A Decade of WPM

Tuesday 30 September 2014
RWSN: Mapping and Monitoring

The Rural Water Supply Network has conducted a webinar series aimed at sharing knowledge and evidence from government-led mapping and monitoring of rural water supply services. In a series of four webinars the discussants, facilitators and participants explored the history of Water Point Mapping (WPM), present examples of district and national monitoring systems through a series of case studies, looked back at cases of failure and forward to the latest developments and innovations designed to enable improved mapping and monitoring of water supply services. Technical aspects as well as elements of related policy and practice were shared.

WPM is acknowledged as a useful tool for investment planning and decision making by national governments, development agencies, NGOs and other actors, particularly in under-serviced rural areas. Though in theory WPM should contribute to greater accountability, transparency and equity in service delivery, and in some cases it does, there are still many challenges in keeping data updated and ensuring it is used properly.

The first webinar reviewed the development of WPM over the past decade, focusing on Malawi, the first country in which the practice was introduced. The key presenters provided dual perspectives of NGO and government actors, which demonstrated the varied methodologies for reporting water supply data, the extent to which data monitoring has impacted decision making and its role in extending equitable and sustainable service delivery. Presentations and discussion assessed the practice, policy, tools and technologies of monitoring and WPM, following its evolution and bringing to question whether WPM is currently a practical and sustainable solution given the reality of resources and government capacities.

How can WPM be sustained?

Chair of RWSN
Ton Schouten, IRC

Contents

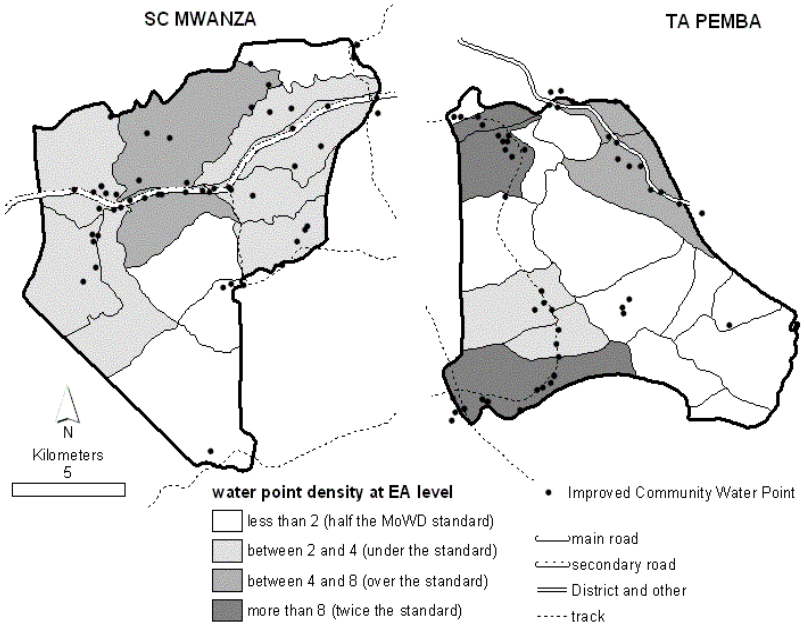
What is WPM?

Water point mapping is a tool for monitoring water point distribution and functionality used by governments and NGOs to improve service delivery. The process includes data collection and entry, which is often then translated into a visual tool for analysis, generally in the form of a map displaying geographic distribution of water points,

First Steps in Malawi; what we learned in 2002

Speaker: **Steven Sugden**, Water for People

Steven Sugden, from Water for People, reviewed the progress of WPM in Malawi since its introduction there in 2002. Taking examples from several districts, he demonstrated the importance of considering not only water point location, but also population density per water point. This allowed determining where funding and resources should be allocated for improving water supply and equity in services. The examples also demonstrated the need to address water point functionality; for example in the Mulanje district, only 52% of water points were actually functional.



"Dots on a map are pretty useless."

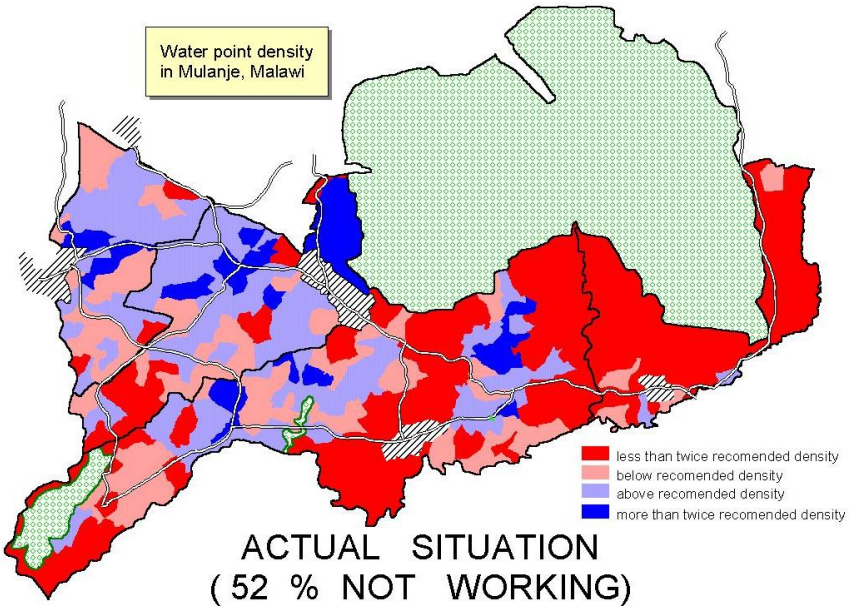
Steve Sugden, 2014

"Why does the next village have eight hand pumps and we don't have any?"

"The broken hand pump is a constant reminder of our inability to escape from poverty"

In examining the relative water point density and financial support given to the Mzimba and Lilongwe districts, WaterAid found that poorly resourced areas were consistently neglected, while comparatively well-resourced areas continued to receive funding. Many water points are built roads, as they are easier to access, repair and monitor, but this leads to inequity in water point distribution. These findings led the World Bank to redirect funding towards the Lilongwe district, which was in greater need of funding attention.

Using district level distribution/density graphs and maps allows better identification of relative need. Performance indicators in Malawi's Ministry of Water have since come to include **1) the functionality of a water point** and **2) the equity of distribution** of the water services. The bottleneck now is translating that knowledge into a radical change in the allocation of funds. There is enough money going into the water industry, Steve says, but we need better control and better coordination. Otherwise, water points will not have the intended impact.



Challenges and lessons learnt:

- Governments are interested, but slow to act.
- Low incentive for government's accountability.
- No nationally coordinated system for data collection.
- Updating information is difficult.

The potential for WPM to improve service delivery through informing policy, planning and investment is in place, however some barriers still remain. In particular, governments are not yet fully equipped to manage the process, provide continual financial support and analyse the data appropriately. However, the experience in Malawi has contributed to reforming the way that water sources and supply improvements are assessed in that they demonstrated the need to consider both water point functionality and water point distribution.

Equity + functionality = performance indicator for Ministry of Water

Sustainability

In order for WPM to be sustainable, it must be embedded within the government, for example by using district level staff to collect and input data into a central system as part of their standard responsibilities. Furthermore, the systems introduced should be using simple technology such as MS Excel to record accessibility and functionality before processing the data with GIS mapping. The key aim is to establish that WPM will support achieving the end goal of a particular government's objectives in improving water services.

Questions for Steve

Q: Should WPM be a routine activity and if so how often should it be done?
If the ministry had control of all water point installation and then district level staff, and other organizations involved inputted the data to a central system as part of their normal responsibilities, with no extra cost to the ministry, then there wouldn't be a requirement for regular WPM monitoring

Q: How sustainable is it? In your analysis of how it has performed over the years, what can be done for monitoring how it works and how the process is embedded?
To be sustainable, WPM has to be embedded in government. If it results too complicated for the users, because of the necessity for coordinates data and WP specific information, the village/district wide information system in Excel (as developed by EWB) can represent a valid interim alternative as it is less high tech, but may be more manageable. The WPM can then represent a further development. The end goal of a monitoring system, such as WPM, should be first set-up so that is developed to respond to the specific requirements.

Discussion - Ben Taylor: One of the issues raised by Steve Sugden is that the data is essentially a means to hold local government authorities to account, and thus government is not always interested. The experience in Tanzania is similar, and the conclusion was that the key to reliable data is independent data collection. Asking government to hold itself to account is unrealistic. As the cost of mapping is very small compared to cost of infrastructure, it can easily be justified. It is proposed to conduct a rolling programme of independent mapping conducted in 1 in 3 districts each year.

Reflections from the Government of Malawi since 2002

Speaker: **Thanasius Sitolo**,
Department of Water Supply Services Malawi

"WPM has the potential to open up policy debates…to discuss the best ways to resolve issues with the distribution of water resources."
Thanasius Sitolo, 2014

Thanasius Sitolo from the Department of Water Supply Services of the Government of Malawi demonstrated the importance of institutionalizing WPM processes. The Department supported WPM projects as a means of providing a basis for informed decision-making at the district level to ensure accountability, transparency and equity in resource allocation. Their role in the initiatives, in partnership with different NGOs, has included surveying, analysis, feedback, updating mapping information and ultimately institutionalizing the practice of and responsibility for WPM. It is the institutionalizing element which has proven the most challenging, for several reasons.

Perceived challenges for government to implementing WPM

'High tech' reputation of WPM → District level actors are wary of the need for advanced technical and financial support and additional personnel (in particular looking at the long-term and for future regular updating).

\+

High personnel turnover → The average time in a government job is two to three years.

\+

Capacity for fulfilling responsibilities → GIS software licenses must be renewed, new hardware must be acquired and users must be trained (impacted by the limited resources).

=

Sustainability?

"WPM is an important tool for decision-making in allocating water facilities, enhancing coordination or when planning for rehabilitation works."
Thanasius Sitolo, 2014

Additionally, the Malawi government feels it has been subject to a very short timescale in which to accomplish engagement from district government with NGOs for national coverage of mapping information.

Thanasius maintained that the government of Malawi recognizes the value of WPM in transparency and equity of water point allocation, as well as targeting non-functioning water points and allocating funding at district level. It also enables service delivery responsible and all stakeholders to review district level project efficacy. At national level, it is recognized that the WPM supports in the preparation and appraisal of rural water supply projects and for improving sector

coordination. WPM has the potential to open up policy debates and the chance to discuss the best ways to resolve issues with the distribution of water sector resources. It is also recognized that for the WPM to be sustainable, it requires incorporation within governmental M&E systems and budgets.

Questions for Thanasius

Q: How costly is the mapping process in Malawi for the government? How much does it cost per WP to map a WP using the process the national government currently uses?
It costs $10 per WP to set up WPM.

Q: Does Malawi have a sector target for functionality? How are you doing in relation to that target? What role does WPM have in informing the reaching of that target?
The target is to increase functionality from 70% to 90% . The information is also used to inform on mechanics requirements

Q: Do you as the government of Malawi currently use put to date WPM mechanisms to maintain the 90% target?
Currently no, the WPM is not used as a regular monitoring system (no up to date data available) for water supply functionality.

NGO support to government-led monitoring

Malawi's national WASH M&E system

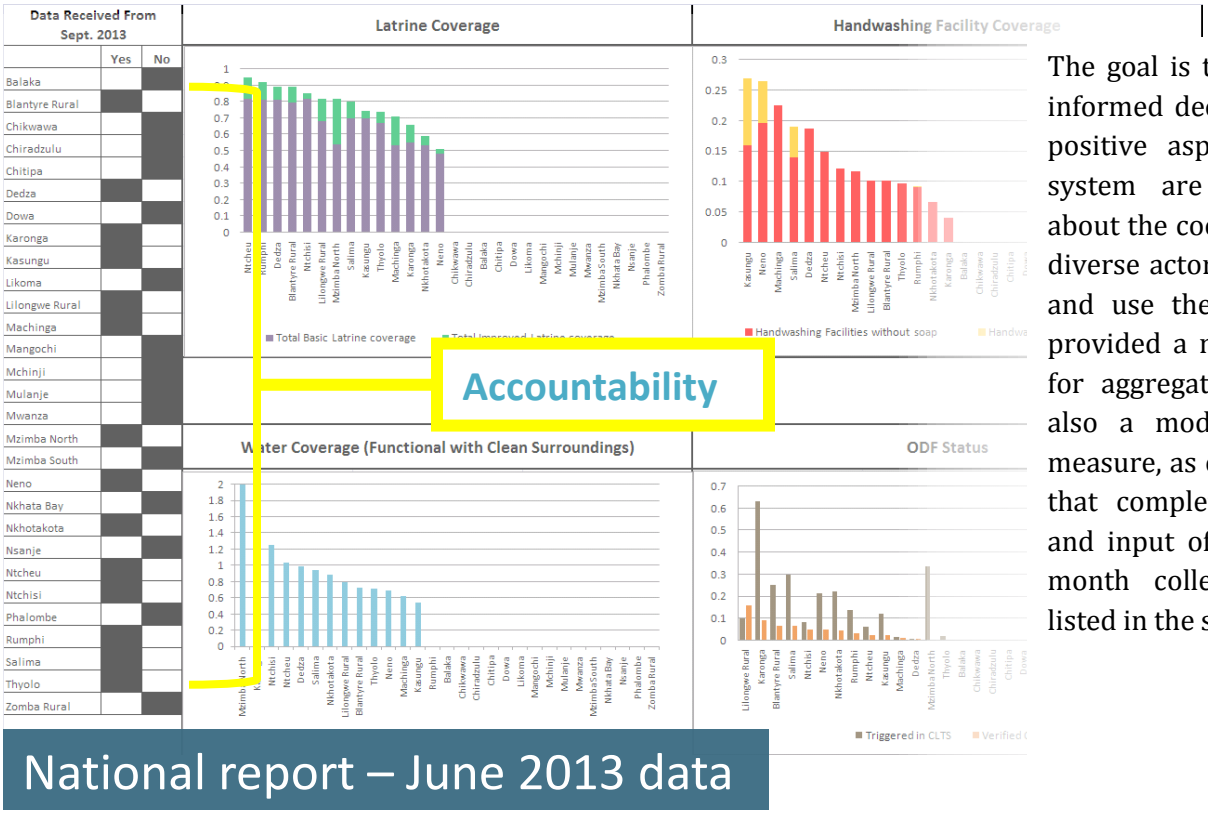
engineers without borders ingénieurs sans frontières Canada

Speaker: **Sydney Byrns**,
Engineers Without Borders, Canada

> "The important thing is to keep data coming through the door."
>
> Sydney Byrns, 2014

Sydney Byrns suggested that WPM is beyond the capacity of district level governments and is difficult for national level management. Malawi has not yet developed the capacity to completely own and manage WPM, and the use of data from the monitoring process is still weak. Sydney detailed the support of NGOs EWB and WaterAid in developing a national WASH Monitoring and Evaluation (M&E) system with the Malawi government for collecting and monitoring water supply and sanitation services The system was intended to be a 'less high-tech' solution to 'keep data coming through the door' as the Malawi government struggled to manage GPS and GIS based WPM.

The M&E system is Microsoft Excel based, simple to use and delegates data collection responsibilities to existing government staff from Health sector (which has larger resources). Health Surveillance Assistants collect data on WASH infrastructure from each village in the area as part of their responsibility, and the data is entered into an Excel document, which then automatically populates a prepared pivot table with key indicators and useful tools/measures for data analysis and data representation with maps.



National report – June 2013 data

The goal is to use the data for informed decision making. The positive aspects of the M&E system are that it brought about the coordination of many diverse actors to acquire, input and use the data, as well as provided a national dashboard for aggregated data. There is also a modest accountability measure, as only those districts that completed the collection and input of data for each six month collection period are listed in the spreadsheet.

The M&E system was intended as a compromise to all of the requests from various stakeholders, taking the most realistic and easy to collect data and collating it into one database. Because of this, however, the system does not answer all programmatic questions and does not provide all of the data and indicators requested by stakeholders. It also only provides indicators and analysis for functionality and coverage, but no other water supply indicators. It does, however, provide a simple and manageable system for district level participation in data collection and mapping.

Collaboration

EWB Canada and WaterAid began working together in Malawi at the district level. The ministry of Malawi became involved at a later stage as the M&E program progressed to a national water and sanitation hygiene database. EWB has then supported with capacity building and in supporting the government to be the driver of the system. The Excel-based M&E framework serves as personnel from EWB Canada continues to work directly with the ministry in maintaining the system, while WaterAid supports the program with some funding and strategy input.

Questions for Sydney

Q: How are the 3 organizations (WA, EWB Canada and Malawi govt) interacting with each other? Do they use one database, or separate?
(How are you communicating together and is there a central database for this WPM data or separate database repositories?)

EWB started at district level, was not working closely with the Ministry at the beginning of the programme, but EWB has been working closely with WA Malawi. As the process moved forward with the national roll-out, the ministry became involved with a national water and sanitation hygiene database. EWB is maintaining relationship at Ministry level, and WA backs up the program with small funding and through partnership. The actual working partnership has been between EWB and the national government.

The national M&E framework (Excel- based system developed with support from EWB) has one single database.. There are also a number of database of WP collected by different organization and the data are kept in separate databases, dating back to 2009 and 2010.

Discussion points

Arjen Naafs: A way to reduce costs is by using maps which only need to show data per administrative boundaries and where exact locations are not needed for budget allocations/government decisions. Excel based waterpoint mapper (wateraid and Engineers without borders) can respond to this need. For more detailed research (e.g. hydrogeological surveys) actual GPS coordinates would be needed, but for most decision –making support mapping, admin location can be sufficient.
Andrew Shantz: It appears that point mapping seems to require a level of human and financial inputs beyond most developing countries capacity and availability while mapping at village and commune level can simplify the process and reduce costs. In Cambodia this is happening, similarly to the process in Malawi.
John Nedjoh: What are the indicators to show that government is leading the National M&E system e.g. Governments Budgetary Allocation; specific responsibilities and experiences of the government officials driving the organisation of the bi-annual updates? Who is funding and what is the level of funding? Any advice on costing this?
Heidi: in response to some questions about the practicality of using GIS, its availability, etc. GIS skills are not automatically available among WASH professionals and this makes the mainstreaming difficult. Most of NGOs contacted for a research on this indicated a lack of GIS skills means lack of awareness about GIS potential.
Fabio Fussi: Many development projects support the creation of high GIS capability at decentralised level, which is not sustainable and not realistic. On the other hand, it is important to put in connection decentralised data collection (with good technicians on GPS and field observation) with a central database manager.

Community:
https://dgroups.org/rwsn/mapping/join

Presentations & Recordings:
http://www.rural-water-supply.net/en/resources/details/615

Full webinar series on rainwater harvesting, groundwater research and water point mapping (RAIN - UPGro - WaterAid - IRC - RWSN)
http://www.rural-water-supply.net/en/projekts/details/79