



# Progress to deliver safe drinking water services to 100 million rural people by 2030



## Story of change: Key findings & emerging impacts

### Summary

- REACH research is informing the development of results-based funding to improve rural water services and make progress towards SDG 6.1.
- In 2021, a global diagnostic survey identified rural water service providers in 68 countries with interest or existing experience in results-based funding. From small service providers to national and sub-national governments, over 460,000 handpumps and some 2.6 million piped connections were documented.
- Further screening of the data indicated up to 68 service providers in 28 countries could potentially provide results-based services to 5 million rural people in the near term.
- Four conditions are proposed to guide prioritising on-going country engagement: a) policy alignment, b) public finance, c) verifiable data, and d) professional services.
- Supported by the diagnostic study, the Uptime Catalyst Facility has expanded results-based contracts for reliable water services serving 1.5 million rural people in 7 countries in 2022 to over 4.5 million people in 16 countries, including Central America and India in 2023.

 Global



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Improving water security for the poor

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## Introduction

We know the world is badly off-track on progress to meet the safely managed drinking water goal by 2030. Rural areas are a particular concern where basic access is lower and safely managed water a more distant prospect. COVID-19 and climate risks have heightened these existing inequalities. Projected costs to meet even basic water access are beyond existing government and donor budgets. Current policy and practice will miss SDG 6.1 unless we explore new approaches which can be adapted to different contexts.

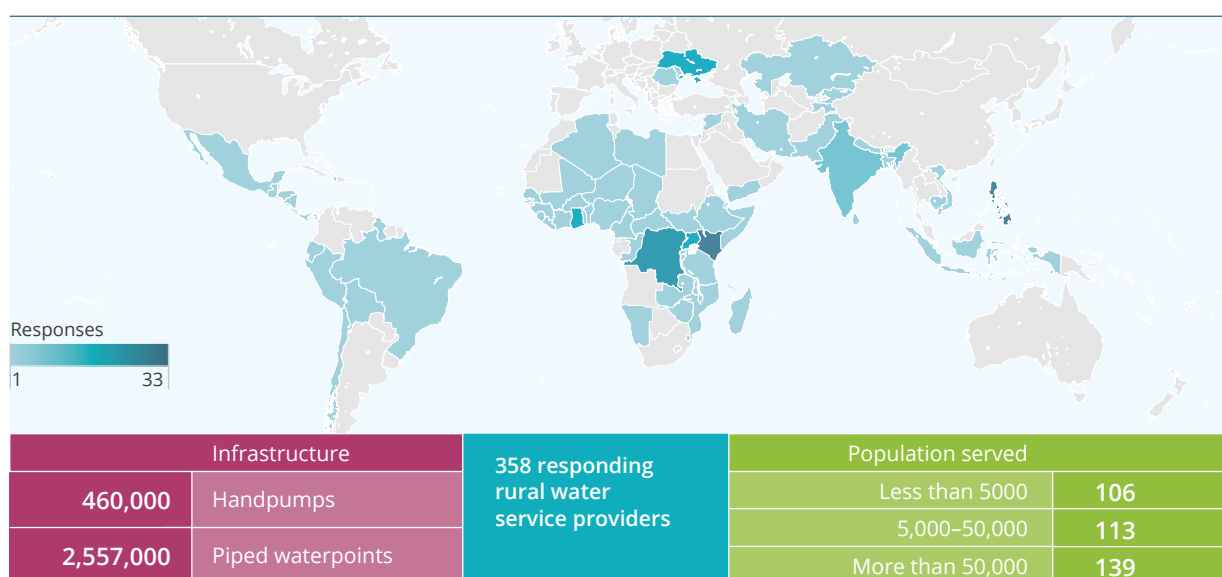
Results-based funding is neither new nor magical. The idea of using incentives linked to information has been part of the 'new public management' since the 1980s often running in parallel to the popularity of decentralisation and the subsidiarity principle. Results have been mixed. Overall, the rural water sector can provide limited evidence of successful applications with sustainable outcomes.

However, a number of professional service providers have been independently applying approaches consistent with results-based funding. In Africa, this includes FundiFix which operates in rural Kenya and has been a partner with Oxford University and the REACH programme for many years.

Since 2018, FundiFix has been a partner of the [Uptime Consortium](#), which has worked to establish a simple and common data reporting platform for operational performance metrics to develop a common contracting model. This work has permitted five partners to work collectively to explore if the rural water sector could apply results-based funding at scale. Results have been promising with 16 countries worldwide applying a common contract with payments in 2023, supporting reliable services for over 4.5 million people using handpumps or small piped systems. The Water Services Maintenance Trust Fund in Kenya has also acted as a flexible fund to improve learning and gather evidence about the application of results-based funding in this sector.

What needs to change to replicate this impact at a scale of, say, 100 million rural people? In 2021, REACH, RWSN and Uptime collaborated on a global diagnostic study which set out to explore if the conditions for results-based funding could be applied more widely both for professional service providers and also utilities and governments. The full [report is available](#) with a summary of key insights documented below.

**Figure 1: Location and number of responses from rural water service providers.**



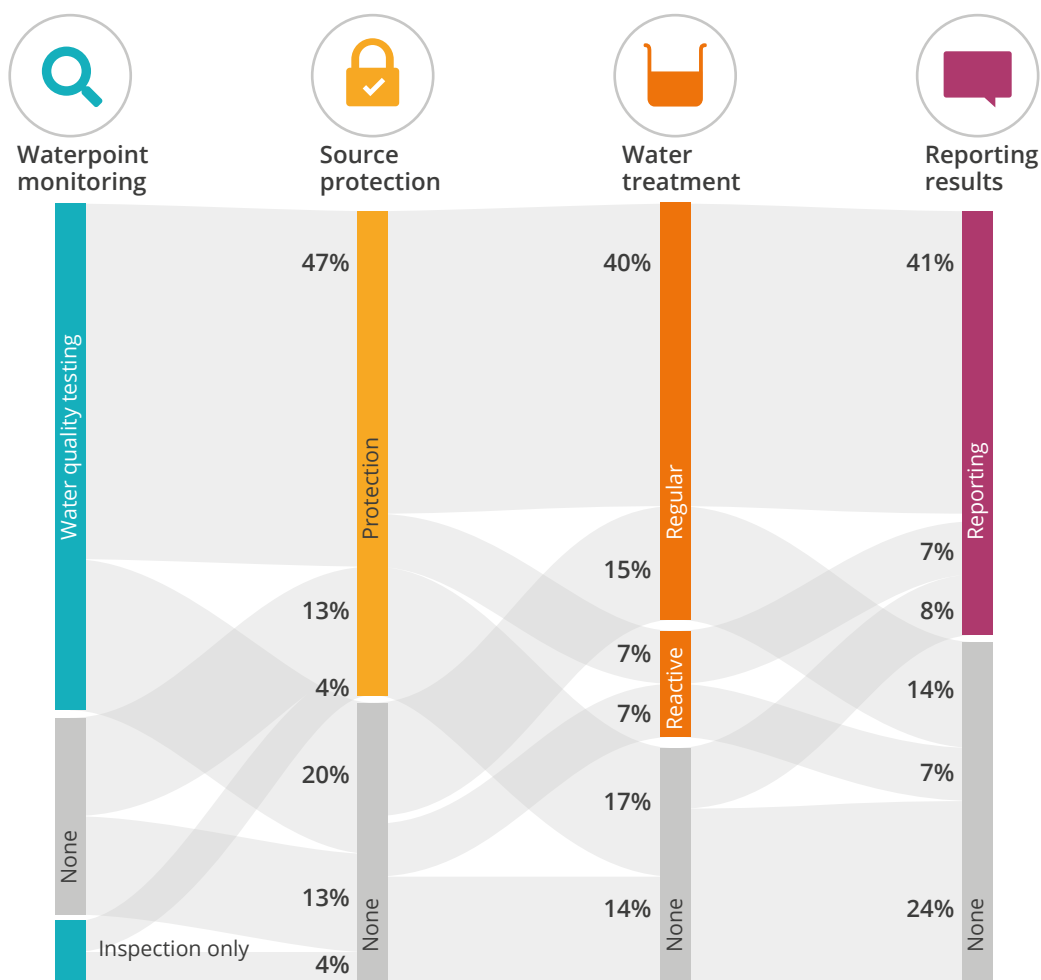
## What did we learn from the diagnostic?

Five major findings emerged. First, most service providers aim to repair broken infrastructure in three days or less. Second, almost all service providers reported at least one type of water safety activity (Figure 2). Third, most service providers collect payments for water services, usually in cash. Fourth, about one third of service providers reported major negative shocks to their operations from the COVID-19 pandemic. Fifth, non-governmental service providers in low income countries less often report receiving subsidies for operations, and more often report paying part of user fees to government, including through taxes.

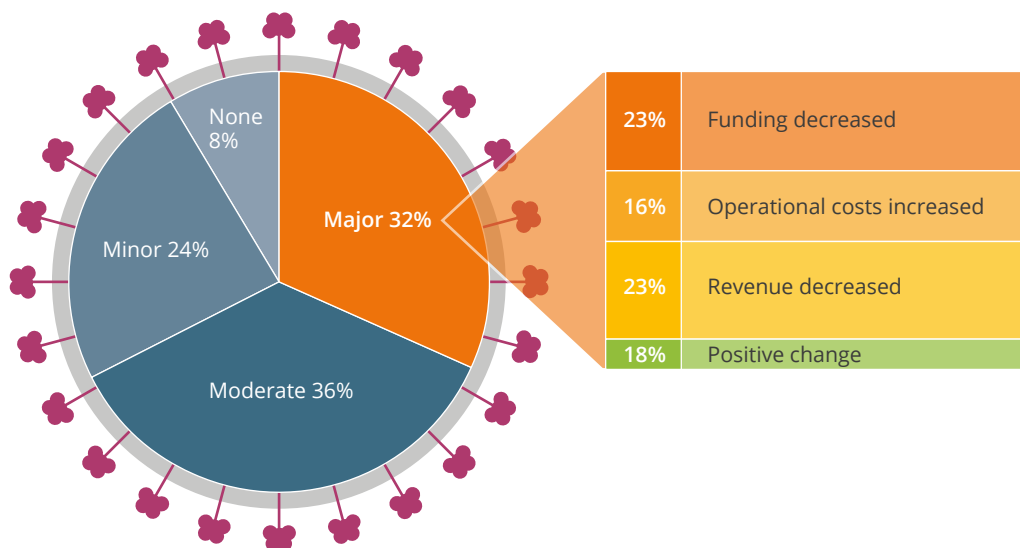
About one third of rural water service providers reported major negative impacts to their operations from the COVID-19 pandemic. These negative impacts included decreased funding support, decreased revenue collection, and increased operational costs (Figure 3).

The most impacted service providers were more often not charging for water services, compared to those describing moderate, low, or no impacts of COVID-19, who were more rarely providing services without charge.

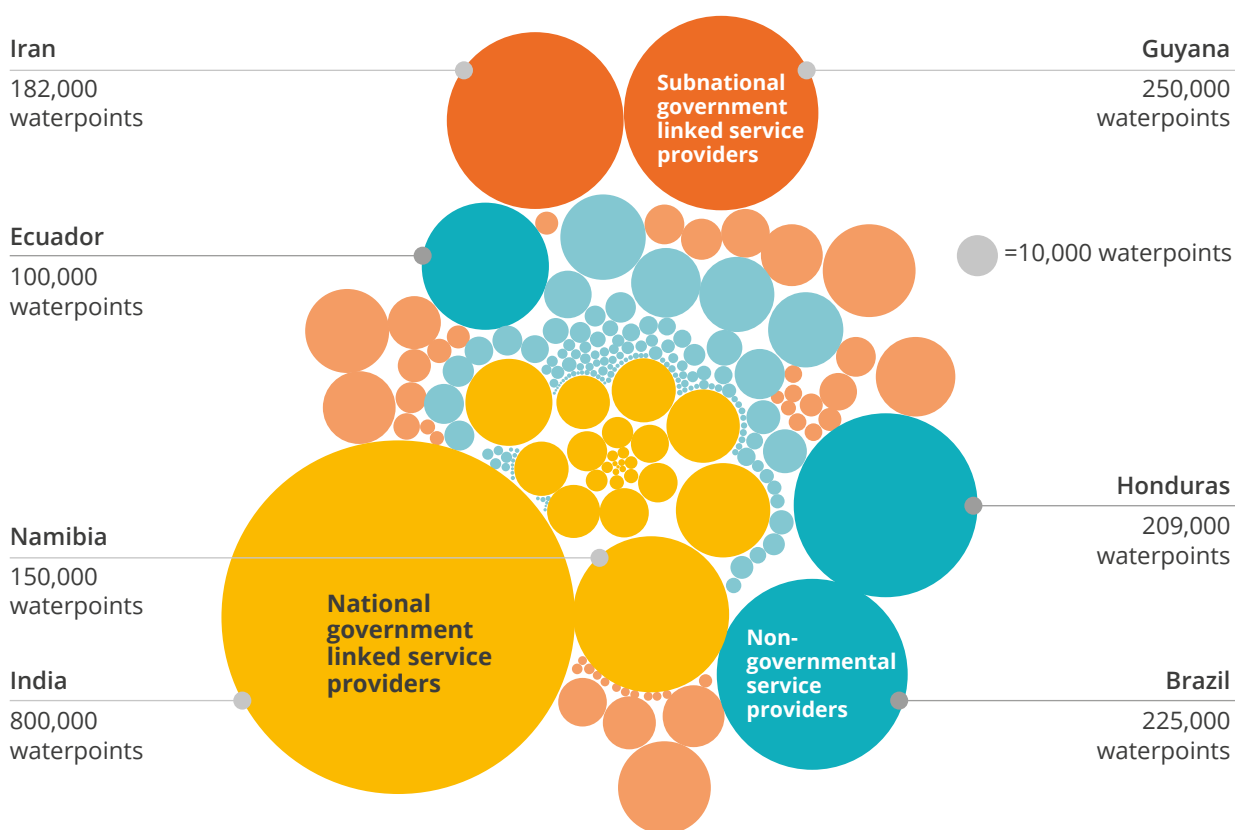
**Figure 2: Reported waterpoint safety activities.**



**Figure 3: Impacts of Covid-19 pandemic on service providers (multiple responses permitted for types of major impacts).**



**Figure 4: Responses from largest scale service providers. Number of waterpoints is rounded to the nearest thousand.**



Responses from utilities and government-linked service providers were considered separately from non-governmental service providers for analysis. However, the responses showed similar trends as the findings about non-governmental service providers with the important exception that the scale of operations were much higher (see Figure 4). Data from utilities suggest potential to rethink the often artificial boundaries between rural and urban water service provision. However, subsequent inquiries with utility respondents suggest uncertain opportunities in the near term.

Targeted discussions with a few government respondents suggest opportunities for advancement of safely managed drinking water through professional service provision may exist, though the sequencing and entry points for results-based funding will vary by context.

To guide this process, the diagnostic proposed four conditions to promote scale and sustainability:

- **Policy alignment** speaks to the policy priorities and legal obligations at national and sub-national levels. In some countries, there is a constitutional and legally binding commitment to provide all citizens with safe drinking water. This does not necessarily lead to high quality services though can provide a clear framework to allocate responsibilities between the government, a water services regulator and service delivery models. The latter may be non-prescriptive allowing different institutional forms, from a public utility working in urban and rural contexts to social enterprises focussing on deprived rural areas. Political processes and leadership are essential to coordinate multiple actors who may unintentionally waste limited resources in competing activities.
- **Public finance** is a key dimension of the policy context to support professional service delivery. Public finance needs to consider the blend and sustainability of public funds, donor transfers and user tariffs. With constraints to achieve full cost recovery from tariffs in most rural contexts along with insufficient and volatile donor funding, public finance is necessary to provide sustainable and inclusive services.

Results-based funding from public sources can complement user payments to support service sustainability and scale. In all cases, public finance needs to be well-targeted, efficient, fair and smart. Without public funding, progress to universal and safe drinking water services will stall.

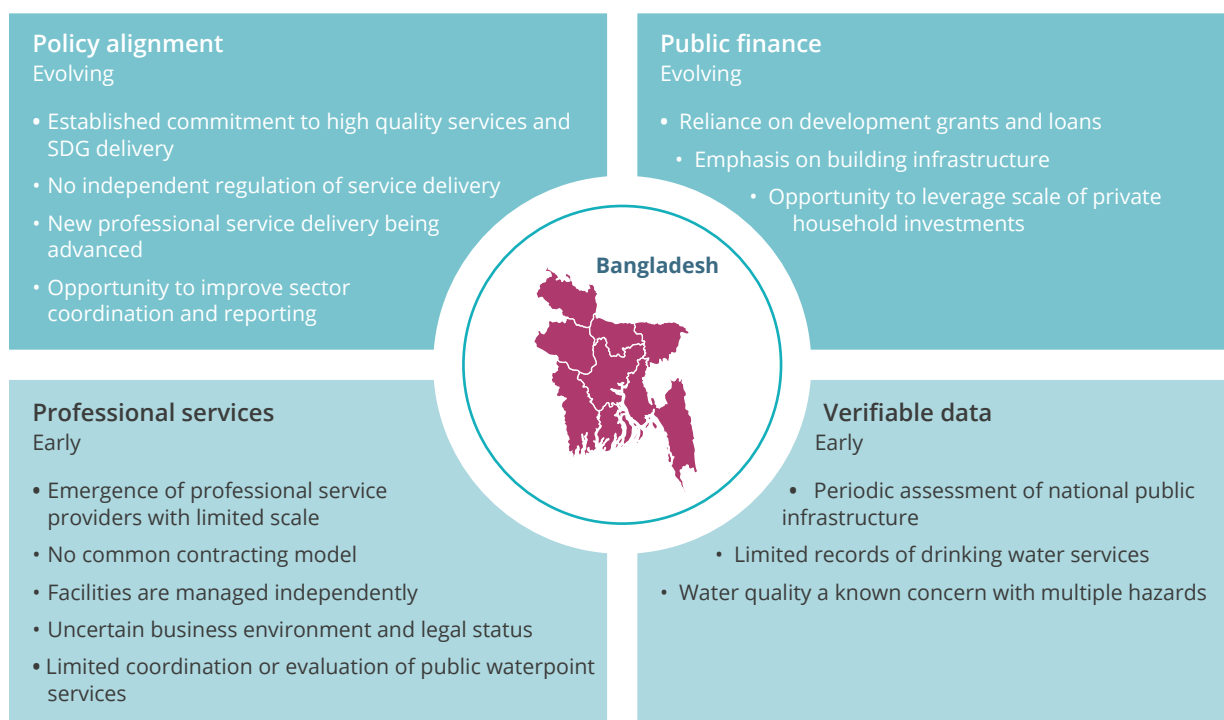
- **Professional service delivery** reflects a contractual approach where the risks and responsibilities in the delivering of affordable, reliable and safe drinking water services are allocated clearly and fairly between service providers, users and authorities. A service provider will be mandated to fulfil certain roles in proportion to its capacity and be visible to government subject to the local institutional arrangements.

Water users in communities, schools or healthcare facilities receive a minimum guaranteed service level determined by national or local government. Regular monitoring and reporting to relevant authorities would result in action and sanctions in the case of violation of specific conditions. This would include water quality standards and water safety which are often not adequately addressed in most rural contexts today. Technical assistance and funding may be necessary to support the transition to a professional service delivery model.

- **Verifiable data** are central to assessing and funding rural service providers. Verifying data in rural contexts is challenging and can lead to high costs with implications for sustainability of services. Advances in sensor technologies offer new opportunities to improve the accuracy and availability of data. Despite challenges and costs, verification becomes more practical when considered alongside the other three conditions. Linking data systems to professional service delivery, potentially as a requirement for public finance, could motivate development of innovative robust and low-cost methods.

Existing services may already be generating data that can be usefully captured and channelled when the need for particular indicators is clearly understood and the associated costs are justified. Without means to monitor delivery, results-based funding is not feasible.

**Figure 5: Conditions for scale and sustainability in Bangladesh.**



To illustrate the status and sequencing of these four conditions, we outline the context of Bangladesh (see Figure 5) where the REACH programme is working in collaboration with government, UNICEF and local partners.

Many other organisations are working to similar ends and existing initiatives may provide the means to accelerate progress. For example, the World Bank has a number of programmes in several countries exploring these ideas. Further, in India, the [Jal Jeevan Mission](#) has a commitment to provide over one billion people with piped drinking water by 2024. The design of the programme has an implicit results-based framework though it is less clear on future funding to maintain services after 2024. Other governments have initiatives and existing policy frameworks in various stages of implementation. These often include bilateral and multi-lateral donors with public commitments to delivery of SDG 6.1 for tens of millions of people. Donors wish to promote a common reporting framework to improve the sustainability and accountability of investments.

## What next?

After piloting this model in seven African countries serving over 1.5 million people from 2020–2022, Uptime have scaled up to contract service providers in 16 countries providing reliable water to over 4.5 million people in 2023. By design, Uptime has a selection bias to organisations with established reporting systems with performance metrics on guaranteeing reliable services. Beyond this cohort, there will need to be significant investment in technical assistance to establish the primary data and reporting systems for service providers to qualify for results-based funding. Conversations have been initiated with a number of governments to understand the interest in and alignment for results-based funding.

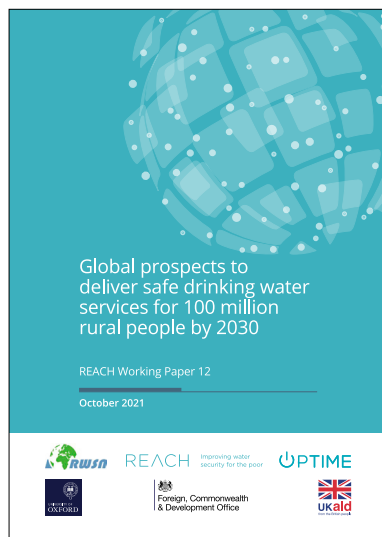
The Rural Water Supply Network (RWSN) and Uptime are working to maintain contact with those service providers and government authorities that responded to the survey, and reach out to more, so as to provide useful networking and knowledge management services that encourage the exploration and uptake of results-based funding, and document experiences to help future research and policy.

The era of investing only in drinking water ‘access’ in rural areas without accountability and funding for sustainable services in the future is drawing to a necessary end. The false economy of building infrastructure without sustaining services is now more clearly documented. Results-based funding is no singular solution to the inherited challenges of the past. However, it provides a means to monitor and reward the daily delivery of affordable, reliable and safe drinking water services for the hundreds of millions of rural people lacking services at home, in schools or in health care facilities.

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## Outputs

### Reports / working papers



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.

Charles, K., Nowicki, S., Armstrong, A., Hope, R., McNicholl, D., Nilsson, K. (2023). [Results-based funding for safe drinking water services](#). REACH Working Paper 13. University of Oxford and Uptime Global, Oxford, UK.

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

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.

McNicholl, D., Hope, R., Money, A., Lane, A., Armstrong, A., Dupuis, M., Nyaga, C. Katuva, J., Barbotte, T., Koehler, J., Thomson, P., Allen, J., Harvey, A., Womble, S., Lambert, L. and Staub, M. (2021). [Delivering global rural water services through results-based contracts](#). (Working Paper 3). Uptime Consortium.

### Journal papers

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)

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)

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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 from the UK Government's Foreign, Commonwealth & Development Office. Project code 201880.





