HARNESSING WATER POINT DATA TO IMPROVE DRINKING WATER SERVICES

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SUMMARY: FROM WATER POINTS TO IMPROVING WATER SERVICES

TRANSFORMING WATER SUPPLY

To "transform our world", the Sustainable Development Goals (SDG) adopted by governments aim to ensure no one is left behind: that everyone has the water and sanitation services they need, when they need them (SDG 6). Achieving this ambitious target by 2030 requires accelerating progress and investment dramatically and a shift to providing services instead of infrastructure. National policy targets and the SDGs are not going to be met at the current rate of investment and failure of existing infrastructure due to a lack of service monitoring using water point data[1,2]. According to Antonio Rodriguez Serrano, Senior Water and Sanitation Specialist from The World Bank and Sistema de Información de Agua y Saneamiento Rural (SIASAR) team leader, "We have to keep the current services functional. The most critical question is not how to breach the gap to 100% coverage, it is how to sustain the services. Data we collect should help us to understand the factors that affect the sustainability of water services in rural communities and address the problems communities are having in a certain area. Data that does not trigger action should not be collected."[3] This White Paper builds on a) more than 30 cases from government, development partners and the private sector; b) the experiences of users of the Water Point Data Exchange; c) interviews with leaders in the space of water point monitoring; and d) action research in Uganda, a country leading in the use and publication of water point data[4]. Evidence on the real state of basic and safely managed services, including the location of water sources and water supply and their other attributes, will be pivotal for accelerating progress and ultimately achieving SDG 6.1. It is crucial for decision makers to understand this role of water point data.

ACTIONABLE GUIDANCE

National and local governments, donors and implementers each have different roles in ensuring sustainable services. This white paper provides actionable guidance to each on how to use water point data and improve water point monitoring based on existing practices and the experience of the authors working on water point monitoring programs and tools. There are complementary 2-page fact sheets available with the detailed recommendations.

STRUCTURE OF THE DOCUMENT

This document introduces what water point data are, why they are collected, and how they are used in "The Value of Water Point Data". The chapter "A Deep Dive: The Case of Uganda" illustrates the use and progressive improvement of water point data in a country that is actively updating and publishing its National Water Atlas. "From Water Point Data to Improved Water Services" provides an overview of how water point data can be used more effectively to measure services and water resources, strengthen the enabling environment, and improve coordination. It also reviews some innovative approaches under development, such as the remote monitoring of water points. Finally, "Recommendations" provides actionable guidance to a) national governments, b) local governments, c) NGOs and implementers, and d) donors and investors.

Box 1
Local government, the service authority, and the service provider[5]

This paper uses the term "local government" to refer to the legally mandated "service authority" as they are often, but not always, the same. Recommendations for local government in this paper apply to the service authority as well. According to Lockwood and Smits[5], the "functions of the service authority include planning, coordination, regulation and oversight, and technical assistance. In some cases, the ownership of the physical assets of rural water supply systems is held by local government entities, but this varies from country to country. These functions may be split between different administrative levels, for example between provincial and district authorities, depending on the degree of decentralisation or mix between decentralisation and deconcentration of functions." Service providers "include community-management entities and local private operators, as well as publicly mandated utilities, and individual households. In reality there are a number of variants within most of these categories, as well as hybrids, reflecting different degrees of system complexity and levels of service demanded."

CONTENTS:

THE VALUE OF WATER POINT DATA

WHY DO WE COLLECT WATER POINT DATA?

For national governments and program managers, the main use of water point mapping has been to set a baseline for monitoring of water service results against national or program targets. Some national governments use the data to guide, monitor and support local governments, to ensure progress on water coverage and services in districts, set allocations for local government, and budget and plan new programs[6,7]. Local governments use water point data to determine the status of water services, make district investment plans, support communities, advocate for district programs, improve the targeting and coordination of partner interventions, and for the acquisition of funding. The demand for evidence by users, politicians, planners, engineers and financiers is an important factor in whether water point data are collected and used.

For donors and NGOs that undertake water point mapping, good quality water point data are crucial for assuring and showing program results to stakeholders[8-10]. In some cases, water point data are consulted in advance of program design and as part of post-implementation monitoring of NGO programs[11]. Water point data are also frequently used by sector experts, researchers and students for evaluations and studies of rural and peri-urban water services.[12,13]

Box 2:
What are water point data?

Water point data are a set of records which uniquely identify water points and provide additional attributes such as the type and condition of the infrastructure, functionality, service levels and sustainability of the water service from that water point. Water point data typically will also include information on when that data were collected and by whom. A water point is a

1. Point source from which water is abstracted, such as a borehole, well or spring, and

2. Water supply/distribution points, such as a handpump installed on a borehole or a standpipe in a small piped network. It is important to be able to distinguish between piped and non-piped water supply to use water point data.

Examples are: a drilling log for the borehole, groundwater monitoring data from a borehole, water quality samples from handpumps, a functionality map of rural handpumps, smart meter readings, tariff collection records from a water point vendor, and management performance information.

A RECENT HISTORY
OF WATER POINT DATA

Mapping water sources is not new. However, it is only in the last 15 years, with the advent of increasingly accurate and affordable GPS/GLONASS, internet, and phone-based data collection that water point mapping has reached new heights and data are becoming more accurate and accessible.

WaterAid Malawi was one of the forerunners of using and advocating for digital water point mapping and started in 2002 with the objective of providing "a basis for a more equitable, efficient, accountable and transparent allocation of resources for water point construction and rehabilitation at district and sub-district level" and expected water point mapping "to strengthen the availability, depth and quality of data throughout the sector" [14]. Since then, several national water point atlases [i] are publicly available online in developing countries, for example Cambodia[15], Bangladesh[16,17], Ghana[18], Liberia[19], Sierra Leone[20], Uganda[21], and Tanzania[22]. The international Water Point Data Exchange[25] website now provides public access to more than 350,000 records in a standard data format.

In the last 13 years, the Rural Water Supply Network and others have published a series of well-cited publications that have created a better understanding and appreciation of higher than expected rates of non-functional water points globally [26]. Because of the need of governments, donors, researchers, NGOs and the private sector to collect and assess water point functionality, several organizations have specialized in the creation of water point mapping and monitoring tools [27–35]. The focus on the collection and dissemination of functionality data has been a double-edged sword. While the access to data and functionality statistics has improved, water point data are not often combined with a strong understanding of how to use the data to move beyond assessing the performance of infrastructure to improving the performance of services delivered. Local government and service providers require more information than functionality on the actual services delivered to fulfill their roles in the provision and support of water services.
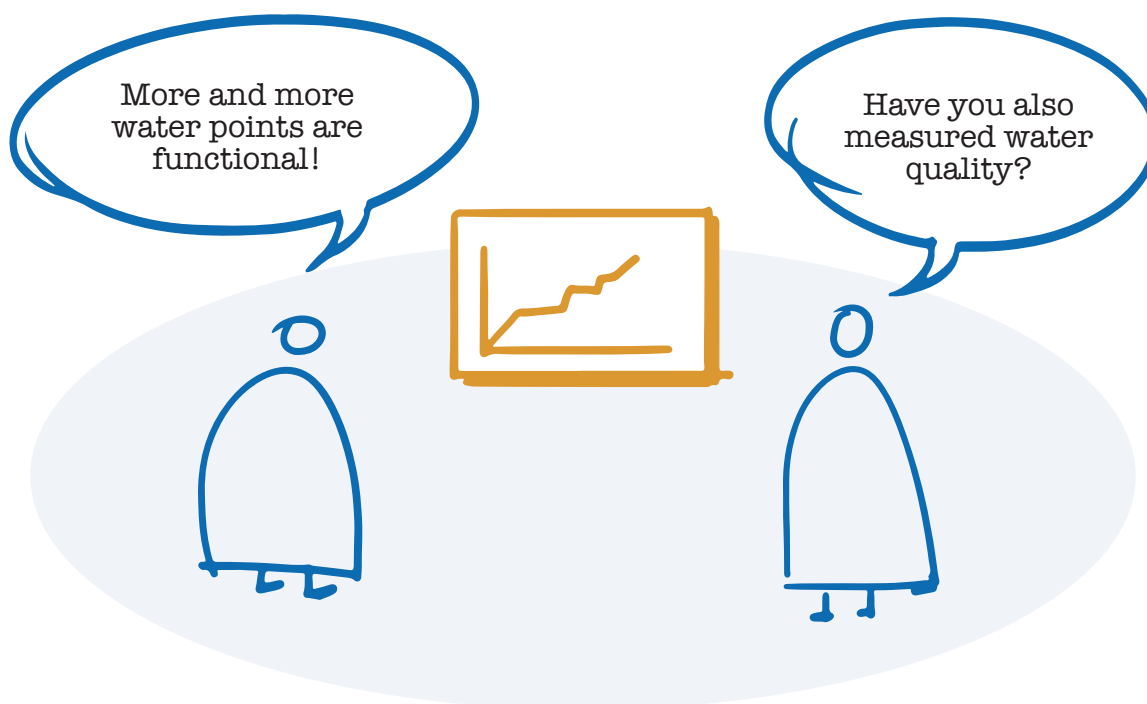

Figure 1:
Local Governments require more information than functionality to assess the service levels

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[i.] Regional initiatives, such as SIASAR in Latin America[23] and the AMCOW Pan-African M&E system[24], are creating new channels for the publication of national data and may facilitate the publication of water point data in the future.

THE USE OF
WATER POINT DATA TODAY

Water points are typically registered by community or geographical area and sometimes with a water point name, identifiers and/or GPS coordinates. Collecting these data usually requires travel and is relatively expensive when not included as part of routine operations. Thus, many inventories of water points are collected only once without a plan for routine updates.

At its best, water point data are being used to improve the practice of the people and institutions involved in service delivery and to strengthen the enabling environment as part of routine monitoring, for example once a year. National governments have used water point data to develop and set policy targets and as a part of several joint sector reviews to evaluate and learn from sector progress [36]. Local governments have used water point data to assess services, plan corrective actions, for example identifying hand pumps for rehabilitation and water committees which need to be trained, and lobby for funding.[6] Today, it is possible for international and local stakeholders to find each other with public water point data, to advocate, and to work together to improve services. The simplest water point location data shared on the Water Point Data Exchange was enough for two NGOs, Initiative Eau and H2omap. org, to find each other in Burkina Faso and identify an opportunity to extend their water quality mapping activities together [37].

Table 1:
Some examples of the use of water point data

Use	Cases
Service Provision	Automated dispensers/standpipes: Grundfos [38] and Susteq [39]
Asset Management	Tools using water point data from IRC [40] or Water for People [41]
Financing / budgeting	Life-cycle costing benchmarks for basic water services [42], Evaluating district financing needs [43], Allocation of national budget in Uganda [44], Fundraising by Charity: Water [45], Assessment of revenue collection [46], Payment of hand pump mechanics [47,48]
Operations	Remote monitoring of water points such as Portland State University [49], Oxford University [50], MoMo [51,52], Spare parts sales, distribution, and servicing [53], Water pre-payment and sales [38],
Water Resource Management	Smart hand pumps for groundwater resource management [54,55], Recording historic water rights [56]
Preventive Maintenance	Preventive maintenance of hand pumps in Bombali in Sierra Leone [57], Predicting failure with smart handpumps [58]
Performance Management	DiMES water services monitoring framework [6], Hand pump mechanics association Uganda [59,60]
Business cases	Skyfox spare parts [53], The Bluepump [12]
Contracting	DiMES water services monitoring framework [6]
Partnerships	Initiative Eau and H2omap.org in Burkina Faso [37]
Planning	Cambodia [61], Kenya [46,58,62], Sierra Leone [63,64], and Uganda [8,11,65,66,9]
Policy Development	DiMES water services monitoring framework [6], Tanzania [22], District in south of Cambodia [61], Gender mainstreaming Vanuatu [67], Kenya SNV [62], Lira Local Government in Uganda [65]
Other uses	Advocacy in Bombali [57], Technology review (Bluepump) [12]

MOST WATER POINT RECORDS
ARE STUCK

While there is great potential, some challenges hamper widespread use of water point data to further improve service provision. The diverse approaches to data collection, storage and analysis have created inaccessible and disparate datasets with difficulties in linking different datasets to create a picture of how services are changing over time. There is a focus on one-off data collection, a lack of funding for recurrent monitoring, and water points are often not provided with a unique identifier or name [57,64]. Drilling logs and detailed information on water points are still often stored on paper in local offices if they are filed at all. A similar challenge remains regarding the technologies and tools that are available and used. Digital data may sit on a single computer in a local office and subsequently not be used. Password protected management information systems and poor dissemination prevent the use of data after they have been collected. Digital systems are changing rapidly, but there is little standardization of data and it is not always possible or easy to move data from one tool or survey format to another [3].

From national governments, there is an expectation that local government and development partners will use national water point data to support communities and service providers and increase coverage. However, they do not always receive the data they need to make decisions, nor the capacity to analyze and present results. Challenges with local capacity include financial resources, skills to interpret data, aptitude to use hardware and software, and available manpower. At times, analysis of data is done one-off by an outside expert or researcher but lessons are not necessarily well disseminated or used in decision making [63]. Not all development partners require that data on program water points be collected and reported, and some do not necessarily act on the results to improve services or adjust programming.

To make a significant impact and overcome these limits, a coordinated effort by all partners is needed. For example, NGOs such as IRC, WaterAid, and Water for People coordinate in a long term partnership with district governments and require their country offices to share data with government and provide training on how to use the data [68]. The case of Uganda presented in the next chapter provides more insight into the type of coordination that is required and the importance of a national framework from government to overcome these challenges.

A DEEP DIVE: THE CASE OF UGANDA

IRC Uganda and WASHNote reviewed current practice around water point mapping, monitoring and the use of water point data for decision making in Uganda. After interviews with central government technical staff, district water officers and civil society organizations that are using water point data, 13 cases were documented, followed by a learning and sharing event with over 20 leaders in water point mapping.

Uganda provides a strong example from sub-Saharan Africa of sharing and using water point data, by actively reviewing, evaluating progress and learning from the data [69]; and the Ministry of Water and Environment maintains a strong national monitoring and evaluation framework with Golden Indicators [70] that has recently been updated to incorporate the SDGs [36]. The Ministry hosts the Ugandan Water Supply Atlas, which contains over 125,000 water points available on an interactive map, and the portal calculates daily the high-level indicators results at national and district level. The Ministry gathers raw data collected by the districts through standardized (paper) forms and from data collected by NGOs that has been aggregated by the umbrella organization UWASNET [71] and processes it into the Ugandan Water Supply Atlas.

PROGRESSIVE IMPROVEMENT IN THE USE OF EVIDENCE IN UGANDA

Every year government, multilateral partners, civil society organizations and the private sector come together for the joint sector review to assess national performance calculated with water point data, identify funding gaps and coverage levels, understand the state of the infrastructure and services, and get to know investment needs.

At the national level, water point data in Uganda have been used to plan and monitor water systems, identify the suitability of different technologies, support the development of the district investment plans and forecast what financial resources are needed to reach everyone by 2030 [7]. At the district level, water point data are evaluated together with stakeholders in district-wide coordination meetings and results are used for advocacy and planning of water services [65,66]. Water point data on functionality, ground water levels, water quality and risk levels are used to plan the maintenance of water points, support community management, and to assess services against national standards [65,66].
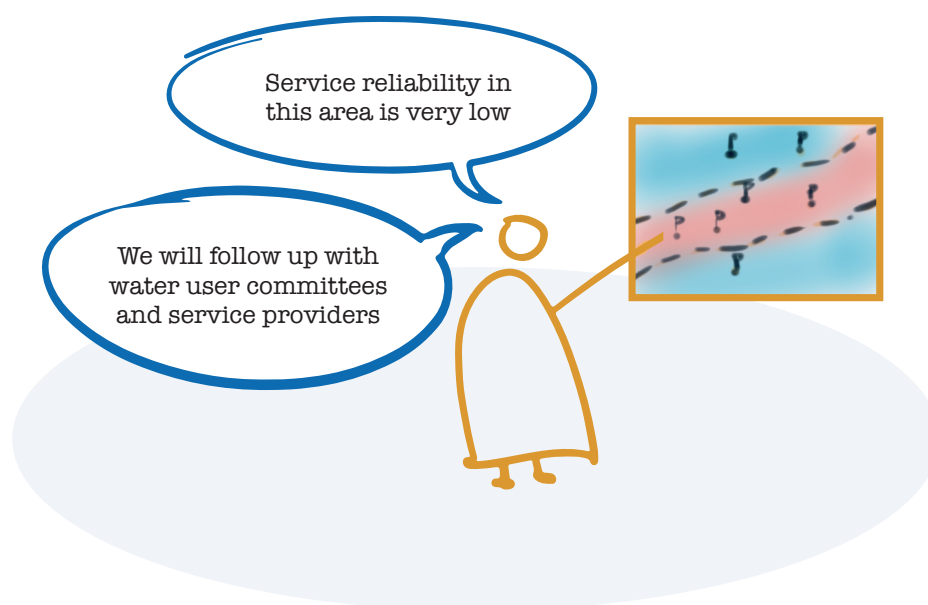

Figure 2:
Use water point data to plan corrective actions and design programs with partners

Development partners use water point data in a large variety of ways in their own programs, reflecting their diverse needs and approaches. The most common uses are planning, reporting, advocacy, priority setting, and program design [9,11,71–74]. Water point data are often the starting point to compare the partner's objectives against national standards and to quantify the partner's contribution to Ugandan and district targets [72]. Some NGOs such as Water For People, Evidence Action, WaterAid, and IRC are using water point data to innovate around approaches and guide decision making in district-wide programs in partnership with government [9–11], including using the data for planning and risk analysis [73]. Water point data have also been used as an active management tool [9,47]. For example, some development partners are successfully using water point data to pay hand pump mechanics based on the reliability and functionality of water points [39,40].

CONTINUE TO HARMONIZE THE COLLECTION AND USE OF DATA

The use of data by partners in Uganda is far from uniform, and it can be quite complicated to aggregate country water point data for inclusion into the national atlas as many partners use custom formats and codes. To improve the quality and alignment of data in districts there is a demand for standardization of the data collection process (tools used, phone apps, databases, frequency of collecting and reporting) to ensure that data from different sources are comparable. This includes using the same data collectors, as "the quality of the data is as good as the person collecting it," and the demand to add water point names. Without names, GPS coordinates are not sufficient to update data based on a phone call. All parties are called to work together to strengthen government monitoring systems and, to this end, voices have been raised to refocus national budgeting from hardware to software [iii].

Figure 3:
Water Points are more easily matched when the data entry includes an unique ID and distinctive description

GPS only   Unique ID + rich descriptions

% data matches of water points
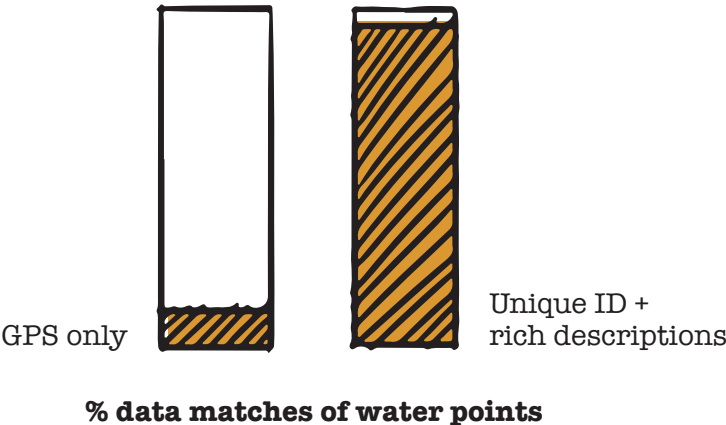
For the use of data, stronger and more detailed service level indicators are needed than those supported and used by government and development partners, according to NGO leaders in water point monitoring in Uganda. There is wide agreement [iv] that joint sector reviews should check the use of evidence and water point data to ensure the alignment of indicators, data collection processes, analysis, and tools. Equally, program and partner objectives should be harmonized with national policy lines. Lastly, leaders in water point monitoring recommend providing more detailed data by making full national, district and NGO datasets available and by including more district details in national sector review reports.

iii Software includes training, data collection, reporting, water quality testing, etc.

TELL THE STORY IN DISTRICTS: REFLECTIONS FROM WATER POINT MAPPERS

Politicians in Uganda are influential in the allocation of resources, and their involvement is paramount. Efforts are needed so elected officials understand the status of WASH services from a human point of view. Data alone are not enough, decision makers would rather hear the story behind the data, for instance by letting women in areas with poor services narrate their experiences. Politicians can articulate stories of people and use them to advocate for appropriate responses. The timing of these stories and messages is important. These should be interlinked with district planning cycles to inform the decision-making process and resource allocation in the district. Discussing the raw data can be facilitated by district technical staff. District staff can work with partners to define and reach consensus on the results of reported data and present that in an easy way to users and politicians. There is a need to break up data and disseminate it to the lowest level so, for instance, the sub-county water boards can use water point data to perform their roles. Using water point data for a district investment plan provided the opportunity in at least one district to develop a common story that spoke to all partners [66].

Box 3:
A vision for water point data use in Uganda [v]

Local and national governments envision improving on indicators, data collections tools, and digital techniques so that a complete picture of water services and resources can be captured and so stakeholders will be aware of the quality of services delivered and work to improve them.

Development partners envision a transparent sector with partners that respond appropriately to evidence, have clear roles and responsibilities, and have the capacity to execute their functions. It is a sector that monitors in real time, invites conversations, and enables different stakeholders to contribute and act based on evidenced data. This is a sector where it becomes the norm to click and know where to intervene to ensure effective and efficient systems that work to improve water services, decisions and plans. Water point data are used to improve management and the behavior of users. Finally, it is a sector that works together to empower and support permanent government structures and personnel to collect water point data and use it to ensure the delivery of water services.

Figure 4:
Use water point data to tell the story of water services to others
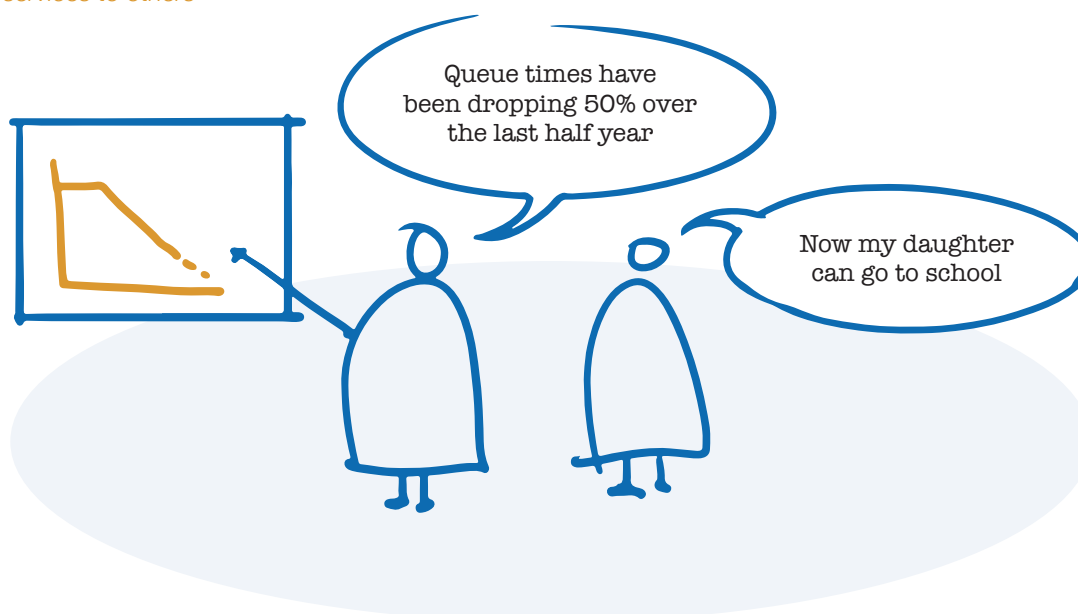
FROM WATER POINT DATA TO IMPROVED WATER SERVICES

Governments, NGOs and the private sector have shown that water point data can be used to assess the need for new programs, target interventions, identify problems in existing services and their management, and plan maintenance and/or corrective actions. The case of Uganda highlights the importance of government leadership in working with all stakeholders in a continuous process of water point monitoring and learning.

Globally, national policy targets and the SDGs are not going to be met at the current rate of investment and failure of existing infrastructure due. At the current rate of investment, only the capital costs of achieving basic services will be covered. Achieving safely managed services will require three times the current level of capital investment [1,2]. These estimations do not account for the cost of maintaining existing services and ensuring they meet national standards. In the next 10 years, on average, recurrent operating and maintenance expenditures of existing services will exceed capital expenditure [1].

To unlock finance, it is important to start creating opportunities to invest and fund in services with known costs and risks. Otherwise private sector and public sector actors will continue to hold back. Once auditable service level and financial data of water points are available, it should become easier to identify needs and reduce the risk and cost to financiers so they can invest in extending and sustaining water services. This section outlines a few of the ways water point data can be used to strengthen the enabling environment and improve services across different contexts.

MEASURING SERVICES AND WATER RESOURCES

Coverage and functionality indicators are not sufficient to assess the level of basic or safe water services. Functionality is a limited proxy for the sustainability of the service [2,75,76]. Country-led monitoring systems should answer key questions about how to improve water services, sector practices and programs. At minimum this means collecting service level data and data on factors that impact sustainability (finance, management performance) and tracking trends over time [77,78].
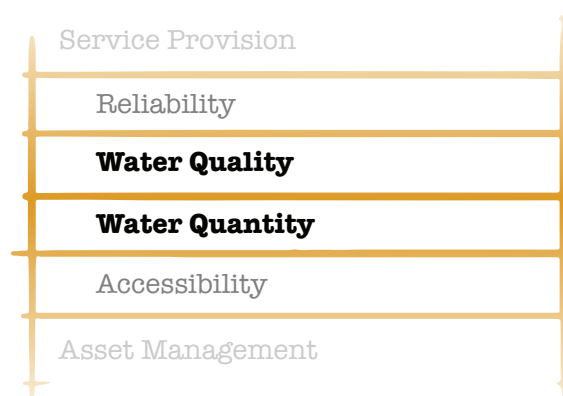
Figure 5: Include service level indicators in national monitoring systems

While service levels are usually conceptualized from the perspective of the household, the cost, effort and complexity of household surveys and data management make it difficult to collect this data more than every few years. Estimations at the level of the facility or water point, such as the water point reliability or downtime, can be useful to keep track of services and identify problems within days instead of months or years [77]. Additionally, the performance of service providers, caretakers, vendors and other sustainability factors, such as groundwater levels, can and are often assessed at the level of individual water points. With the increasing availability of water point data and new technologies for remote data collection, water point data will remain an important source of information for governments and development partners alike to measure progress towards the goal of sustainable water services for all. Moreover, water point data are likely to become an important source of monitoring data for ground water resources in the face of water scarcity and the need for climate adaptation at the local level.

Water point data are crucial for advocacy in support of better services. For example, local governments can use the data to lobby for funding, citizens can use the data to pressure their elected representatives for better services, and NGOs can use the data to foster accountability in service delivery.

Box 4:
*Common water point data parameters*

Githu et al. evaluated 50 water point data sets and identified the parameters found in at least half of the datasets. These were Geocoordinates, Management Unit, Status/Functionality, Installation Year, Type of Water Point, Infrastructure Condition/Failure Reason, Village, Extraction Technology, Date of Data Collection, Source of Revenue, District, and Implementer [79]. This 'minimum' has been used as the basis of the Water Point Data Exchange standard. Datasets may include further useful technical information to evaluate service provision or "service level" (reliability, water quality, water quantity, accessibility, etc.) [6], asset management (condition, year of installation, functionality, etc.), financing and budgeting (tariff collection accounts, expenditure accounts, etc.), operations (maintenance logs, reading meters, etc.)[38], water resource management (ground water monitoring) [54], and preventive maintenance (frequency, type, etc.) [57].

STRENGTHENING THE ENABLING ENVIRONMENT FOR SUSTAINABLE SERVICES

Donors, NGOs and the private sector all have a stake in strengthening national monitoring systems and the enabling environment in order to create the conditions to identify problems early on and reduce the risk of reputational damage when water points fail. Ultimately, government and in-country institutions must assume responsibility for country-led monitoring including setting sector goals, determining the questions asked and acting on the results.

One-off inventories are costly exercises as they require hiring and/or training data collectors since data collection is not part of routine travel and budget costs. Human resource, coordination, routine monitoring and budgeted annual plans are required to ensure water point data and other required data for assessing services are collected and used. With routine monitoring, data stays up to date and the quality can progressively improve over time. The Uganda Water Portal, SIASAR in Latin America and SIBS in Timor Leste are examples of monitoring programs that have gone beyond one-off or ad hoc collection [23,80].

Figure 6: Routine monitoring versus ad hoc monitoring

Ad hoc monitoring

Routine monitoring
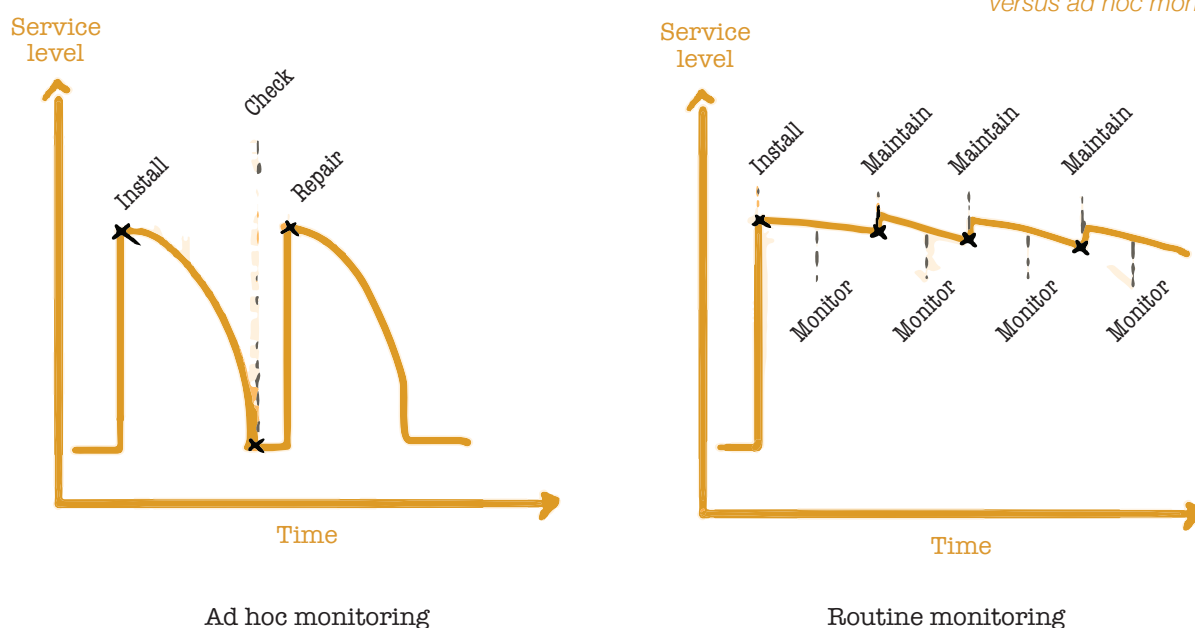
Developing standards for water point monitoring, based on 1) national policies and commitments and 2) international metrics and digital formats, will reduce the cost of coordination, data management and collection and should enable all partners to contribute information to local, national and international inventories. Additionally, NGOs, academics and the private sector have been quick to adopt data standards and data sources such as the Water Point Data Exchange when it is available and to use it to generate new knowledge.

Figure 7: Publish water point data to international and national databases to ensure use of data

Organisation 2:

Water quality test passed
Absence of Fecal coliform
Maintenence: behind schedule

Organisation 1:

India Mk II installed

District:

Spot check, service interrupted

District:

Service restored
Training of water committee
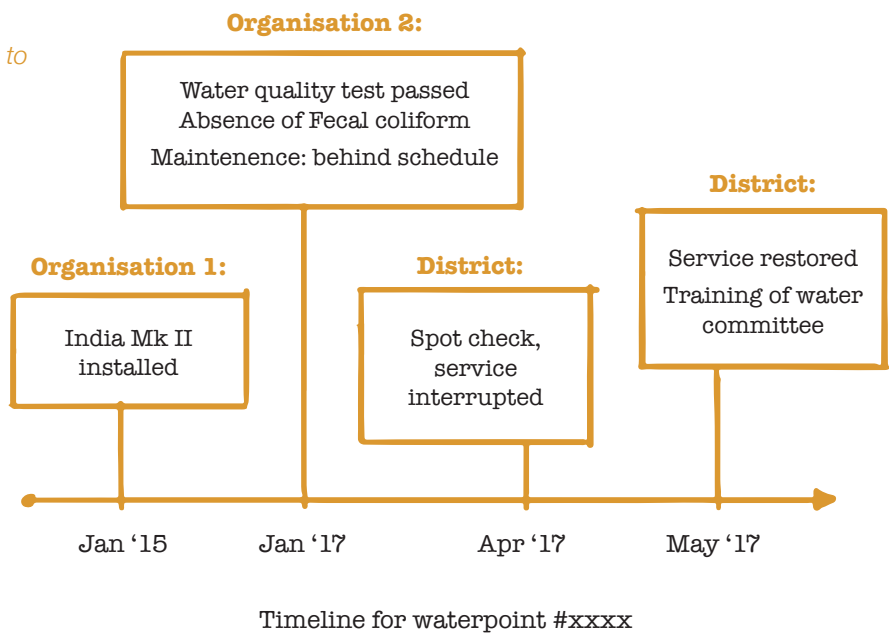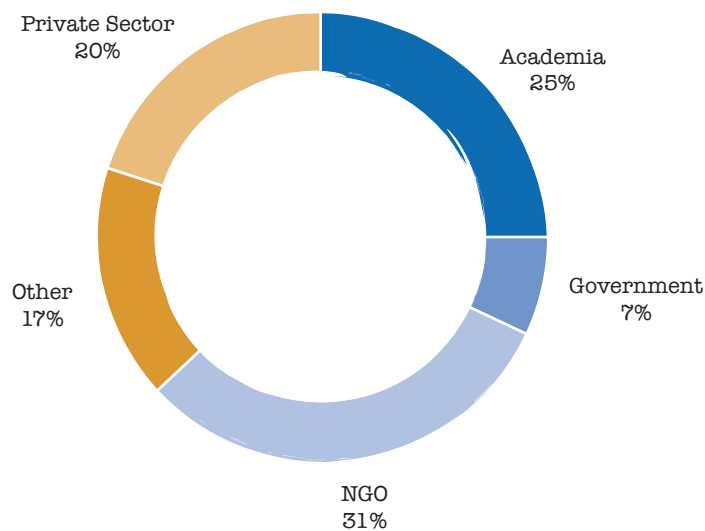
Jan '15   Jan '17   Apr '17   May '17

Timeline for waterpoint #xxxx

Figure 8: Use of public water point data by type of user as reported in a form on the Water Point Data Exchange website.

Private Sector
20%

Academia
25%

Government
7%

Other
17%

NGO
31%

Reported use of the public Water Point Data Exchange by all users

WORKING TOGETHER TO MAKE WATER POINT DATA USEFUL

Governments and development partners have used water point data to plan interventions, evaluate programs, calculate indicators, generate new business models [34,50,81–84], evaluate service delivery models and appropriate technologies [12,85], estimate the life-cycle costs of water services [42] and ultimately speed up progress towards SDG 6.1. Collaborative use of water point data by different actors, has the potential to improve national government, local government and partner results all at once.

National governments have a role in accelerating progress by providing guidelines on the use of these data to local governments and service providers to improve services at the local level and facilitate the coordination of water point monitoring. For the local government, water point data are a tool for guiding and coordinating partners working in an area and acquiring the finance required for sustainable water services. Inadequate human resources and logistics are challenges that can be overcome together with partners when the need is clearly communicated. For development partners, donors, financiers and implementers alike, water point monitoring throughout the program life-cycles is crucial for ensuring the results of programs and improving value for money. When water point monitoring is done in partnership with local government following national and international standards, it truly has the potential to identify problems on time, reduce reputational risk, and sustain real progress towards the SDGs.

Box 5:
Innovating new models for rural water supply

Remote monitoring technologies, such as smart meters, are also opening the door to using water point data for both operations of the service provider and support from the service authority and NGOs [54,58,81]. Water point data are increasingly used to evaluate and develop new service delivery models and identify appropriate technologies and business opportunities. Vergnet Hydro, a handpump manufacturer, has worked with UNICEF to develop the UDUMA public-private partnership model, whereby Vergnet Hydro matches 50% of the investment in a minimum of 500 new handpumps in one area with a minimum of 225,000 inhabitants. Vergnet Hydro will then commit to 15 years of functionality of the handpumps providing high quality services at an affordable price. [83,84] Vergnet Hydro also provides a dashboard online and has set a frequency for automatic contribution of updated water point data to WPDx. SkyFox, a business in Ghana, used water point data from the Community Water and Sanitation Agency (CWSA) to get the water point maps from the District Monitoring and Evaluation System and extend their mobile-based handpump spare parts sales to communities with handpumps. SkyFox in return reports handpump repair status back to CWSA and the district through an online dashboard and by phone. [81]

Mobile pre-paid off-grid solar systems distributed by off-grid power companies and telecoms have been used by rural households in several countries, such as Uganda, Kenya and Zimbabwe, and enable households and their relatives in a city to pay for electricity from working solar systems using mobile money and/or airtime. [86]

With the decreasing solar energy costs and improving practices and supply chains, upgrading of water sources with solar systems in rural areas may become equally accessible in the future and water point data can help identify these new business and service opportunities. It should be noted that the water sector has less private sector companies, and users are not always used to paying for the service, so these new business models may face greater challenges in the water sector.

There are several parties creating and testing or marketing different mobile technologies for the remote monitoring of water points, such as Portland State University [49], Oxford University [50], Charity: Water [45], Susteq [39], Grundfos [38], and MoMo [51]. Researchers are showing how these devices can be used to assess services, plan rapid responses to breakdowns, and even predict breakdowns and assess groundwater levels [54]. Private companies like Susteq and Grundfos, also integrate payment systems into "smart" standpipes, which can even track the use of water by households. These systems are not without their own maintenance and management problems and can be relatively costly to install and operate. [vi]

Specialized data standards and platforms may become more common in the future and include AGS [87] for drilling data like in the United Kingdom and HDx [88] for data during emergencies. Disseminating data using standards ensures that valuable data remains widely available in the long run and remains compatible with evolving technologies and practices.

[vi] WellDone is preparing a White Paper on the lessons learned from MoMo and other remote monitoring systems to date.

RECOMMENDATIONS

By measuring service levels and sustainability metrics, water point data will become an increasingly important tool for innovation and practice in improving rural water services. To facilitate new forms of finance and significantly accelerate progress towards the SDG 6.1, all actors need to assess the performance of services in the same way, reference water points in the same way, and align responses.

Box 6:
Technical tips –
a shortcut to improved water point data

A few measures are within reach of all organizations collecting water point data and should be followed:

1. Use unique identifiers, rich descriptions and photos to ensure water points records are unambiguous and can be tracked over time. It should be possible to update a water point based on a phone call with a vendor or care taker.

2. Publish points to the Water Point Data Exchange and National Water Atlases to ensure that these records and unique identifiers are known and reused.

3. Contribute resources to national and district water monitoring and evaluation systems to ensure routine monitoring and evaluation of services. [vii]

Many mobile data collection tools have "monitoring" or "updating" features that are important to turn on before data collection. They add unique identifiers and are easier for data collectors to use in the field than paper forms. Linking water points as a desk exercise based on GPS alone is difficult and error-prone.

[vii] The Direct Support Cost Tool can estimate district requirements [40] and GLAAS/TrackFin for national requirements.

Based on the experience of WASHNote and IRC as well as over 30 cases of water point data use and expert interviews, we make the following recommendations.

FOR NATIONAL GOVERNMENTS

1 Help local governments and service authorities achieve results by incorporating service level and sustainability metrics that go beyond functionality into the national indicator framework. Provide monitoring results on paper where connectivity, power and digital competency are limited.

2 Establish clear institutional roles and responsibilities for the routine monitoring of water points at specific times on an annual basis, including the roles of local government and implementers [iix][89]

I report project results to the district every quarter

I speak to the comunities every quarter

I assess school water supplies every year

I prepare the district investment plan every year
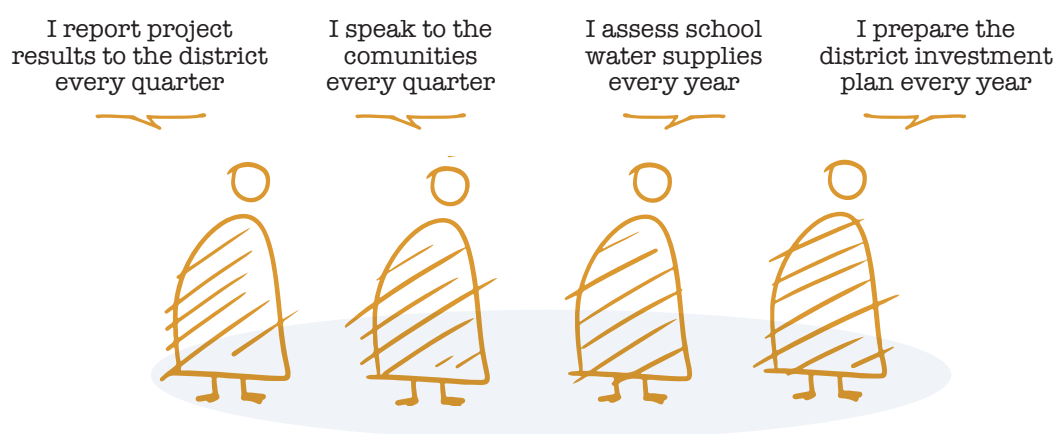
3 Use standard approaches and technologies [ix], and then publish data. This will make water point monitoring more robust because it reduces the dependency on any single tool, database or website. This can become critical in when resources are constrained and during emergencies.

My standard!

My standard!

Our standard!
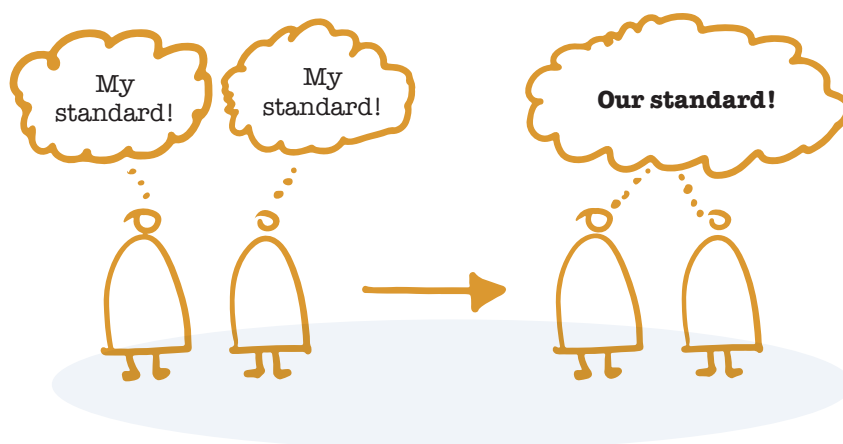
[iix] Tools such as the 12 components national WASH M&E system strengthening tool [89] can be used improve the performance of national M&E systems. Monitoring should be country-led [90] where the country, and not the donor, leads and owns the monitoring cycle by determining the questions to be asked, the methods applied, the analytical approach, the communications and how the information is used.

[ix] International standards, such as the Water Point Data Exchange, SDG 6.1 definitions and indicators, and sustainability metrics should be integrated into national water point monitoring systems.

FOR LOCAL GOVERNMENTS

1 Require NGOs and the private sector to collect water point data meeting national standards to monitor results and to share their data with the district and other stakeholders. They should have to explain the results of their water point monitoring during coordination meetings. Provide feedback to the national government when there are challenges using data.

2 Use water point data to tell the story of water services to politicians, financiers, and users to sustain interest in achieving universal access to basic water services. Evidence-based investment plans using water point data can facilitate dialog between water engineers, planners and politicians on how to improve services.

3 Use water point data to plan corrective actions and design programs with partners. For this to work efficiently, development partners and government must work with the same standards and indicators. Ensure local lessons are included in the choice of data to collect.

FOR NGOS AND IMPLEMENTERS

1 Identify and use existing water point data before program conception and share any new water point updates and results with partners at the local level. Water point data can help to engage in a dialogue to address local needs.
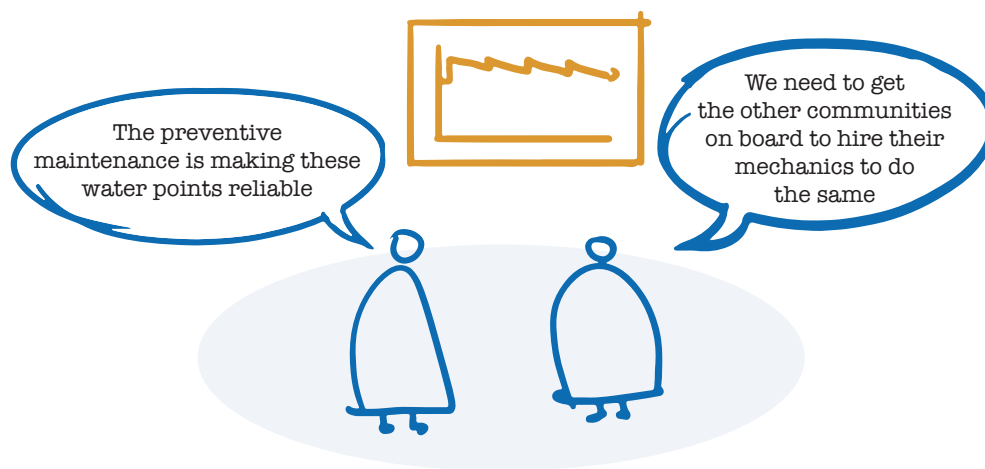
2 Monitor water points using existing standards[x]. Do so in coordination with the local government and/or national government when possible to increase the visibility and legitimacy of program outcomes.

3 Set aside a part of the program budget to support the capacity of local government to monitor and evaluate water point data and strengthen their roles. Use the Direct Support Tool[40] to estimate needs. District wide approaches, such as that adopted by the Agenda for Change[91], can serve to improve coordination, long term results and accountability.

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[x] International standards such as the Water Point Data Exchange and JMP/GLAAS, regional ones established by AMCOW and SIASAR, and national frameworks

FOR DONORS AND INVESTORS

1 Require grantees and businesses to evaluate existing water point data during the proposal stage and use service level and sustainability metrics throughout the program life-cycle to simplify audits and value for money assessments.

Water Point #XXXX				
	Jan 2018	Jun 2018	Jan 2019	Jun 2019
Reliability				
Water Quality				
Water Quantity				
Accessibility				
Condition				
Year of installation				
Functionality				

2 Adopt a policy of working within national and district water point monitoring frameworks. National and district-wide approaches have the potential to sustain monitoring and water services beyond the project life-span and improve long-term investment and reduce reputational risks.

National/district water point monitoring framework

Local project
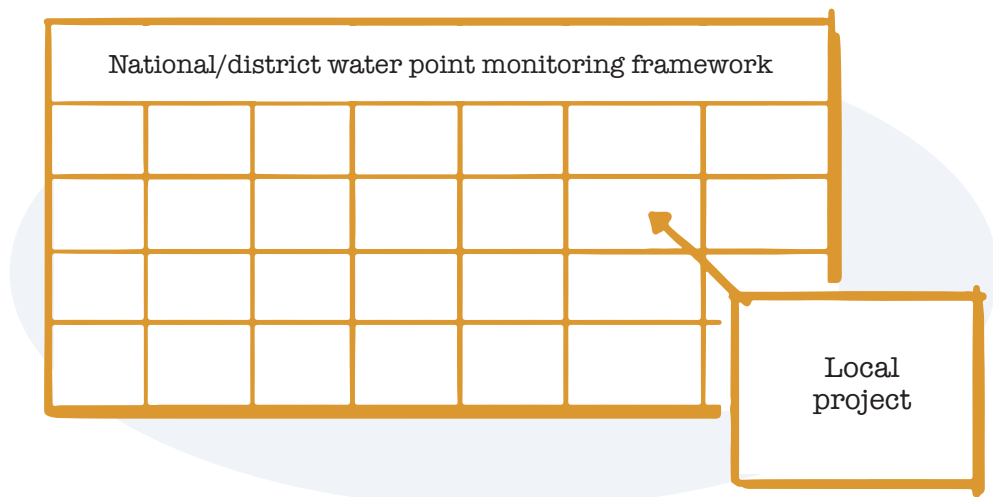
3 Invest in improving international standards around indicators and water point data to lower transaction costs and complexity.

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