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O&M audit, a practical tool for sustainability

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SUSTAINABLE ENVIRONMENTAL SANITATION AND WATER SERVICES

O&M audit, a practical tool for sustainability

F. Soley and J. Thogersen, Ghana

THE DANIDA SPONSORED Volta Region Community Water and Sanitation Programme in Ghana has been under implementation since 1993. Community Water and Sanitation Agency is the statutory authority responsible for its implementation.

The prime objective of the Programme has been the provision of reliable and easily accessible potable drinking water, which is **managed** and **sustained** by the beneficiary communities. To date, a total of 88 pipe schemes and over 1,200 boreholes fitted with handpumps have been constructed and these are serving an estimated population of 400,000.

In trying to ensure that the beneficiary communities sustain these water facilities, various strategies were adopted. The first was to induce and strengthen the concept of Community Ownership and Management. This was done through a combination of re-orientation of the entire population on the need to change their perceptions about water and technical/institutional capacity building at the community level. The 5% community contribution as a commitment fee during the mobilization and animation stage, the constitution of a management body popularly called Water and Sanitation Committee or Board, the training of these committees/boards, selection and training of operators, caretakers and Area Mechanics and the provision of working tools are concrete manifestation of efforts aimed at facility sustainability. The development of the private sector is also a key strategy under the Programme. This is intended to make basic O&M services readily available to communities as and when needed so long as they have money to pay for it.

Operation and Maintenance (O&M) considerations have, however, received varying levels of attention during the different project phases. Communities are often very anxious to benefit from new physical projects/facilities. The enthusiasm at this stage is normally so overwhelming that no impediment is tolerated. They normally manage to meet all requirements of the Programme. With the completion of the facility the interest wanes significantly and it becomes very difficult to institute effective and efficient O&M mechanisms for sustainability. At this point, they must be convinced through other means to readily adopt best management practices. Simply telling them what they are supposed to do at this stage has proven ineffective. This implies that the Programme ought to go a step further to drive home its O&M messages. The generally poor maintenance culture arising from utter indifference to public goods by Ghanaians compounds the O&M challenge.

The Monitoring, Operation and Maintenance (MOM) Unit of the Programme has come to realise beyond all doubts that the communities cannot be solely blamed for not doing what they have been told to do several times over the years. Rather, the entire system has to be re-assessed to clearly establish the missing links in order to make headway.

This understanding propelled the Unit, which comprises two Engineers and a Socio-economist to embark on a campaign named O&M Audit. The main rationale behind the Audit are to: assist communities in identifying problems and taking proactive measures to rectify them; build the capacity of WATSAN Committees/Boards in overcoming identified problem areas for a more sustainable O&M of their facilities; enhance the awareness of communities in O&M especially regarding their roles and responsibilities; and educate/inform communities about routine maintenance requirements (specifics) of their facilities. Certain maintenance functions are not performed by the Caretakers/Operators not because they are irresponsible or non-committed but simply because they are not aware they have to be doing them. The Audit helps the district and programme staff to recognise critical monitoring issues so they can be more focussed in their work. The O&M Audit has actually turned out to be very potent in promoting positive changes in the management of the water facilities.

The audit methodology

The O&M Audit is a systematic community-based activity, which uses participatory methodologies like Interactive Discussions, Interviews, and Guided Walk along all structures of the facility. A critical review/analyses of all records helps the Audit Team to ask very searching questions, which make it almost impossible for the management body to misrepresent facts or provide incorrect answers to impress the team. An effort is usually made by the Audit team to reach out to stakeholders who were not present at the meeting for their opinions on any issue at stake.

Planning and preparation

This first phase of the O&M Audit basically involves the review of all available literature on the community e.g. feasibility study reports and design documents. These are studied to give the Team a good foreknowledge about the water system before the actual Audit visit. Advance communications with the Programme's District Office to arrange a date for the Audit visit with the community is also done at this stage.

Audit visit

The second phase is the Audit visit. The outline of the visit includes a meeting with the Chiefs, Opinion Leaders, and the WATSAN Committee/Board and other interest/pressure groups in the community. There is also a joint technical inspection by the participants in the Audit namely the visiting Team, the Caretakers, WATSAN Committee or Board members and any other interested participants. [The meeting, which is highly interactive, is moderated by the audit team who ethically desists from too much lecturing, but rather listens more to gather as much information as possible normally takes 4 hours.] Here, the rationale of the exercise is thoroughly explained to the participants so as to overcome their anxiety and create a congenial atmosphere for frank exchanges of ideas without any intimidation. No contribution or question is 'stupid'. Additionally, the moderators should ably control tempers so as to prevent any clashes between factions.

The beauty of this meeting is the way it provides a common platform for all the stakeholders and related interest groups to freely air their concerns about the management of the scheme. This discussion is significant in explaining objectively the situations, both managerial and conflict, as they come up. This forum is also used to lobby the community's support for the WATSAN Committee/Board since the community itself has some crucial O&M roles and responsibilities. After this meeting, the community is asked to fix a convenient date for the presentation of the Audit report where the whole/majority of the people would be available and where every issue will be clearly explained to the understanding of all. Some individuals who, out of conflicts, refuse/fail to participate in the meeting for some reasons, are approached in their homes by the Audit Team for a one-on-one session. After this meeting, there is a joint technical inspection of the entire water scheme by the participants especially the Caretakers, WATSAN Committee/Board members and any other interested participant.There is hands on coaching for the caretaker on operation and maintenance of treatment plants, valves and valve chambers. The WATSAN committee on the other hand receive coaching on sound managerial and financial procedures. Eg simple financial accounting and calculation of tariff collection efficiency. ***This is because the Audit team is more keen on getting problems understood and solved than documenting them.***

Report preparation

Audit report preparation is next after the Audit team visit. It is a detailed and comprehensive account of the O&M status quo, outlining specific recommendations for improvement. [On average, between 15 and 25 recommendations are contained in the report to be implemented by the WATSAN Committee/Board, the community or by the Programme's District Office and are clearly specified.]

Community debriefing

The next stage is the Report Presentation at a community meeting. This is the most interesting milestone in the Audit Process. The extent of ignorance of the community in terms of O&M becomes very evident here. Their anxiety to understand the system and acquire tools they can use to check the WATSAN Committee/Board especially in the management of their finances is aggressively brought to the fore. The Team patiently provides answers to all their curiosity while at the same time stresses the need for the community's maximum cooperation with the WATSAN Committee/Board in the management of the scheme.

Follow-up

The final stage in the process is the filling-in of a simple follow up form by the Field Extension Staff, who in our case is the Environmental Health Assistant. The Form contains a summary of all the recommendations given by the Audit Team. This is taken to the community every two months and filled with Yes or No answers as to whether Action has been taken or not. There is a small column for remark on each recommendation describing incomplete attempts made so far or reasons for inactions. This form is then sent to the Audit Team for analysis aimed at establishing the extent of responsiveness to the implementation of the recommendations by the relevant stakeholders namely, the operators/caretakers, WATSAN Committee/Board and the Programme's District Staff.

Resources required for the audit

Two man-days are normally used by each of the Team members (comprising both engineering and socio-economist professionals) i.e. one day for the actual Audit, half day for the Audit report preparation and another half day for a debriefing of the whole community (report presentation).

Another important but implicit resource requirement is the acknowledgement of the importance of this O&M intervention by all Programme Staff. This way, they will be more willing to lend the necessary support to the process and accept in good faith problems that might be exposed by the Audit. It is important that Programme staff do not misconstrue this activity as a fault-finding one but should rather understand it as an opportunity to solve identified problems whilst learning lessons for future improvement. It must be a genuine acknowledgement of their own shortcomings. This fear in fact exists and should be managed through diplomacy and continuous education of the different stakeholders of the Programme.

The O&M Audit intervention has so far covered 30 communities benefiting from either pipe schemes (25) or boreholes fitted with handpumps (5).

Discussion

Approach to extension support for communities

The original approach to extension work in the communities had been the persistent preaching of O&M messages on what ought to be done by the communities. This approach was based on the assumption that communities will do whatever they are told to do. Such messages like the need to: set a water tariff; prepare a budget; keep proper financial and other records; render accounts to the community etc, were not uncommon. The O&M Audits have demonstrated, however, that dissemination of textbook O&M information is rarely sufficient for sustainability of the facilities, the content of the information and the implications of not taking certain actions are seldom understood. The general O&M knowledge must be accompanied with "tailor made" problem oriented knowledge disseminated using the approach of actually assisting them to change procedures.

Communities were told as part of the animation process that they are solely responsible for O&M. In other words, the partnership between the community and the Programme/Community Water and Sanitation Agency ends with the completion and handing over of the facility. However the expectation that the communities are capable of taking full responsibility for O&M of their facilities soon after completion is, in most cases unrealistic, O&M must be considered as a collective responsibility involving the community the Programme/CWSA, and Private Sector service providers, over a prolonged period after completion.

The caretakers/operators are local artisans/mechanics identified from within the community and given some training. Similarly, the WATSAN Committees/Boards are constituted by the local community people who generally do not have enough experience in management of a public utility like water. What is required is an approach by which the WATSAN Committee or caretaker is assisted to understand and do what is right many times until they get conversant to become more independent-minded in the performance of their duties. This implies that all Extension Agents under the Programme must generally have uniform understanding, knowledge and skills to be transferred to the communities.

Previously, the general community was often cut off in capacity building and other extension activities. Efforts were mostly concentrated on the management committees to save time. This strategy is risky and has created many problems in our Programme communities. Lack of understanding often creates lack of trust, and lack of trust between the community and the WATSAN are highly diminishing for the sustainability of the facility. In the Audit process we emphasise strongly the need to involve all stakeholders of the community during the Audit visit and to call together as many as possible from the community during the debriefing. If there are any indications of internal conflicts in the community related to the water facility, the Audit team will try to understand the details of the conflict and explain in detail what is required from the different parts to achieve sustainability of the facility.

Achievements of the O&M audit

There are a number of benefits to be derived from the O&M Audit as outlined below:

1. It allows the Programme staff to have an interactive and learning/sharing session with the communities. In the process indigenous knowledge is acquired from the community whilst professional (technical) advice is given. This interactive process enables the Audit Team to understand the communities better in terms of why they do or do not do certain things. The O&M Audit is able to unearth information that has been hidden from routine extension agents for many months or years. This is achieved through the searching questions based on quick analysis of available records. It is common to hear District Programme Staff express surprise at how some information obtained through the Audit has never been disclosed to them even though they are almost always with the communities.
2. It involves the whole community and thereby creates a good platform for common understanding and awareness about O&M issues. Here, consensus is built among the WATSAN, the community and the Audit Team on the state of the facility/management and the way forward. The use of local languages understood by the whole community during presentations enable even illiterates to be well informed and educated on O&M. Also, these debriefing sessions equip the community with simple tools they can use to check the performance of the WATSAN.
3. The O&M Audit approach promotes teamwork within the Audit team as most of the problems are brainstormed on the spot. Here, each member of the Audit Team draws on his/her specialized knowledge and experience to explain the causative factors of the problems and the appropriate solutions. He/she has to convince the other team members for a consensus. One has to be open to criticism and arguments over one's ideas and be prepared to concede and make quick compromises. The learning approach of the Audit has made the process very enriching. The knowledge base, understanding and outlook of the Professionals therefore expand and deepen with every single Audit. This is because; the problems are different in different communities thus requiring different solutions as appropriate for the situation/environment in question.
4. The Audit intervention is primarily aimed at assisting the communities to overcome their O&M problems. However, the lessons have been valuable for other

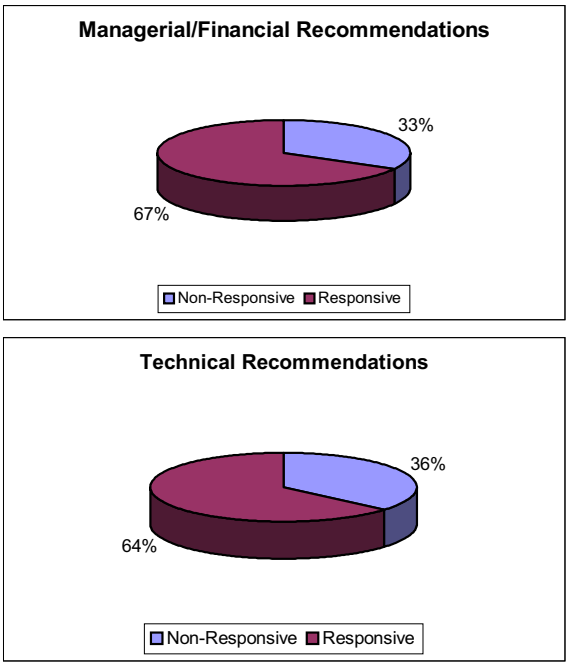


Figure 1.Responsiveness of communities to audit recommendations

purposes as well. Problems caused by design and constructional deficiencies are noted for correction or fed back into future works. Knowledge gaps at all levels, right from the community through the District Office to the Regional Programme Office are also identified The Audit invariably represents a precise needs assessment technique for the future and an O&M training curriculum can become focused, drawing on practical situations. Further, the Audit findings enable design of optimal monitoring sheets and M&E systems, which again enable extension workers to push the communities in the right direction during each monitoring visit.

5. The Audit has revealed that over 80% of all O&M problems are of managerial and/or financial nature. This dispels the notion of O&M as a purely Engineering issue. Rather, it is a good 'marriage' between software and technical (hardware) issues. For instance, Extension Agents, who are mainly software people, need to understand the technical principles behind biological water treatment (SSF, HRF/URF) and the estimation of water produced to be able to help the community to calculate the tariff collection efficiency. These will be used in assisting the community on how best to operate and maintain their facility. In the same way, the hardware person needs to understand fundamental social dynamics in order to be sensitive in his interactions and relationships with the community. E.g. knowing that conflict situations or institutional/organisational instability is capable of throwing the management of the scheme into disarray.
6. The response of communities to the Audit recommendations have been very positive. Below are illustrations of the remarkable rates of responsiveness to the Audit recommendations (managerial/financial and technical) by the communities within a 2 to 9 month period:

Conclusion

Unlike the pre-construction phase where the craze for a facility is the driving force for community action and responsibility, the O&M phase has no tangible output to offer. Convincing the communities on the grave implications for sustainability if O&M is not given the same level of commitment becomes the bait. This explanation is effectively done through in-depth assessment and understanding of the existing situation, made possible through the Audit.

The high degree of responsiveness to the Audit recommendations therefore is a confirmation of the potency of O&M Audit to create awareness in O&M and stimulate action from all stakeholders. Both the short and long-term impacts of the Audit make it a worthwhile venture to be considered by all Projects if they are to be sustainable. The positive changes in the performance of the management committee (WATSAN Committee/Board) and the community and the refinement of major policy issues, design and training packages through feedback from the Audit intervention ensures value for money in future investments.

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