REDIT: JOHAN

Sustainable WASH Systems Learning Partnership

# LEGAL AND POLICY CHANGE TO PROMOTE SUSTAINABLE WASH SERVICES IN KITUI COUNTY, KENYA

December 2021





**Prepared by:** Johanna Koehler (Institute for Environmental Studies, Vrije Universiteit Amsterdam, The Netherlands/Smith School of Enterprise and the Environment, University of Oxford, UK); Cliff Nyaga (FundiFix Ltd, Kenya); Rob Hope (Smith School of Enterprise and the Environment, University of Oxford, UK); Pauline Kiamba (Rural Focus Ltd, Kenya); Nancy Gladstone (Smith School of Enterprise and the Environment, University of Oxford, UK); Mike Thomas (Rural Focus Ltd, Kenya;) Albert Mumma (Faculty of Law, University of Nairobi, Kenya); Andrew Trevett (UNICEF).

Acknowledgments: Permission for the research described in this report was agreed with the Kitui County Government, the national Ministry of Education and UNICEF (Kenya). The National Council for Science and Technology Institute awarded a research license to the University of Oxford and the University of Nairobi supported by ethical approval from the University of Oxford. The views and recommendations presented in this report are not necessarily those of or endorsed by Kitui County Government or the National Ministry of Education. Rural Focus Ltd (Kenya) supported the field work with thanks to a team of local enumerators. As well as the Sustainable WASH Systems Learning Partnership, research funders include the REACH program funded by the Foreign, Commonwealth & Development Office (Project Code 201880), the UK Economic and Social Research Council. (FCDO) and UNICEF. However, the views expressed and information contained in it are not necessarily those of or endorsed by FCDO or other funders that can accept no responsibility for such views or information or for any reliance placed on them.

Front cover: A view of Kyuso Town in Kitui County. Photo credit: Johanna Koehler

About the Sustainable WASH Systems Learning Partnership: The Sustainable WASH Systems Learning Partnership is a global United States Agency for International Development (USAID) cooperative agreement with the University of Colorado Boulder (UCB) to identify locally driven solutions to the challenge of developing robust local systems capable of sustaining water, sanitation, and hygiene (WASH) service delivery. The consortium of partners — Environmental Incentives, IRC, LINC, Oxford University, Tetra Tech, WaterSHED, Whave, and UCB — are demonstrating, learning about, and sharing evidence on systems-based approaches for improving the sustainability of WASH services in four countries.

This report is made possible by the generous support of the American people through USAID under the terms of the Cooperative Agreement AID-OAA-A-16-00075. The contents are the responsibility of the Sustainable WASH Systems Learning Partnership and do not necessarily reflect the views of USAID or the United States Government. For more information, visit www.globalwaters.org/SWS, or contact Karl Linden (karl.linden@colorado.edu) or Ryan Mahoney (rymahoney@usaid.gov).



# Table of Contents

Acronyms	iv
Water Policy, Politics, and Practice in Kenya	I
Policy Change in the Kitui County Water Sector	2
The FundiFix Model in Action	5
The Kitui WASH Forum	6
Water Services Audits and Database Development	7
Key Institutional Changes in the Kitui County Water Sector	8
Kitui Water Policy and Bill Development Process	8
Key Contributions in the Kitui Water Bill and Policy	9
Unresolved Policy Questions	
Wider Sector Implications	
Recommendations and Conclusion	12
References	14

# List of Figures

Figure 1. Functionality of Kitui County water sources on day of audit by source type	3
Figure 2 Timeline of water policy-making under devolution in Kitui County, Kenya	4
Figure 3: Public participation per sub-county by gender	9

# List of Tables

# Acronyms

CEC	County Executive Committee
KPI	Key Performance Indicators
MCA	Member of County Assembly
MP	Member of Parliament
NGO	Non-Governmental Organization
SDG	Sustainable Development Goal
SWS	Sustainable WASH Systems Learning Partnership
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WAG	Water Action Group
WASH	Water, Sanitation, and Hygiene
WSP	Water Service Provider
WRUA	Water Resources Users Association

### Water Policy, Politics, and Practice in Kenya

The rural water sector in Kenya is undergoing significant institutional change following national governance reform in the 2010 Constitution. Focusing on Kitui County, Kenya, a project location for the United States Agency for International Development (USAID) Sustainable WASH Systems Learning Partnership (SWS), this report outlines the direction of policy change over the past 10 years and reflects on ways in which public, private, and civil society actors are contributing to the evolution of a county water policy that supports sustainable water, sanitation, and hygiene (WASH) service delivery.

The Constitution of Kenya 2010 made some significant changes to governance structures, including introducing counties as a devolved level of government with specific mandates. These mandates included, among others, responsibility for water and sanitation services, stormwater drainage, soil and water conservation, and the responsibility to ensure public participation in public affairs (Government of Kenya 2010). The devolution of water services to the 47 county governments has posed a major challenge for policymakers as they work to establish county policies and legislation consistent with the national policies and legislation emerging from the new Constitution. Table 1 illustrates a range of political dynamics that interfere with the building of new county-level institutions.

Dynamic	Description
National-county policy dynamics	The national Water Act of 2016 clarifies some aspects of service provision and the structure of the new subnational institutions, but county budget allocations — especially for the rural water sector and for water services in institutions such as schools and health care facilities — remain ambiguous and need to be defined at the county level.
Intra-county political dynamics	Divergent agendas exist between Members of County Assembly (MCAs) and the County Executive Committee Members (CEC), who are partly motivated by election cycles and community support, and the interests of the bureaucratic elite.
Community practice dynamics	Voting blocs may emerge in alignment with community income generation and political support, which can influence adoption or rejection of new approaches to water service delivery.
Donor practice dynamics	External investments in development projects and research can create implicit pressure for change and impact — these may not always align with the strategic priorities set by the governor or other county-level government actors.

Table 1. Dynamics in the development of county level institutions for rural water service delivery

This complex array of policy and practice dynamics demonstrates the need for a legal framework at the county level to guide decision-making, operations, and financing in the water sector. While the development of such a framework and its implementation will in turn be subject to these overlapping processes, this report presents legal and policy developments in Kitui County, which, if implemented, could increase the likelihood of achieving sustainable rural water services.

### Policy Change in the Kitui County Water Sector

Kitui County is Kenya's sixth-largest county by area (30,430 km<sup>2</sup>), with 95 percent of the 1.1 million residents living in rural areas (KNBS 2019 Vol. II). It has an arid and semi-arid climate featuring a bimodal annual rainfall pattern. The longer dry season commences in May or June and lasts until rains arrive in October or November, but the seasons vary unpredictably and, in some years, very little rain falls for almost 6 months (Hope et al. 2021). For the 400,000 people in Kitui relying on surface water as a main drinking water source (KNBS 2019), and those who practice rainwater harvesting via roofs and gutters, rock catchments, and sand dams, the extended dry period creates water supply challenges. Groundwater resources, lifted by hand pumps or pumped using solar, electric, or diesel power to piped systems and kiosks, offer a buffer against drought for many Kitui County residents. However, water quality (natural salinity), infrastructure maintenance, and functionality remain concerns. In 2017, an audit of water infrastructure in the county identified 460 piped water schemes, of which only 56 percent fully functioned, and 687 hand pumps, of which only 45 percent fully functioned (Nyaga 2019; Figure 1).

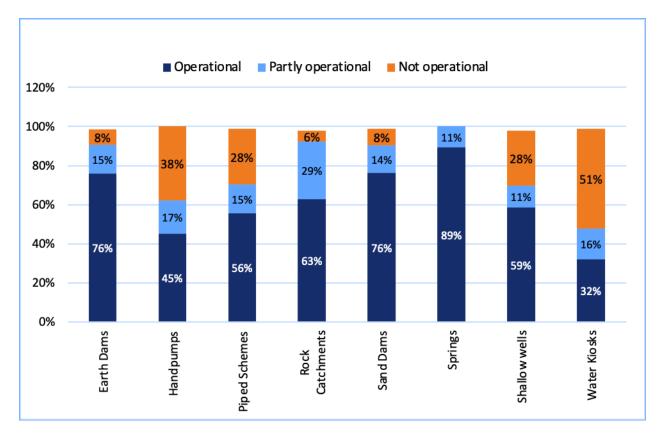


Figure 1. Functionality of Kitui County water sources on day of audit by source type

With large-scale institutional change ongoing in the country, a policy window opened for rural water sector research and policy engagement. A number of projects supported by different funders have served as policy experiments in Kitui's water sector (see Figure 2). The University of Oxford initiated a rural water research program in Kitui County in 2011, attracting the support of a number of development donors including USAID. Ten years on, this work has contributed to the development and implementation of a professional service model for rural water service delivery, known as FundiFix. An alternative to community-based management, the FundiFix model is described in more detail below, along with two other key developments in the Kitui WASH sector that have played (and may continue to play) into the policymaking process: the WASH forum and a County WASH database. Figure 2 provides a timeline of the water policymaking process. Subsequent legal and policy developments, including the development of the first county water bill, are presented in the "Key Institutional Changes" section of the report.

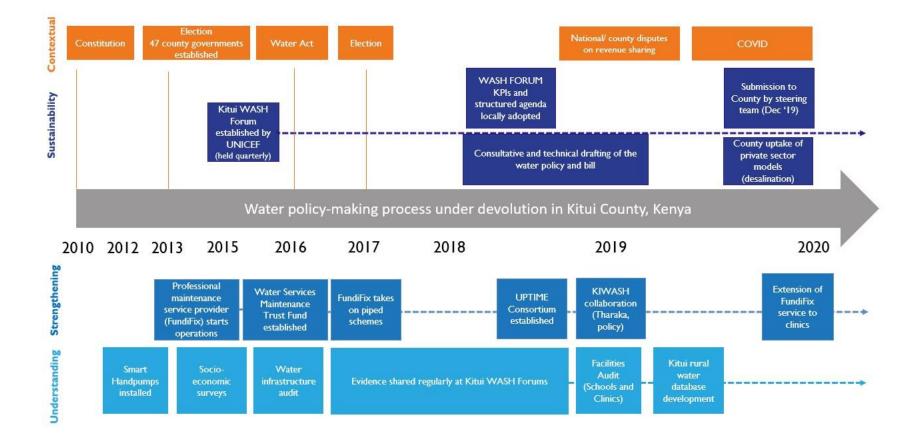


Figure 2 Timeline of water policy-making under devolution in Kitui County, Kenya

### The FundiFix Model in Action

The persistent challenge of how to achieve reliable water services for those parts of the population outside formal service provision areas motivated the intentional design and testing of a professional repair and maintenance service model called FundiFix (REACH 2016). It is built on the principles of professional services, smart monitoring, financial sustainability, and institutional coordination. This policy experiment thus included operational, financial, environmental, and social acceptability components. With smart hand pumps (Thomson et al. 2012) providing remote monitoring of hand pump use and breakdown, the service demonstrably enabled a reduction in hand pump downtime following breakdown (i.e., the time taken to repair a broken pump) from around a month to less than 3 days (SSEE 2014). A willingness-to-pay study and choice experiments with rural communities in Kitui and Kwale counties gauged community interest and contributed to the model design (Koehler et al. 2015; Hope 2015; Hope and Ballon 2019, 2021).

FundiFix is now an established professional maintenance service provider in Kenya that guarantees repairs for hand pumps within 3 days and service visits for piped systems within 5 days, offering an alternative to the usual model of community management. Water infrastructure maintenance contracts between communities and FundiFix are on a 1-year rolling basis and are established through regular engagement among the service provider, the local county government water office, and local communities. The FundiFix model engages communities on asset ownership, fee collection, and management of their own water points while maintenance risks are pooled at a supra-communal level (REACH 2016). With growing user demand, though not always regular user payments, FundiFix is now guaranteeing reliable water access for around 80,000 people in Kitui and Kwale counties through a prompt and professional service, and has expanded its service to more than 100 hand pumps and 24 piped schemes that also service local schools and health care facilities. Since 2018, FundiFix has also operated a water quality monitoring program and hosts a field water quality laboratory in its premises in



FundiFix at work. Photo credit: J. Katuva

Kyuso Town (Charles et al. 2020; Nowicki et al. 2020).

The funding gap between rural water user payments and the costs of a reliable rural water service has been addressed through the creation of a Water Services Maintenance Trust Fund (WSMTF). Established in 2016, the fund enables FundiFix to move toward financial sustainability and guarantee reliable services even if repair costs vary or users pay late. The WSMTF works through a resultsbased contract designed to attract contributions from non-donor funds. In 2017, donor funds paid for the majority of WSMTF contracts; by 2020, the donor proportion had fallen to a quarter with the majority now paid by results-based contracts from private sector partners (REACH 2021). This work has supported the concurrent development of the Uptime Consortium of which FundiFix is a part (McNicholl et al. 2019, 2020, 2021).

### The Kitui WASH Forum

UNICEF initiated the Kitui WASH forum in 2016, and it convenes quarterly. As of December 2021, the forum has held 10 coalition meetings with the participation of 47 to 63 actors drawn from national and county government, NGOs, donors including bilateral programs, private sector, community groups, and academic or research institutions (Nyaga 2018). The primary goal of the forum is to systematically plan for WASH investments and to document all available data on operational, financial, and institutional aspects of WASH systems. Project staff from SWS and REACH project research institutions have participated in the forum since its launch, conducting regular surveys and in-depth social network analysis to provide insights on changes in coordination, behaviors, and priorities for rural water sustainability in Kitui County. This long-standing and embedded interaction has produced significant and ongoing opportunities for knowledge exchange and co-production of an extensive evidence base on Kitui's water sector to inform policy development (Hope 2015; Hope et al. 2020; Kiamba & Chintalapati 2019; Koehler et al. 2015, 2020; McNicholl, Nyaga, & Pugel 2021; Nyaga 2018, 2019; REACH 2016; SSEE 2014, 2015; Thomson et al. 2012).



The Kitui Water Minister addresses the WASH forum. Photo credit: Kitui County Government

#### Water Services Audits and Database Development

Discussions at the first WASH forum meetings in 2016–2017 revealed insufficient data to guide planning and investment in county water infrastructure and maintenance. This led the county government and SWS partners, the University of Oxford, Rural Focus Ltd., and UNICEF Kenya, to conduct a series of water infrastructure audits in Kitui County from 2017 to 2019. The first water infrastructure audit included 3,100 rural water points across the whole county (Nyaga 2019) and complements a household survey on service quality and user preferences conducted in Mwingi North in 2018. An audit of WASH services in schools followed, developed in consultation with the national Ministry of Education, which included 1,887 primary and secondary schools in Kitui County, as did an audit of 122 health care facilities, including hospitals, health centers, clinics, and dispensaries.

SWS partners disseminated audit results through national and county platforms between 2019 and 2021. The county government has used the audit data to inform the development of a Kitui County Energy Plan in 2020 with support from the International Institute for Environment and Development and the Catholic Agency for Overseas Development. It includes a pilot planned for the water sector that the extensive information from the audits made possible. The Kitui County Government also leveraged the audits to negotiate a planned World Bank investment in solar water infrastructure in the county. The audit of school WASH services demonstrated a gap in institutional coordination between the county Ministries of Health and Water and the Ministry of Education: half of Kitui County's schools had no handwashing facility; less than one in three schools reported daily group handwashing activities; fewer than one in two schools reported toilets as clean; and few teachers had water quality concerns (4 percent) though monthly monitoring reveals multiple hazards, including E. coli, fluoride, salinity, and nitrates (Hope et al. 2021). While both national and county governments acknowledge the need for strategic action to expand the professional service to schools and health care facilities, at the time of writing conversations around specific commitments continue.

Two further noteworthy developments have occurred in Kitui's rural water sector. First, in 2019, following an SWS–facilitated debate, the Kitui County Government adopted 10 key performance indicators (KPIs) for monitoring water sector change with respect to the governor's manifesto and the Ministry of Water objective. The 10 KPIs were initially adapted from the community water audit findings. Second, SWS supported the development of a County WASH database, which will allow stakeholders to share available data to inform investment decisions. This activity has been anchored within the Kitui WASH forum to facilitate collective development of the database and to understand stakeholder motivations for adoption, strengthen interventions required for the successful adoption of databases, and determine the role or impact of databases in supporting alignment of sector priorities and actors for sustainability. The database provides an inventory of water infrastructure, using data and knowledge generated through the audits, and is kept up to date via the flow of operational and financial performance reports completed by all eight field-based (sub-county) government staff. It provides a common framework that supports (but does not impose) a means to increase transparency and accountability in decision-making, while leaving it open on who engages when and in what way. This

database may progressively come to influence sector planning and resource allocations, including donor programming.

### Key Institutional Changes in the Kitui County Water Sector

Broad actor recognition of the need for a legal framework at the county level to guide decision-making, operations, and financing in the water sector has led to the development of Kitui's county water bill, first presented in 2021 and delayed in approval due to the public health crisis. The policy and bill incorporate new findings from rural water practice and research in the county and continue to be open to exploratory cycles of intervention, reflection, and evaluation as the county proceeds to establish its water institutions. If enacted, the county water bill will be key for sustainable change in the areas of coordination, finance, monitoring, and professional service delivery models.

#### Kitui Water Policy and Bill Development Process

The process of policy and bill-making in Kitui County has involved a number of technocratic procedures with the interference of political interests. After the formation of a Technical Working Group, a desk review and a situation analysis of the policy environment took place with inputs from various departments within the Kitui County Government. Next consultative and technical drafting of the county water policy and the water bill occurred along with a meeting with a Kenyan legal expert on water issues. In a county assembly committee workshop the Technical Working Group, which included SWS partners, addressed political concerns. Finally, for content communication and translation, the Kitui County Government held public consultations with SWS partners and other WASH actors.

The Kitui County Government's Ministry for Water presented the draft policy and bill during public actor consultation workshops held in November 2019 in the eight sub-counties and at the county level. A total of 755 people (528 men and 227 women) participated in the sub-county workshops, demonstrating a gender imbalance (Figure 3). These actors included (1) chairpersons of major water schemes, (2) representatives of NGOs, (3) representatives of community-based organizations, (4) rural administration (county and national government), (5) religious leaders, (6) representatives of key local institutions such as schools and health care facilities, (7) political leaders (MCAs and members of parliament), and (8) local advocacy groups. This public participation aimed to create awareness of the policy and the bill, and to document critical views from the public and other WASH actors at the sub-county level, which the Technical Working Group took into consideration in the preparation of the final drafts.

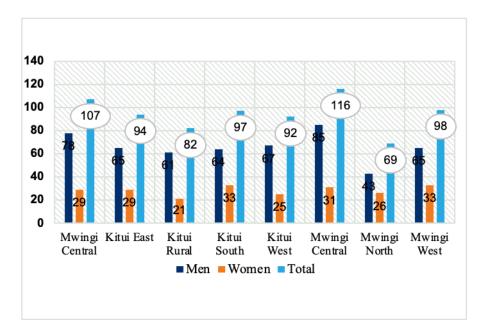


Figure 3: Public participation per sub-county by gender

#### Key Contributions in the Kitui Water Bill and Policy

The Kitui Water Bill and Policy provides a basis to advance more sustainable WASH systems with clarity and political support on revised arrangements for: (1) roles and responsibilities of county government to plan, build, maintain, monitor, and finance sustainable WASH services; (2) sustainable funding and finance arrangements, including guidelines linking capital and operational expenditure, affordable tariffs, and alternative funding models; (3) sector coordination through the WASH forum and monitoring systems; (4) service delivery contracts, including rural water utilities and maintenance service providers; (5) non-discrimination in service provision by wealth, location, gender, and facilities (e.g., schools, health care facilities, and hospitals); and (6) water resource management and protection of both surface water and groundwater. National policy developments and existing constitutional commitments informed work on the bill with reference to the Sustainable Development Goals (SDG 6). Here follows a more detailed overview over the six key contributions of the new policy and bill.

**Institutionalization of the County WASH forum.** The county government will legally enshrine and financially support the forum, thus internalizing it into county operations. It provides a structure within which various civil society, research institutions, and NGO actors can engage with the county government on WASH policy, planning, technical advisory, and performance. If the bill is enacted, the forum shall be funded from the Kitui County Water Services Fund and referred to as the WASHCOORD Forum.

Leadership of the County Water Directorate. The County Water Directorate has the primary responsibility to ensure water and sanitation services are monitored and reach the public. The bill

clarifies various responsibilities and structures within the directorate in relation to planning, approving designs, certifying construction work, monitoring, reporting, and inspections. Some unique roles for the directorate include registration of Water Resources User Associations (WRUAs), community water service providers, *inter alia*, establishing an information management system for water services, monitoring services, and reporting and issuing service quality compliance certificates.

**Establishment of a Kitui County Water Services Fund**. After the research project incubation of the WSMTF, a county-owned Water Services Fund will be formally integrated into county operations and established under Article 65 to pool and manage public, private, and donor funds to fund specific activities that support the county's long-term goals to deliver sustainable universal access to safe and affordable water and sanitation services. The Kitui County Water Service Fund is expected to receive funds from the county budget (proposed at 10 percent), levies from county water service providers (WSPs), and support from external partners. The fund will invest in specific strategic activities that are typically under-funded, including county WASH sector coordination, operation and maintenance, water security for schools and health care facilities, human resource capacity building, and water resources protection. At least 50 percent of the annual budget of the fund shall be ringfenced for operation, repair, and maintenance of drinking water supply and sanitation infrastructure, equipment, and facilities in areas considered not to be commercially viable. A fund administrator and a fund advisory panel will administer and guide the fund based on guidance to be established in a Fund Utilization Policy.

#### Recognition of the role of county water service providers and maintenance service

**providers.** Recognizing factors that affect the performance of WSPs and other rural social enterprises, including clustering of schemes, scale, exclusivity, and formal contracting, the county shall have one or more WSPs to provide water services within a specified service area. Other entities providing water services shall operate under license from the respective county WSP. This implies that the county WSPs shall have delegated responsibility to regulate these water providers (such as community water projects) within their areas. The bill proposes strict performance and fiscal accountability of all WSPs to enhance water and sanitation service delivery. The county will recognize the role of maintenance service providers in professional preventive and/or responsive repair and maintenance to keep water supply infrastructure functioning on a daily basis. The water and maintenance service providers shall be eligible for financial and technical support from the county government. An SWS learning brief provides further reflections on professionalized maintenance for rural water service provision (SWS 2021).

Water Action Groups (WAG) for accountability in regulation. WAG is a nascent structure incubated by the national Water Services Regulatory Board to give consumers a voice on the quality of water services. This provides an accountability loop on the WSPs. WAGs will be registered and may receive funding support from the Kitui County Water Services Fund.

Linking the resource and supply – WRUAs. A WRUA is a structure provided for in national water legislation to facilitate community-based water resource management. The WRUAs provide a vehicle through which source protection measures can be implemented. The bill enables a relationship between WRUAs and the county government as well as with the national government. The county government

will register the WRUAs, and they may receive funds from the Kitui County Water Services Fund to support county-level conservation activities, subject to meeting accountability criteria.

#### **Unresolved Policy Questions**

Several questions concerning ownership and accountability arose in the policy process that required further discussion among different parties.

Clause 62 of the Kitui bill tackles the long-standing challenge in rural water management of **ownership of community water assets**, including land ownership and control of access to community water assets. It stipulates that the county government will hold in trust all water works developed by WASH actors in future. There remains a challenge with respect to ownership of existing water assets, mostly due to informal processes that sector actors previously applied in which the communities made free land and labor contributions. Lack of official land acquisition paperwork has allowed individual owners or their families to claim ownership or compensation a few years later and at times interrupted service access. For the latter issue, the bill provides processes for ascertaining the origin of water assets for community water works. Further, Clause 77(6) establishes the formalization of all agreements entailing any land granted or leased by a community or an individual for the purpose of developing county water and sanitation assets.

Another important issue is the **accountability for contractor work** and the capacity gap in terms of executing the contracted work. According to Clause 60, a project implementation committee shall be established, with links to the WASHCOORD forum, to monitor project implementation. The committee will approve the certificate of completion to confirm that the work has been completed in accordance with the approved design and that the directorate approved any design changes.

#### Wider Sector Implications

Three important sector implications arise from the legal and policy change process in Kitui County, Kenya.

#### Achieving gender and minority representation in the policy process remains challenging.

Although women are key actors in WASH issues, their involvement was noticeably lower than men's in public participation forums (31 percent women compared to 69 percent men). Indeed, Bukachi et al. (2020) found gendered implications of revenue collection and community reservations about the professional maintenance approach that will be promoted by policy change. Thus, recognizing and addressing financial, social, and political barriers is necessary to facilitate women attending these decision-making forums to share their perspectives on water policy, and female focus group discussions should be facilitated. Representation at all levels also requires structural adjustments in terms of gender representation in the Water Directorate. The Kitui County Water Bill requires that "no one gender shall occupy more than two-thirds of the membership of any management board or committee" a consideration that is aimed at improving gender representation in all county water sector appointments. It also recognizes vulnerable groups by instituting special measures that ensure their access to water and

sanitation services. These measures include setting investment priorities and tariff policies that are responsive to the needs of vulnerable groups, such as children in schools, internally displaced persons, persons with disabilities, refugees or victims of drought, and marginalized communities.

#### Political interests have multiple dimensions that may focus on local and short-term issues.

First, given the recent decentralization reform, county officials lack knowledge about the policy process (e.g., differentiating policy measures from development plan activities). Second, competition for equal treatment and benefit between different MCAs led to conflicts of interest, at times hindering contributions toward improving rural water sustainability. Thus, capacity-building is needed with regard to the legal and policy process; and intra-county dynamics, linked to community practice dynamics, play a critical role in the development of county-level water service institutions aligned with the national policy framework.

**Ownership of the policymaking process is central to its success.** Local and external actors must balance the need to effectively reach an acceptable outcome with the recognition that technical support may be required to get there. The policy development process must be owned by the institution that will be responsible for implementation as well as enforcement. In the case of Kitui County Water Policy, the Water Department in the Ministry of Agriculture, Water, and Livestock took full responsibility in coordinating the entire process. The involvement of experienced representatives of the public and non-state actors in the policy formulation process is critical. These representatives should be of senior level and should be able to confidently commit their departments to the proposed policy changes. In Kitui County, the Technical Working Group, among others, comprised senior officers across various departments of the Kitui County Government. These officers deliberated on matters with professionalism and they fully owned the policy document.

That said, three important caveats should be considered in relation to devolved water policy development. First, most members of the Technical Working Group are county government officials with many other responsibilities. As such, they may not have time to develop technical documents; therefore, seeking policy support from government institutions responsible for policy development, such as the Kenya Institute of Public Policy Research and Analysis is prudent. Second, ensuring a balanced and representative policy development team with broad expertise for the comprehensive representation of issues requires further effort. Third, development partners funded activities for the policy and bill development process. Government funding to support the process would likely change the policymaking dynamics and the question of ownership over certain aspects.

### **Recommendations and Conclusion**

By formally recognizing the role of both public and private actors in the water sector, Kenya's national Water Act of 2016 provided a pathway for extending beyond the community-based management paradigm in rural water services, creating a legislated "space" in which professional maintenance service providers have been able to develop (Article 94) (Republic of Kenya 2016). Building on previous work,

Kitui County's Water Bill and Policy are poised to institutionalize such approaches at the county level. Challenging issues include limited gender and minority representation as well as various power games with internal and external actors that cloud the plurality of voices that are integrated into the final drafts of the bill and policy.

To advance along the path to sustainable WASH services in Kitui County and beyond, core recommendations from this research include:

Account for the long timeframes of institutional change. Harnessing the opening of a policy window for institutional change in the rural water sector (i.e., decentralization in Kenya) is critical; yet in most cases the following legal and policy changes will require a decadal timeframe. Moreover, most large donors operate within 3–5-year timeframes and therefore limit financial sustainability in their design. This requires new thinking on how to catalyze more flexible funding approaches to reflect on the relative risks and benefits of the size and duration of donor projects on system sustainability.

#### Draw on legal expertise and build trust for policy experiments in the rural water sector.

Incubating a professional service model and sharing performance data have been critical in demonstrating an alternative approach to rural water services in Kitui County and exploring its opportunities and challenges. FundiFix acted as a policy experiment, sharing otherwise commercially sensitive data to promote sector understanding and inform policy design. Moreover, local legal expertise for institutional innovation, including the trust fund, as well as the development of the water bill and policy has been critical for anchoring institutional change in existing frameworks and building trust with national and county governments. This is important to ensure the institutional and financial backing for policy experiments to become embedded in long-term practice of delivering rural water services.

**Establish collaborative learning approaches through WASH forums.** Bringing the diverse actors of Kitui's WASH sector together for multilateral communication is critical for building cohesion, knowledge exchange, and collective action. As a place where the dynamics of national-county policy, intra-county politics, community and donor practice play out, it provides an important platform for coordinating sector activities and long-term planning as well as defining boundaries of the WASH system, including clarifying responsibilities.

The water bill and policy development in Kitui County demonstrate a pragmatic and evidence-based approach that reflects the social, economic, and environmental context of a large, low-density county with around 1.1 million people living with multiple deprivations. It may have value for other arid and semi-arid counties in Kenya but will not be applicable to high-density, higher rainfall, and higher welfare counties. What is critical to note is the decadal timeframes for progress and that work on sustainability requires patience and multiple partnerships among public, private, and civil society actors to increase chances of progress.

### References

- Bukachi, S., Omia, D., Musyoka, M., Wambua, F., Ngutu, M., & Korzenevica, M. 2020. Can Social Capital Quench Thirst? Evidence from Rural Kenya. Available at: <u>https://reachwater.org.uk/can-social-capital-quench-thirst-evidence-from-rural-kenya/</u>
- Charles, K. J., Nowicki, S., and Bartram, J. K. 2020. "A Framework for Monitoring the Safety of Water Services: from Measurements to Security. *Npj Clean Water*, 3(1), 36. <u>https://doi.org/10.1038/s41545-020-00083-1</u>
- Government of Kenya. 2010. The Constitution of Kenya. National Council for Law Reporting.
- Hope, R. & Ballon, P. 2021. "Individual Choices and Universal Rights for Drinking Water in Rural Africa." Proceedings of the National Academy of Sciences, 118(40), p.e2105953118. <u>https://doi.org/10.1073/pnas.2105953118</u>
- Hope, R., Katuva, J., Nyaga, C., Koehler, J., Charles, K., Nowicki, S., Dyer, E., Olago, D., Tanui, F.,
  Trevett, A., Thomas, M., and Gladstone, N. 2021. Delivering Safely-Managed Water to Schools in
  Kenya. No. 8; *REACH Working Paper*.
- Hope, R., Thomson, P., Koehler, J., and Foster, T. 2020. "Rethinking the Economics of Rural Water in Africa. Oxford Review of Economic Policy, 36(1), 171–190.
- Hope, R. & Ballon, P. 2019. "Global Water Policy and Local Payment Choices in Rural Africa." Npj Clean Water, 2(1), 21. <u>https://doi.org/10.1038/s41545-019-0045-y</u>
- Hope, R., Foster, T., Koehler, J., and Thomson, P. 2019. Rural Water Policy in Africa and Asia. In J. Dadson, S.J., Garrick, D.E., Penning-Rowsell, E.C., Hall, J.W., Hope, R. and Hughes (Ed.), Water Science, Policy and Management: A Global Challenge. John Wiley & Sons, Ltd.
- Hope, R. 2015. "Is Community Water Management the Community's Choice? Implications for Water and Development Policy in Africa. Water Policy, 17(4), 664 LP – 678. <u>http://wp.iwaponline.com/content/17/4/664.abstract</u>
- Kiamba, P. & Chintalapati, P. 2019. Understanding Coordination in Kitui County's Water Sector: An Analysis of Stakeholder Interactions and Perspectives.
- KNBS. 2019. 2019 Kenya Population and Housing Census, Volume II Distribution of Population by Administrative Units. Nairobi: KNBS.
- Koehler, J., Thomson, P., Goodall, S., Katuva, J., and Hope, R. 2020. "Institutional Pluralism and Water User Behavior in Rural Africa." *World Development*, 105231.
- Koehler, J., Thomson, P., & Hope, R. 2015. "Pump-Priming Payments for Sustainable Water Services in Rural Africa." World Development, 74. <u>https://doi.org/10.1016/j.worlddev.2015.05.020</u>
- McNicholl, D., Nyaga. C., and Pugel, K. 2021. Understanding Changes in Coordination in Kitui County's Water Sector 2018-2021. Sustainable WASH Systems Learning Partnership (SWS) Research Report. Available at: <u>https://www.globalwaters.org/resources/assets/understanding-changes-</u> <u>coordination-kitui-countys-water-sector-2018-2021</u>

- McNicholl, D., Hope, R., Money, A., Lane, A., Armstrong, A., Dupuis, M., Harvey, A., Nyaga, C., Womble, S., Allen, J., Katuva., J., Barbotte, T., Lambert, L., Staub, M., Thomson, P., and Koehler, J. 2021. Delivering Global Rural Water Services through Results-Based Contracts. Uptime consortium, Working Paper 3. Available at: <u>https://www.uptimewater.org/s/Delivering-GlobalRural-Water-Services-through-Results-Based-Contracts.pdf</u>
- McNicholl, D., Hope, R., Money, A., Lane, A., Armstrong, A., Dupuis, M., Harvey, A., Nyaga, C.,
  Womble, S., Allen, J., Katuva, J., Barbotte, T., Lambert, L., Staub, M., Thomson, P., & Koehler, J.
  2020. Results-Based Contracts for Rural Water Services. Uptime Consortium, Working Paper 2.
- McNicholl, D., Hope, R., Money, A., Lane, A., Armstrong, A., van der Wilk, N., Dupuis, M., Harvey, A., Nyaga, C., Womble, S., Favre, D., Allen, J., Katuva, J., Barbotte, T., Buhungiro, E., Thomson, P., and Koehler, J. 2019. Performance-Based Funding for Reliable Rural Water Services in Africa. Uptime Consortium, Working Paper 1. Available at: <u>https://static1.squarespace.com/static/5d5fc19961d87c00011689d2/t/5f02887c0e31a70a9c5fc990/15</u> 94001552517/Performance-based+funding+for+reliable+rural+water+services.pdf
- Nowicki, S., Koehler, J., and Charles, K. J. 2020. "Including Water Quality Monitoring in Rural Water Services: Why Safe Water Requires Challenging the Quantity Versus Quality Dichotomy." Npj Clean Water, 3(1), 14. <u>https://doi.org/10.1038/s41545-020-0062-x</u>
- Nyaga, C. 2019. A Water Infrastructure Audit of Kitui County. SWS.
- Nyaga, C. 2018. Understanding Factors and Actors to Achieve Sustainable Drinking Water Systems in Kitui County, Kenya. SWS.
- REACH. 2021. Scaling-Up Results-Based Funding for Rural Water Services. REACH Working Paper.
- REACH. 2016. The FundiFix Model: Maintaining Rural Water Services. REACH Working Paper.
- Republic of Kenya. 2016. The Water Act. National Council for Law Reporting.
- SSEE. 2015. Insuring Against Rural Water Risks. Evidence from Kwale, Kenya. No. 3; Water Programme Working Paper.
- SSEE. 2014. From Rights to Results in Rural Water Services Evidence from Kyuso, Kenya. Water Programme Working Paper (Vol. 1).
- SWS. 2021. Professionalized Maintenance for Rural Water Service Provision: Toward a Common Language and Vision. Available at: <u>https://www.globalwaters.org/resources/assets/sws/professionalized-maintenance-rural-water-service-provision-toward-common-language</u>
- Thomson, P., Hope, R., and Foster, T. 2012. "GSM-Enabled Remote Monitoring of Rural Handpumps: A Proof-of-Concept Study." *Journal of Hydroinformatics*, 14(4), 29–39.