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ENSURING AVAILABILITY AND SUSTAINABLE MANAGEMENT
OF WATER AND SANITATION FOR ALL

ICT enabled monitoring fosters greater accountability and improves WASH services in communities

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UNICEF has been supporting the Ministry of Water Resources in the development & rolling-out of WASH Information Management System (WASHIMS) across Nigeria. WASHIMS is an user friendly tool for building, organizing and processing sector data for informed decision making. It has evolved from a stand-alone system in 2013 to an on-line web-based platform that now includes features for real time tracking. From only 12 Local Government Areas (LGA) using WASHIMS in 2013, presently there are 70 LGAs regularly operating it. Up-to-date data on the WASH situation is available for over 22,000 communities compared to only 2,600 in 2013. The introduction of real-time tracking of water point functionality has contributed to an increase in functionality from 56% to 71%, with one LGA reporting 98% functionality over 1 year. The widespread use of WASHIMS across the 70 LGAs has renewed interest among all sector players with potential for rapid scale-up across Nigeria.

Background

With a national average of 59% and 34% access to water supply and sanitation (Demographic Health Survey- Nigeria 2013), Nigeria is one of the countries that did not meet the MDG targets, especially in sanitation adversely affecting Africa's ability to meet the targets onthewhole. Severe scarcity of data for planning, weak mechanisms for mapping disparities and targeting vulnerable groups were some of the key factors that hindered the attainment of the MDG targets. This is further aggravated by the lack of updated data on the status and functionality of WASH infrastructure. At any given time, only about half the water points in Nigeria are functional. 56% of hand pumps are functional (UNICEF-TCF (2011) Hand pump functionality survey; while only 37% of solar powered motorized schemes are functional as per UNICEF-TCF (2013) Performance Assessment of Solar powered motorised boreholes. This is a huge drain on the already low investments in the sector.

Development of a robust system for programme monitoring and evaluation within the WASH sector in Nigeria has therefore been one of the overarching areas for tracking performance and driving reforms in the sector. Diverse efforts in the past included the development of a National Framework on Sector Monitoring and Evaluation by the Federal Ministry of Water Resources (FMWR) in 2004, now implemented in 17 out of the 36 states; development and harmonization of sector indicators for an unified monitoring and reporting systems for the sector. Attempts were also made to develop sector database through national inventories and surveys.

Despite these initial efforts, there was still a huge gap with regard to a coherent, sector-wide, user-responsive, systematic and real-time data collection, updating and feedback mechanism that ensures sector interventions and results are systematically reported as they happen.

Genesis of WASHIMS and real time functionality tracking

UNICEF recognized in early 2010 that if its interventions were to make a difference to the situation in Nigeria, then it has to enable scaling-up. The LGA wide approach was thus born and since then has been a major strategy for UNICEF's WASH interventions as well as other development partners including the government in 21 states of the country. LGA wide approach allowed inventory and mapping of WASH &

other social indicators for the development of LGA-Wide Investment Plans including LGA-wide Open Defecation Free (ODF) Plans, and enabled evidence based planning and implementation. WASHIMS was initially built on the need to monitor and track progress on the WASH situation against the baseline data that has been generated for select LGAs.

Starting with the stand-alone database system with limited features in 2012 capturing water, sanitation, hygiene data from 12 LGAs, WASHIMS gradually metamorphosed into an on-line user friendly tool for building, organizing and processing sector data to support management decision processes in 70 LGAs in 2015. UNICEF with funding from UKAid and the European Union has supported the Federal Ministry of Water Resources to develop and to scale up the use of this tool as a National System for WASH Data management. This system is web-hosted and allows for real-time data entry and update at the local government level, building on the existing institutional arrangement. Entries/updates made at the lowest levels (LGAs) are immediately available for review and use at all levels depending on administrative rights and can be accessed from anywhere in the world. The system includes interface for data entry and update (using computer, smartphone or SMS platforms), reports generation, graphic presentation as well as spatial representation of facilities on maps to enable informed decision making. Robust control mechanism is equally in place to ensure quality assurance and data integrity.

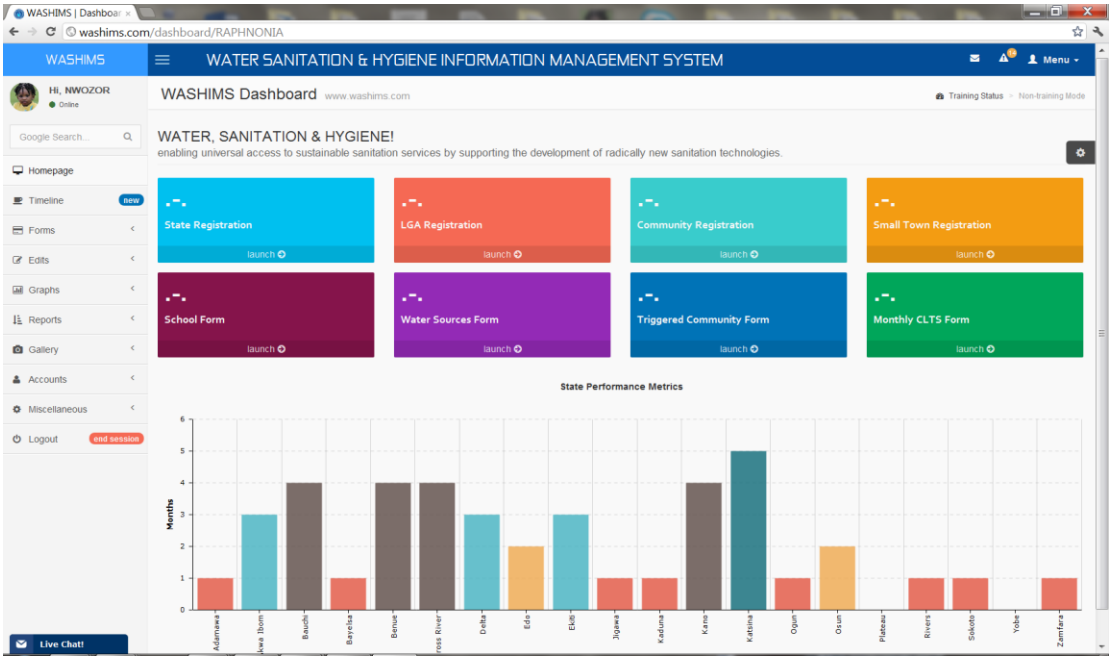

Figure 1. Screenshot of WASHIMS Dashboard (www.washims.com.ng)

Source: UNICEF Nigeria

Guiding principles

One of the overarching aims in the development of WASHIMS is the need to evolve a more sustainable monitoring and reporting mechanism that is regularly updated and hinged on government (LGA) and community structures at the lowest levels. The focus is on monitoring and reporting of the most dynamic indicators on a real-time basis by engaging with communities using SMS medium building on the accessible telecommunication coverage, in almost all communities. Not only will the monitoring system allow for decision making at a macro level, it will also allow rapid remedial responses to the reported issues and foster accountability of service providers to right holders.

The innovation is in harnessing Information and Communication Technology (ICT) to address twin objectives – at one end allows informed decision making for effective resource allocation to reach the under-served (through WASHIMS); and at the other end enables active engagement of the communities in real-time monitoring and getting their voices heard by the service providers for improved services through the use of Real Time Functionality Tracking System (RTFTS) on WASHIMS. This system, (as opposed to local

authorities led routine monitoring in communities, which had been constrained by poor financial and human resources) has shown to be more reliable in terms of data integrity as the users themselves provide first-hand information on the status of their facilities, cost effective (use of SMS) and sustainable as beneficiaries can report on breakdowns immediately without waiting for visits from the local government staff. It also empowers the community to hold duty bearers accountable to services.

Key strategies in the rolling-out of WASHIMS

One of the key strategies in the deployment of WASHIMS is the use of community-led real time reporting for tracking water point functionality. RTFTS is an innovative and cost effective way of ensuring timely reporting and efficient response mechanism for facilities maintenance and repairs by directly engaging with the beneficiaries. This system uses SMS sent in by community level reporters (known as facility caretakers) to get rapid update on the functionality of facilities in the communities. At any time a facility is reported to be non-functional, the system sends out a SMS trigger to the Local Area Mechanics and the LGA Water supply Officers who then initiates remedial actions, in collaboration with the communities, to ensure that such facility is operational within a small turn-around time.

Another key strategy in the development and rolling out of WASHIMS is the development of the National Coding System for communities and WASH facilities and intervention areas. The coding system arose from the need to resolve the challenges and confusion associated with the demarcation and naming of the intervention areas often influenced by factors ranging from cultural, administrative, political, and programmatic. In Nigeria, there is no official gazette of communities or villages and data on this remains very dynamic. With the introduction of the coding system it has been possible to keep this variable relatively stable and allow for effective programming and monitoring of the intervention areas. More so, the introduction of facility coding system also made it possible for each facility in an intervention area to have discrete identity that distinguishes such facility from another. This has helped in the management and update of the attributes of any given facility using their codes as their discrete identities.

Another important element that has helped in institutionalizing systematic capture of new WASH facilities and update of WASHIMS is the use of system-generated contract works completion certificates for contract management. The certificate including the facility's code are auto-generated once the detailed attributes of a facility have been inputted in the system.

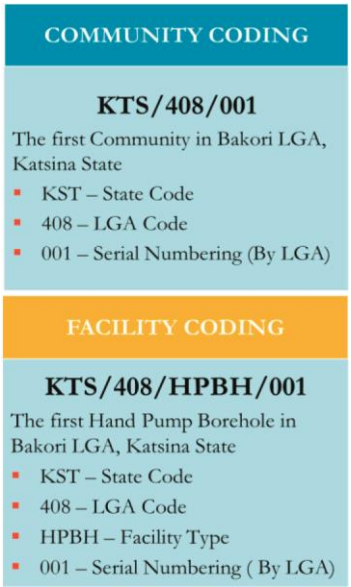

Figure 2. Coding system

Source: UNICEF Nigeria

Implementation and roll-out

WASHIMS implementation and rollout was done by first training staff of local institutions (especially the LGA WASH Departments/Units) on data management using WASHIMS. Other support included the provision or basic ICT infrastructure (such as computers, smartphones, internet facility, backup power supply systems, etc.), deployment of appropriate staff and funding for basic operations and field level activities. Community level reporters (Water, Sanitation & Hygiene Committees WASHCOMs, Facility caretakers, etc.) are trained on modalities for real-time monitoring and reporting using SMS. Local Area Mechanics (LAMs) are mobilized and trained to respond to facilities breakdown at a minimal agreed fee. Monitoring, reporting and feedback under this system is done using multiple, user-friendly and far-reaching channels to ensure that reports and updates are received in real time. The reports and feedbacks from the system triggers a chain of follow up actions that ensure that duty bearers are held accountable and services are not interrupted. Figure-3 illustrates the implementation process.

The initial implementation was done in 12 LGAs, lessons from these initial LGAs informed the strengthening and rollout of this system to cover 70 LGAs between 2014 and 2015**.** The initial one off cost (hardware, database, facility coding, trainings, etc.) for setting up this system in one LGAs is currently about USD 5,455 (about US$ 27 per person) while the annual running cost (subscriptions, bulk SMS, Internet, etc.) is at USD 1,091 (about US$ 5.5 per person/year). This cost goes down as the scale (number of LGAs) increases.

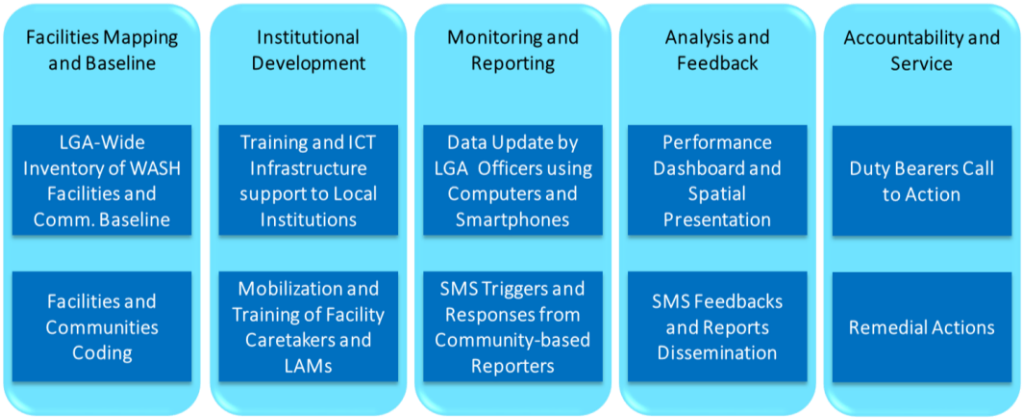

Figure 3. Key steps for washims-rtfts implementation

Source: UNICEF Nigeria

Progress achieved

WASHIMS is currently in use in 70 LGAs across 21 States of Nigeria and hosting WASH data of over 22,000 communities. Over 620 WASH Officers and sector players have been trained at all levels on the use of WASHIMS. The system has been popularized and adopted by sector players (including government at all levels, external support agencies, local NGOs and other sector players) as the National Information Management System for the Sector. Some of the key outcomes / results following the implementation of this system include:

- Unifying monitoring and reporting processes across the sector that is helping to grow a national WASH Database
- Catalysed leveraging of more resources for investment in the sector, government contribution for capital projects and operational funds have doubled in the last 2 years (for example, in the four states-Bauchi, Benue, Jigawa and Kastina, the government funding has increased from US$ 4.5 million in 2012 to US$ 11 million in 2015)
- Improved water points functionality in the pilot LGAs from 56% to 71%. In one of the pilot LGAs (Bakori, Katsina State) this system improved facilities functionality from 74% to 98% in less than 6 months and has sustained this over a year

- Reduce drastically the downtime of facilities from an average downtime of over 2 months to less than 2 weeks
- Increased involvement of the LAMs (and other private actors) in Operation & Maintenance through engagement in service contracts with resultant job creation as more LAMs are evolving (with at least one LAM per cluster of 50 to 100 water points)
- Local capacity for planning, monitoring and reporting has been enhanced with over 55 LGAs now able to develop, monitor and review their sector plans
- Improved contract management capabilities of the local institutions as this has injected more transparency in contract management and had also enhanced third party monitoring of contract works
- Prompt entry/update of newly completed facilities and tracking of facilities status post baseline
- Communities have equally been empowered as they are now involved in monitoring and reporting of services as it affects them as beneficiaries. This has helped to amplify the communities voices and promote mutual accountability in project management.

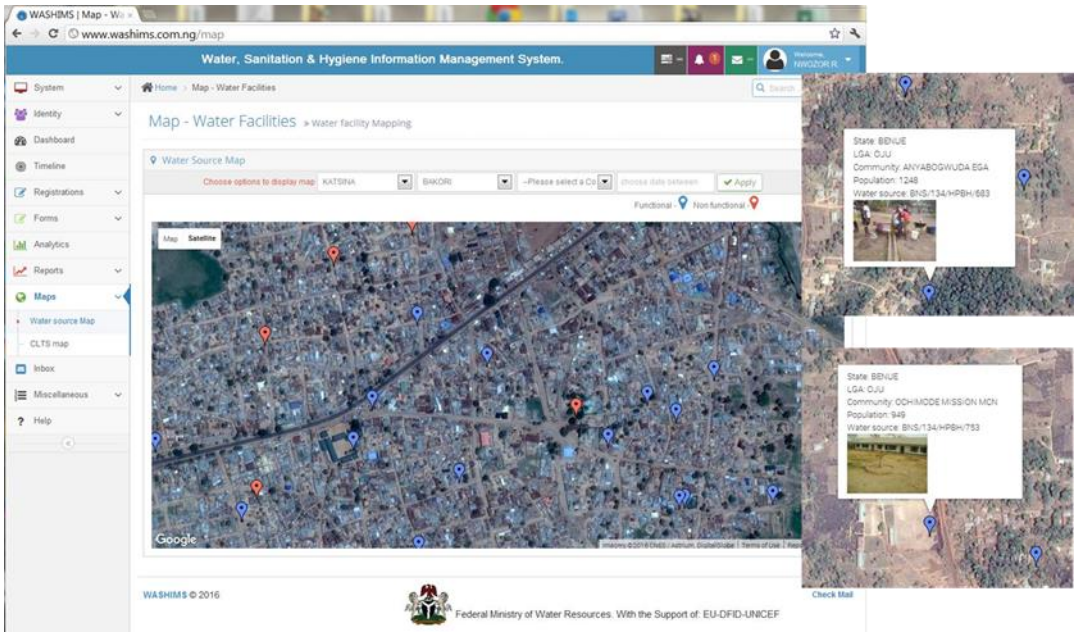

Figure 4. Map showing the water facilities (functional/ non-functional)

Source: UNICEF Nigeria

Potential application

WASHIMS and the associated RTFTS has the potential to be applied across the whole country starting with the states that are committed and have WASH Departments/ Units at the LGA level. In the initial phase (in 2016) WASHIMS will be expanded to cover more LGAs in the current 21 states while efforts will be made to introduce this in other states in collaboration with the Federal Ministry of Water Resources. There is already a renewed interest within the Ministry at the national level, with the emphasis of the current national government on strengthening information management within the sector. The plan is therefore to have at least 250 LGAs in the country adopting WASHIMS by 2017 for informed decision making and better use of resources (see Figure 5).

As capacities at the local levels improve, this system has the potential to be expanded to include other key areas for real-time monitoring of WASH services such as; water quality monitoring and surveillance, monitoring of communities ODF sustainability as well as behaviour change monitoring. The system can also be adapted to cover other sectors (health, education) for tracking programme performance and access to services. As more and more LGAs use WASHIMS, the system has the potential to play a critical role in enabling Nigeria attain SDG-6 targets.

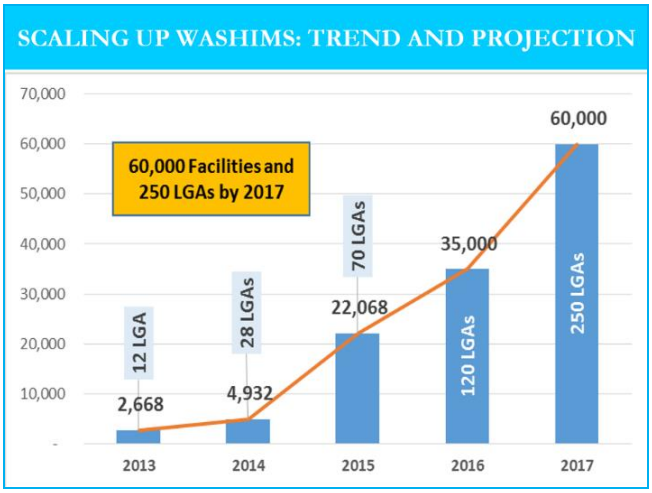

Figure 5. Trend and projection for washims upscale

Source: UNICEF Nigeria

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