



Scaling up results-based funding for rural water services



Story of change: Key findings & emerging impacts

Summary

- In 2016, a results-based funding model was developed to improve the reliability of rural water supply services in Kenya.
- The Water Services Maintenance Trust Fund has tested this model and attracted new sources of results-based funds to guarantee rural water services in two counties in Kenya.
- Results-based funds have grown from 19% (2017) to 86% (2021) of WSMTF resources.
- In the same period, annual WSMTF resources increased from just under USD 50,000 to over USD 150,000.

- The WSMTF has informed the work of the Uptime Catalyst Facility which has issued results-based contracts guaranteeing reliable drinking water for over 4 million rural people in 12 countries in 2023.

"Fundifix has a results-based approach backed by good data on the volume of water being supplied by handpumps and small piped systems. This allowed us to make a clear match between our consumers in Germany and rural water users in Kenya."

Iris Braun, Founding Partner, share GmbH



📍 Kenya



Introduction

Generally, governments and donors do not fund the operation and maintenance of water supply infrastructure. It is assumed that communities are willing and able to pay for operational costs. In reality, repairs often take a month or more, and waterpoints can be abandoned after a few years despite a projected life-time of 10–15 years.

The false economy is widely known yet endures in policy and practice. A waterpoint may not function after a few years meaning a USD 10,000 handpump installation or USD 100,000 small piped scheme delivers a fraction of its potential value. This wastes limited funds and fails to provide safe, affordable and reliable drinking water services.

Droughts, floods and the COVID-19 crisis compound the poverty impacts. Women and girls bear the burden of spending millions of avoidable hours collecting water with risks of violence, missing school to reproduce development inequalities, and paying higher costs for more distant water of uncertain quality.

Fixing the funding gap

FundiFix was registered as a professional maintenance service provider in Kenya to test whether people would pay a share of the costs based on a guarantee that waterpoint breakdowns would be fixed in three days. While water users were willing to pay and sign annual maintenance contracts, an affordable payment left a funding gap. This led to the design of the Water Services Maintenance Trust Fund (WSMTF) in 2016 with the support of UNICEF and government partners. The WSMTF was designed to financially support FundiFix so that it could guarantee reliable services even if repair costs or user payments varied.

The premise of the Trust Fund was that results-based contracts would attract new sources of funding beyond governments and donors. The pitch to non-traditional funders was two-fold: first, rural water users have to pay to demonstrate demand for a service, and, second, payments were results-based defined by fixing breakdowns in less than three days.

Figure 1: Survival curve for handpumps and piped schemes in Kitui county, Kenya.

Source: Tim Foster

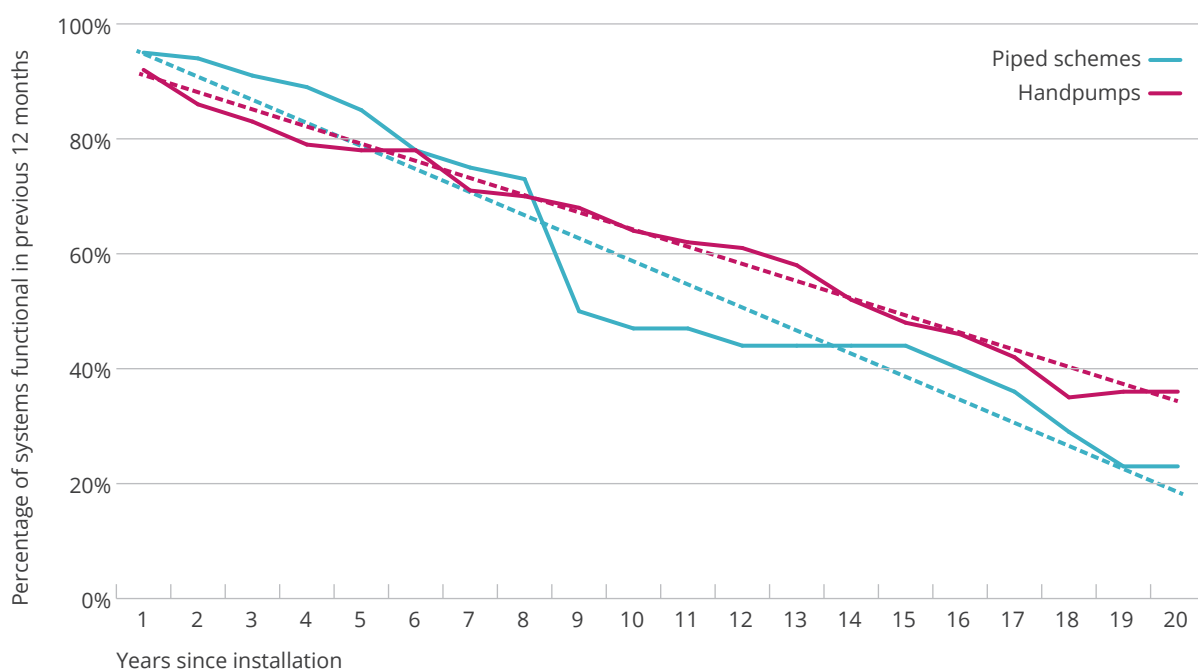


Figure 2: How the WSMTF works

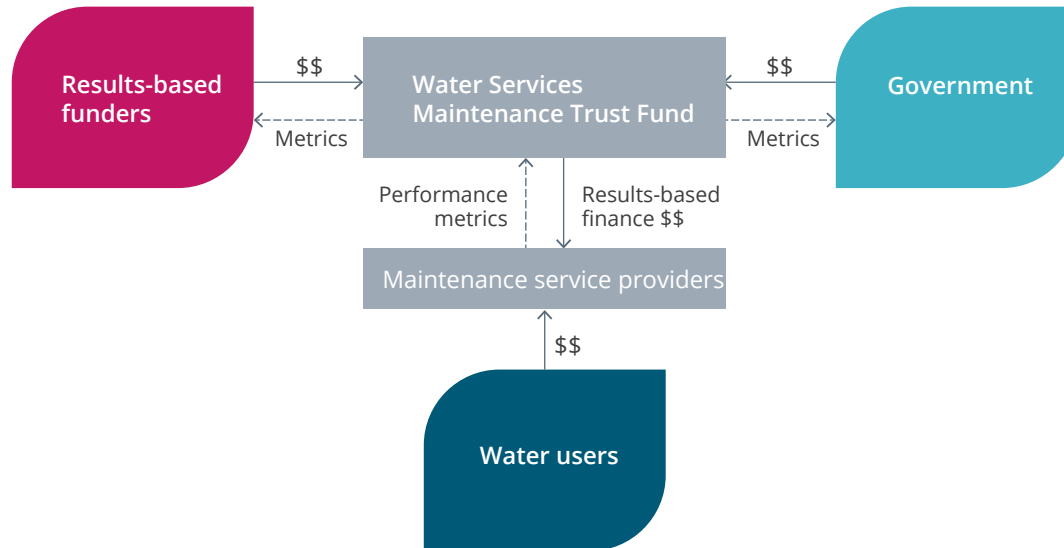
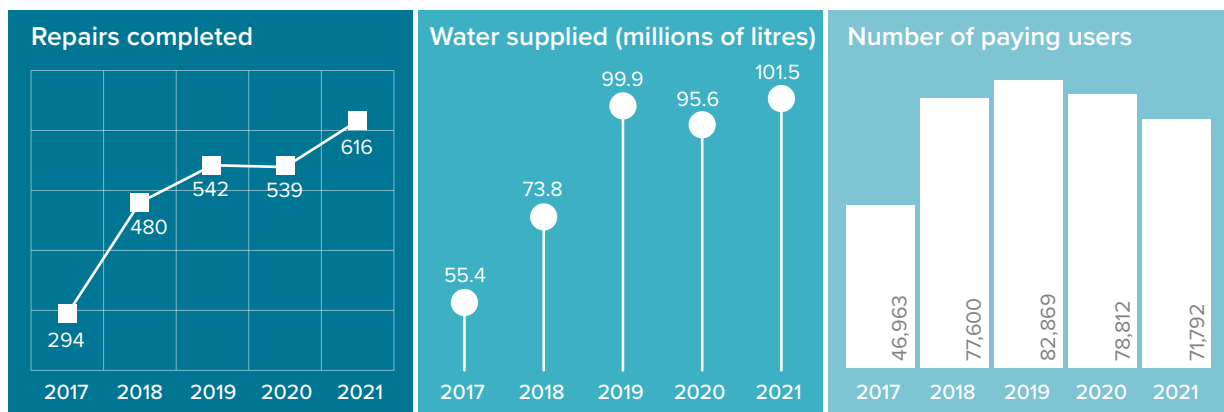


Figure 3: Design and performance of the Water Services Maintenance Trust Fund in Kenya



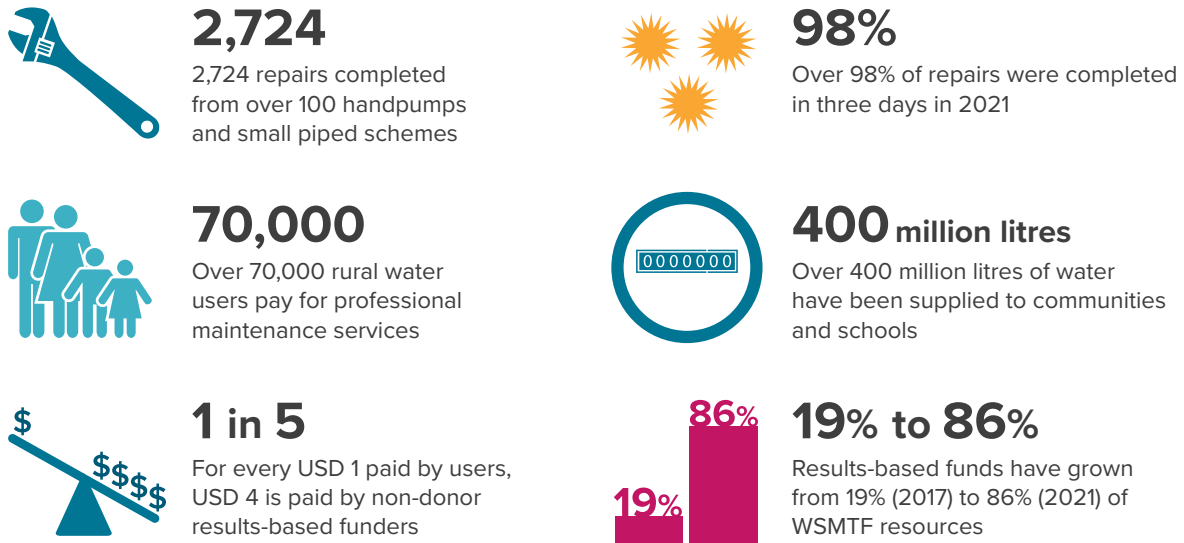
Private sector funding can support results-based contracts

FundiFix operates in two counties in Kenya – Kitui and Kwale counties. In Kwale County, the funds have successfully led to repeat contracts since 2016 with an agricultural and a mining company. These two companies, Base Titanium Ltd and doTERRA Ltd, have a strong commitment to support sustainable community development.

FundiFix provided a new model to help the companies achieve shared objectives and help a local social enterprise address a gap in public services for rural communities and schools.

In Kitui County, there are no major companies in the service areas, so initial donor support from FCDO was required. In 2016, a German ethical retailer, [share GmbH](#), read of the FundiFix work in [The Economist](#). This led to a results-based contract with a 1:1 match for one litre of bottled drinking water sold in Europe to fund 20 litres of water delivered in Kitui and Kwale counties.

Figure 4: WSMTF impact summary, 2016 to 2021



Donor and non-donor contributions

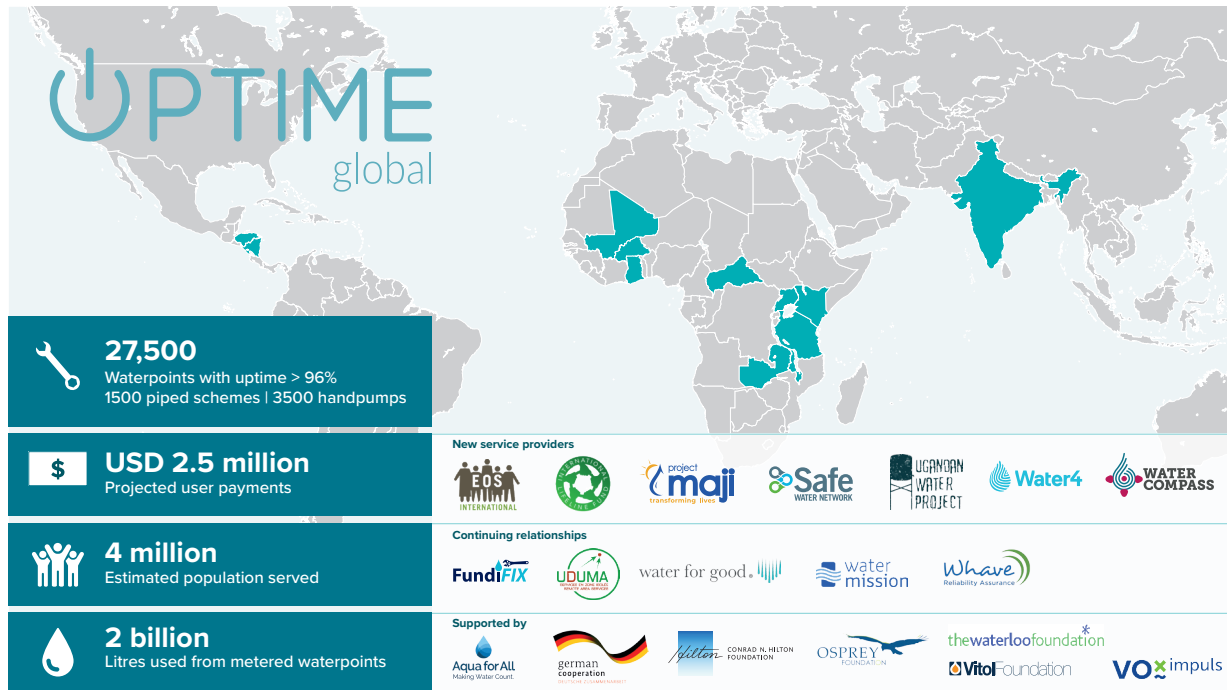
USD	2017	2018	2019	2020	2021
<p>Donor Non-donor</p>	<p>9,065</p> <p>38,744</p>	<p>22,523</p> <p>48,020</p>	<p>29,372</p> <p>47,246</p>	<p>45,618</p> <p>134,917</p>	<p>22,350</p> <p>134,071</p>
Total (USD)	47,809	70,543	76,619	180,535	156,421
% Non-donor	19%	32%	38%	75%	86%

With the growth in results-based funding, the share of funding from FCDO has decreased over time. The business model has evolved to include piped schemes in Kitui County which helped expand both the number of users and the volume of water supplied. Measuring the volume of water is important as this defines the contract payments with share GmbH and offers an objective and verifiable indicator of performance.

With WSMTF support, FundiFix has expanded from 77 handpumps in 2016 to 91 handpumps and 20 small piped schemes in 2022. In 2021, FundiFix provided over 100 million litres of reliable water to 71,792 rural Kenyans. A total of 616 repairs were completed with 98% completed in three days.

The WSMTF provides an example of how the funding gap can be met by non-donor funds in results-based contracts. In 2017, donor funds paid for 81% of WSMTF contracts, by 2021, the donor proportion had fallen to 14%. In the same period, the annual WSMTF resources increased from just under USD 50,000 to over USD 150,000 as the number of water users expanded almost five-fold from 15,000 people in 2015. However, user payments remain at less than 20% of the local operational costs.

Figure 5: Uptime countries in 2023. Source: www.uptimewater.org



Scaling-up results-based funding: The Uptime Consortium

In 2018, lessons from the WSMTF and FundiFix operations and research contributed to the formation of Uptime – a partnership involving five professional service providers in Africa. Uptime has developed a common contracting and operational reporting system. In 2020, the Uptime Catalyst Facility (UCF) was established. From 2020–2022 the UCF disbursed over USD 1 million in results-based funding. In 2023 it is expanding from seven African countries to support services for c. four million people globally at a cost of less than USD 1 per person per year.

In collaboration with the REACH programme and the Rural Water Supply Network, Uptime produced a [global diagnostic](#) to identify professional service providers and national governments to scale-up the work to 100 million by 2030. This will require larger-scale and longer-term funding commitments to ensure the growth and sustainability at scale.

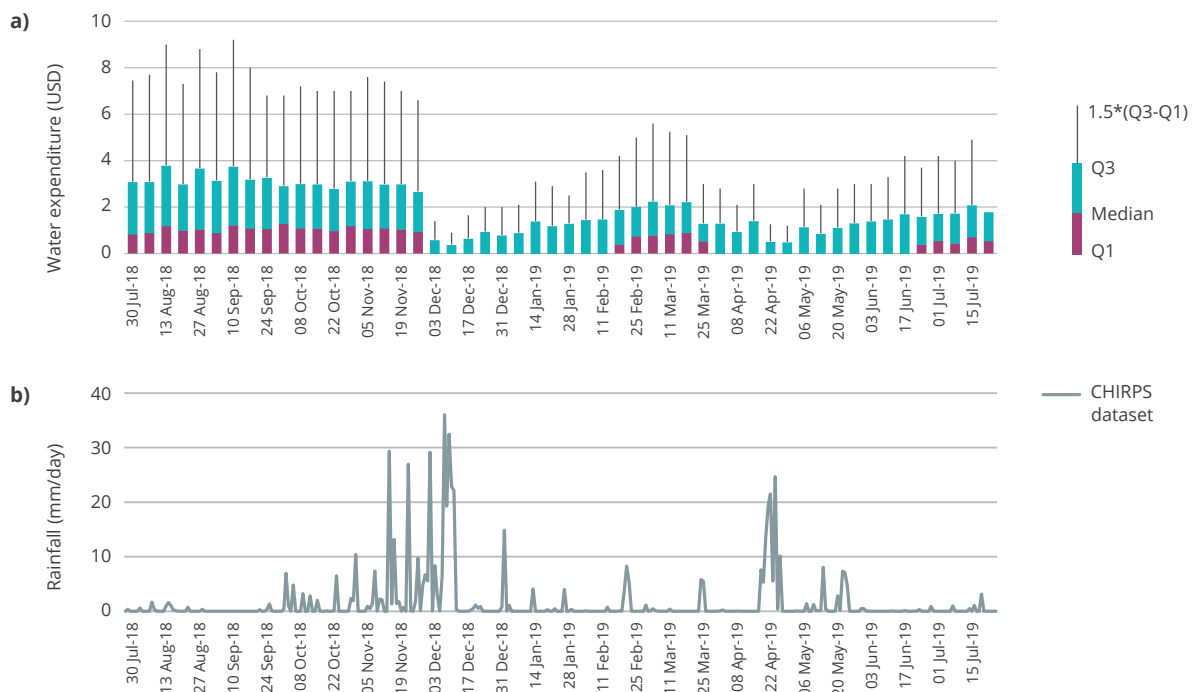
The REACH programme has been supporting work to design results-based contracts for safe water services in schools in Kenya and adapting the model to Bangladesh (SafePani).

Research to support policy and practice

Building on research led by Oxford since 2010, REACH is rethinking the institutional and policy design for rural water services in Africa and Asia. Two contributions include understanding (1) how risk shapes institutional design and (2) how rural water use behaviour interacts with regional and seasonal rainfall variability.

Theoretical work has promoted new thinking on how risks and responsibilities can be allocated between the state, market and communities to network more sustainable services at scale. This addresses the current paradigm of community management as the default approach common across Africa and Asia.

Figure 6: a) Weekly expenditure and water use in Kitui based on water diaries, August 2018 to March 2019. b) Rainfall in Mwingi North sub-county



Empirical work has modelled socio-climatic interactions in East and Southern Africa to reveal how rainfall variability influences water use demand, and how tariff design can reduce water use consumption. Analysis finds a monthly flat fee increases water demand compared to a volumetric tariff. This finding can inform how to target scarce resources at those most in need in areas affected by increased climate variability and public health risks.

Using evidence to support policy reform

Reform to the Kenyan national Water Act in 2016. Article 93 recognises alternative service delivery models beyond community management for the first time. This policy change was informed by research from the Oxford team and the early results of the FundiFix model.

Contributions to the 2019 Kitui County Water Bill.

In 2019, the Kitui County government invited REACH technical assistance to consult on the first Water Bill for the County. This work builds off Article 93 and also includes provision for public finance to support maintenance services, exclusive service areas allocating risk and responsibilities, and improved regulation and monitoring, including water quality and water safety planning. In partnership with UNICEF and national government, these changes are influencing other counties, including the establishment of a similar Trust Fund in Turkana County following similar principles and service delivery goals.

Reform of National Policy in Bangladesh, and development of the SafePani model. In Bangladesh, the experience and lessons are shaping reform of the 1998 National Policy for Safe Water Supply and Sanitation. A joint report by the REACH team with UNICEF and national government describes the [SafePani](#) model which adapts lessons from Kenya with emphasis on water quality and climate resilience.

In March 2023, the Bangladesh government announced the scale up of results-based contracting to district level to provide reliable water services for 1700 schools and 300 healthcare centres in Khulna district.

What next?

The [global diagnostic study](#) provides evidence to inform a strategy to reach 100 million rural people by 2030. The Uptime Catalyst Facility is testing a common contractual framework which will support this strategy. The progress of the WSMTF in Kenya and Uptime indicate there are results-based funds available subject to verifiable results of the reliability of waterpoints, the volume of water supplied, and sharing costs with user payments. Additional work is charting approaches to monitor and treat drinking water quality, ensure payments are affordable, and to include schools and healthcare facilities in exclusive service delivery areas. Long-term and ring-fenced budget commitments from national and sub-national governments will be critical to promote sustainability.

Outputs

Working papers and reports

WSMTF, (2022). [Water Services Maintenance Trust Fund - Impact Report, 2016–2021](#). Available from kituiwaterfund.org

Nilsson, K., Hope, R., McNicholl, D., Nowicki, S., & Charles, K. (2021). [Global prospects to deliver safe drinking water services for 100 million rural people by 2030](#). REACH working paper 12. Oxford, UK: University of Oxford and RWSN.

Hope, R., Fischer, A., Hoque, S.F., Alam, M.M., Charles, K., Ibrahim, M., Chowdhury, E.H., Mahmud, Z.H., Salehin, M., Akhter, T., Johnson, D., Hakim, S.A., Thomson, P., Hall, J.W., Roman, O., Achi, N.E., & Bradley, D. (2021). [Policy reform for safe drinking water service delivery in Bangladesh](#). REACH Working Paper 9, University of Oxford, UK.

Hope, R., Katuva, J., Nyaga, C., Koehler, J., Charles, K., Nowicki, S., Dyer, E., Olago, D., Tanui, F., Trevett, A., Thomas, M., & Gladstone, N. (2021). [Delivering safely-managed water to schools in Kenya](#). REACH Working Paper 8, University of Oxford, UK. ISBN 978-1-874370-82-6.

McNicholl, D., Hope, R., Money, A., Lane, A., Armstrong, A., Dupuis, M., Harvey, A., Nyaga, C., Womble, S., Allen, J., Katuva, J., Barbote, T., Lambert, L., Staub, M., Thomson, P., & Koehler, J. (2020). [Results-based contracts for rural water services](#). Uptime Consortium, Working Paper 2.

Hope, R., Thomson, P., Koehler, J., Foster, T., & Thomas, M. (2014). [From rights to results in rural water services – evidence from Kyuso, Kenya](#). Smith School of Enterprise and the Environment, Water Programme, Working Paper 1.

Journal articles

Armstrong, A., Hope, R. & Munday, C. Monitoring socio-climatic interactions to prioritise drinking water interventions in rural Africa. *npj Clean Water*, **4**: 10 (2021). doi: [10.1038/s41545-021-00102-9](https://doi.org/10.1038/s41545-021-00102-9)

Chintalapati, P., Nyaga, C., Walters, J. P., Koehler, J., Javernick-Will, A., Hope, R., & Linden, K.G. (2022). Improving the reliability of water service delivery in rural Kenya through professionalized maintenance: A System Dynamics Perspective. *Environmental Science & Technology*, **56**(23): 17364–17374. doi: [10.1021/acs.est.2c00939](https://doi.org/10.1021/acs.est.2c00939)

Foster, T. & Hope, R. (2016). A multi-decadal and social-ecological systems analysis of community waterpoint payment behaviours in rural Kenya. *Journal of Rural Studies*, **47**(A): 85–96. doi: [10.1016/j.jrurstud.2016.07.026](https://doi.org/10.1016/j.jrurstud.2016.07.026)

Hope, R., Thomson, P., Koehler, J. & Foster, T. (2020) Rethinking the economics of rural water in Africa. *Oxford Review of Economic Policy*, **36**(1): 171–190. doi: [10.1093/oxrep/grz036](https://doi.org/10.1093/oxrep/grz036)

Koehler, J., Nyaga, C., Hope, R., Kiamba, P., Gladstone, N., Thomas, M., Mumma, A., & Trevett, A. (2022). Water policy, politics, and practice: The case of Kitui County, Kenya. *Frontiers in Water*, **10** (4). doi: [10.3389/frwa.2022.1022730](https://doi.org/10.3389/frwa.2022.1022730)

Koehler, J., Rayner, S., Katuva, J., Thomson, P. & Hope, R. (2018) A cultural theory of drinking water risks, values and institutional change. *Global Environmental Change*, 50: 268–277. doi: [10.1016/j.gloenvcha.2018.03.006](https://doi.org/10.1016/j.gloenvcha.2018.03.006)

Thomson, P., Bradley, D., Katilu, A., Katuva, J., Lanzoni, M., Koehler, J. & Hope, R. (2019). Rainfall and groundwater use in rural Kenya. *Science of The Total Environment*, **649**: 722–730. doi: [10.1016/j.scitotenv.2018.08.330](https://doi.org/10.1016/j.scitotenv.2018.08.330)

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Story of change themes



Groundwater



Land



Coasts



Gender



Schools



Services



Health



Climate



Cities



Basins

REACH is a global research programme to improve water security for the poor by delivering world-class science that transforms policy and practice. The REACH programme runs from 2015-2024 and is led by Oxford University with international consortium of partners and funded with UK Aid Direct from the UK Government's Foreign, Commonwealth & Development Office, Project code 201880.