

Financial Sustainability for Universal Rural Water Services

- *The Fundifix Model, Kenya*

Stockholm World Water Week
Tuesday 25th August, 2015

Rob Hope & colleagues, Oxford University and RFL Ltd., Kenya



Does rural water demand reflect global policy goals of universal service delivery?

What share of user payments (tariffs) are needed to blend with donor (transfer) or government (tax) contributions for sustainable finance?



Does the legacy of past water infrastructure investments influence future financial sustainability?



Will rural water users pre-pay for a professional maintenance service provider operating at scale?



Fundifix Model - A model for the sustainable delivery of rural water services at scale.

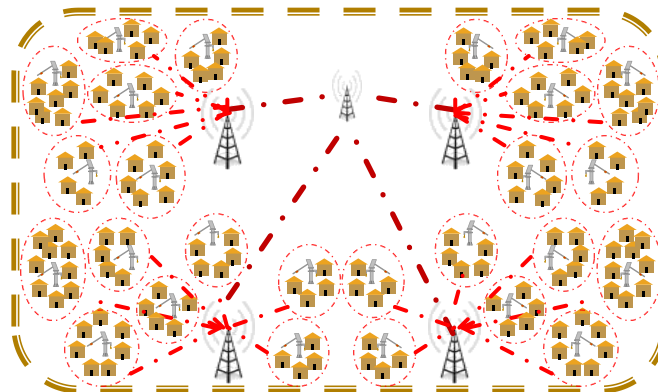
a) Institutional sustainability
- GoK, WASH forum, community



b) Operational sustainability
- FundiFix Ltd. (MSP)

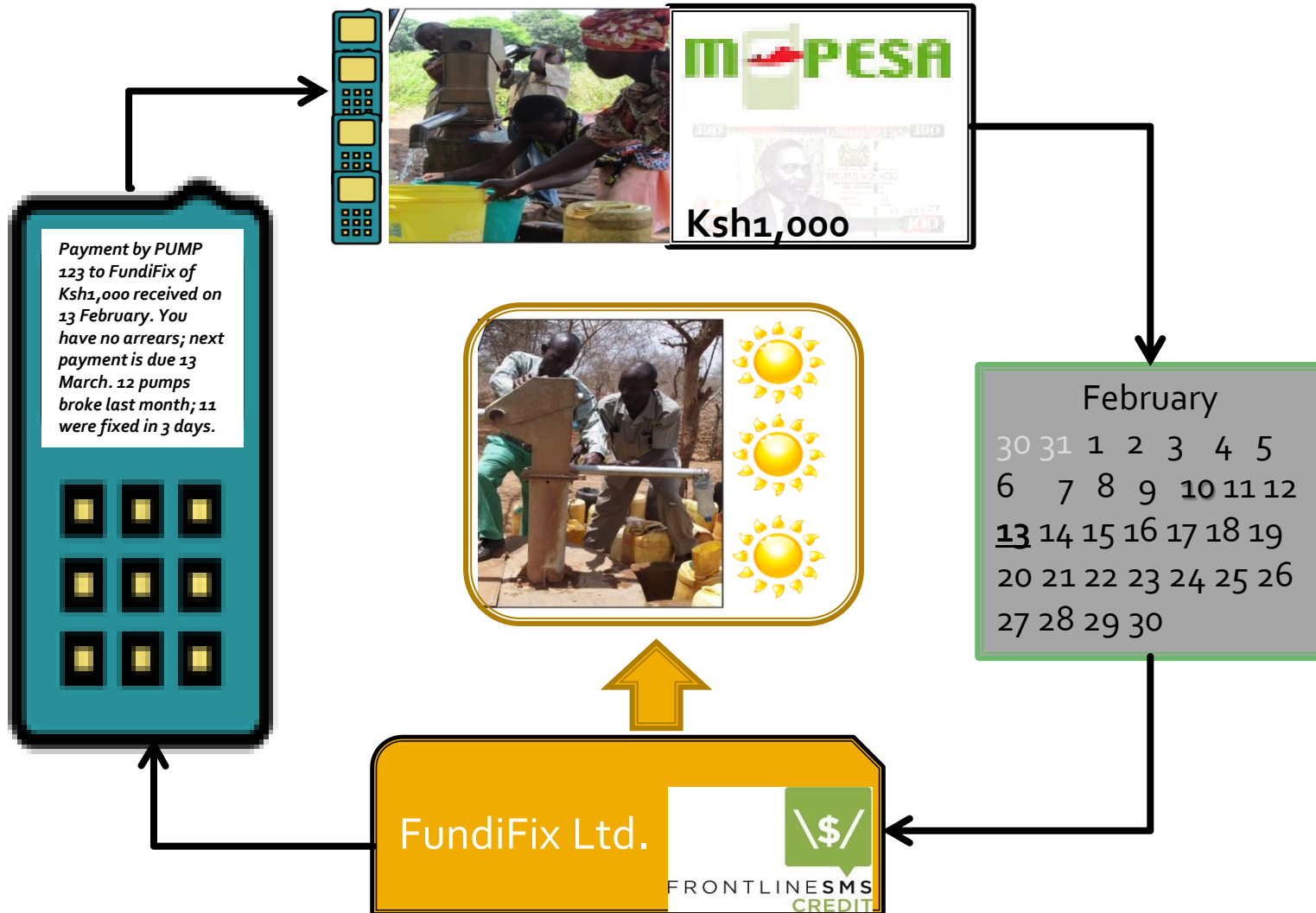


c) Financially sustainable
model at scale and over time

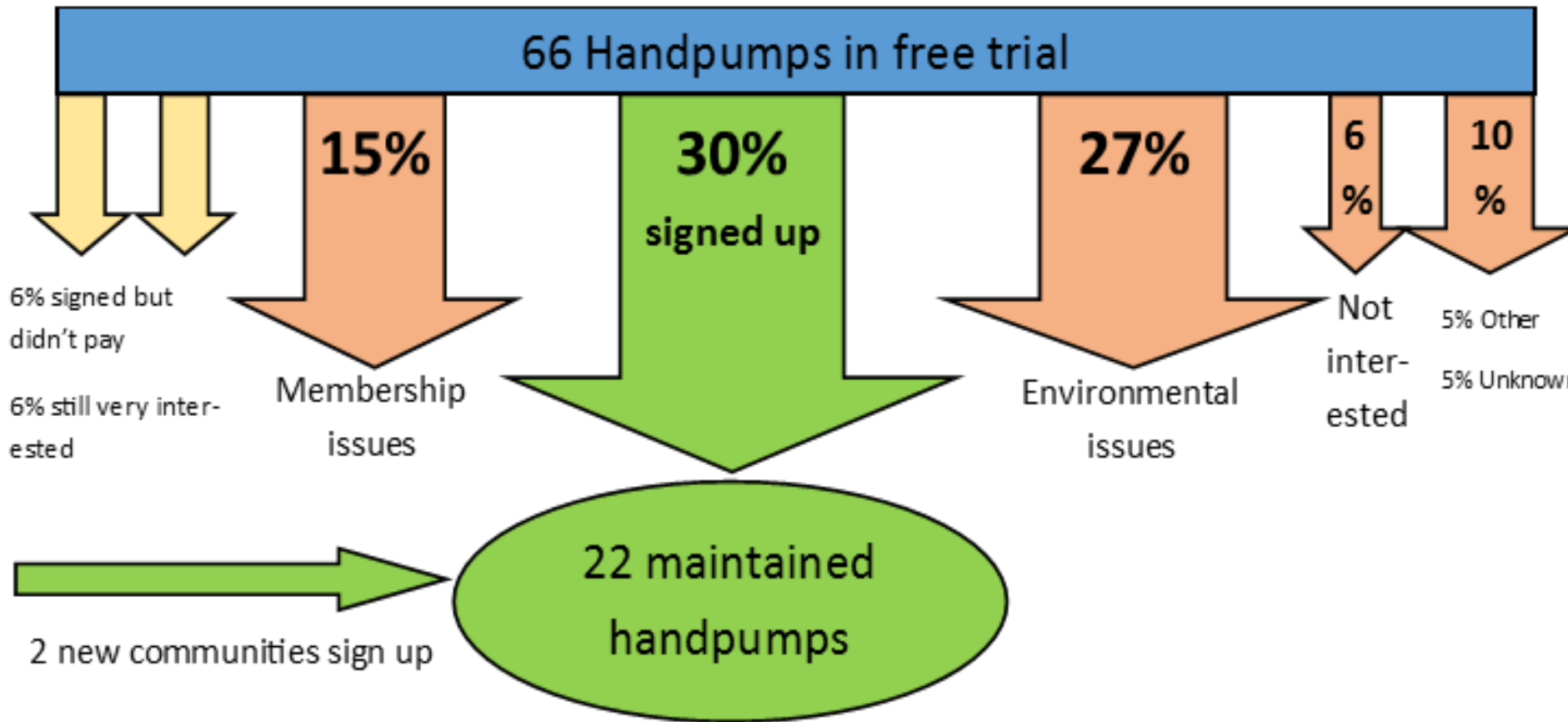


Operational Sustainability

- professional, performance-based contracts

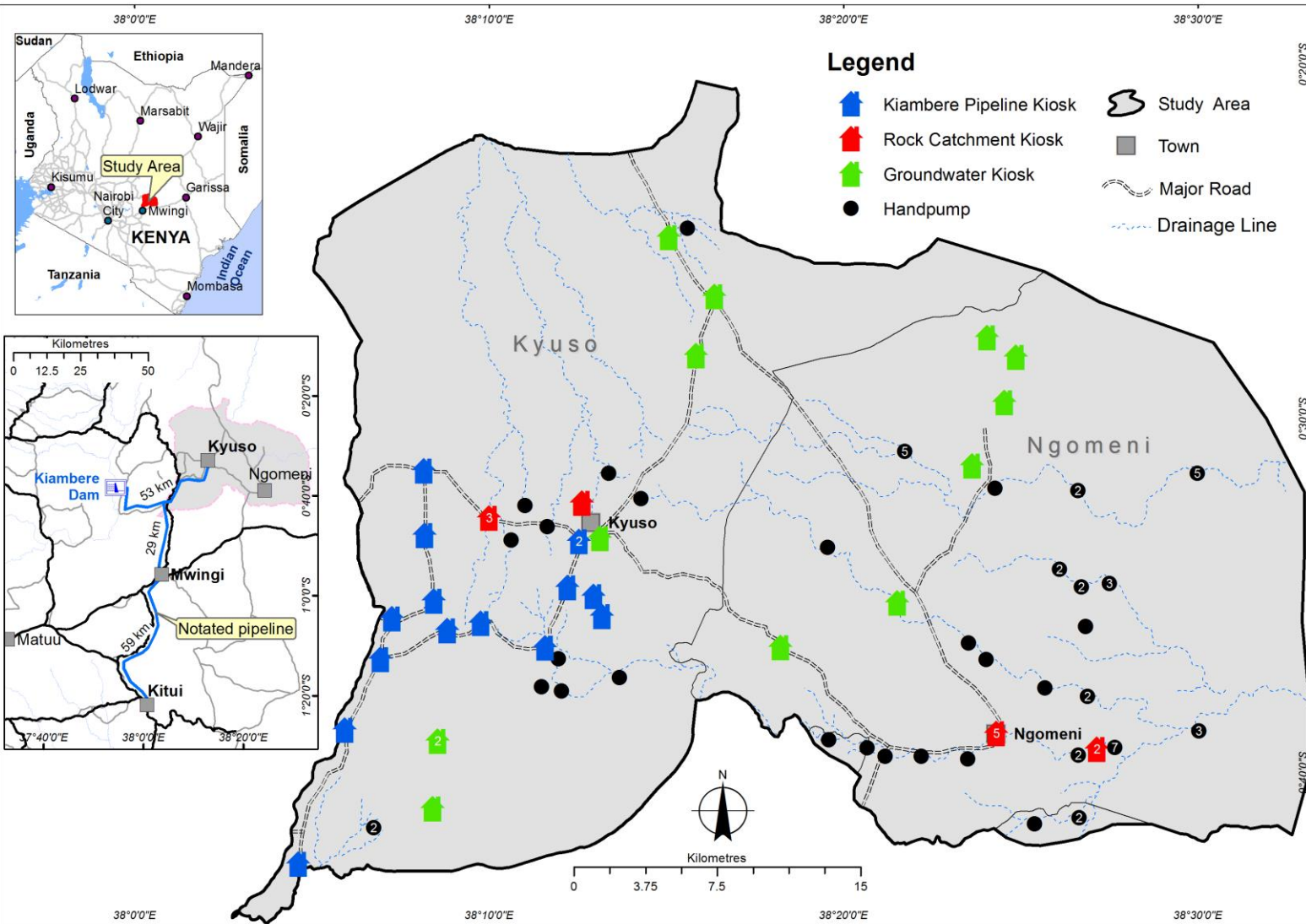


Preliminary results of a pre-payment system for long-term, local sustainability.



Not seeing the pumps for the pipes?

- a legacy of uncoordinated water infrastructure investments in Kyuso, Kenya



Water infrastructure performance by service level and unit cost comparison (handpumps, kiosks)

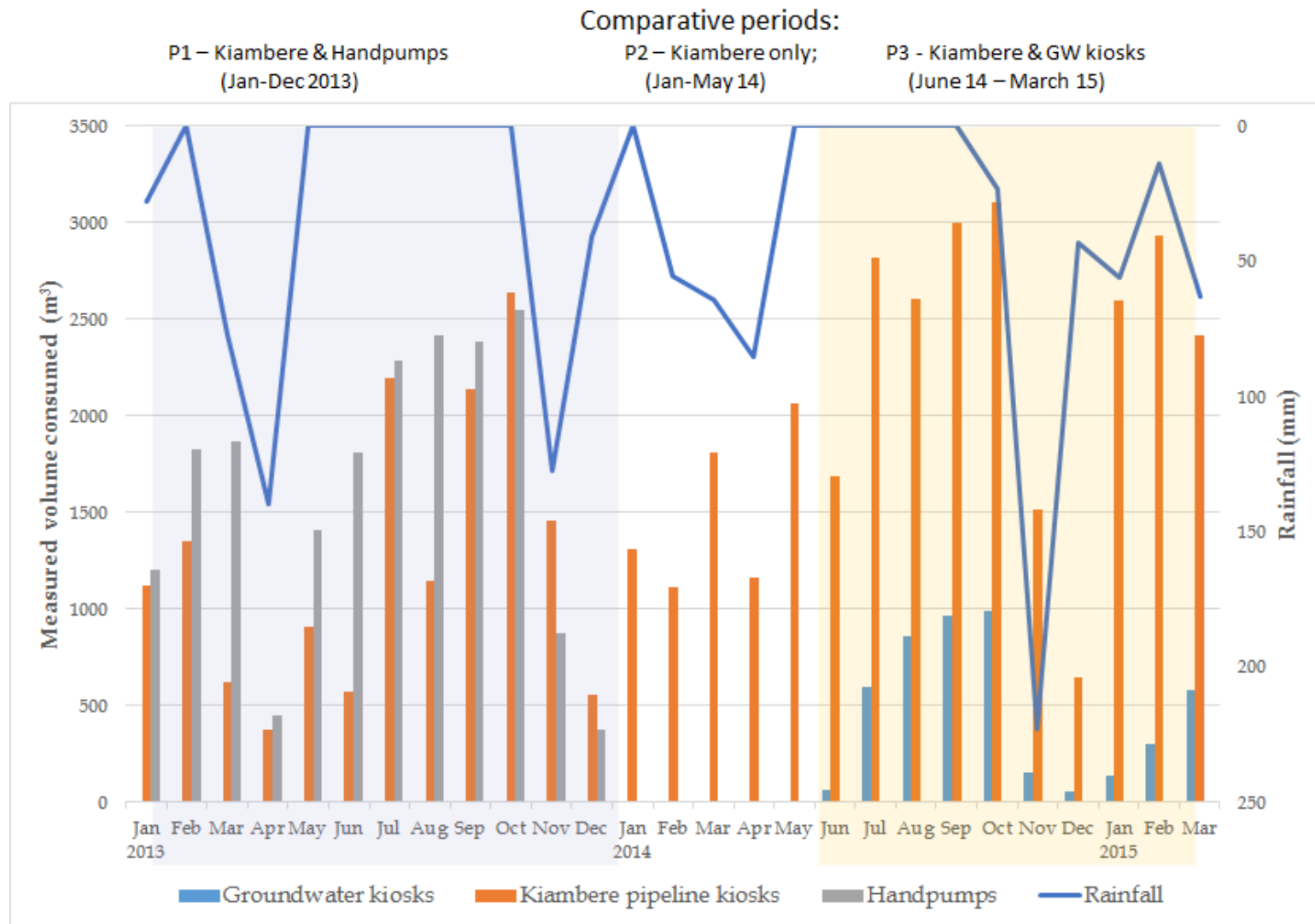
Infrastructure (source)	Waterpoints	Estimated total users	Non-functional	Mean downtime per failure	Maintenance Provider
Kiambere Pipeline (surface)	1 (15 kiosks)	5,700	27%	9 days	KIMWASCO
Rock Catchments (surface)	4 (10 kiosks)	>300	90%	5 days	CBM/County
Submersible pumps (groundwater)	12 (17 kiosks)	5,000	44%	57 days	CBM/County
Handpumps (groundwater)	66	13,000	2%*	< 3 days	Fundifix Ltd.
Total	108	c. 24,000	2-90%	3-365 days	

* Functionality rate of handpumps relates to handpumps maintained by FundiFix in 2013.

	Handpumps*	Kiambere kiosks	Groundwater kiosks
1. Estimated annual volume (m ³)	19,415	18,932	4,680
2. Availability (% days)**	98%	50%	41%
3. Local O&M costs (USD)	\$8,368	?	?
4. Local revenues received (USD)	n/a	\$17,880	\$7,568
Crude cost per m³ (USD)	\$0.43	\$0.94	\$1.62

Rainfall predicts water demand

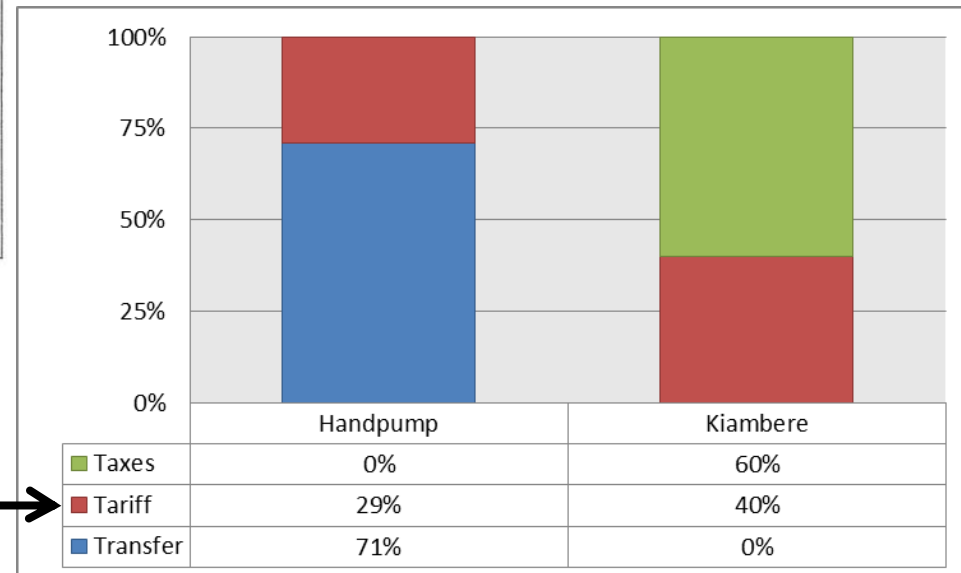
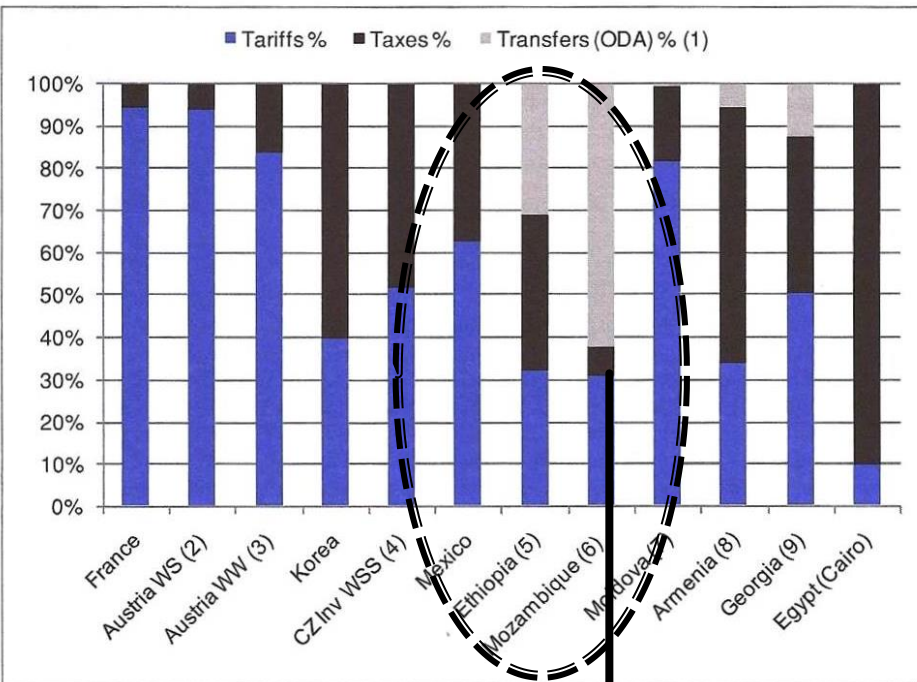
- usage (handpumps>kiambere>submersible)
- monthly range (<1,000m³ to > 5,000m³)



Financial sustainability and the 3T model

- Tariffs (users), Taxes (govt) & Transfers (donors)
- Do we expect rural handpump users to pay 100% costs?

Figure 2.1. Shares of official development assistance, national governments and users in water supply and sanitation finance in various countries



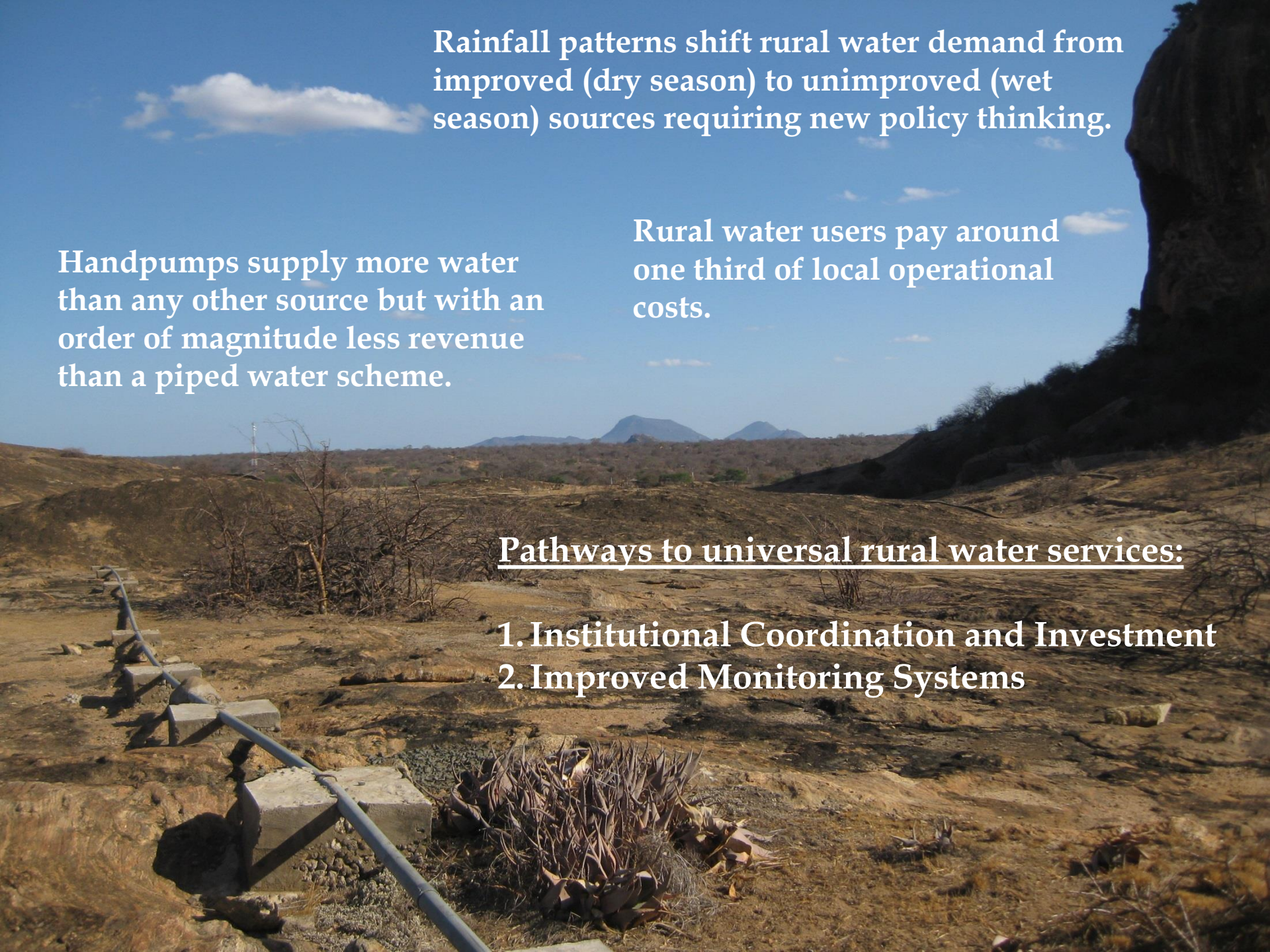
Rainfall patterns shift rural water demand from improved (dry season) to unimproved (wet season) sources requiring new policy thinking.

Handpumps supply more water than any other source but with an order of magnitude less revenue than a piped water scheme.

Rural water users pay around one third of local operational costs.

Pathways to universal rural water services:

- 1. Institutional Coordination and Investment**
- 2. Improved Monitoring Systems**



References available on session portal:

Oxford/RFL (2015) *Financial Sustainability for Universal Rural Water Services – evidence from Kyuso, Kenya*. SSEE Water Programme, Working Paper 2, Oxford University, UK

Foster et al. (2015) *Insuring against Rural Water Risk – evidence from Kwale, Kenya*. SSEE Water Programme, Working Paper 3, Oxford University, UK

Koehler et al. (2015) Pump-Priming Payments for Sustainable Water Services in Rural Africa. *World Development* Vol. 74, pp. 397–411, 2015

Hope, R.A (2015) Is Community Water Management the Community's Choice? Implications for Water and Development Policy in Africa. *Water Policy*, 17: 664-678

Oxford/RFL (2014) *From Rights to Results for Rural Water Services – evidence from Kyuso, Kenya*. SSEE Water Programme, Working Paper 1, Oxford University, UK

Thomson et al., (2012) GSM-enabled monitored of rural handpumps – a proof-of-concept study. *Journal of Hydroinformatics*, 14(4): 29-39

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TODAY - 11:00-12:30, Room NL 357

IT for a smarter water future

Patrick Thomson, Oxford Uni

Distributed monitoring of shallow aquifer level using community handpumps

Wednesday, 9:00-10:30, FH Congress Hall B

Water as a driver for sustainable development and poverty eradication

Johanna Koehler, Oxford Uni

Pump-priming payments for sustainable water services in rural Africa.

Thursday, 14:00-15:30, Room FH 307

(Re)thinking governance

Johanna Koehler, Oxford Uni

Can decentralisation improve water security and promote equitable post-2015 development?