



Presentation from  
**2015 World Water  
Week in Stockholm**

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# Implementing, monitoring and financing the water SDG in rural Africa

Stockholm World Water Week, Sunday 23rd August, 2015  
Implementing the SDGs in the post-2015 development agenda

Presenter: Patrick Thomson, Oxford University  
Co-authors: Johanna Koehler & Dr Rob Hope



# The Challenge (Target 6.1)

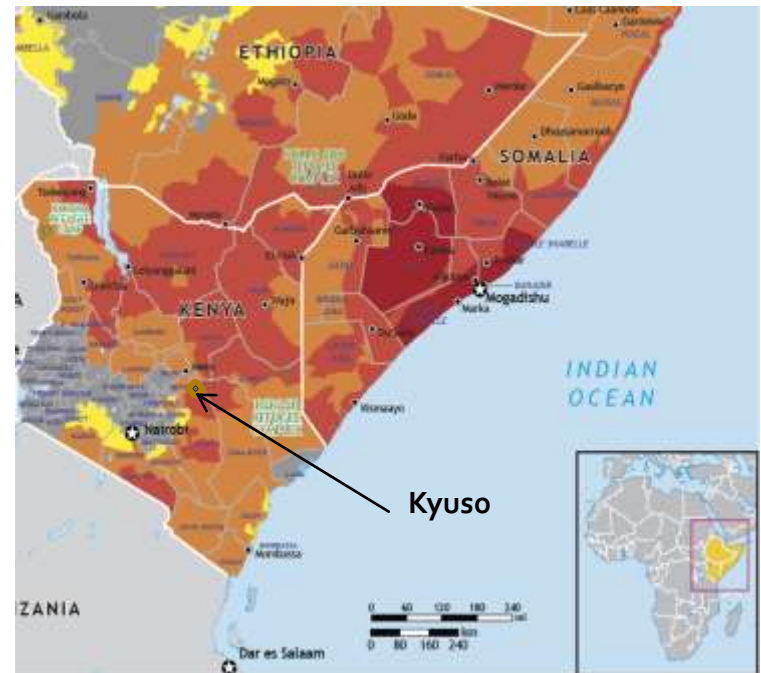
*"By 2030, achieve universal and equitable access to safe and affordable drinking water for all."*



***"By 2030, achieve universal and equitable access to safe and affordable drinking water for all"***

Improved monitoring can help us do this *and help us prove that we are doing this*

1. Improved monitoring can drive improved service delivery
2. Improved monitoring can leverage sustainable financing
3. Improved monitoring give new insights into rural water use patterns
4. Monitoring is an obligation under the Human Right to Water





# Improved monitoring can help leverage sustainable financing for rural water services

**Tuesday 25th August, 9:00-10:30**  
**Room NL Music Hall / Musiksalen**

## **Sustainable finance for universal rural water services**

Dr Rob Hope will lead a session providing new evidence of models that advance sustainable finance in Africa in conjunction with UNICEF, GSMA and Grundfos.

**Wednesday 26 August, 9:00-10:30**  
**FH Congress Hall B**

## **Water as a driver for sustainable development and poverty eradication**

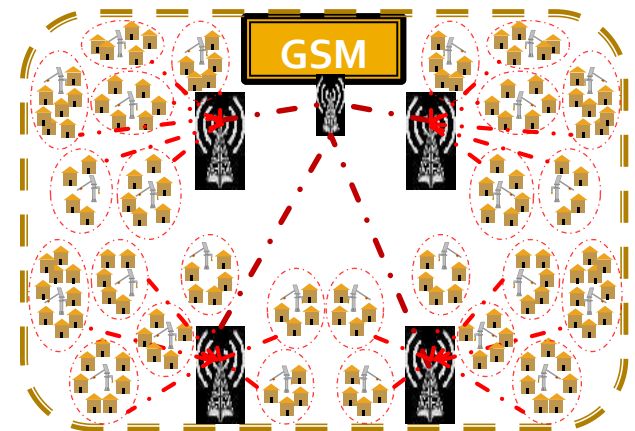
Johanna Koehler is presenting “Pump-priming payments for sustainable water services in rural Africa”.



# Improved monitoring can drive improved service delivery #1

## Smart Handpumps Operational Trial

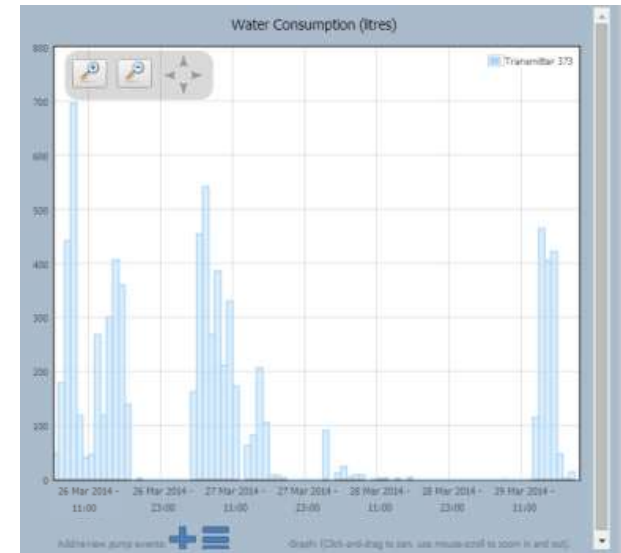
- Transmitter secured inside pump handle monitors usage and functionality
- Information transmitted by SMS
- Monitoring information triggers maintenance response
- Monitoring verifies maintenance response and downtime



# Improved monitoring can drive improved service delivery #2

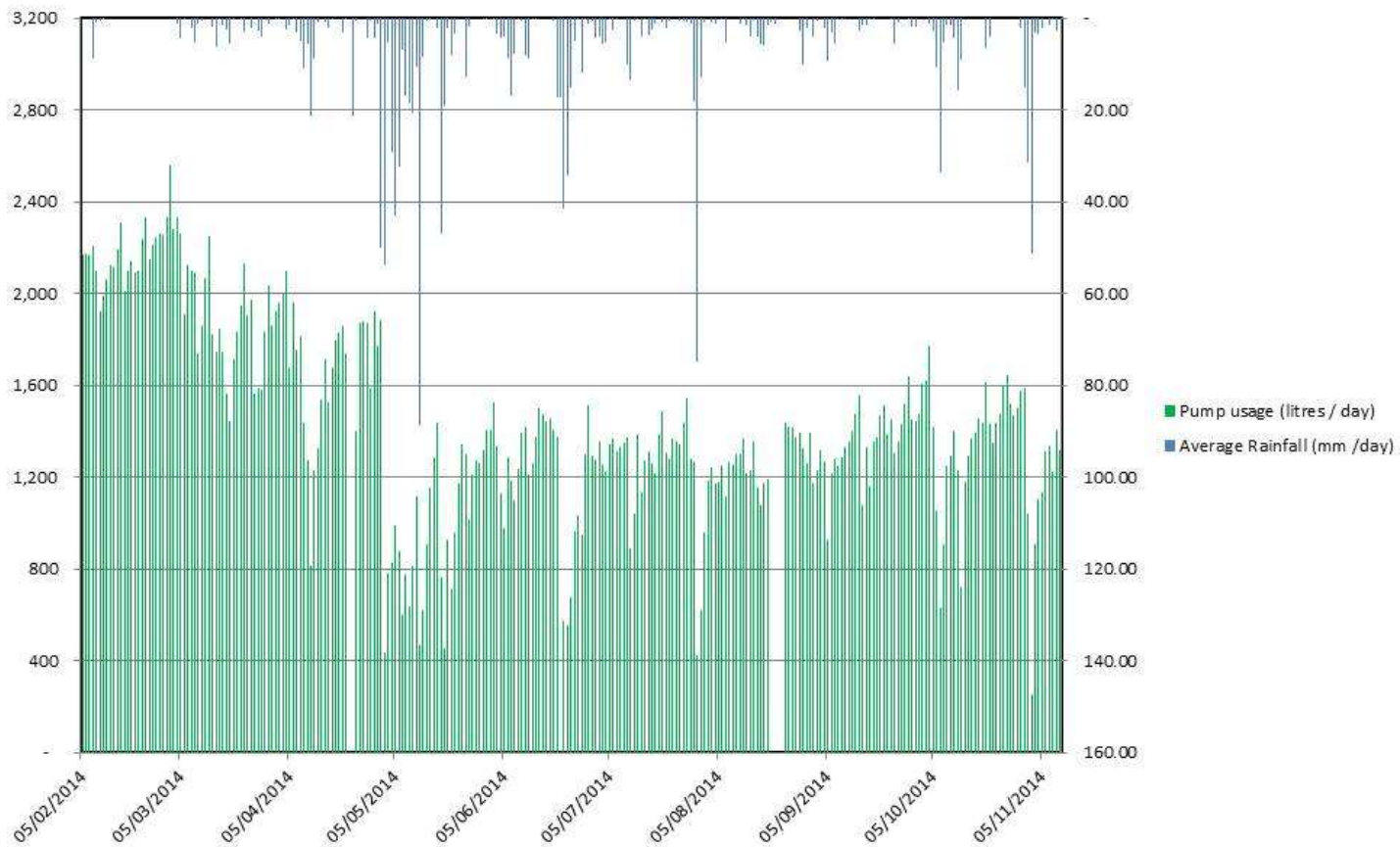
## Smart Handpumps Trial Results

- Handpump downtime reduced 10-fold from 27 days to <3 days
- Only 2% of handpumps not working at any given time vs. 17% pre-trial
- New and nuanced understanding of rural water usage patterns
- Accountability can drive new service delivery models



# Data can provide new insights into rural water use patterns

Rainfall vs. pump usage in Kwale County (February - November 2014)





# Monitoring is an obligation under the Human Right to Water

General Comment 15 (2003) 37 (c) refers to the obligation *"to monitor the extent of the realization, or the non-realization, of the right to water"*.

Human Rights Council Resolution A/HRC/RES/15/9 (2010) states that *"the delegation of the delivery of safe drinking water and/or sanitation services to a third party does not exempt the State from its human rights obligations."*

**Any Questions?** [patrick.thomson@ouce.ox.ac.uk](mailto:patrick.thomson@ouce.ox.ac.uk)  
(Related Sessions at World Water Week below...)

### **Tuesday 25 August**

9:00-10:30, Room NL Music Hall / Musiksalen

*Sustainable finance for universal rural water services*

Dr Rob Hope will lead a session on models that advance sustainable finance in Africa

11:00-12:30, Room NL 357

*Information technologies for a smarter water future*

Patrick Thomson: "Distributed monitoring of shallow aquifer level using community handpumps."

### **Wednesday 26 August**

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

*Water as a driver for sustainable development and poverty eradication*

Johanna Koehler: "Pump-priming payments for sustainable water services in rural Africa."

### **Thursday 27 August**

14:00-15:30, Room FH 307

*(Re)thinking governance*

Johanna Koehler: "Can decentralisation improve water security and promote equitable post-2015 development?"

# Selected References and Publications

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

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) Is silence golden? Of mobiles, monitoring, and rural water supplies. P Thomson, RA Hope, T Foster. Waterlines 31 (4), 280-292, 7, 2012

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



Further information on our publications and, our work and the team can be found at:

<http://www.smithschool.ox.ac.uk/research-programmes/water-programme/publications.php>

<http://www.smithschool.ox.ac.uk/research-programmes/water-programme/index.php>

<http://www.smithschool.ox.ac.uk/research-programmes/water-programme/team.php>