WASH Infrastructure Mapping

Rumbek Center, Lakes State

August 2021

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 in partnership with Center for Emergency and Development support (CEDS) conducted a WASH infrastructure mapping exercise in Rumbek Center. Data collection took place on February 18th, 2021 and succeeded in mapping 1419 latrines and 470 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.

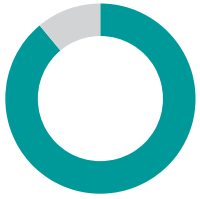
Methodology

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 321 square grids was assigned to a team of 21 enumerators to map and assess existing WASH infrastructure. GPS points were recorded also for grids where no WASH infrastructure data 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, 69% coverage was achieved (220/321 grids). Further details on the methodology and data collection tools can be found in the Terms of Reference.

Waterpoints

Waterpoints by type

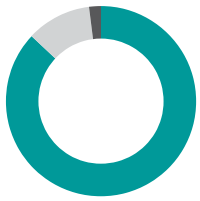
Manual borehole	65% (307)
Unprotected wells	11% (51)
Standpipe	8% (38)
Piped system/stand pipe	4% (19)
Storage tank	4% (18)
Protected well	4% (17)
Motorized boreholes	2% (10)
Water kiosks	2% (8)



Waterpoints by type

89% (418) Improved (3)

11% (51) Unimproved



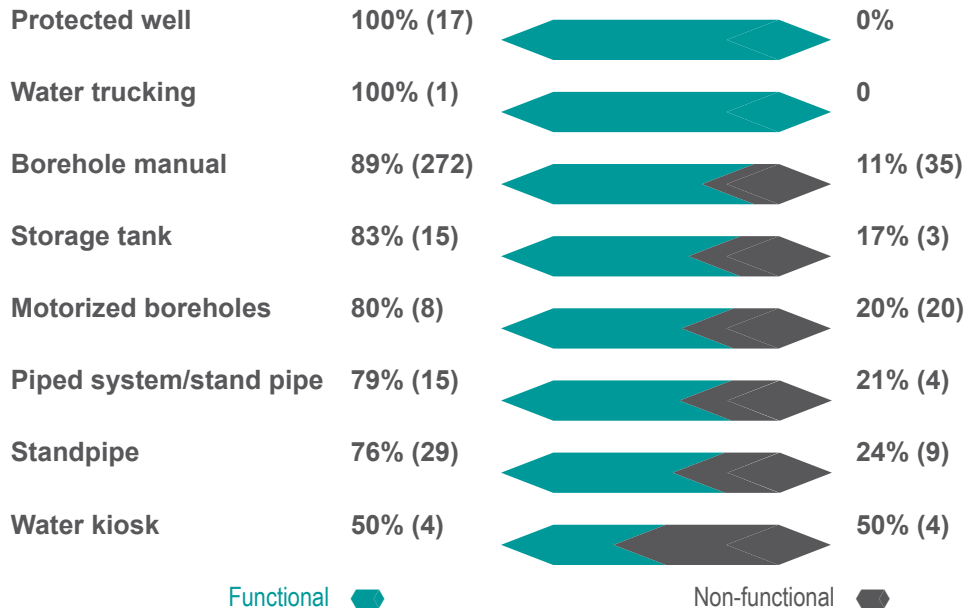
Waterpoint functionality

87% (410) Functional

11% (54) Non-functional

2% (6) Decommissioned

Improved waterpoints functionality by type



Waterpoint requiring payment

55% (257) Require payment

45% (210) Do not require payment

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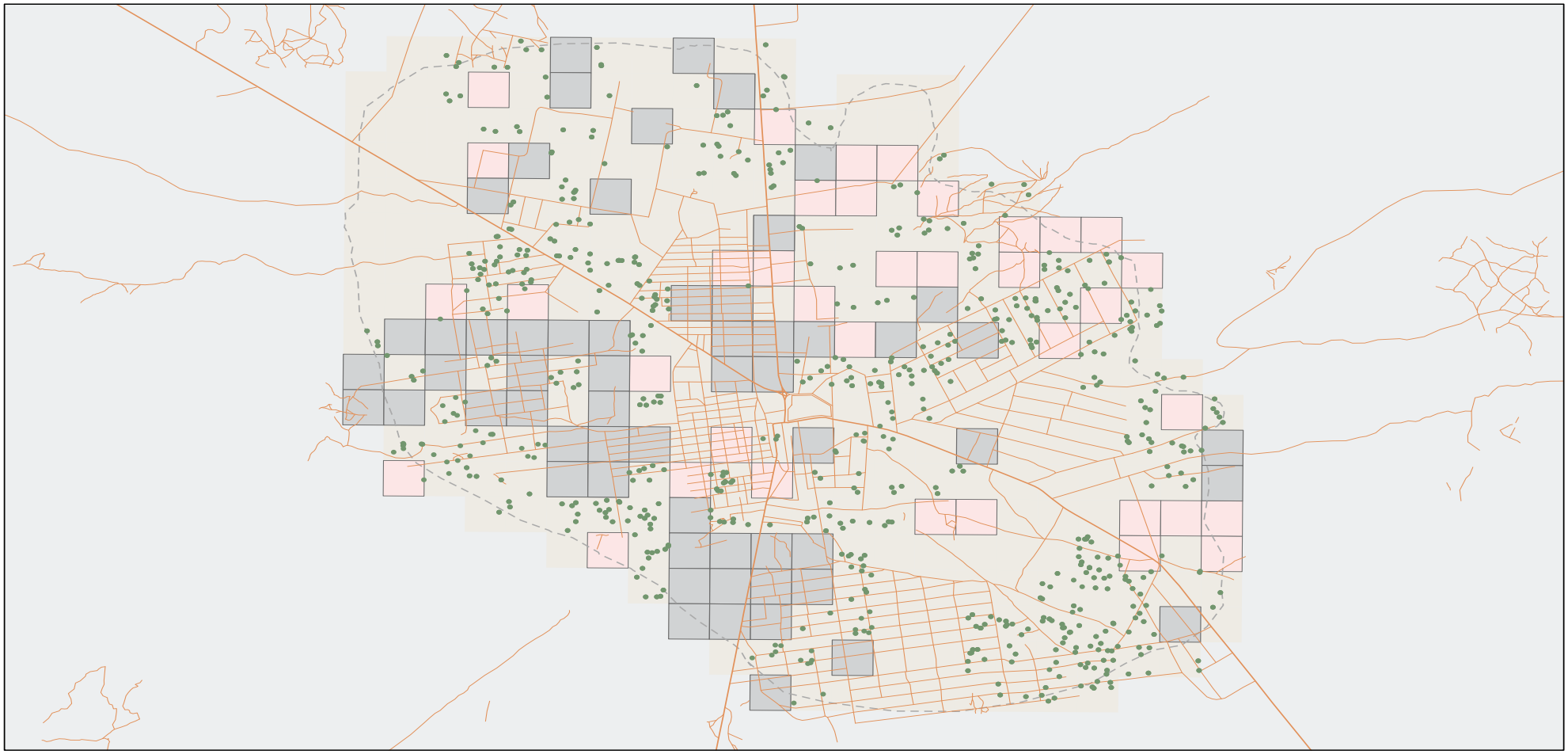
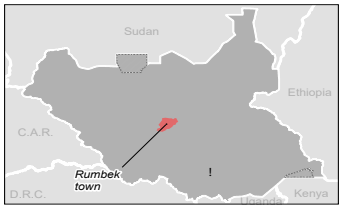
Rumbek Center Assessment Coverage Map





Assessed points (1,241)

Roads

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

Rumbek 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_Rumbek_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.

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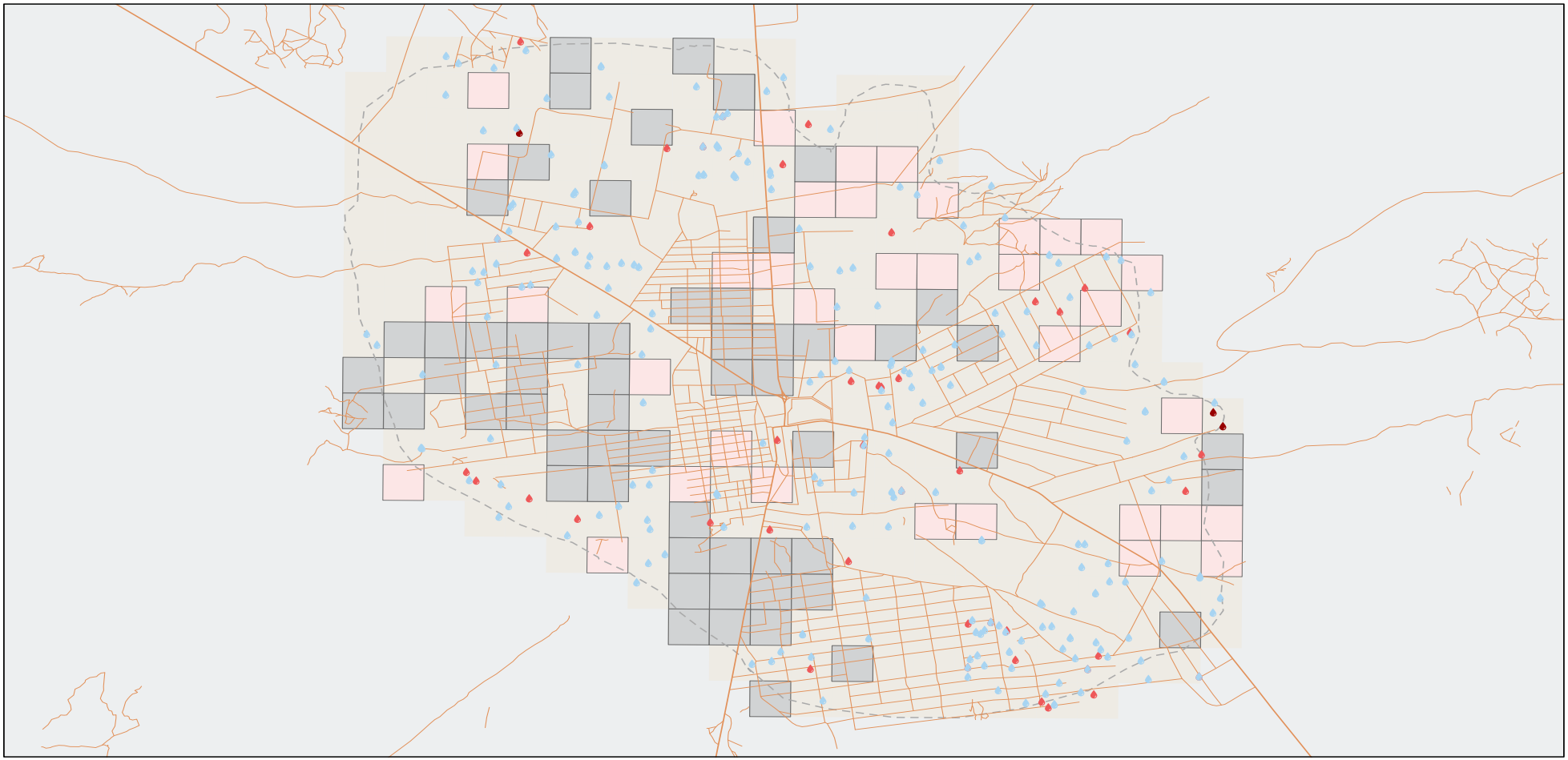
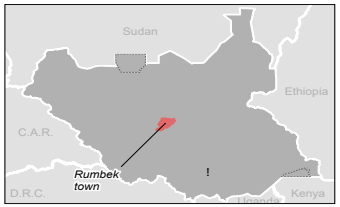
Rumbek Center Waterpoints functionality Map





Water Point Functionality

- No (60)
- Yes (310)
- Decommissioned (5)
- Roads

Assessed areas: 0.2Km² (220 assessed 0.2Km² grids covered out of 321)

- Rumbek 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_Rumbek_Town_Water_Point_Functionality_May2021
Contact: south.sudan@reach-initiative.org

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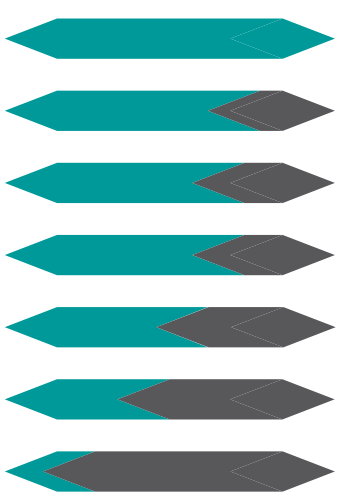
Improved waterpoints type with water quality test results



Sanitation

Latrine by type

Latrine with lockable doors

72% (364) With lockable doors

27% (135) Without lockable doors

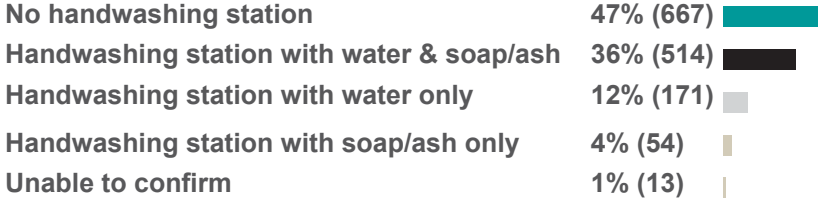
1% (5) Unable to confirm

Accessibility to latrine

83% (1180) Accessible to everyone

17% (236) Not accessible to everyone

Functional handwashing station at latrine



Estimated latrine sludge level

41% (206) Less full with sludge

32% (161) Almost full with sludge

15% (77) Full with sludge

12% (60) Unable to confirm

Latrine by cleanliness

74% (374) Unclean (4)

26% (130) Clean

Latrine requiring payment

99% (260) Do not require payment

1% (2) Require payment

footnotes

1. () numbers in parenthesis indicate number of facilities assessed
2. 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)
3. **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)
4. A latrine was considered unclean when faeces were found on it(JMP,2020).
5. A communal/institutional latrine refers to latrines found in public areas such as NGOs compounds, schools, churches/mosques etc. (JMP,2020)
6. A family latrines refer to latrines used by a particular household with full latrine ownership, construction and maintenance (JMP,2020)
7. Shared latrines refer to those used by a number of households, who are all responsible for care and maintenance (JMP,2020)

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