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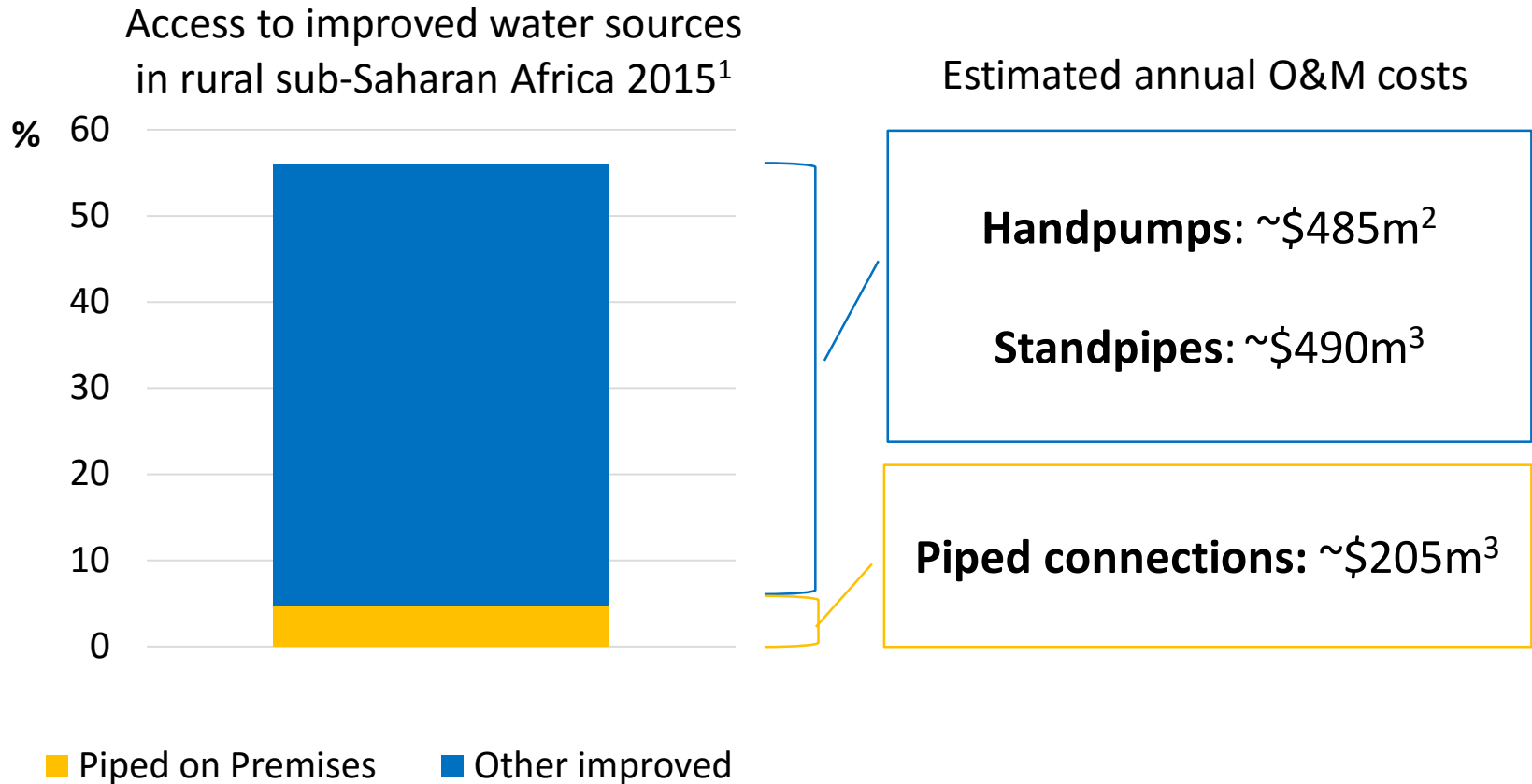
# Predictors, Patterns & Implications of Waterpoint Financial Performance in Rural Kenya



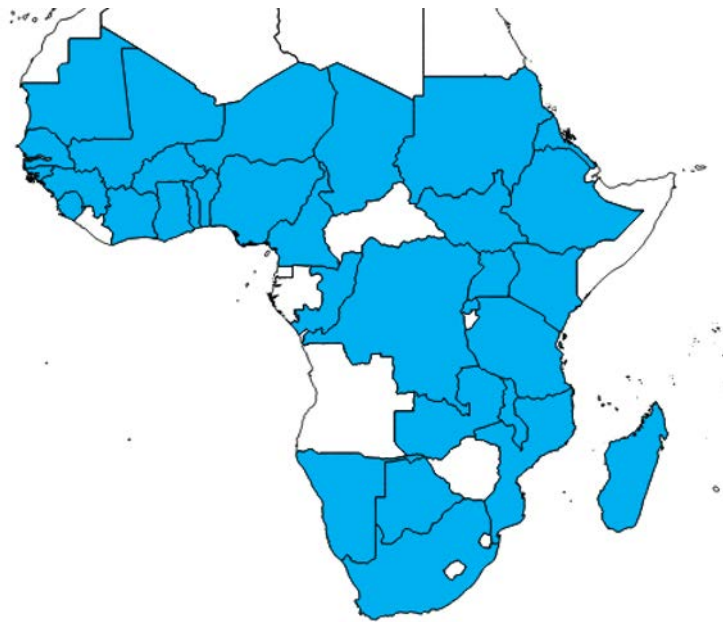
Pathways to universal  
and sustained  
water, sanitation  
and hygiene



# Water service delivery costs in rural sub-Saharan Africa likely exceed \$1b per year



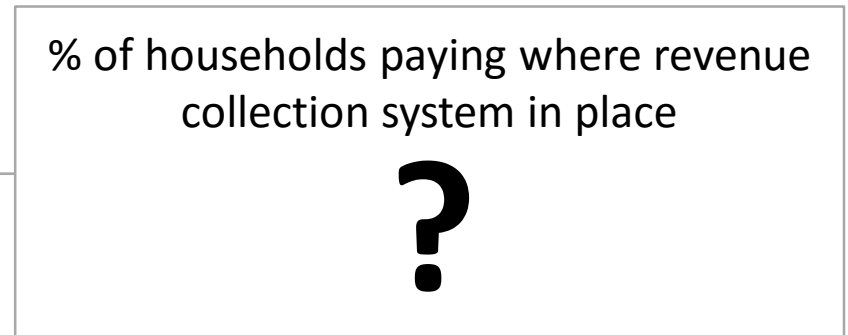
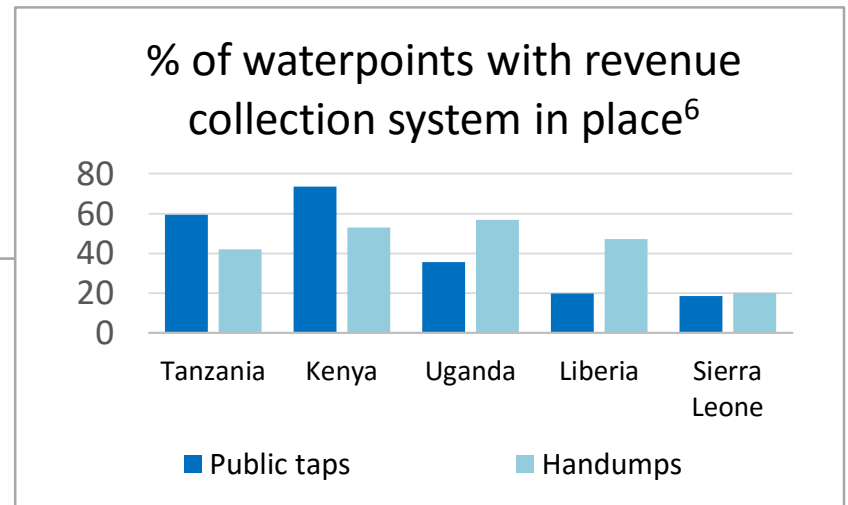
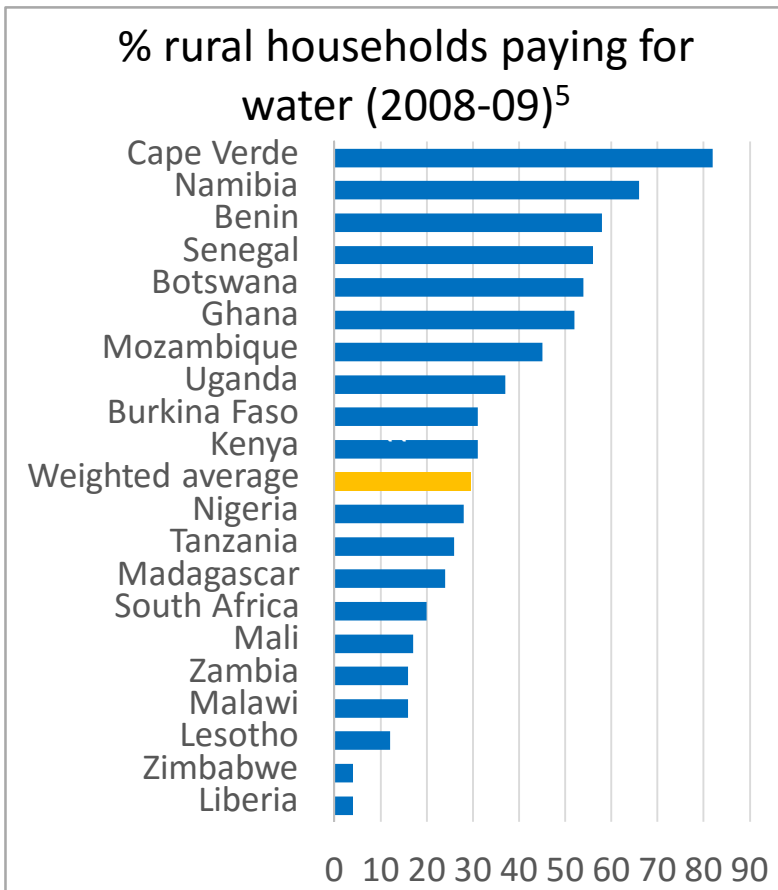
# Community-based financing of O&M widely promoted in policies & assumed in finance plans



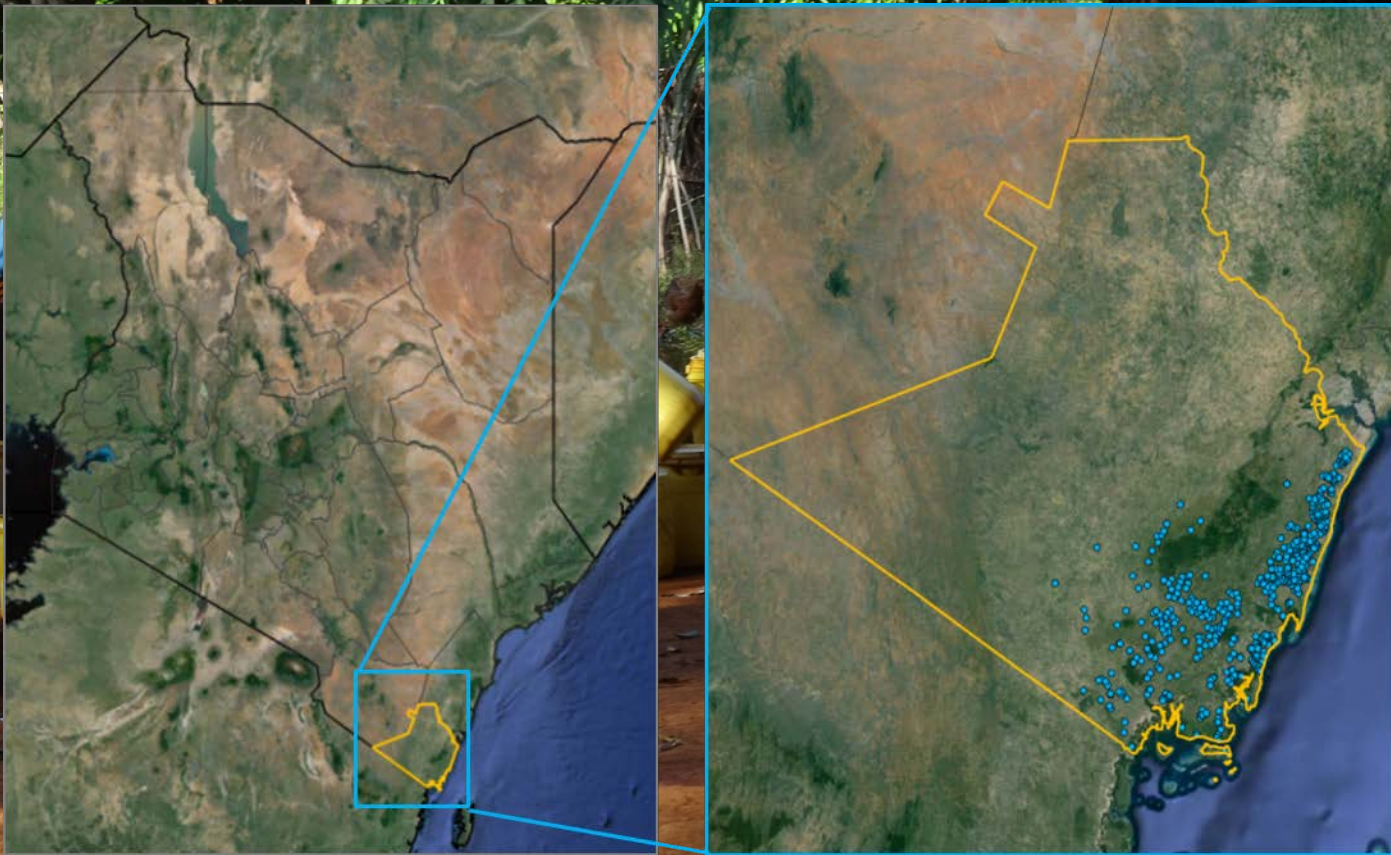
■ = rural water policy or financing plan assuming some or all O&M costs covered by household contributions<sup>4</sup>



# Mismatch between policy and reality: Majority of rural households do not pay for water services



# Evidence from waterpoint financial records in Kwale, Kenya



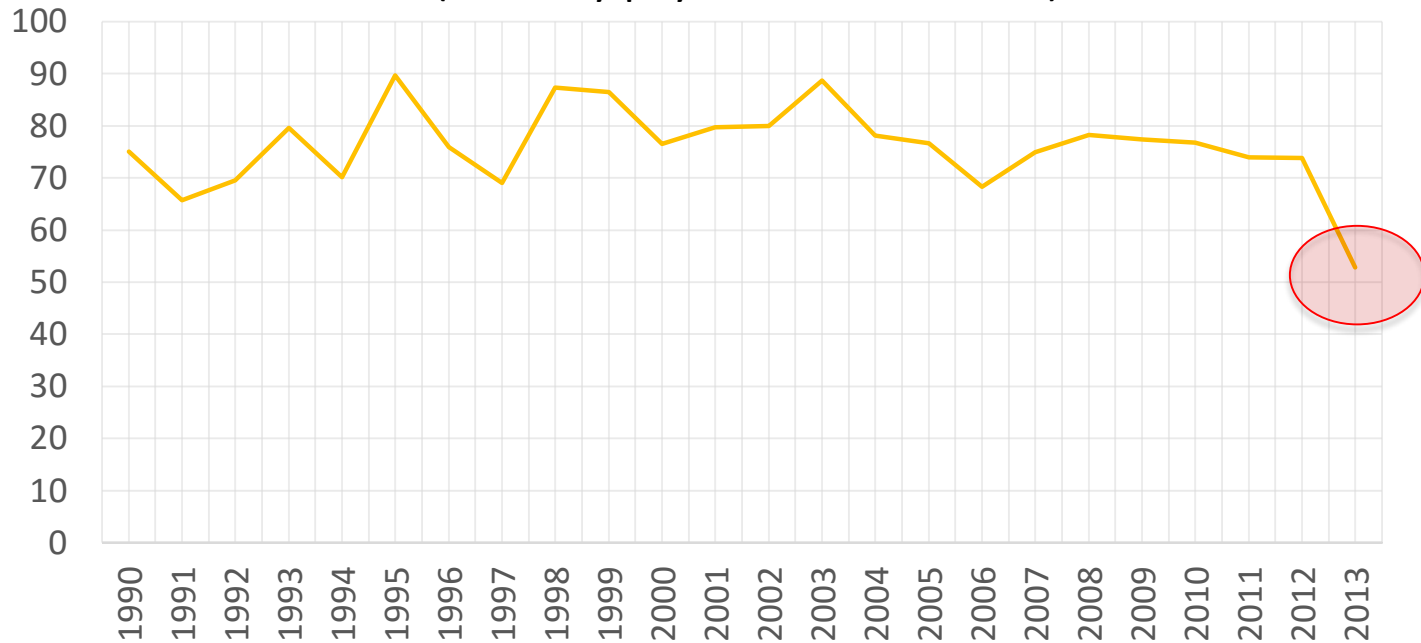




- Financial records located at 100 communities
  - 270+ waterpoint years
  - 43,020 monthly contributions
- Integrated with household survey (n=3,000+) & waterpoint census data
- Assessment of payment **prevalence, patterns, predictors & implications**

# Around one in four households in Kwale do not meet monthly payment obligations

Collective payment rate by year  
(Monthly payments, 1990-2013)





# Payment levels predicted by waterpoint location, pH, taste, rainfall season and group size

## Geographic

- Distance: HHs to WP
- Distance: WP to WP
- Settlement type

## Environmental

- pH
- Electrical conductivity
- Taste
- Rainfall season
- Alternative sources

## Operational

- Attendant
- Lock
- Community mechanic
- System age

## Institutional

- Participation

## Financial

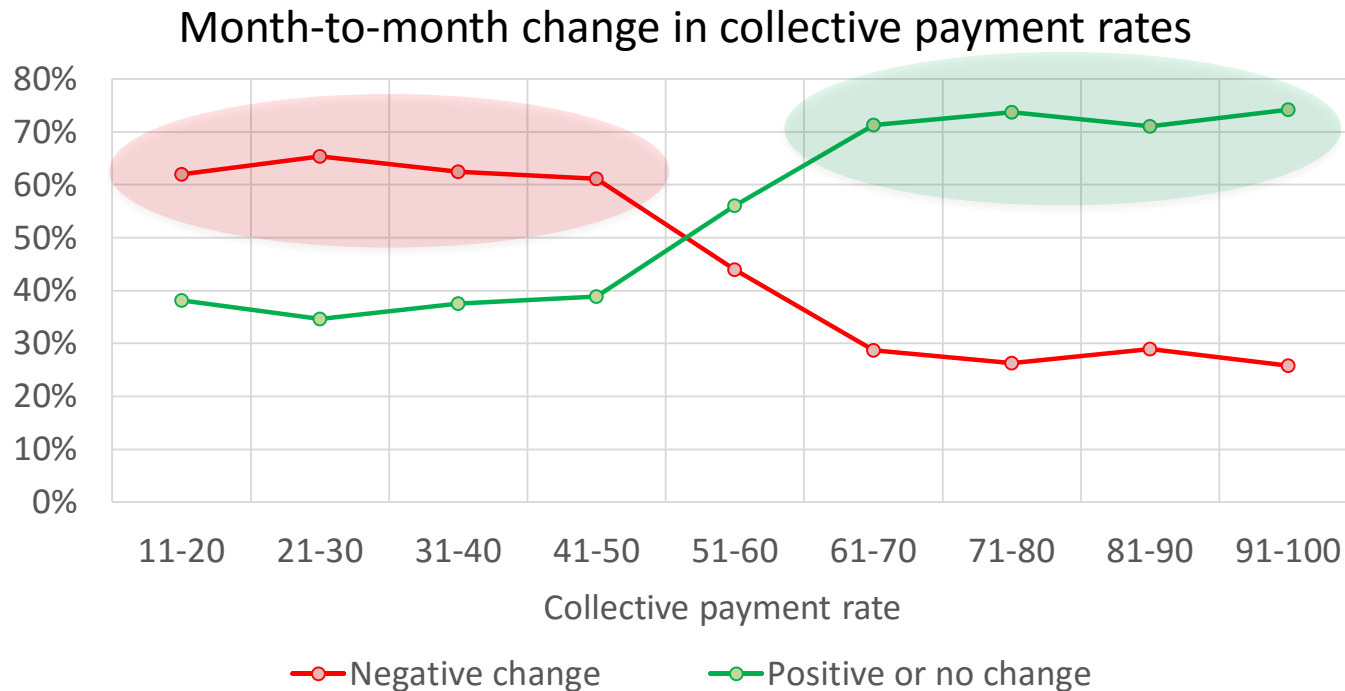
- Tariff
- Bank account

## Socio-economic

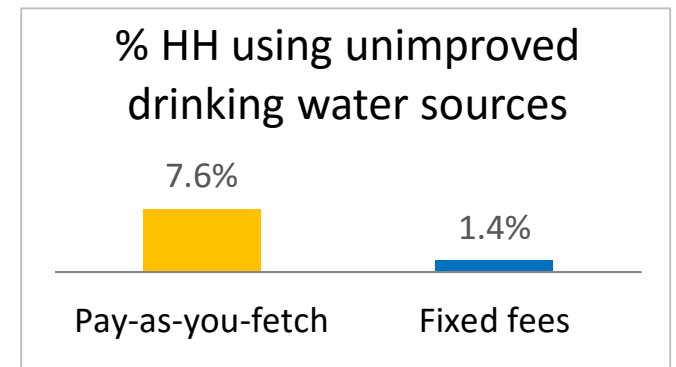
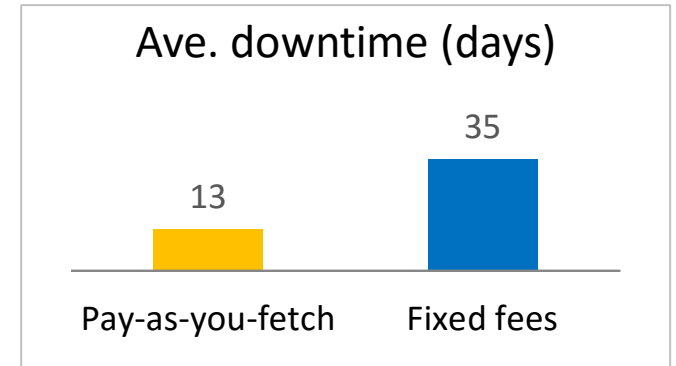
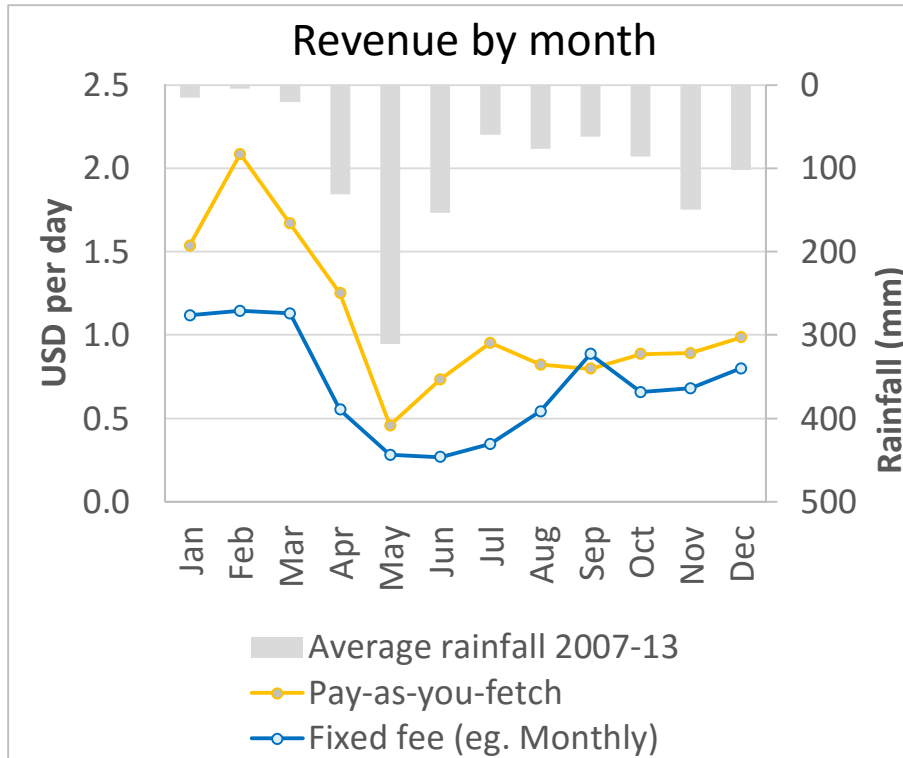
- Productive uses
- Wealth
- Group size



# Monthly payment rates remain relatively stable above 50-60%, but are prone to collapse below this point



# Pay-as-you-fetch: has higher revenue, lower downtime but associated with unimproved water use



# Summary

- Non-payment and late payment prevalent
- Payment behaviours shaped by environmental & social factors
- Revenue collection prone to collapse when rates drop below 60%
- Pay-as-you-fetch generates more revenue & has shorter downtime but appears to deter some users



# Footnotes

1. Data drawn from WHO/UNICEF Joint Monitoring Programme (2015).
2. Based on an estimate of 184 million handpump users (Macarthur,2014), and mid-points of annual O&M cost requirement of US \$2-3 per person (WASHCost 2011, adjusted to 2014 values).
3. Based on an estimate of 70 million standpipe users and 29 million people with piped connections (calculated from JMP country files) and mid-points of annual O&M cost requirement of US \$2-12 per person (WASHCost 2011, adjusted to 2014 values).
4. Based on information presented in Banerjee & Morella (2011) & GLAAS (2014). Banerjee & Morella (2011) list countries with a rural water cost recovery strategy. GLAAS (2014) lists countries with a “financing plan [which] defines if operating and basic maintenance is to be covered by tariffs or household contributions“.
5. n=17,515 (Afrobarometer, 2014). Available at: <http://afrobarometer.org/data>.
6. Analyses based on publicly available waterpoint datasets (Virtual Kenya, 2015; National Water Sanitation and Hygiene Promotion Committee, 2014; Sierra Leone, STATWASH Portal; Government of Tanzania, 2014; Government of Uganda, 2012). For additional data see Waterpoint Data Exchange <http://www.waterpointdata.org>

