A tale of two villages –
Lessons from two water supply, sanitation and health education schemes in North Gondar, Ethiopia

In 1993 WaterAid and the Ethiopian Orthodox Church’s Development and Inter-Church Aid Commission (EOC-DICAC) collaborated on a substantial six-year water supply, sanitation and health education programme covering ten ‘woredas’ in the North Gondar area of Ethiopia.

Two communities of comparable population were included in the first phase of this programme: Atsede Mariam and Bohona. Although the circumstances of the two villages were different and each required different engineering infrastructure, the approach in terms of training for community management and for hygiene and sanitation was identical.

However, some seven years after handing the schemes over to the communities, the outcomes of the interventions appear to be totally different. Where one village has used the management of their water scheme to fund a range of independently-conceived community development projects, the other village has allowed their scheme to fall into a state of disrepair and to become a source of conflict.

Why should the two communities be so different? Is one programme such a success and the other a failure – and if so, what are the reasons for this and what can we learn for future work?

Although a more thorough evaluation would provide further detail, the visit undertaken (amounting to one and a half days per community in May 2003) revealed a number of useful insights and lessons, which are shared in this paper.

Main objectives of EOC-DICAC water supply, sanitation and health education programmes for North Gondar:

- Provide a potable water supply to the village at a reasonable walking distance for the community
- Reduce the time and energy used by women and children in fetching water
- Improve the health and sanitation status of the people
- Strengthen the capacity of the village in their operation and maintenance of the scheme
- Improve the living standard and productivity of the community

Main abbreviations used:

EOC-DICAC – Ethiopian Orthodox Church - Development and Inter Church Aid Commission
WSSHEP – water supply, sanitation and health education programme
Woreda and Kebele – larger and smaller local government administrative regions in Ethiopia

The populations of the highland area of North Gondar in Ethiopia traditionally use unprotected springs or wells for water collection. Defecation practice is in open fields and few people have latrines. The major diseases are caused by lack of safe water, poor hygiene and sanitation practices.
Atsede Mariam – a unique success story?

Atsede Mariam village is in Alefa-Takusa Woreda, in the North Gondar Zone of Amhara Regional state. It sits at 2200m above sea level and is about 161km south west of Gondar town.

The population is around 3500. The village has a church, a junior secondary school, a clinic, an agricultural extension office and a veterinary clinic. The source of water for the village is the spring at Woki, which is 1.5km from the village.

Background and basics:

The one year project cycle for the EOC-DICAC water supply, sanitation and health education programme in Atsede Mariam involved the installation of a pump and gravity water supply system (PGWS), spring capping, the construction of a collection chamber, a pump house, five water distribution points, a flood protection wall and the laying of 1616m of pipe. Two ventilated improved pit latrines were built for communal use and eleven traditional pit latrines for individual household use.

The project provided training in sanitation and hygiene for one member of the clergy, two community health agents, two traditional birth attendants, two health communicators, two “refresher” traditional birth attendants and six water technicians. Regular sanitation and hygiene education was also given at school, Sunday church service and at the construction sites.

As implementers of the project, EOC-DICAC worked from the beginning to enable community ownership of the scheme. As is standard for EOC-DICAC, they encouraged full community participation in the selection of the water site, in providing labour for construction work and in the ongoing and subsequent management of the scheme.

Atsede Mariam: seven years on

Returning to Atsede Mariam almost seven years after the scheme was handed over to the community the following successes are clearly apparent:

- The pump and gravity water supply system linked to five water distribution points is working well and still does not need major maintenance
- This means that where before, villagers had to spend up to six hours daily for the round trip and queuing time to collect water, they have clean water close to their homes
- A volunteer water committee made up of seven people manages the scheme. They are chairman, secretary, finance head, purchaser, auditor, cashier and store keeper. The committee regularly liaises with the community
- Water is sold to the community at ten cents (0.007p) per 25 litre jerry can. This money is deposited in a bank account and used to cover all of the running costs of the scheme
- An attendant at each water distribution point (collecting fees and switching on/locking water at set times) and a pump operator/guard are paid employees of the scheme
- The committee has been able to use money from the water-sales to go towards the cost of an electrical generator, the construction of a church closer to the village and to build 7km of feeder access roads to the village. They are saving money for further activities
- The scheme remains under community management and has not been handed over to the local government water desk
Bohona – new hope for failed projects?

Bohona village is in the high land of the western part of North Gondar zone at an altitude of 2100m above sea level. It is located in Chilga Woreda. It is about 38km west of Gondar town. The population is around 3500. It has an elementary school and one agricultural extension office. Sources of water for the village are Kachona, Mizaba, Felasha and Wanza springs, which are between 30m and 500m from the village.

Bohona: seven years on

With even the briefest of glances, seven years on from the WSSEP hand-over, it is clear to see that Bohona’s water scheme is in a state of considerable neglect.

The fact that the technical schemes are still functioning and providing clean water suggests that the beneficiaries have obtained some tangible benefits from the project. Before carrying out further research it could be supposed that the community has:

- Gained access to safer and adequate water supply at convenient sites (with some distance reduction and time-saved)
- And that faecal and water-related health problems are reduced

However

- Although each of the four water schemes has a water committee with seven members, they do not appear to be managing the schemes well
- The community does not pay for its water, so there are no paid guards or water attendants
- The water sites are muddy and livestock frequently break down the fences
- The community speaks negatively about the water committee and related issues
Summary of the reasons why one project was a success and one failed

Atsede Mariam

- The community participated in the project from the very beginning – and now are managing it themselves. They don’t want to lose control of the project
- Previously, water was the main problem in Atsede Mariam. Women had to leave early in the morning and spend some five or six hours fetching water every day. Alternatively, if they could afford it, they would pay labourers 50 cents per jerry can to bring them water. Water here is a precious resource and is valued even more now that it is clean and close to home. The community doesn’t want to return to the old system. This case study did not allow for an evaluation of the effectiveness of hygiene promotion
- There are respected community members, who have had outside exposure, that share their experiences with the community and are able to mobilise them. Atsede Mariam is not the only really successful project: there are others that have worked well in North Gondar, although these are smaller ones. But Atsede and one other (Dogoma) are exceptional in that they have transformed a sustainable WSSHEP into a means of financing wider community development projects
- The water committee is very strong – it is well respected, manages its finances carefully, consults with the community well and has a vision for further development works that benefit all
- The quality of the engineering work in Atsede Mariam has stood the test of time: the community has never come across major difficulties with maintenance

Bohona

- Water was not a critical problem for the community - perhaps it was not their first priority. This fact could have played a significant role in their response to the project
- The water committees are not active: there is little evidence of activities to mobilise the community to maintain the water scheme (beyond fencing attempts) over the last seven years. The result is a neglected scheme with no associated community development
- The Kebele administration has not given constructive support to the water committee and takes no responsibility for the failures of the scheme. It is clear the Kebele Deputy Chairman is not convinced himself by the need for water-fees, although, with the Kebele office in Bohona, he is fully aware of the community problems
- EOC has a strategy to hand over to the community, but with an agreement that the Water Desk will support the community. This hasn’t happened sufficiently in Bohona
- The community seems particularly closed and hostile to new thinking. They believe water is God-given and therefore want to receive it free. They are not sufficiently aware of the changes that have come to their lives because of the clean water and therefore do not respect their water sites. The hygiene promotion seems to have been very inadequate
- There is a possibility that EOC-DICAC did not ensure that the water committees were formed from the beginning, give sufficient training and emphasise the importance of raising money from water sales, as the water committee claim. The more likely scenario is that Bohona is an example of a difficult case, which might demand a modified approach

“...The problem is the fences – because there are no cattle troughs. And there is no tap so the water is flowing all the time. If there was a reservoir then there would be enough water for everyone. But we know we have to work to keep the water we have – so yes we have to contribute money for maintenance and for guards. But to propose this to the community we need the support of the Kebele.” Chekol Meles, Bohna water committee member and a cashier.
Lessons emerging –

After listening to members of the two communities discussing the way they have responded to the EOC-DICAC/WaterAid intervention a number of inter-related areas began to show themselves as key for the long-term success of WSSHEP:

- Completing the project cycle from needs assessment to hand-over
- Raising the profile of gender issues in WSSHEP
- Building Bridges towards stronger community and institutional links
- Community awareness and project sustainability
- Looking at creative methods and refresher courses

These are discussed below, however to pursue these further a more in-depth evaluation would be essential.

Completing the project cycle from needs assessment to hand-over

Atsede and Bohona were part of the earliest work-phase in EOC-DICAC’s North Gondar programme. At present EOC is implementing two programmes of comparable size in North Gondar: the three year Tsegede Armachicho and five year Lasta-Lalibella programmes - both of which are designed in conjunction with Water Aid. What, if any, adaptations have been made to the project cycle during this last decade, and have the Atsede and Bohona visits bought new insights?

Tsegede (presently in its second year) is following the one-year per community model of Atsede and Bohona. During this, months one and two are dedicated to hygiene awareness and mobilisation of man-power for construction work, months two to nine for the project implementation along with hygiene and sanitation awareness creation, and the formation of the water committee, and months nine to twelve for completion and hand-over. During this time health educators, water technicians and the clergy are trained. The EOC also works with the government-trained traditional birth attendants and community health assistants. At the phase-out stage, refresher courses may or may not be offered. In this way a community has one year both for the provision of ‘hardware’ (the technical engineering work) and the ‘software’ (the training for both hygiene awareness and community management) – although in theory this software continues on its own thereafter.

In contrast, Lasta-Lalibella which is now nearing completion works on a five year programme for all communities. The hardware focus is for one year per community, while the software or social support continues for the full programme period. This means that all communities receive an equal period of health awareness and community mobilisation even if the engineering input comes at a different point within these five years.

Why has EOC adopted different models for the two programmes?

One reason is that the profiles of the areas are very different. Like Atsede Mariam, the lowland area of Tsegede, has a severe water shortage and might be expected to value water highly, although this does not necessarily guarantee the community will be receptive to sanitation and hygiene messages. Likewise it is judged that the inhabitants of Tsegede have open minds (unlike those of Bohona) suggesting that a one-year project cycle there might result in a success as in Atsede. Meanwhile the Lasta-Lalibella area profile is a mix of open and closed communities not unlike the mix in North Gondar of Atsede and Bohona.

Certainly the difference in approach for the two programmes – with its range of between one and five years of software time - is significant and a final comparative evaluation will be important. Within a year of the Lasta-Lalibella programme starting the different time needs of software and hardware were recognized. These were acknowledged and supported by the funding partner, and social workers were introduced to facilitate better training and the new time frame organised.

Considerations about the potentially different time and budgeting needs for water provision, awareness creation and community management have to be looked at the start of a project with the needs assessment – and also to the end of the cycle, with the implications for follow-up. From this brief case study it appears as though both communities would have benefited from more emphasis on sanitation and hygiene – and for Bohona, more time devoted to community management. Perhaps a more in-depth needs assessment would have shown that Bohona’s awareness needs were in fact far greater than their water provision needs. Likewise Bohona, and others like it, could have needed either systematic follow-up or an agreed commitment of support from related institutions after the hand-over.
Equally involved: raising the profile of gender issues in WSSHEP

It was noteworthy that the water committees in both Atsede and Bohona were all or predominantly male, particularly when in rural Ethiopian society it is the women and girls who collect water and who are responsible for all water-related cooking, sanitation and hygiene activities. In Atsede men were observed collecting water, but only water to be blessed and used in church.

In both communities the issue of women’s participation in decision-making around water issues was raised – if only briefly. Responses varied greatly from women feeling able to participate in meetings, to some roles being considered too responsible for women, to those women who felt that meetings were for men, to women’s large workload meaning they did not have time to work in a committee role.

While the whole community in Atsede appeared happy with the decisions made on their behalf by the male committee, considerable money and power was still being controlled by what, in gender terms, is an unrepresentative committee.

Meanwhile in Bohona it was interesting to observe that some vulnerable individuals might not actually be aware of meetings or of the community structures they could feed into. It might be important then, not only to enable a more equal male-female profile in WSSHE work, and (in EOC’s case) to continue working with church structures, but also (at the needs assessment stage) to look at creative ways to make use of other existing community communication channels such as the burial societies or iddr, women’s groups etc.

Building bridges: towards stronger community and institutional links

What emerged strongly from Atsede Mariam and Bohona was the importance of all stakeholders working in partnership if a WSSHEP was to have a sustainable future. This needs one with an effective and accountable working relationships between community, committees, trained individuals, clergy, implementing NGO and local government bodies such as the Water Desk and the Kebele. However, as well as recognising the perennial difficulty of many different parties working together, there is always the reality of low government staff capacity, transport and per diem shortages, and the fact that many posts are voluntary and competing with an individual’s other work or obligations.

Whilst a cohesive and motivated community like Atsede may create their own routes to collaboration, weaker communities such as Bohona, can struggle. Here there could be a case for the implementing NGO to provide a stronger framework from the outset and one which can help the wider community after hand-over to enable the setting of targets, holding others accountable to their responsibility, having the authority to request assistance and so on.

Certainly it seems that the key to success is a strong sense of ownership of a programme from the outset – and from all involved. Although the EOC-DICAC’s practice in North Gondar was to encourage ownership and participation, the essential role for each stakeholder may have needed more emphasis.

By contrast in the Lasta-Lalibella programme (but not in Tsegede) – and towards the end of the North Gondar programme, this ownership has been formalised by written programme agreements signed at the earliest stages by all relevant stakeholders. All are asked if WSSHE is their priority, if they agree on the water sites, if they are committed to providing the essential work and infrastructure (eg building labour, forming committees, opening a bank account for water fees, providing on-going support etc). It is only when all stakeholders have agreed to and signed a formal contract that EOC start project implementation.
Money matters

People living in the capital, Addis Ababa, pay around 1.50 birr (0.109p) for 1m³ of water (the equivalent of about 50 jerry cans (1250 litres).

In Atsede Mariam, the cost of 1m³ is three birr (0.22 pence).

Can’t pay – won’t pay: community awareness and project sustainability

To be able to know the real financial conditions of Atsede and Bohona more data collection would be essential, however it was interesting to note the difference in response to a call for a water fees. While residence in Atsede have even agreed to a recent price rise from five to ten cents per jerry can, people in Bohona refuse to pay even a suggested three birr contribution a year. And while Atsede’s PGWS has fuel running costs that Bohona’s scheme does not, Atsede is funding a number of other development projects the profits from the water fees.

Is Bohona less capable of paying for water or how much is it a question of awareness and the value given to clean water and to hygiene issues? Certainly Atsede has some farmers trading in the valuable crop oil seed, but Bohona does have signs of new shops opening up. Interviews in Bohona revealed very poor members of society, but these are also likely to be present in Atsede.

It is important here to remember that Atsede residents (unlike Bohona) have always paid for water by the number of hours lost daily to fetch it or through paying labourers instead. Even so if a project is to be sustainable long-term, payment to at least cover repairs and guards is essential. It would be interesting to know Bohona’s reaction to water fees had the original needs assessment highlighted the general low level of awareness in the community and more emphasis been put on sustained hygiene and sanitation training.

Lively lessons: looking at creative training methods and refresher courses

Although the research time could not allow much discussion of the sanitation and hygiene aspects of the WSSHEP, (but necessarily focused on water and community management), a general question about the success of this aspect hung over the two communities: how much of Atsede’s success could be attributed to increased hygiene awareness and to what extent did Bohona’s failure result from a low level of awareness?

Although interviewees in both communities spoke of improved health through clean water, it was also frequently stated that they needed more hygiene awareness. Where this report can only touch on these issues, the idea that hygiene and sanitation requires significantly more time devoted to it than the hardware aspect of water provision came out very strongly in a recent WaterAid report focusing on hygiene, which included research-time in Bohona.

With this in mind, the visit did pose questions as to the effectiveness of training methods and materials for the hygiene work to date, and also about the adequacy of refresher courses. Basically is it important to devise training methods and resources that are more visual, participatory and creative than those employed both by EOC and the local administration? Could the successes of Atsede be shared with struggling communities like Bohona in order to inspire them – and if so, how? And would it be more effective and economical if WSSHEP design included a follow-up training calendar?

Malefia Teshager – Traditional Birth Attendant

“Training should not be something you do only one time, but frequently. I did my last training a long time ago and now I need some updating…”
Recommendations

- **Positive exposure and exchange**: given that some of Atsede Mariam’s success is attributed to the presence of individuals who have outside exposure, there is a strong case for offering communities without this exposure (perhaps who are isolated or closed in their thinking) something that will enrich and motivate their perceptions. This could be done through direct community exchanges or through visual presentations about a success story (eg video, slides, drama, photo exhibition or leaflet). Ideally this opportunity should take place as early as possible in the project cycle.

- **All-stakeholder programme contract**: it could be advisable to make full stakeholder meetings from the very first stages of contact with a community a standard practice. Ensuring that implementation of a programme will only start once a formal written contract between the NGO, the community, and local government offices stating all roles and responsibilities has been agreed to and signed. The process leading to this agreement could involve a well-presented case study so that each individual can fully understand the implications and opportunities for themselves before they buy into the project.

- **Look at the existing training methods and materials and consider if more creative means would be helpful**: this links to comments from the Water Desk (re. Bohona) – that they had no visual materials and that they were simply taught. It might be that more creative tools are needed for initial training and that some visual materials should be produced as on-going resources to be left with the community (eg education boards beside water points, laminated cards for health workers to use, posters or community learning games for public places such as the school and church). There are many innovative ideas that can be borrowed from other organisations and countries (eg Kenya or India); although it is vital final resources are designed with considerable input from the user communities.

- **Actively pursue the thinking that the sanitation and hygiene components (and possibly community management) of WSSHEP should have more time devoted to it than the technical water component**: this thinking comes from moves already made in EOC-DICAC’s Lasta-Lalibella WSSHEP, from WaterAid’s recent research and from this Atsede/Bohona case study. This could be clarified with further research into the extent to which awareness has been raised by the one-year model as compared to the five-year model, what training methods are used, how people’s behaviour has changed some years on etc.

- **Consider building in an on-going support and follow-up strategy to WSSHEP programme design**: although this (and the previous points) have implications for funding and staffing, it may in the end be more economical (as well as better development) to return to a community to offer support, than to hand-over to a community and find that some years later the scheme is neglected and the initial funding therefore wasted.

From an initial evaluation at the Needs Assessment stage, and from the early days of a programme it will become clear how much support a community will need. Perhaps the key to this - and to the previous point - is for the programme design to include a framework for hygiene awareness training and for on-going support and follow-up – and that this have sufficient flexibility built in to be modified as the programme unfolds. Donor agencies should be encouraged to see that the programme needs are linked closely to the community needs and will be reassessed through on-going evaluations. Hence, while a one size fits all model may be neater in budgeting terms, a more flexible approach should ensure an outcome whereby a programme becomes financially self-sufficient and absolutely managed by the community in the long term.
The Needs Assessment for WSSHEP may need to be strengthened: as this case study highlighted, Bohona may have needed a different response to that provided by EOC-DICAC. It may be useful for Needs Assessments to ensure that as well as questions on water, sanitation, hygiene, environment etc the following are also assessed: the openness of a community to change; whether there are strong individuals with leadership potential for WSSHEP; how collaborative the community are; how they link with local government bodies; how they respond to case studies of “failed” and “successful” WSSHEP (thereby encouraging critical thinking in advance of implementation); what associations already exist in the community and how these are run; how much external exposure community members have had; how they view paying for services: these in addition to questions on water, sanitation, hygiene, environment etc

Raise the profile of gender equality in WSSHEP and ensure vulnerable groups are included in decision-making. Discussions in both villages showed that women’s participation was fairly weak and suggests the need for greater emphasis on equal gender representation from the programme outset. Likewise a number of interviews suggested that vulnerable individuals may not always be aware of opportunities to participate, they may not feel confident to participate or may not be able to participate for health reasons. Whilst EOC uses the church to communicate issues (the case study did not have time to look into how well this worked) it could be important to look at other mechanisms for involving all sectors of society eg iddr, women’s groups, coffee-ceremonies etc

Give more consideration to livestock watering needs and clothes washing needs: although the community in Bohona was offered the option of constructing cattle troughs and washing basins by EOC-DICAC, perhaps the training to explain their usefulness was not sufficient. Observation of the conditions around the cattle trough and washing basins in Bohona did however raise questions about the design of such facilities. In this case the conditions were due to poor community management, but it might nevertheless be useful to locate such facilities slightly further from the water collection points to avoid cross contamination between cattle, detergent and drinking water. Livestock watering needs in WSSHEP may warrant further research
Consider the formation of education committees for WSSHEP: it may be symptomatic of the insufficient emphasis given to sanitation and hygiene awareness that a committee is established for the water component and not for this. Although the water committee’s function is to manage the water (staffing, collection of water fees, repairs etc), it could be useful to form a comparable committee for education around water and hygiene issues. This could serve to facilitate training and action around health issues in the community. It could draw membership from the community, school, health clinic, church, EOC-trained personnel and government trained personnel (eg birth attendants), and make explicit links with the water committee and local authorities.

Consider increased emphasis on appropriate design and use of latrines. Those latrines observed in Atsede were invariably dirty and did not offer sufficient privacy. This raises questions about the effectiveness of existing latrines as models for training use, and also whether the initial design and training was sufficient. Perhaps the community could be involved in suggesting design modifications and in producing resources for better training and ongoing use which could be distributed to households. For example school children could design hand painted instructions for each latrine with related hygiene messages or there would be a community competition run for best design.

Look at ways to facilitate an evolution in the “failed” WSSHEP of Bohona. Although Bohona must seek its own solutions to its problems, the visit did raise questions about the original intervention and highlight some of the possible adaptations for WSSHEP in general. If funding were available, Bohona might offer a difficult testing ground to explore some of these recommendations (eg community development of training materials together with Kebele and Water Desk staff) and thereby help Bohona find their own way forwards. Certainly it seems important to share the case study findings with both communities (such as a summary translated into Amharic) and with all stakeholders – or worked up into materials for use with all communities (past, present and future), or to form the basis for a community exchange visit.

Finally – to acknowledge the snap-shot nature of the Atsede and Bohona visits and propose that implementation of any of these recommendations be based on more in-depth research.

The offending fence: In Bohona the water committees seem to have confined their interest in the schemes to a repetitive discussion about the fences built to prevent livestock entering the water distribution points. Because the community does not pay for water no guards have been employed.
**WaterAid – water for life**

WaterAid is an international NGO dedicated exclusively to the provision of domestic water, sanitation and hygiene promotion to the world’s poorest people.

WaterAid has been operational in Ethiopia since 1991 providing financial support and technical advice to local communities, governmental and non-governmental agencies involved in the provision of water supply and sanitation services.

WaterAid (Ethiopia) insists that local people undertake the necessary construction work and continue to service and manage new systems upon completion. All projects use technologies that are relatively low cost, practical and easy to operate. By improving not only the quality of water and access to it, but also the quantity, WaterAid seeks to enhance the health and socio-economic well-being of communities it works with. In addition water supply projects are coupled with health education programmes and improvements in sanitation coverage.

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**Ethiopian Orthodox Church Development and Inter-Church Aid Commission - DICAC**

EOC-DICAC is a Christian humanitarian organisation established in 1972 to undertake church-related programmes like clergy training, provision of humanitarian assistance and construction of social services. However in time and with the advice and support of partners, donors, local government offices and beneficiaries, EOC extended its mandate to include development programmes.

WaterAid has been supporting water-related projects carried out by EOC-DICAC since the late 1980s. In 1992 it supported the formation of a water unit and since then has been its main funder: both for unit core costs and for projects.

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