



Introduction

The dynamic and multi-faceted nature of the South Sudanese displacement crisis has created significant challenges for the delivery of humanitarian aid. Accessibility issues within South Sudan have impeded a systematic understanding of WASH needs in many areas of the country. This has created difficulties in establishing a clear and unambiguous system for prioritising the delivery of aid, thereby limiting the effectiveness of humanitarian planning and limiting the potential impact of donor funding. In order to fill this information gap, REACH conducted a WASH infrastructure mapping exercise in Magwi. Data collection took place on December 9th, 2020 and succeeded in mapping 889 latrines and 139 waterpoints. Key findings are presented below in charts (pies & bars) and maps with figures in percentages (%) and numbers assessed enclosed in parenthesis next to each percentage value.

Methodology

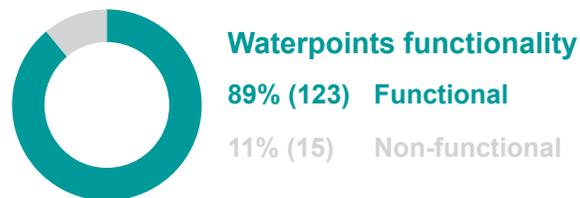
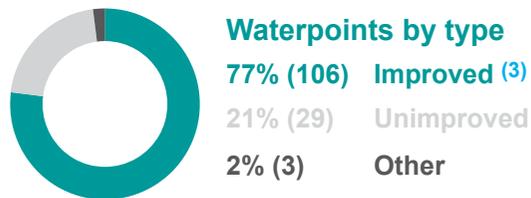
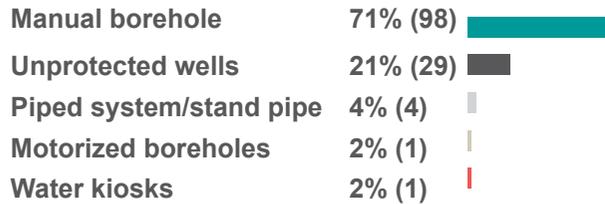
Using a GIS software, a polygon covering the municipal area was created and subdivided into grids squares of 250 meters of side length. Each of the resulting 219 square grids was assigned to a team of 11 enumerators to map and assess existing WASH infrastructure. GPS points were recorded also for grids where no WASH infrastructure data collected was identified. Enumerators were trained to use mobile applications ([MapsMe](#) and [Kobo](#)) that allowed them to georeference data collected, as well as to independently test water quality through hydrogen sulfide (H2S) tests.

For grids that could not be physically assessed through direct observation (due to lack of access), participatory mapping was conducted. As a result, 71% coverage was achieved (155/219 grids). Further details on the methodology and data collection tools can be found in the [Terms of Reference](#).

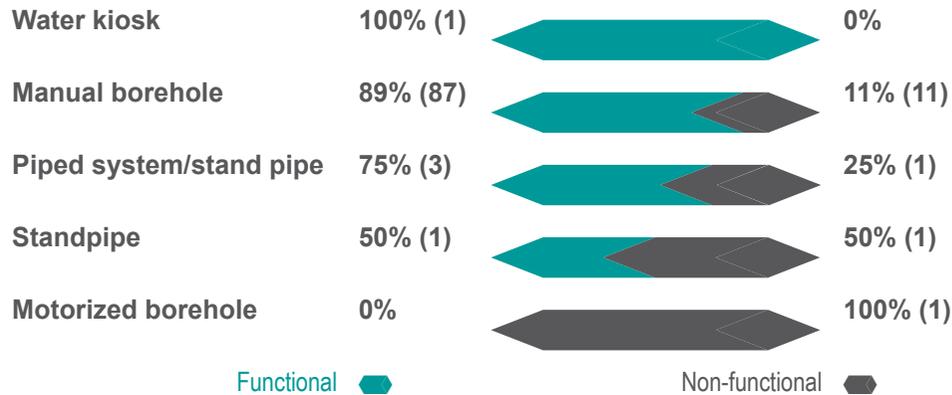


Waterpoints

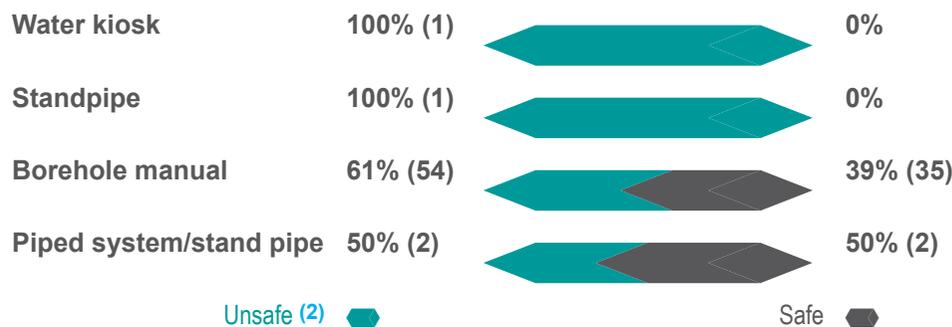
Waterpoints by type



Improved waterpoints functionality by type

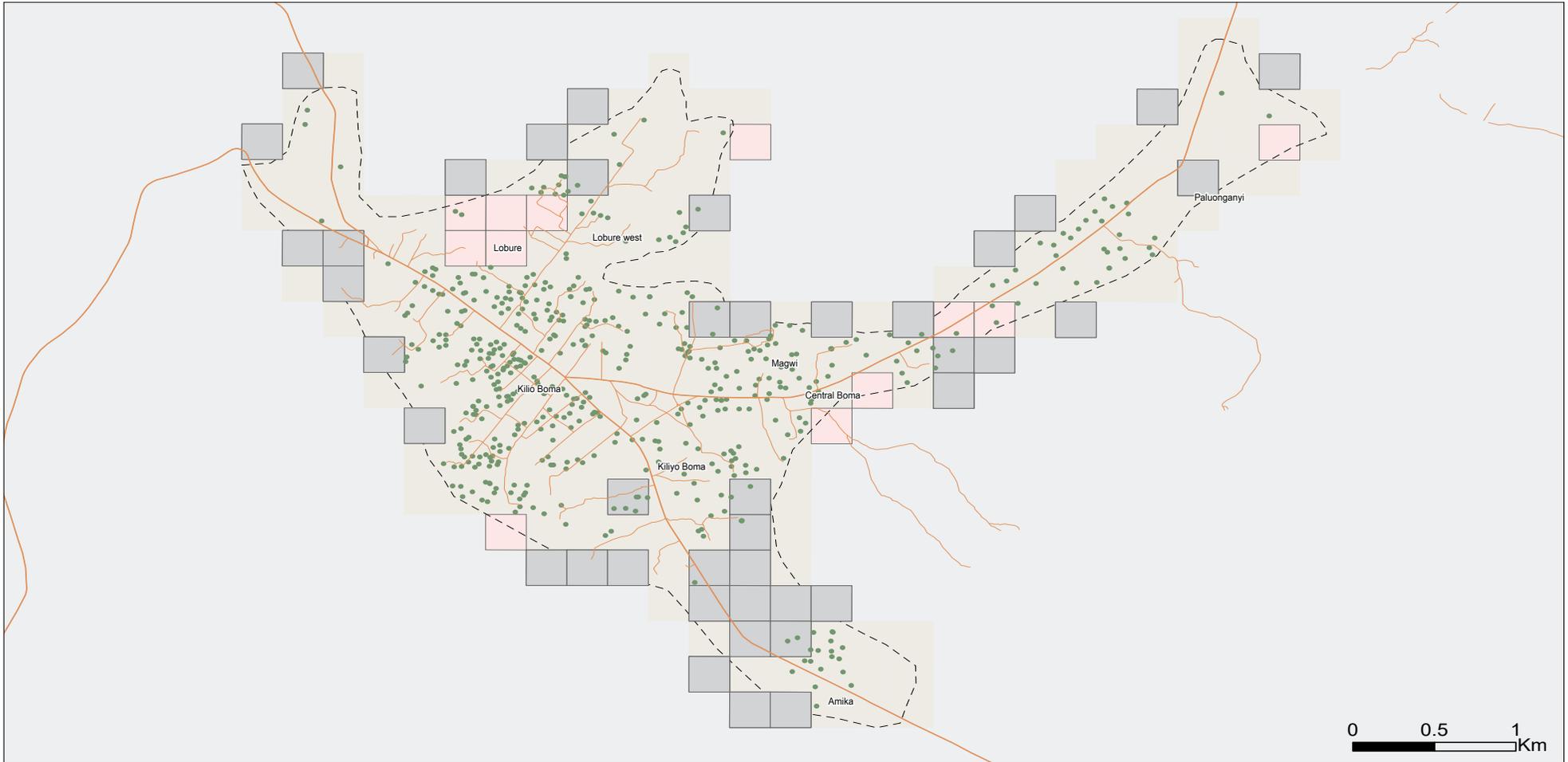


Improved waterpoints type with water quality test results





Magwi Assessment Coverage Map



Assessed areas: 0.2Km² (155 assessed 0.2Km² grids covered out of 219)

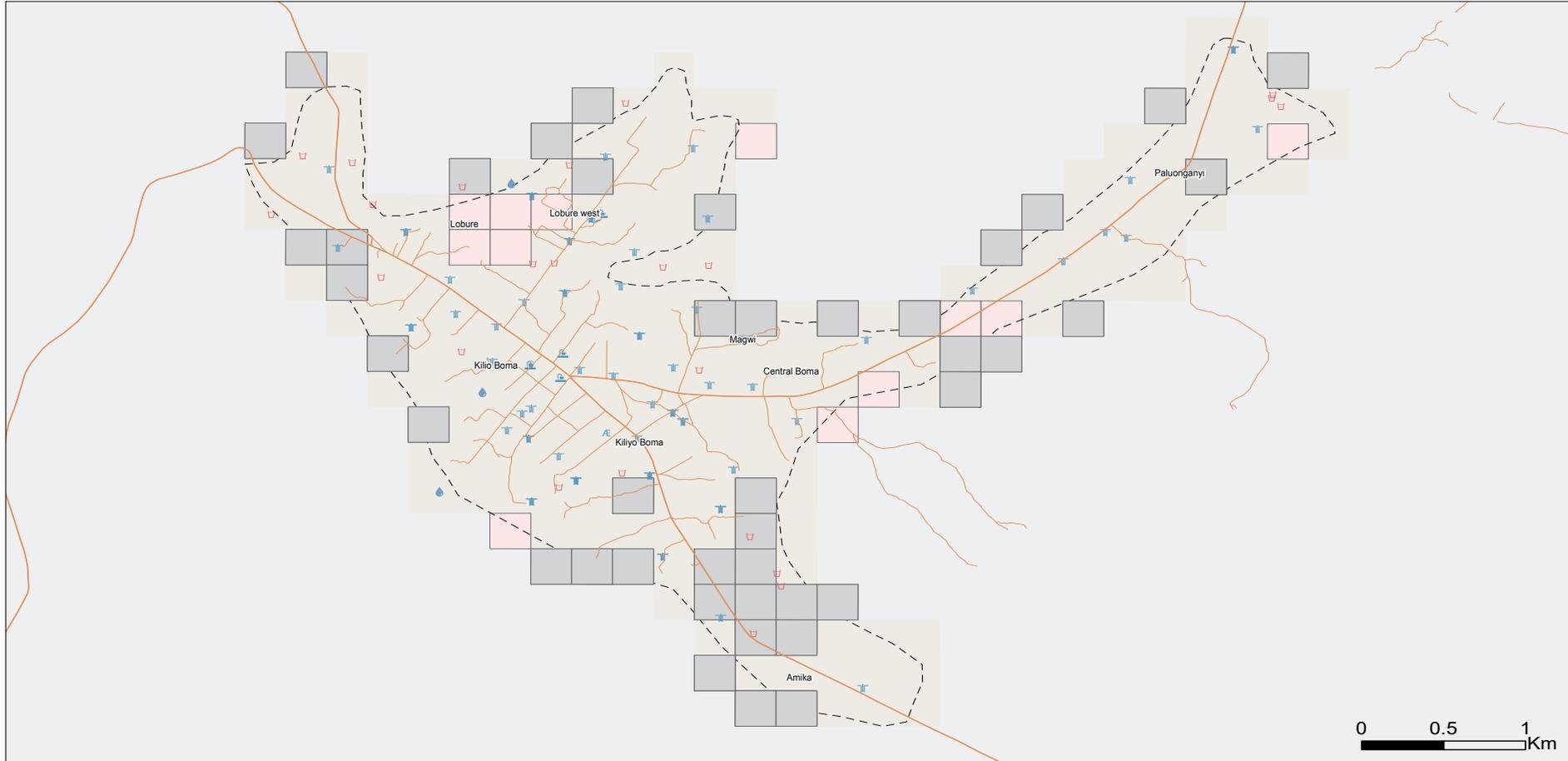
- Assessed points (859)
- Roads
- Magwi town extent
- Observed inhabited areas
- No infrastructure observed
- Limited information/ inaccessible areas

Infrastructure: REACH (2018)
 Roads: © OpenStreetMap contributors (2020)
 Coordinate System: WGS 1984 UTM Zone 36N
 File: REACH_SSD_Map_WASH_Infra_Magwi_Town_Assessment_Coverage_May2021
 Contact: south.sudan@reach-initiative.org

Note: Data, designations and boundaries contained on this map are not warranted to be error-free and do not imply acceptance by the REACH partners, associates, donors mentioned on this map.



Magwi Waterpoints Types Map



Water Point Types

- Manual borehole (68)
- Motorized borehole (1)
- Other (3)
- Piped line (4)
- Stand pipe (1)
- Unprotected well (23)
- Water kiosk (1)
- Roads

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- No infrastructure observed
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Infrastructure: REACH (2018)
 Roads: © OpenStreetMap contributors (2020)
 Coordinate System: WGS 1984 UTM Zone 36N
 File: REACH_SSD_Map_WASH_Infra_Magwi_Town_Water_Points_Types_May2021 1
 Contact: south.sudan@reach-initiative.org

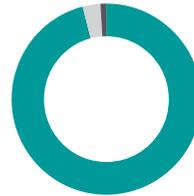
Note: Data, designations and boundaries contained on this map are not warranted to be error-free and do not imply acceptance by the REACH partners, associates, donors mentioned on this map.



Waterpoints requiring payment
52% (72) Do not require payment
46% (63) Require payment
2% (3) unknown

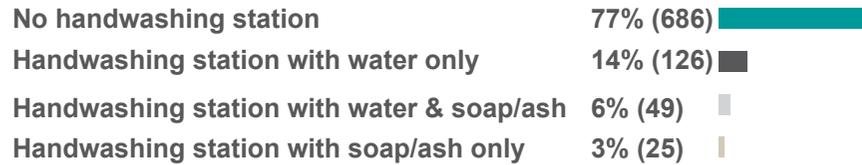


Latrine by cleanliness
72% (123) Unclean (4)
28% (48) Clean



Accessibility to latrine
96% (856) Accessible to everyone
3% (25) Not accessible to everyone
1% (8) Unable to confirm

Functional handwashing station at latrine

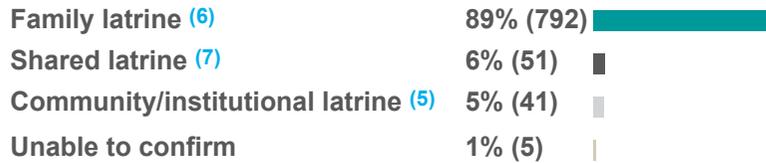


Latrine requiring payment
91%(87) Do not require payment
7%(7) Unknown
2%(2) Require payment



Sanitation

Latrine by type



Latrine with lockable doors
63% (108) With lockable doors
37% (63) Without lockable doors



Estimated latrine sludge level
72% (124) Less full with sludge
22% (38) Almost full with sludge
4% (7) Unable to confirm
2% (3) Full with sludge

footnotes

- () numbers in parenthesis indicate number of facilities assessed
- A water point is **unsafe** to drink when it is contaminated by faecal matter (e.g. H2S test result turn black) and a water point is **safe** to drink when it is free from faecal contamination (e.g. H2S test result do not turn black) (WHO,2017)
- Improved** water source is the water source that, by its nature of its design and construction is likely to be protected from faecal contamination (e.g. boreholes, protected wells, storage tanks, water kiosks and piped systems) and **Unimproved** water source is the water source that is likely to be contaminated by faecal matter (e.g. unprotected well, unprotected springs, unequipped borehole etc) (JMP,2020)
- A latrine was considered unclean when faeces were found on it(JMP,2020).
- A communal/institutional latrine refers to latrines found in public areas such as NGOs compounds, schools, churches/mosques etc. (JMP,2020)
- A family latrines refer to latrines used by a particular household with full latrine ownership, construction and maintenance (JMP,2020)
- Shared latrines refer to those used by a number of households, who are all responsible for care and maintenance (JMP,2020)