

Perceptions of Water Services and the Introduction of Technologies to Improve Water Services in Dar es Salaam, Tanzania



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1. INTRODUCTION

Lack of access to improved drinking water sources:

- There are currently 663 million people who lack access to an improved drinking water source globally, nearly half of whom (319 million) live in Sub-Saharan Africa. In Tanzania, approximately 29 million people, or 44% of the population, lack access to an improved drinking source (WHO & UNICEF, 2015).

Investments in Tanzanian water sector are not always successful or sustainable:

- Although significant capital and resources have been invested to augment water services, a 2015 government study determined that 38% of access points in Tanzania are nonfunctional (Tanzania Ministry of Water, 2015).

Need for research to determine appropriateness, scalability, and accessibility of new technologies:

- As the Government of Tanzania seeks to improve water services, specifically in Dar es Salaam, new technologies must be field-tested prior to large-scale implementation.
- This study uses focus group and key informant interviews to investigate user perceptions of water services in Dar es Salaam. Furthermore, this study examines perceptions of new technologies in the water sector, specifically, the use of solar power and mobile prepayment.

3. RESEARCH QUESTIONS

- In the case of three urban communities in Dar es Salaam, what are people's perceptions of their water services and the introduction of technologies to improve water services?
- How can the Government of Tanzania incorporate people's perceptions of water services and the introduction of technologies to improve water services?



Fig 2: Water kiosk at Burudani site



Fig 3: Water kiosk at Ndugumbi site

4. METHODS

Key informant interviews: Nine key informant interviews were conducted, three per site, including the elected chairmen from each site and two representatives from the municipal water provider (i.e., Dar es Salaam Water and Sewerage Corporation).

Focus group discussions: One focus group was organized in each of the three study sites. Focus groups supported dialogues with permanent residents of the study area and were selected to be representative of gender and age distributions.

5. TECHNOLOGIES UTILIZED

- **Grundfos AQTap:** A smart water meter for “revenue collection and online management of water points [to support] the financial viability and accountability of water service operations” (Grundfos).
- **Solar Power:** Use of renewable solar energy to pump and convey water.

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6. PRELIMINARY RESULTS & CONCLUSIONS

The following themes emerged during preliminary analyses of qualitative data:

1. Mixed perceptions & attitudes of AQTap

- Anticipated challenges include effects on poor and lack of trust in mobile banking system
- Anticipated advantages include familiarity with mobile banking, and greater accountability and transparency in water utility transactions

2. Bad reputation of municipal water service provider

- Though interviewees noted municipal water service has increased in reliability, most recognize the provider has a bad reputation
- Others vocalized lack of trust in the provider, complaining of fraud, inaccurate billing, and poor service quality

3. General excitement and willingness to accept solar power

4. Official and unofficial water sources

- Abundance of illicit water connections
- Small but growing number of household connections

2. STUDY AREA

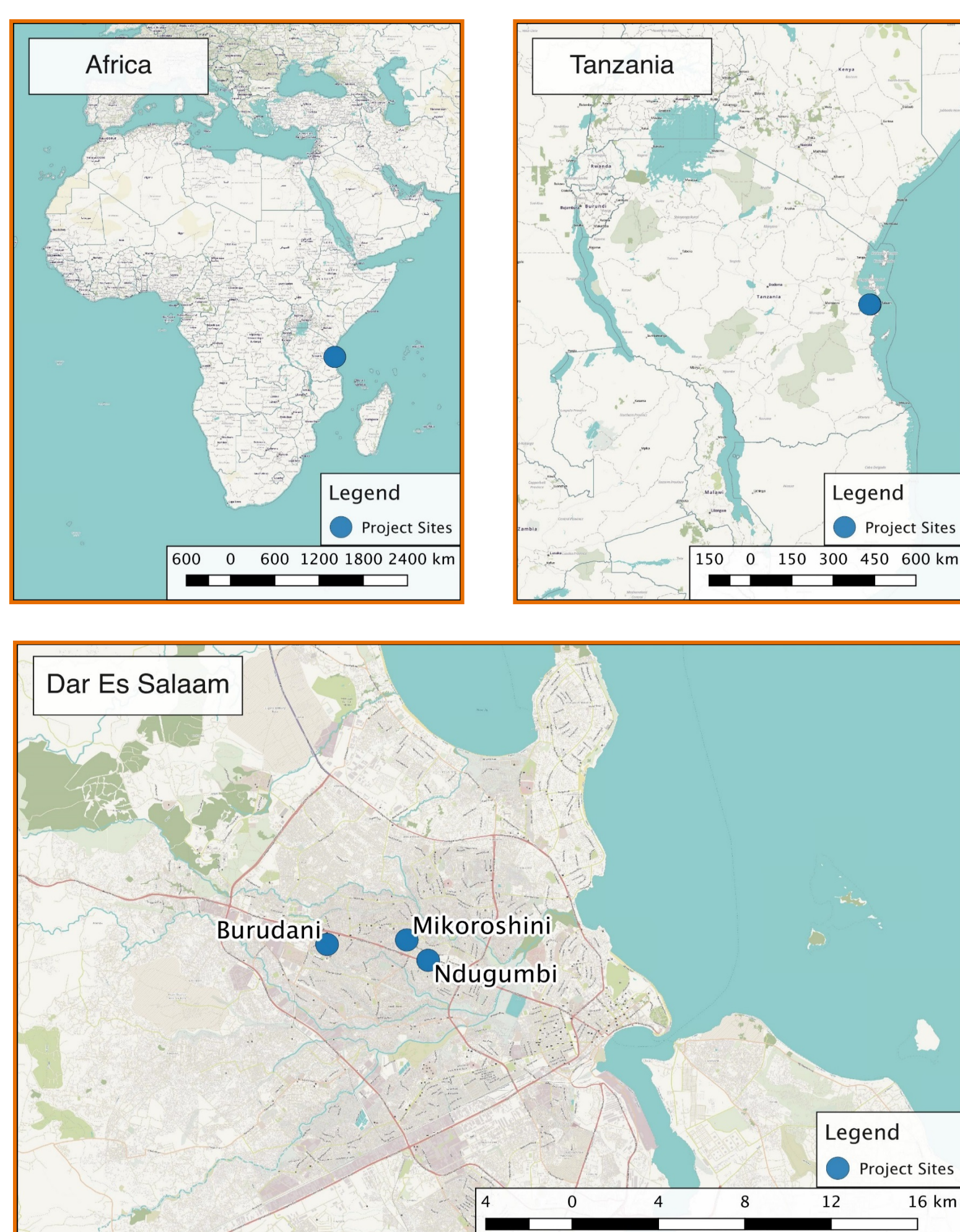


Fig 1: Study sites are located in Dar es Salaam, Tanzania, a coastal city of more than 4 million people



Fig 4: Examples of unofficial or illicit water sources in study areas in Dar es Salaam

7. FUTURE RESEARCH

Further analysis of qualitative data will be conducted to analyze focus group discussions and key informant interviews thematically, and to better understand user willingness to adopt technologies, perceptions of water services, and perceptions of technologies.

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