Data for Improved Rural Water Governance

PHOTO CREDIT: Water and Development Alliance (WADA), Tanzania, 2020.

Why Data?

Water governance includes the set of systems involved in decision-making to improve water management and water service delivery at all scales. The benefits of using data for decision-making have been increasingly recognized in recent years, partly driven by the growing number of stakeholders which are regularly collecting data on rural water services with smartphones, tablets and sensors which enable users to collect and share data more easily than ever before. This data provides an opportunity to better objectively understand the challenges which are slowing progress towards SDG6 targets and identify priority pathways to accelerate sustainable services. UN-Water (2021) recognizes that data can provide numerous social, economic, and environmental benefits in both public and private sectors, including stronger political accountability and commitment, increased evidence-based policymaking, and improved planning and investments at all levels, to ensure the most effective deployment of resources.

Data to Improve Governance at Water System Level

GROWS identified that, if executed well, collecting, sharing, and using data at the water system level can improve transparency, accountability, and trust for both water users and providers. While not an exhaustive view, below we have highlighted key technologies and practices found through GROWS for collecting, sharing and using data.

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Landscape Snapshot

Landscape report focused on TATE impacts from different approaches

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Collecting Data

• Audits, which shed light on service providers' finances and operations, can increase transparency, accountability, and trust, especially if they are regularly carried out by an external and independent party, with the results made available in easy-to-understand formats to regulatory organizations, government, and/or water users.

• Electronic taps and smart meters provide increased transparency about the amount of water disbursed and tariffs collected, which allows providers to be held accountable if this data is shared publicly. Electronic taps can also increase trust from both providers and users that water will be paid for and that the rates are fair.

• Remote monitoring of water system functionality can increase transparency, accountability and trust if the information is shared publicly and acted upon in a way which improves system performance.

Sharing Data

• Community meetings can increase transparency, accountability and trust, if the meetings are conducted in a manner in which technical and financial information is shared by providers, can be easily understood by community members, and can allow for feedback and questions from the community.

• Publishing performance reports can increase transparency, accountability, and trust if financial and/or technical information is shared in a way which can be easily accessed and understood by water users and regulators.

• Information dashboards can increase transparency, accountability, and trust if users are able to regularly access dashboards that present easily understood accurate and relevant information.

Utilizing Data

• Retrospective monitoring increases transparency and accountability in terms of the quality of work completed. Such information can be shared with other stakeholders to further increase transparency around performance. The capability to directly monitor work performed by private actors can increase users' trust that contracted work will be completed at a high standard.

• System-wide assessment tools can increase transparency and accountability by clearly defining a common and comprehensive set of metrics, which are used to measure and track system performance over time and making the data on those metrics publicly available. Trust can also be increased if the tools lead to improved system performance.

Collecting and Sharing Functionality Data at Scale

Governments and other organizations have made efforts to compile functionality and other relevant water system data at national or district scale to provide a comprehensive understanding at different geographic scales. Relevant national examples include the *Tanzania Water Point Mapping System* and the *Uganda Water Atlas.*

Using Data to Inform Decisions

At the national and international scale, progress towards Sustainable Development Goal 6 (SDG6) is tracked by national governments and by the _**WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene**_ (JMP). JMP provides nationally representative information on drinking water service levels using household surveys including the USAID funded Demographic Health Survey (DHS), the UNICEF Multiple Indicator Cluster Surveys (MICS), and national census information. [Please note that JMP also provides insights on sanitation and hygiene service levels, as well as WASH in schools and health care facilities.]

The _**Water Point Data Exchange**_ (WPdx) harmonizes and compiles water point data from disparate sources using a data standard to provide a comprehensive view of available rural decentralized water point infrastructure.

WPdx offers a suite of _**decision support tools**_ based on the open dataset, which provide coverage estimates based on access to infrastructure, along with recommendations on locations for rehabilitations, new construction and preventative maintenance, which can be used to inform budgeting and planning.

The Water Point Data Exchange (WPdx) is a platform for stakeholders to share, access and use data to support evidence based decisions and improve rural water governance.
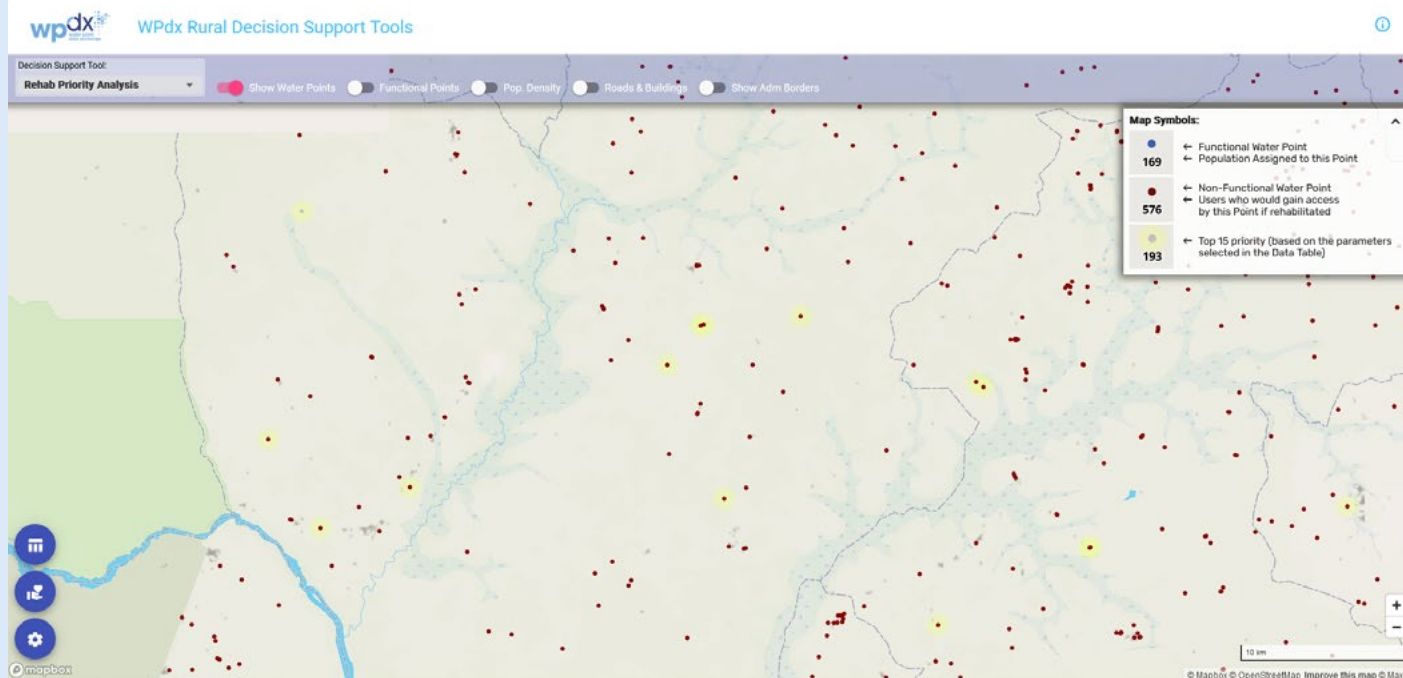
Tanzania Water Point Mapping

Water point mapping (WPM) to monitor the status of community water supplies has been part of the Tanzanian water management approach since 2004. Initiated by WaterAid and adopted by other key NGOs in the Tanzanian water sector (SNV, Plan International and Concern Worldwide), a widescale water point mapping exercise was held between 2005 and 2009 and resulted in the mapping of 55 of 132 rural water districts.

Subsequently in 2010, the Government of Tanzania adopted WPM as its main tool for monitoring rural water supply and developed an online database, the Water Point Mapping System (WPMS). Between 2011 and 2013, the Ministry of Water mapped all districts in Tanzania mainland and data was uploaded to the WPMS. Since 2013, data has been updated on a district-by-district basis by government water managers.

Following the establishment of the Rural Water Supply and Sanitation Agency (RUWASA) in 2019, a new management information system has been created, the Rural Service Delivery Management Information System (RSDMS), which aims to support performance monitoring for both operation and governance needs of rural water investments. RSDMS is used to monitor and regulate construction and service provision for rural water and sanitation at district, regional and national levels.

In February 2022, GROWS hosted a governance and water data workshop including participants from government, NGOs and development banks to explore current challenges and opportunities related to collecting, sharing, and using data to improve rural water decision-making. Participants stated that accurate and up-to-date data on water point location, functionality, water quality, water tariffs, number of water users and presence of an active community-based water supply organizations (CBWSOs) were needed to allow for monitoring water point functionality.

Participants identified the following key challenges for implementing effective WPM: 1) collecting information from remote water points; 2) ensuring information is up to date; 3) handling issues with accurately coding unique water points; 4) handling challenges around data quality related to paper-based collection; and 5) holding data providers accountable.

Potential approaches to help overcome some of the identified WPM challenges included: 1) building technical capacity of CBWSOs; 2) engaging water users to provide information on water point functionality; 3) investing in hard-to-reach areas; and 4) advancing technological innovation to update the data collection systems.

Citations

UN-Water, 2021: Summary Progress Update 2021 – SDG 6 – water and sanitation for all. Veråsion: July 2021. Geneva, Switzerland. Available online: https://www.unwater.org/app/uploads/2021/12/SDG-6-Summary-Progress-Update-2021_Version-July-2021a.pdf

Water Point Data Exchange, 2022. Decision Support Tools. https://tools.waterpointdata.org