Low-cost, pre-cast toilet designs for households and institutions in Ugandan small towns and low income areas

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Aim of the project is to make tangible improvements to sanitation services delivery in the six participating towns in Northern Uganda

“by supporting town councils in six (...) towns in (...) Northern Uganda to develop and implement comprehensive town-wide sanitation plans.”

Funders: GIZ – USAID
Implementing partners: WSDF-N (MoWE), 6 town councils
Situation in the six towns

- Unlined pit latrines (>85%)
- Toilets abandoned when full – leading to space constrains
- High water table – ground water pollution
- No standards for toilet design – poor quality of construction
- Fragmented supply chain for sanitation products – High cost of construction
- Cost of single lined pit in Kampala: $350 – 500 vs Up-county: $1000 - 1200
Proposed ideas

- Design low cost emptyable toilets to support FSM
- Faeces to be completely contained
- Standardised design
- Work with what is available in the market
- Must be aspirational – look good
- Modular design for up-grades
- Work with local concrete block manufacturers
- Costs under $400/toilet block
Containment – Lined Pit Latrines

- **Line of excavation**
- **Backfill**
- **Foundation of 100 mm**
- **T-pipe section**
- **Culvert rings**
Foundation for Superstructure

- Culvert ring
- Wooden framework
- Cast concrete
User Interface – Lined Pit Latrines
Super Structure – Dry Pit Latrines

- Precast corner pillars
- Precast sections of ferro cement (950x400x25)
- HWF using smaller culvert ring

- Vent pipe
- Ventilation
- Prefabricated metal door
User Interface – Water-borne Latrines

SaTo pan
Soak pit for final effluent disposal

Second holding tank (connected by T pipe) that acts as baffles of a septic tank to increase retention time
Institutional Toilet Facilities

Block For Females: HWF, Wash Room & Incinerator
Hand Washing Facilities

0.6 m culvert as reservoir

Embedded push button taps

Drainage basin
Modular design

- Lined Dry Latrine
- SaTo Pan toilet
- Pour flush with septic tank
- Pour flush connected to solids free sewer
Take Home Messages

Pre-cast designs

- Cheaper than brickwork
- Modular design possible
- Quickly installed
- Modern look
- Fulfill standards
- Long lasting
- Can be built by locally available materials
Discussion / Questions / Contacts

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