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**TRANSFORMATION TOWARDS SUSTAINABLE
AND RESILIENT WASH SERVICES**

**Using Technology for Development to sustain
community based management of rural water
supply services in Zimbabwe**

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The Zimbabwe WASH Sector has been struggling with Community Based Management (CBM) since time immemorial. A lot of documentation exists outlining failure areas. Sticking challenge has always been that of finding lasting solutions to the identified gaps, chief amongst which are service reliability, institutional support for CBM, financing and support mechanisms for CBM, capacity building and the rightful definition of CBM. With this in mind, government has of late been capitalising on the development in technology to curtail some of the above weaknesses in a bid to improve performance of CBM at community level. To a greater extent, this has been happening within the framework of the Rural WASH Information Management System (RWIMS) which has a thrust on reducing down time of water points, improving supply chain for WASH spares, making sector information publicly available for evidenced based planning and strengthening governance systems for CBM.

Introduction

Zimbabwe has a long standing Integrated Rural Water Supply and Sanitation Programme (IRWSSP) under implementation across its 60 rural districts. Management structures exist at all levels to run and manage this programme, which for the past two decades has seen more than 75 000 boreholes getting drilled and more than 100 000 Blair latrines constructed with 100% subsidies from government and her partners. Come 2012, a new wave of sanitation delivery engulfed the sector, which saw the National Action Committee for WASH taking a drastic shift from a supply driven approach to sanitation to a demand driven model with much emphasis on community triggering for behaviour change and elimination of open defecation. This has resulted in more than 800 villages declared open defecation free (ODF) in a space of 5 years; an achievement never registered in the life time of IRWSSP.

With government, civil society and communities continuing to invest more in WASH infrastructure development, the biggest gap settling in has been sustainability of the same. The District Development Fund (2008) had it that, 45% of the more that 75 000 boreholes drilled in the rural areas are on breakdown at any given time. This points to a weakened community based management system calling for an urgent relook on how the system can be revitalized and better strengthened for improved service delivery and sustainability. One strategic move taken by government so far in a bid to stall further deterioration of the situation has been to capitalize on the development in technology to put up a robust information management system to help keep track of the distribution, status and service levels for the various WASH facilities using beneficiary communities as sources of data. This also includes linking these various WASH facilities to strategic service providers for response servicing and back up support where need be. To a larger extent, this has been made possible through the use of mobile phones.

The Community Based Management (CBM) concept

Community based management implies that communities are in control, have full authority and responsibility for the development, operation and maintenance of their water and sanitation services. CBM thus aims to ensure that communities are self-organised, able to manage (plan, lead and control), make decisions on, and take full responsibility for, operation and maintenance and the attendant obligations such as raising resources for spares and upkeep of their water and sanitation facilities. Core components of the CBM strategy include community consultations and engagements in planning, establishment and training of water and sanitation management committees, selection and training of village pump mechanics (VPMs) for response servicing, stocking of spare parts and introduction of mechanisms for community contribution and financial management systems.

In Zimbabwe, adoption of CBM as policy for managing water and sanitation services at local level started in 1992. To date, CBM has been implemented in all the 60 rural districts of the country in one way or the other. To this end, a CBM implementation guide has been developed and adopted by the WASH Sector. In addition, the National Water Policy also views CBM as the “solution to issues of sustainability of the sector as a whole” and merely adapts the provisions of the CBM Guide. CBM was born out of the 3 tier maintenance system which had much influence and play ball from government. The system comprised of the district maintenance team (DMT), the Pump Minder and the Pump Caretaker all of whom looked upon to government for support through the DMT. The major problem with the Three-Tier Operation and Maintenance (O&M) system has been weak involvement of user communities in the maintenance of their water points. This meant that all such facilities were regarded as government property. The continued rise in the O&M costs combined with the ever decreasing O&M budget allocation by government ultimately failed the system. In view of these problems, which resulted in long downtime of water points, the sector adopted CBM as a better sustainable O&M system.

Government realised and accepted that the management and maintenance of water and sanitation facilities is better done by the community of users, hence National Action Committee (NAC) adopted the decentralization policy with CBM as an integral component of IRWSSP. In the context of the WASH Sector, CBM implies that the beneficiary communities are in control, have full authority and responsibility for the development of water and sanitation services. It also entails that user communities shall take full responsibility for the operation and maintenance of their facilities including the attendant obligations such as raising resources for spares and upkeep. The thrust of CBM was therefore community empowerment for enhanced community management and ownership of water and sanitation service provision processes.

Community Based Management: the gaps

A number of lessons can be drawn from implementation of CBM across various rural communities and all of which can be consolidated to inform further strengthening of this concept. The various lessons coming out especially under the water component span from structural, technical to programmatic issues as detailed below:

1. Service reliability

Rural communities are willing to contribute towards the operation and maintenance of water and sanitation facilities. Some communities have set up water point funds and make regular contributions. Some have encouraged the establishment of income generating projects around water points to supplement the water point fund. Communities have accepted the concept and are willing to pay pump mechanics for repairs done to the pump. This will power has however over time been crippled by the frequent and repeated breakdowns due to use poor quality spares that have flooded the market thus draining the already vulnerable communities of their hard earned cash contributing towards O&M. End result has been growing frustration, fatigue and ultimately total withdrawal by some households from active participation in the water point fund hence the current problem of long down time of water points.

2. Institutional support for CBM

Government has a well laid down structure to support CBM. At village level, there are trained Village Pump Mechanics expected to provide hand pump repair services at a fee in case of any breakdowns; at Ward level there are various government extension officers who are technical in their own right and can assist with technical advice when ever needed. This structure also helps link communities with the district and private players by virtue of their level and position in society. At district level is also the district water and sanitation

sub-committee (DWSSC) an advisory of the Rural District Council in terms of WASH issues. The biggest gap currently is that this institutional structure is poorly coordinated and starved of information on current status and performance of the various water points serving communities to render their services effectively and judiciously.

3. CBM viewed as maintenance of water facilities with training and equipping of VPMs as the main output

At conception stage, people thought that the most important aspect of CBM was training and equipping of VPMs. Assumption made was that this was going to enable VPMs to successfully respond to breakdowns in real time thus reducing down time of water points. The other gross assumption made was that the business of pump repairs was going to be quite attractive to VPMs with enough grip to retain them in their areas of operation. However due to a poor communication system between water point management committees and VPMs, some boreholes go for months without being reported. This obviously puts the VPM out of employment thus forcing him into other sustainable ventures and trades in a bid to make ends meet. There is therefore need for government to view CBM beyond mere training and equipping of VPMs and put in place mechanisms to make business available to the cadres; a thing that will help retain them in that profession servicing targeted communities.

4. Financing and support mechanisms for CBM

In the past, CBM implementation has benefited from seed money from government and civil society organizations. Focus with this funding has mainly been on drilling of communal boreholes, setting up and training of Water Point Committees and VPMs including their tools and in some instances financing rehabilitation especially in cases where the nature of breakdown is beyond capacity of user communities to handle. The funding has however been dwindling over the past years and as such RDCs now need to shift their priority towards creating an enabling environment allowing for full participation by public private players supporting CBM rather than to continue looking up to donors for funding. The donor route has killed CBM through creating dependency amongst communities thereby disabling the very communities targeted for empowerment. The process of engaging private sector players in CBM seems complicated but this given space is one intervention with high returns. What the private players only need to see and be convinced on is the business sense in the whole arrangement. To this end government needs to invest in creating an environment that allows private players to access data on rural water supply in terms of investment done to-date, distribution and types of water points including beneficiary populations and finally the functionality status and historical records and performance data for all those water points.

5. Capacity building and enhancement

Most agencies view capacity building for CBM as the technical training of VPMs and provision of tools and spares to enable them to respond to breakdowns. Unfortunately, this has turned out to be a total disregard of the key tenets of capacity for CBM. Capacity building and enhancement in the context of CBM should be viewed as a multi faceted interlinked process running from mapping what is where and in what state; identification, training and tooling of both water point management committees and VPMs; defining the supply chain for hand pump spares including linking up water points to strategic service institutions. This properly executed can facilitate easy implementation of CBM.

Grounding CBM on information technology

Of late, government has been trying to strengthen community based management of rural water supply services through the development and deployment of a robust mobile to web based sector database; the Rural WASH Information Management System (RWIMS). Main objective has been to make available real time data on the status of water and sanitation facilities. Strategic ownership of this system including its operation and maintenance rests with the beneficiary communities. This database driven by communities (Key Informants) through RapidPro (a free sms platform allowing communities to keep track and report on the status of their water points in real time) is web based with normalized links to VPMs and the District Water and Sanitation Committee for response servicing. Government Extension Workers manage the database at Ward level through RWIMS FieldForce installed on their smart phones and linked to each and every water point through RapidPro. The geo-database is accessed through a RWIMS Online platform installed on the sector website, www.ncuwash.org. It is also imperative to note that the advancement of

RWIMS capitalized much on developments in the mobile phone industry and the subsequent penetration of this communication technology in rural Zimbabwe. Future phones are used to enable RapidPro-RWIMS FieldForce communication at community level and smart phones are used to enable RWIMS FieldForce-RWIMS Geo database communication whilst the sector website is used to enable stakeholders to access the database remotely through RWIMS Online. This recent development in information technology for the WASH sector has come in as a solution to a myriad of challenges constraining CBM. Below are some of the notable success stories picked from communities and districts after RWIMS implementation:

1. Reduced down time of water points

RWIMS as a community level system has been able to keep track of the functionality of water points in real time. On average it is now taking 12 hours for a pump breakdown to be notified to both the local technical artisans at community level (VPMs) through RapidPro and also the District authorities through RWIMS Online with beneficiary communities driving the whole process. The coming in of RWIMS has thus been able to link VPMs with jobs thus creating demand for their services. This has also enabled VPMs to respond to any breakdowns in real time. Where the nature of break down is limited to repairs, down time has been reduced to less than two days and in other cases where the breakdown is major and requiring rehabilitation, down time has been reduced to a week. This on its own has helped ensure water security at community level thus enhancing value for money for communities contributing towards O&M.

2. Improvements in the supply chain of WASH spares

By design RWIMS is a web based system available to sector players and stakeholders through an online application that can be accessed over smart phones or computers. Its use is however regulated through user accounts and passwords. This kind of set up has ensured sector wide use of the system also reaching out to various service providers like drillers and pump manufacturers. These private sector players have been able to make use of the system doing business mapping to estimate demand for their services and also establish likely locations from where to expect high demand for their services. “Restocking and repositioning of borehole spares is now easy and effective with the use of evidence from RWIMS” said one of the local pump manufacturers. In that regard, this has helped ensure availability of pump spares nearer to demanding communities. However, some more effort is still needed to keep on encouraging private business players to design models that allow these spares to be available in the retail sole trader shops at community level where villagers go and buy their bread every morning as current stocking levels are limited at lowest to provincial towns.

3. Informed sector planning with high impact

The coming in of RWIMS has also revolutionized sector planning and programming at all levels. RWIMS has been taken as a one stop entry into the sector where government and all her partners can get national data on the distribution and functionality of water points across various districts. This has enabled sector planners to map-out unserved areas requiring investment in new WASH infrastructure, water points on break down requiring repair or rehabilitations, water points with water quality or capacity issues requiring remedial action, water points that are oversubscribed in terms of beneficiary populations etc. Evidence based planning is one major pillar to the success of CBM. With investment matched with demand and actions taken when most needed, communities are bound to embrace full ownership of their water services sacrificing all they have to keep their water supply systems up and running.

4. Sector publicity resulting in increased competition amongst service providers

The coming in of RWIMS has revolutionized access to sector data at all levels from international, national to sub-national levels. At community level all VPMs operating in the Ward are linked via a free sms platform (RapidPro) to all the water points in their vicinity. In case of any breakdowns, all the VPMs receive a free sms message generated in real time by a registered Key Informant who in most cases is a member of the water point committee. Depending on their ability to respond, all these VPMs are given an opportunity to assess the nature and level of breakdown outlining the bill of quantity for rehabilitation including a competitive labour charge knowing quite well that lowly priced quotation usually wins the bid. All this shields user communities against unscrupulous VPMs whom of late have been enjoying monopoly of the area and charging exorbitant prices even when it is not worth the assignment. The same also happens with pump manufacturers who have also started to setting up provincial depots and with some working through agents to reposition spares against the quantum of business available as provided for from the reports they

get through RWIMS Online. Competition has started to increase amongst pump manufacturers and the only way to out-smart each other is through offering concessionary rates and continuous improvement in the quality of their spares all of which is to the direct benefit of user communities.

5. Multi-sectoral engagements resulting in productive uses of water

Besides merely mapping the distribution and functionality of water points, RWIMS also report on water quality and quantity issues, depths of water points and also seasonality. The newly introduced indicator on water point yield has been welcomed by other sister sectors especially nutrition which has started making use of this indicator to track high yielding boreholes at community level that can be used to promote and support development of nutritional gardens or other localized income generating projects like cattle fattening etc. It is interesting to note that part of the funds raised through such initiatives are ploughed back as water point funds to help sustain operations and maintenance of the water points in question thus further strengthening community based management concept at the lowest level.

6. Enhanced governance system for CBM

RWIMS is an interconnected system that recognizes the important role communities play in the operation and management of their water points. More often than not, communities feel that they have full ownership of their facilities if systems in place accords them the opportunity to map and report on the distribution, status and operation of their respective water points at any given time rather than having this role played by an outsider. This sense of ownership is what then defines the future of CBM. In every reporting that happens in RWIMS, originator of the information is the respective water point management committee which causes for communication to the Ward based enumerator with an overall responsibility to manage the Ward database. Consecutively, the same message also goes to the VPM for response servicing. This two way communication between water user communities and government systems enhance water point governance issues thus further strengthening community based management.

Conclusions and recommendations

The major wave of change brought about RWIMS in the operation and maintenance of rural water supplies has helped revive the community based management concept, which over years had lost its charisma. Under the conventional CBM system, VPMs have not found enough incentives to continue providing O&M services and neither have private players realised opportunities for business. Introduction of RWIMS as a support system to CBM presents opportunities for doing business differently. Firstly the quantum of business in O&M of rural water services can now be accurately quantified and mapped at any given time, good enough a carrot to lure public private partnerships in WASH based on sound business models. However, RWIMS is a hi-tech system and to ensure its sustainability and full utilisation, there is need for a guaranteed and dedicated support budget from central government to meet system operational costs. In the absence of this budget, all the CBM support communications that water points are currently enjoying with government, private sector, civil society and local level service providers will all be disabled resulting in the system's support to CBM dying a natural and sudden death.

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Note

Disclaimer: the views expressed in this paper are those of the authors and do not necessarily reflect the views of government/organisations they work for.

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