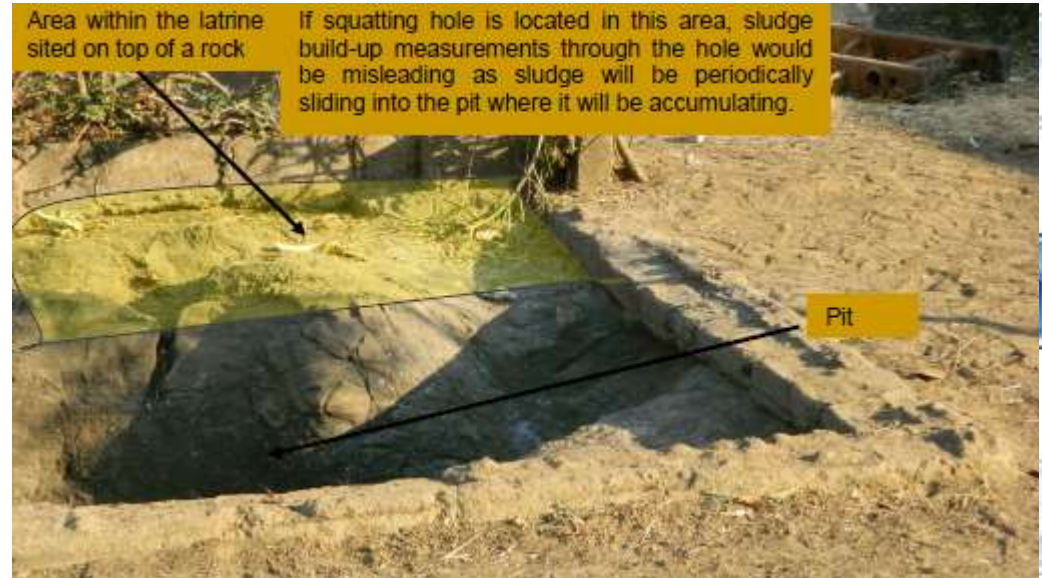
- VIP minimal level of sanitation
- E. Cape and Limpopo only provinces where simple pits outnumber VIPs
- Municipalities responsible for pit emptying

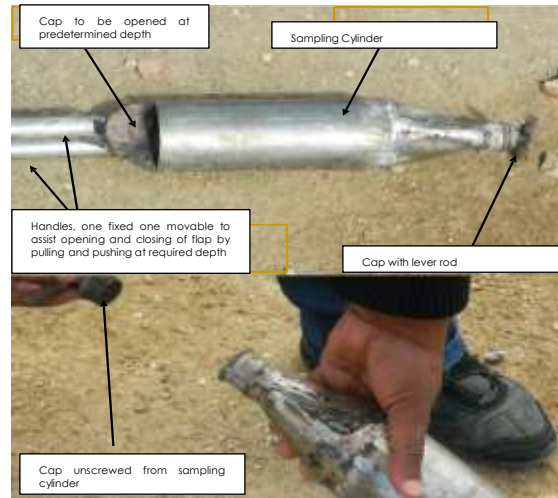
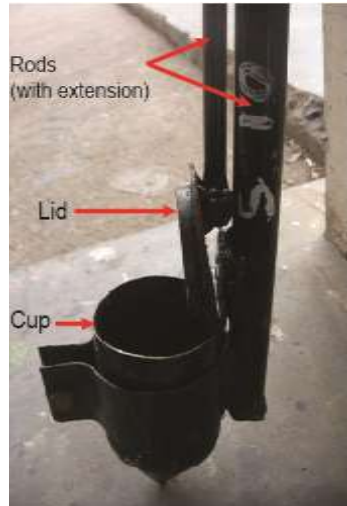
Uganda

- Simple pits and VIPs most common system
- Land ownership challenge
- Three ways pits are emptied
 - mechanical
 - manual labour
 - semi mechanical
- Project demand for emptying is $900 \text{ m}^3/\text{d}$ = shortfall of 63%

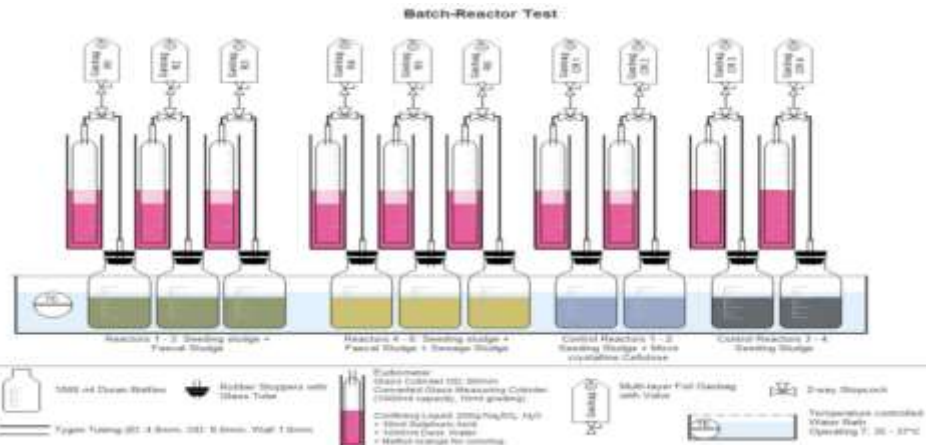


- Differences in what defines a pit toilet
- Ownership issues
- Protective equipment for emptiers
- Sampling pits difficult
- Varying content of faecal sludge and different system behaviours
- Development of SOP for faecal sludge









Acknowledgements

Photos and data
provided by
Research Teams

