



WASH Infrastructure Mapping

Ezo, Western Equatoria 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 International Aids Service (IAS) conducted a WASH infrastructure mapping exercise in Ezo. Data collection took place on March 19th, 2021 and succeeded in mapping 616 latrines and 87 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 14 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, 100% coverage was achieved (321/321 grids). Further details on the methodology and data collection tools can be found in the [Terms of Reference](#).



Waterpoints

Waterpoints by type

Manual borehole	41% (36)	
Unprotected well	33% (29)	
Standpipe	7% (6)	
Protected well	6% (5)	
Storage tank	6% (5)	
Piped system	2% (2)	
Other	2% (2)	
Borehole motorized	1% (1)	
Water trucking	1% (1)	

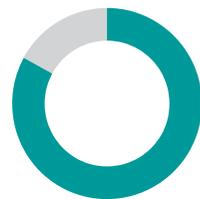


Waterpoints by type
 64% (56) Improved (3)
 33% (29) Unimproved
 2% (2) Other

Improved waterpoints functionality by type

Borehole motorized	100% (1)		0%
Piped system	100% (2)		0%
Standpipe	100% (6)		0%
Storage tank	100% (5)		0%
Water trucking	100% (1)		0%
Protected well	80% (4)		20% (1)
Manual borehole	75% (27)		25% (9)

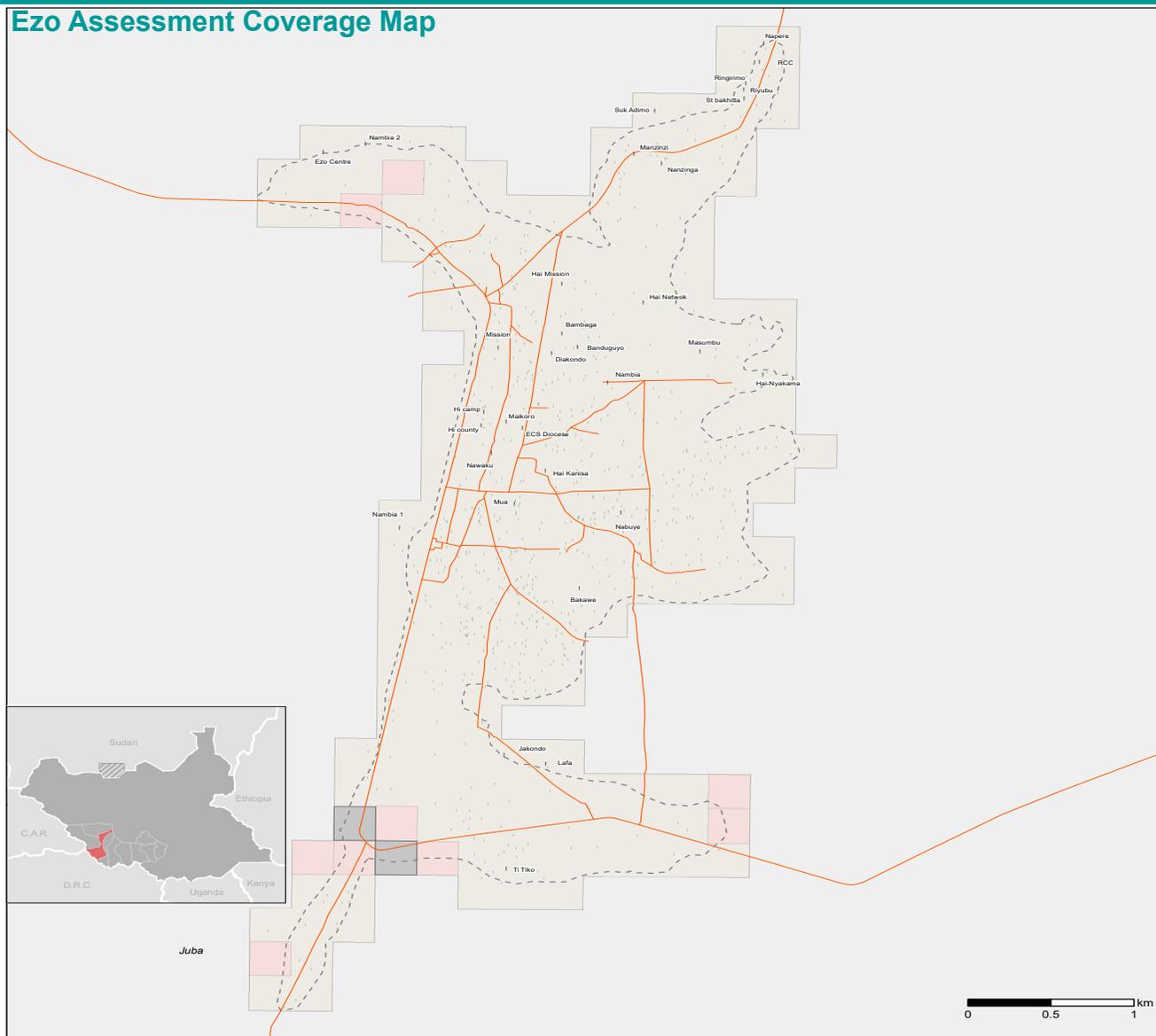
Functional Non-functional



Waterpoints functionality
 83% (72) Non-functional
 17% (15) Functional



Waterpoints requiring payment
 100% (87) Do not require payment



WASH infrastructure types

• Assessment coverage (703)

— Roads

- - - Ezo town extend

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

- Observed inhabited areas
- Limited information/Inaccesssable areas
- No infrastructure observed

• Reported refered area name

Infrastructure: REACH (2021)
 Roads: OpenStreetMap Contributor (2020), REACH (2020)
 Coordinate System: WGS 1984 UTM Zone 36N
 File: REACH_SSD_Map_WASH_infra_Ezo_Town_Assessment_Coverage_May202
 Contact: south.sudan@reach-initiative.org

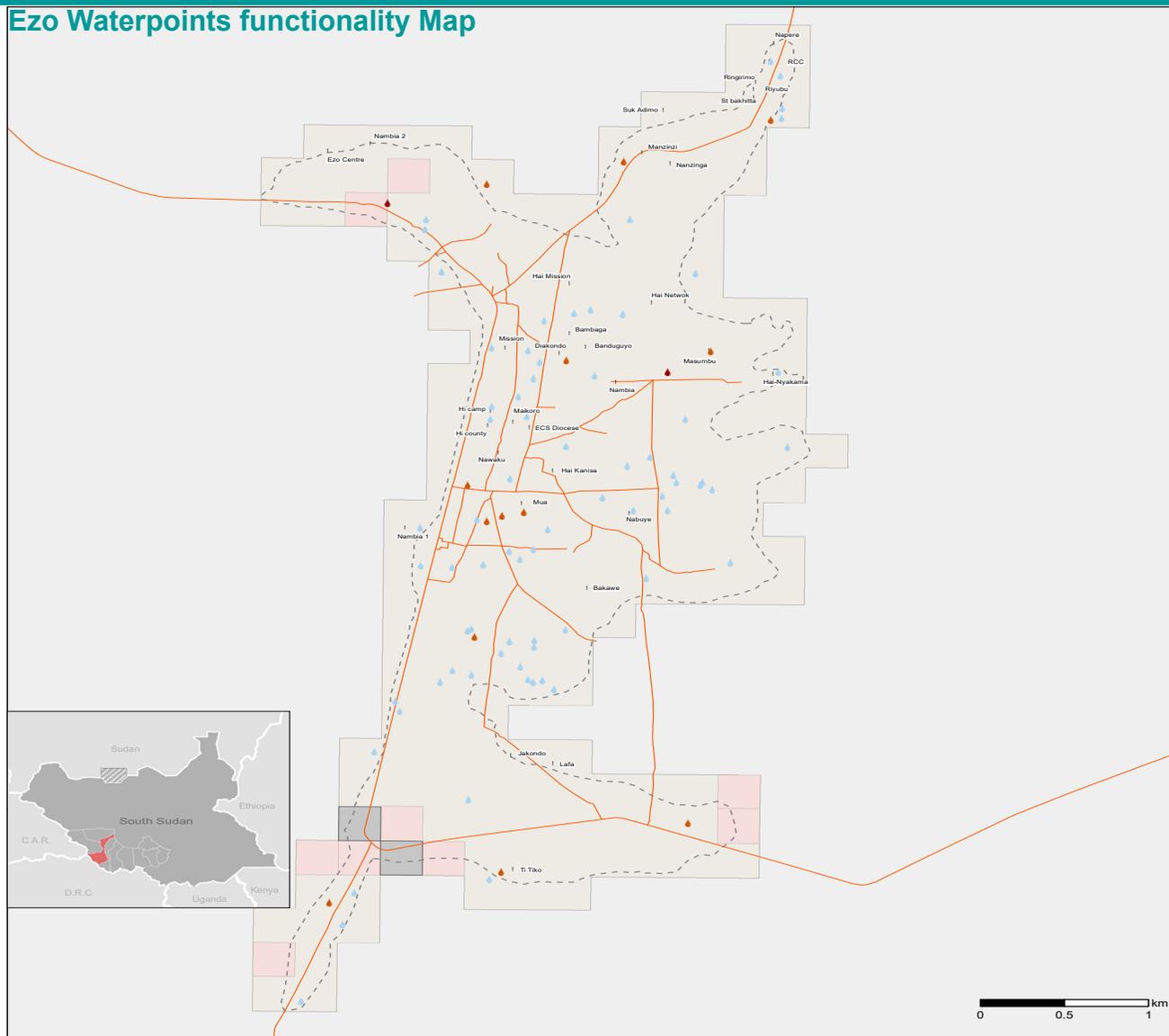
Note: Data, designations and boundaries contained on this map are not warranted to be error-free and do not imply acceptance by the REACH partners, associates, donors mentioned on this map.



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Water points functionality

- Yes (72)
- No (13)
- Decommissioned (2)

- Roads
- Ezo town extend

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

- Observed inhabited areas
- Limited information/Inaccessable areas
- No infrastructure observed

- Reported refered area name

Infrastructure: REACH (2021)
 Roads: OpenStreetMap Contributor (2020), REACH (2020)
 Coordinate System: WGS 1984 UTM Zone 36N
 File: REACH_SSD_Map_WASH_infra_Ezo_Town_Water_Points_Functionality_May2021
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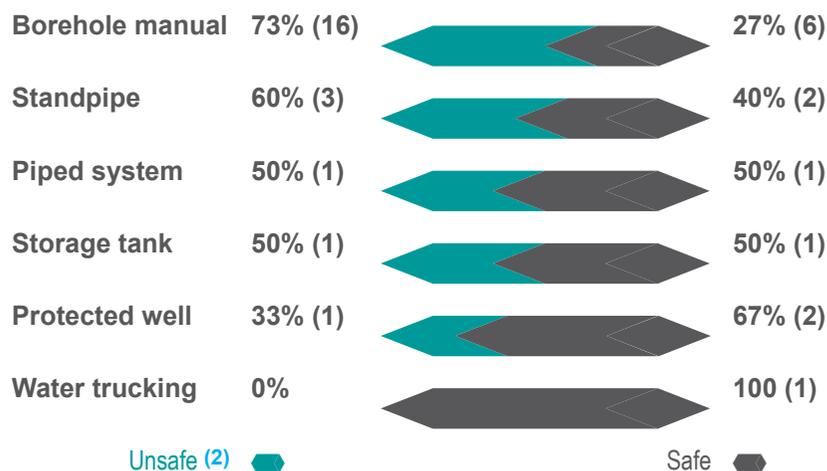


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Improved waterpoints type with water quality test results



Estimated latrine sludge level

62% (76) Less full with sludge
29% (35) Almost full with sludge
6% (7) Unable to confirm
3% (4) Full with sludge



Latrine by cleanliness

66% (80) Unclean (4)
34% (42) Clean



Accessibility to latrine

88% (541) Accessible to everyone
12% (73) Not accessible to everyone

Functional handwashing station at latrine

No handwashing station 99% (606)
Handwashing station with water & soap/ash 1% (7)



Latrine requiring payment

98% (60) Do not require payment
2% (1) Unknown

Sanitation

Latrine by type



Latrine with lockable doors

62% (76) Without lockable doors
36% (44) With lockable doors
2% (2) Unknown

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)