

Water Works



Successes and challenges from a gravity water supply, sanitation and hygiene promotion scheme – Bale, Ethiopia.

**WaterAid Ethiopia
Ethiopia
January 2004**

Summary: This study analyses the Robe Melliyu Gravity Water Supply, Sanitation and Hygiene Promotion Project, which has evolved into a community-owned and managed schemes serving a population of at least 70,000. Although the scheme still faces challenges, broadly-speaking it is a considerable success: everyone has access to safe water, the system is sustainable, sanitation coverage is steadily growing and hygiene awareness is relatively high. The main topics of this paper are: Area status before the project; Project's history; Project's components; Rural/urban balance; Keeping success sustainable; Connections with individuals and the communities; Project's structures; Sanitation and hygiene issues; Focusing in environmental sanitation; Gender issues; and finalizes with observations and recommendations

Keywords: WaterAid, Ethiopia, Projects, Reports, Gravity fed schemes, Hygiene promotion, Participation



Waterworks



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This report is based on the findings of a research visit to the Robe Melliyu gravity water supply, sanitation and hygiene promotion scheme (Bale, Ethiopia) in January 2004.

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Waterworks



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A runaway success?



On the edge of Horoboka village – one of those included in the Robe Melliyu scheme, with the Bale Mountains behind.

Exploring Robe-Melliyu

Robe-Melliyu gravity Water Supply, Sanitation and Hygiene Promotion scheme is situated 430km south east of Ethiopia's capital, Addis Ababa – in Sinana Woreda, Bale Zone of the Oromiya Regional State.

In an area of acute water needs and little or no sanitation provision or understanding, an ambitious project to improve the health of the community was brought to life through the joint efforts of the community itself, the government, the indigenous NGO - WaterAction, and the international NGO - WaterAid. Work to harness the water from three spring sites was started in 1996. The following five years saw a main pipeline of 56km, almost 91km of distribution pipe networks and 80 waterpoints constructed. The engineering work was complemented by the provision of sanitation facilities, hygiene promotion and training for community management.

Nine years on from its conception and the project has evolved into a community-owned and managed scheme serving a population of at least 70,000 in

villages, as well as the sizeable town of Robe and two small rural towns. Although the scheme still faces challenges, broadly-speaking it is a considerable success: everyone has access to safe water, the system is sustainable, sanitation coverage is steadily growing and hygiene awareness is relatively high.

The rural village on which this study concentrated - Horoboka - is aiming for 100% sanitation: a latrine for each household. The sustained sanitation promotion work, which the village appears to have achieved since the project was handed over, is significant for WSSHP in rural Ethiopia, and important to document. While the most interesting and surprising feature of the scheme as a whole is that the rural community is selling water to the urban.

A three-day research visit spent meeting with people in Horoboka, as well as key individuals in the scheme's structure, aimed to understand and document some of the reasons for success, the obstacles that have been overcome, and the challenges that remain, or are emerging.

Key to main abbreviations:

WA - WaterAid

WACT - WaterAction

WATSAN committee - water and sanitation committee

WSSHP - Water Supply, Sanitation and Hygiene Promotion

Woreda and Kebele - larger and smaller local government administrative regions in Ethiopia

NGO - non-governmental organisation (such as WaterAid)

8.8 Ethiopian birr = 1 US dollar

15 birr Ethiopian birr = 1 pound sterling

Ethiopia, the fourth largest country in Africa, is one of the poorest that WaterAid works in. According to 2001 Human Poverty Index figures it is ranked amongst the three poorest countries in the world, with between 50% and 70% of the population living below the poverty line.

Statistics indicate that only around 25% of rural and 80% of urban dwellers have access to potable water supplies, while only around 6% of rural and 55% of urban dwellers have access to some form of sanitation facilities. Water-related diseases are rife and health services are limited.



Before the project

"Even a bird could not urinate in Robe"

The Robe Melliyu project serves a large area and within this area people lived at varying distances from the traditional water sources. Prior to the project access to water that was safe was a severe problem for everyone – regardless of where they lived.

According to a 1994 survey, people in Robe town were dependant on five public tapstands (dispensing raw water pumped from the polluted Shaya River), some private water connections and privately owned hand dug wells. Fetching water required hours of queuing.

Meanwhile rural people obtained their water from traditional shallow wells, rivers, streams and seasonal ponds. In the dry season the average journey time to fetch water each day was over six hours: about half the available daylight hours. Even when donkeys were used to carry jerry cans, adults (mostly women) would still carry pots on their backs or jerry cans in their hands.

With water such a scarce resource, most was used for cooking and drinking – with little left over for hygiene needs. Bathing was rare in the dry season. Of those interviewed 30% said they washed once every three months outside of this season, while some bathed only once or twice annually. People were not familiar with using any type of latrine and generally defecated in open fields. With most of the water contaminated, waterborne diseases were common, and at certain times fatalities were significant.

Robe's reputation for lack of water was well known: 'people would not allow a man from Amalem (one of the project villages) to marry their daughter' – 'even a bird could not urinate in Robe.'

"Really there was a very big problem before. There was vomiting and diarrhoea. Due to waterborne diseases there were also disease outbreaks. A lot of people died. There was one family whose children were very ill. I remember one child died late in the evening. And the second child died early next morning."
- Zeitu Ali, Horeboka village -



Horeboka: a village of cactus-fenced, equally sized compounds on a grid-like streets system.

Many such villages were created under the Derg regime's villagisation policy. Having compounds grouped together makes development easier, but people do not like living away from their farmlands. When Horeboka was established in 1978 there was no provision made for water at all.

An uphill struggle for water

The people living in the project area had never sat passively in the face of their water problems.

Their first appeals for help were in 1946, and thereafter they contributed labour and cash to a variety of initiatives – all of which failed. In one case local political interests worked against them, but in general the schemes collapsed because the community was not sufficiently involved in the planning and implementation – or because they didn't receive sufficient training to operate or maintain the services.

These schemes included attempts to divert the Bamospring, a government (UNICEF-funded) scheme to construct hand pumps and use motorised pumps to draw water from the Shaya River, and a petition for Robe to be included in the Global town scheme (and to which they contributed a significant amount of money) – but Robe was left out.

Angered at the misuse of their money and suspicious of new schemes, the community started their own fund and in 1993 made a new approach to the Water Bureau. It was then that they found the office were starting to discuss a proposal for the area with the NGO WaterAid. Having heard of WATA's WSSHP work in neighbouring Arsi Zone, a community delegation visited WATA in Addis Ababa to underline their wish to be fully involved.



Starting off



Open land and an open water course close to the spring source, which the Robe Melliyu scheme depends on.

Robe-Melliyu is situated in one of Ethiopia's surplus grain-producing areas. The main crops grown are wheat and barley. Other products that grow in this region include: fax, maize, peas, lentils, horse beans, potato, carrot, cabbage, kale, tomato, red onion, onion and garlic. While rich farmers can sell for profit, the majority are still living at subsistence level.

Stepping-stones to a WSSHP project - the basic chronology for Robe-Melliyu

- ❖ After an initial study period in 1993, a WSSHP project proposal for Robe-Melliyu was drawn up and agreements sought from all involved: the Oromia Water, Minerals and Energy Resource Bureau (who seconded technical staff to the project), WaterAid (above all as an advisory and funding partner), and WaterAction (as designer, planner and in implementing partner working with the Bureau staff) - and not least the community - who would contribute labour and cash, as well as assume responsibility for the scheme's long-term success.
- ❖ The original start date of the project (April 1995) was delayed due to the Water Bureau being in disagreement with WaterAid's requirement for an independent project office and that the community manage the scheme after implementation. Working out the details of the project design meant that work did not start until 1996 with a new completion date set for March 2001. This point is considered in more detail later in the report.
- ❖ With all agreements signed WATACT asked the community to elect and form WATSAN committees. Each village formed a committee of 7 (4 women and 3 men) and from each 2 members represented their village on a General Assembly.
- ❖ Meanwhile a Steering Committee was formed, bringing together representatives of government bodies responsible for water, health, planning and agriculture - and representatives from the community, from WaterAid and WaterAction. This committee served during the construction period and was then replaced by a Water Management Board (selected from the General Assembly).
- ❖ Household members from each village and from Robe town were required to contribute both cash (from 10 to 80 birr, according to their income) and labour. In addition, local fundraising events and campaigns were organised and resources were mobilised from individuals, organisations, institutions and companies. People worked in trench excavation and back-filling after the pipes had been laid, transporting materials etc.
- ❖ During the construction period some 80 individuals (with a higher proportion of women) were selected by the community to be trained in the technical work associated with administration skills and sanitation issues. These trainees were also taught how to build latrines and how to produce "san plats" (sanitation platforms) - the concrete covers for pit latrines. The first training sessions took place intensively over about two months, followed by periodic refresher courses. During the construction phase the trainees gave their time for free. Thereafter the outstanding trainees were selected to be employed by the Water Administration Office.
- ❖ The structural model for Robe-Melliyu was designed for an easy transition from implementation to a fully operational scheme: the idea being that the committees are gradually empowered in decision-making processes and their capacities in project management and operation built up. When the project is completed individuals can then confidently fulfil the roles they were elected for: as members of a WATSAN committee (responsible for the facilitation of project activities, hygiene promotion, cash and labour contribution), as Water Management Board members, or as Water Administration Office staff and field tap attendants.
- ❖ Difficulties arising around how the scheme should be managed, tariff rates and sanitation education - both of which required additional studies and project time - are given consideration later in this report.



Facts and figures

While the technology behind gravity schemes may be simple - pipes running water down hill - the reality behind a large and complex undertaking like that of Robe-Melliyu is very different. The following overview may be useful to demonstrate both the scale of the "hardware" (engineering work) and the longer-term "software" (such as hygiene education and community empowerment) involved, before moving on to explore a variety of issues in more depth.

Main objectives of the project:

- ❖ To improve the health status and living conditions of the target community (an initial population of 65,000 but with a design population of 126,000) through the provision and promotion of safe and adequate water supply, hygienic practice and sanitation facilities
- ❖ To reduce the drudgery, and save the time and energy, of women and children by piping water within a 250 to 500m radius of their village
- ❖ To provide safe disposal of human excreta and rubbish
- ❖ To strengthen the skill of the community to use and manage local resources

Key dates:

- 1993/4 initial studies
- 1995 extended negotiations
- 1996 project start
- 1997 Water Administration Office staff employed and water service started in the 1st phase villages
- 2001 project completion and hand-over to community
- 2001/2 studies/changes regarding tariffs (see later)

Project costs:

- ❖? the government Water Bureau contributed over 1.6 million birr (in cash, personnel and machinery)
- ❖? the community contributed 1.29 million birr (in cash and in kind)
- ❖? WaterAid contributed about 11.3 million birr in cash
- ❖ WaterAction was responsible for the overall management and implementation of the project through deployment of key staff.

Practical achievements and development activities:

The Robe-Melliyu WSSHP project has three components - water supply, sanitation/hygiene promotion, as well as the related community development. The partnership of government, WaterAid, WaterAction and community members accomplished the following activities during the implementation phase.

Water-related construction work and training programme

- the development of 3 spring sites
- construction of 2 collection chambers
- construction of 15 reservoirs (3 of 25m³ capacity, 8 of 50m³, 1 of 75m³ and 3 of 150m³)
- construction of 4 pressure breaks
- construction of 44 pipe-supporting pillars
- installation of 147.17km of pipeline (56km main pipeline and 91km of distribution pipe networks)
- 80 public waterpoints constructed
- 75 individuals trained in water technician skills
- 147 private connections (total connections to date)

Sanitation and hygiene promotion immediate outputs

- hygiene education provision to 13 villages, Robe town and 2 other small towns (around 33,000 people total)
- repeated Focus Group education for 14 groups
- training of 55 Village Health Community workers
- construction of 16 Ventilated Improved Pit Latrines
- construction of 1109 Traditional Pit Latrines
- construction of 180 concrete latrine slabs (san plats)
- digging of 760 refuse disposal pits

Community management

- Establishment of WATSAN committees (in 13 villages and 4 kebeles of Robe Town)
- Formation of Steering Committee
- Formation of Board and Water Administration Office





The rural/urban balance



A role reversal

One of the unique and exciting things about the Robe-Melliyu scheme is the unusual supply of an urban resource by the rural community. The Water Management Board - which has overall responsibility for the entire scheme - is essentially made up of individuals drawn from the rural villages around Robe, as are the majority of the staff in the Water Administration Office, and those who operate and maintain the network. Meanwhile the spring originates in - and the pipeline chiefly runs through - the lands of these rural villages. The usual power of the town has been reversed.

In addition it is unusual to see a marriage of two communities whose water uses are so divergent: with urban dwellers invariably using farm ore water per capita than the rural - and where the urban population - as a rapidly expanding single body of people (already perhaps more than the original estimate of 35,000) - could dominate the rural villages.

It is not surprising that this situation did not arise without difficulties for Robe-Melliyu, and although relations are good between the two communities, critical issues are brewing - and finding solutions may not be easy.

An uneasy history

In the earliest stages of the WSSHP project, both the rural dwellers and the Robe town people argued that the new scheme should be managed by the Water Management Board and not by the government Water Bureau. Invariably the Water Bureau in Ethiopia is responsible for urban water supply, with rural water supply more and more frequently managed by the community themselves (especially in those schemes with considerable NGO involvement). The Water Bureau however did not believe the rural community capable of running such a large scheme: they were unwilling to relinquish their work with the town supply and had concerns that the town community might lose out - that WaterAid would somehow favour the rural community.

To clarify issues WAWACT organised an exchange visit for the steering committee to see the management style of the neighbouring WSSHP project at Hatos, which was running well on this very WAW model, and to discuss with the community there. Convinced by the logic and integrity of this method, the steering committee applied to the Zonal and town Administration for a plot of land on which to found and staff a project office, which became the Water Administration Office.

Nevertheless the issue which had delayed the project by over a year in the first place, raised its head again, and in 1998 meetings between the NGOs, government and community players resulted in a compromise: that the Robe Water Service (the Water Bureau) should manage the previously constructed waterpoints in Robe as well as the newly constructed ones in town. This would include the employment of Robe-based tap attendants. And the rural Board would manage the rest - and thus the majority - of the scheme.

A fair price?

During the period when the system were being tested and before formal community management took place, Robe dwellers received their water without paying anything to the scheme. As had been the case before Robe-Melliyu, they paid 10 cents at the town tap stand for 75 litres of water and this revenue was collected to go to the government Water Bureau budget. The argument for this free service was that the WAWACT scheme had simply linked up the Robe line (from an earlier inadequate project) to the new network.

However, WaterAid and WaterAction, concerned about the overall management and financial sustainability of the scheme, suggested that the Robe town people should pay towards the maintenance costs of the rural management.

In 2002, a team composed of WaterAid, WaterAction and the Water Bureau made a study of Robe-Melliyu's financial situation. At this time the scheme's expenditure was greater than its income, and it remained dependent on project support for vehicle costs. The study showed that fees from Robe town and increased rural water sales could lead to financial sustainability for the scheme. Long discussions were held between the Steering Committee and the Robe Water Board and an agreement was reached that Robe town should make a fixed payment to the scheme of 23 cents per m³ of water used. At the same time incremental water tariffs for urban private connection users (for bulk use) were introduced (which would help raise the income of Robe Water Supply Service so that they could afford to pay the 23 cents), and a general tariff increase for both rural and urban tap stand users from 4 jeny cans for 10 cents to 3 cans.

But now, in 2004, the rural community questions the 23 cents rate and asks - is this fair and is it enough?



Keeping success sustainable

Financial health – a matter of gravity

The Robe Melliyu scheme is the result of considerable investment in terms of money, of hard work and of hope on the part of many different people. Even those who have been less active (or even obstructive) in the success of the scheme would not be prepared to lose the benefits easily. Having suffered generations of severe water shortages, hours lost each day in fetching water, general poor health and devastating disease outbreaks from contaminated water and an absence of sanitation, all have seen the changes brought about by the WSSHP project. The fact is: life would take a serious step backwards if the scheme were to collapse. To date Robe Melliyu looks in good health, but the future is never guaranteed. And as would be expected, there are pressure points – of which the issue of urban water fees (see previous page and expanded upon below) is just one.



Assefa Feleka from Robe town draws a crowd as he suggests water costs are already too high. When the town rate for payments into the Robe Melliyu scheme was agreed in 2002, new tariffs were also introduced for Robe people with private connections – with tariffs increasing incrementally for greater water usage. However this increased fee goes directly to the government Water Bureau budget to help pay for other town systems – with no extra money going to sustain the very scheme Robe depends on.

Financial pressure points existing now :

- Urban water payments

Although the town payment into the scheme of 23 cents per 3 of water used was the result of long discussions and an agreement with all stakeholders, the rural Board states that it is now not happy with this sum. Robe had contributed towards the construction and had been with the rural community from the beginning in their plea for help with the water problem – so why should there be the inequality of the rural community carrying the major burden for maintaining the system? The rural Board points out that the scheme provided Robe with 19 extra tap stands (as well as fittings left over after construction) – quite aside from the quantities of water pipes to the town. Until recently Robe's usage was not measured, but with a meter now connected to the reservoir the figures will be more accurate, and are sure to strengthen the rural community's belief that 23 cents is just too small a contribution – and especially when considering future repair costs as the system ages.

- Selling from private connections

In Horoboka village – as an example – there are 900 households served by 5 tap stands. Technically the amount of water is sufficient for the population, but people complain that the stands are far from their homes and the hours they open are not convenient. To fill these gaps there is an increasing tendency for

people who have paid for private connections to sell water to their neighbours. With 22 connections in Horoboka and requests for more, this individual business could threaten both the sense of community ownership of the scheme and its long-term income. The option to buy water from a near neighbour might also affect new households' decision to save for their own connection – something that the scheme encourages primarily for improved health (families with their own water source use more water for household cleanliness and personal hygiene), but also because each new private connection brings additional income into the whole scheme. See later for more detail.

- Reviewing salaries

The staff employed by the scheme are highly committed: they have seen the radical change the water and sanitation has brought, been involved from the pioneering days of the project, and received training directly from the implementation team. Much of the success of the scheme is the result of their dedication. However the salaries they are paid for long hours of work, though comparable to salaries of other community schemes are very low. While the most senior Robe Melliyu staff member receives around 350 birr a month (and his counterpart in the Water Bureau around 1,000 birr), the tap attendants in Robe town (responsible for collecting fees, but not for hygiene promotion as in the villages) receive 330 birr a month. The maximum rate for tap attendants in the rural communities is 221 birr per month. Clearly there is a question of fair wages, but also of staff retention and whether good new staff (who would not have a historical commitment) would apply at this salary.

- Returning to farm lands

As mentioned, many villages in the area are artificial creations of the previous Derg regime, which separated people from their farm lands. Even if they

Checking the sums add up

The figures to date show that Robe town contributions to the scheme for water usage vary each year between 6,000 birr and 4,000 birr: a small fraction of the significant income gained by the Water Bureau from Robe tap stand and private connection sales annually.

know the importance of a safe water supply, people's wish to be on hand for agricultural work can be stronger. Health issues apart, if more leave the village - and stop buying safe water - the income for the system as a whole will be reduced.

Looking to the future:

- More of everything

Both the rural and the urban community are asking for more tap stands and more private connections. In theory the scheme is designed for expansion, and it promotes using more water for improved health. However can the present income support such growth - and especially at the speed people are requesting? Connecting households to the water network creates an extra work burden for the staff, but the government-controlled connection fee does bring additional income into the scheme. At present the water tariff from a private connection for rural people is slightly higher than from a tap stand - but whether the differential between tap stand and private user rates should be increased further is another subject for discussion.

- Major hardware replacements

At present the engineering infrastructure is relatively new and repair costs are minimal. But in time there could be considerable replacement costs as parts age. Whatever income is raised to cover the day-to-day costs of general maintenance and salaries, is the scheme in sufficient financial health to put money away to cover large-scale costs?

- One more river to cross

A preoccupation for the Robe-Melliyu scheme at present is the need for a bridge across the Shaya River. During the rainy season it is difficult to cross to carry out maintenance work, while those who live on the far side are cutoff. The community estimate for a bridge is 500,000 birr: an impossible sum for the scheme to finance. The communities have been looking at fundraising strategies. One suggestion is to increase the water fees - but even if this were acceptable to everyone, it would take years to raise such an amount. As it is the rate of 10 cents for 75 litres of water (3 jerry cans) has only been in place a year: previously 10 cents bought 4 cans. The community accepted this because they have faith in their WATSAN committees and the scheme's income needs, but could they support another rise?

- Maintaining training momentum

Ideally the scheme should have a budget for refresher courses for staff - and in particular if existing staff leave, and new staff need training from scratch. A training budget could access new, more creative, materials and methods to keep the momentum going in hygiene education.

- Spreading the cost of sanitation

People are building a variety of styles of latrine, with the style largely dependent on what they can afford. People prefer the "san plat" cement latrine because it is easy to clean, but more so because it is perceived as safer - and there is considerable concern about latrines collapsing. In Horoboka village the project constructed seven slab latrines and distributed these on a lottery basis. Many people would like to have a slab but find them too expensive. If the sanitation aspect of the scheme is to grow in Robe-Melliyu (and not leave poorer households behind) there is a strong case for finding a flexible financing mechanism.

Options could include a scheme-sponsored credit system or using traditional strategies such as burial societies.

- Irrigation for kitchen gardens

Nothing can be done to bring people's farm lands closer to home, but there is an underused resource: the village plots are of sufficient size to establish kitchen gardens and grow vegetables for improved nutrition or to sell. The problem of course is that in the absence of irrigation channels, the best watering option is a private connection, but for many the cost is prohibitive. If the long-term aim of the scheme is to raise the living standard of the community on several fronts, then facilitating water for vegetable growing could be a consideration.

Other sources of income?

All involved in Robe-Melliyu are conscious that managing the scheme on water sales alone may not work. To date they have had the benefit of pipe fittings left over from the project, and vehicle maintenance help from the Water Bureau. But what of the longer-term?

The time has come to investigate additional income generating options. One of these stands in the Water Administration Office compound - a stone crusher originally lent by the Water Bureau for construction work, and not needed since. Selling gravel may be just one way to help the scheme stay truly sustainable.

The natural environment: an endless resource?

Robe town is booming and its population growing fast - and for health to improve people need to use more water than they do now. Although the scheme was designed to serve a projected population of 126,000, what happens after that? Do we risk running the springs dry - and what other strategies are there for complementary sustainable development and environmental regeneration in the area?



The individual and the community

All for one, one for all?

Participation in the scheme by the different communities was (and remains) varied - with all villages showing different degrees of community interest and community spirit - and by community this could be used to include all those in the Robe-Melliya scheme: a community of WSSHP-related employees, voluntary community members and users - as well as the community of individuals involved in other spheres of life - church, mosque, administration, school and clinic.

However with the option for individual water supply there is room for the ever-present and normal human conflict between individual and group interest to enter the equation - that is for a shift of emphasis to develop towards benefiting a household rather than the communal good. As a logical step forward in standard-of-living terms and for improved health - and with over 2,000 connections in Robe town and increasing numbers in the rural villages, what is the best approach for the long-term future of private connections in community-owned WSSHP schemes?

Having the right connections

Anyone can request a private water connection from the main pipeline. And now that they are used to having clean water so much closer at hand, people find the tap stands are further from their homes than they would like and the set opening hours inconvenient. A private connection means water is permanently available for every need and saves time at the public stand. And to date water from one's own private connection costs almost the same for most people as that from the tap stand. However there are costs involved in setting up the connection - and the following calculation is typical:

15 birr:	to get permission from the Water Administration Office and the estimate of the pipe length
1,000 birr:	for purchase of tap and pipe
167 birr:	for purchase of an individual water meter
400 birr:	as a set 40% fee (40% of materials) to be paid into the community system

- making the total average cost per household around 1,600 birr, and well beyond the reach of most villagers.

A kitchen and bathroom at home?

Something that many in the world take for granted is unimaginable for a rural Ethiopian family: safe water piped directly to their home - and especially when home is usually a mud and wood structure without electricity. A constant supply of water for all needs would replace a woman's daily routine of waking for hours in all weathers to fetch only the quantity of water (invariably dirty) she can manage to carry.



Going it alone in Horoboka

Since Regassa (pictured above), the Chairman of Robe-Melliya's Board.

In common with about 20 of the better-off villagers in Horoboka, since he has a private water connection and sells water to his neighbours. He charges 5 cents per Jerry can (in contrast to the 10 cents for 3 cans at the tap stand). It could be argued that this system enables cost recovery for the original connection, as well as providing a useful all-hours service to those living close by. But at the same time individual water sales create profit for one household and do not benefit the whole scheme. They also diminish the incentive for others to save for their own private connection (from which the scheme does benefit financially). With this in mind, it is noteworthy that in WA's gravity WSSHP scheme in Tareta (Arsi), private connections are limited because of the irrefutable to erode the sense of communal ownership. Is this an option for Robe-Melliya?

The Horoboka case demonstrates that there are community members who, for convenience sake, are willing and able to pay more for their water. And this raises the question: if some people have more to spend on water, are there other, more scheme-sustaining strategies available to Robe-Melliya? Should there be a credit system for private connections, or an overall price increase in water so that more public stands can be built bringing water closer to everyone's home? But, equally, would such strategies favour the better-off villagers and penalise those poorer households who may be struggling with the existing rates?

Paying your way?

Would charging higher water tariffs for private connections be appropriate? In the opinion of Hadji Abdur Kadir of Horoboka: "A tariff revision has to come - so we can safeguard the scheme for future generations. But if we charge more for private connection water now, people will be afraid to have a connection and there will be stagnation in the scheme. The solution is to encourage private connections and then gradually raise the fee. It is the same with fertiliser: it was 25 birr for 50 kibs. Now it is 150 birr, but farmers still buy it. It has risen gradually."



Using structures

Foundations for success

WaterAction's evaluation of Robe Meliyu (2001) highlighted individuals, groups or structures that played a key role in the project's success. They particularly noted the Water Administration Office staff commitment and the effective community and management structures that were put in place (and where women were well represented).

Certainly the short time spent in Horoboka was enough to appreciate the way well-organised community structures can make a project flourish.

The research team met a variety of groups in the village: the WATSAN committee, a women's "Focus Group" (representatives are pictured below - middle), members of Bik teams (see more under "Sanitary strategies" - next page) and mosque and church community members (see representatives in the photo below - right). All of these individuals and groups were impressively energetic and committed. Just one example of their positive contribution is the way church and mosque committees transmitted hygiene and sanitation messages after the religious services and worked closely with both the kebele and WATSAN committees.

It could be important to Horoboka that the overall Board Chairman comes from the village, but members of the Board and General Assembly are of course elected from every village so there should always be the influence of "movers and shakers" for each community. Moreover a meeting with village elders (some are pictured below - left) demonstrated that all feel a sense of ownership for the scheme in Horoboka - not just those who are members of a structure particularly concerned with it. But of course Horoboka is one of the villages that have always been supportive and this is not the case the whole way down the water line.

Abdulahin Hassan, Head of the Bale Zone Resource Office, reflected on this and other issues affecting the project in the early days - and to some extent now: "When the Water Bureau staff were working to mobilise the community and form committees, it is not that they found committee formation difficult, but getting people to cooperate with the committees was sometimes hard. The villages situated furthest from the spring were very cooperative."

Working with tradition

Ethiopian government structures start with the Bik as the smallest unit. A group of Biks form the Gote (a sub-division of a village), and a group of Gotes form a Kebele (or village). A group of Kebeles make up a Woreda, a group of Woredas make up a Zone and a group of Zones make up - in this case - the Council of the Oromiya Regional State.

However aside from this, it is traditional for Ethiopians to work in an organised communal way - examples of this include the burial society (or iddir) and the debbo (or jiggga), whereby people will gather to help each other with house building or the harvest. Thus the WSSHP project formation of WATSAN committees and such entities as Focus Groups (groups of committed individuals who are continue to give sanitation and hygiene education to this day) is essentially a case of formalising traditional ways.

The ones in the middle were not very active, and the ones nearest to the spring were often quite negative: they even tried to break the pipes. They said the project was taking their resource and that they didn't want to pay for water. We all had to work to convince the community that it is government policy to provide water for all - and as much to those near a spring as far from one."

"And where the community was willing to help, actually mobilising people was often hard - because they were always busy. But the project team were always active and worked to mobilise them by approaching through religious groups and community organisations. And once they were convinced of the benefits of the project the community gave their labour free: there was no coercion at all."

Finally Abdulahin highlights the important role played by the once-quarterly Steering Committee meetings to ensure the successful management and overall direction for the project - and particularly the fact that the committee included both kebele and woreda level representatives.



Robe-Melliya - notes on structures

The scheme stands or falls on the integrity, energy and efficiency of the different individuals and structures working with it. Below is a clarification of the different players with some notes on issues connected to them:

- The Water Administration Office

The paid staff posts in Robe-Melliya scheme are as follows: Project Coordinator, Finance and Administration Head, Technical and Hygiene Head, Technician, Cashier, Typist, Storekeeper, Drivers (2), Guards (6), Tap attendants (34). They work out of an office and compound close to Robe town, and are managed by the Board.

- Robe Town Water Supply Service

During implementation the town had water committees to mobilise labour and cash. Now all town water management is via government structures. The Robe Water Supply Service does not meet regularly with the rural Board - they just get together if there are issues to discuss.

- Focus Groups

These groups are made up of people the original project office identified as active: individuals who showed a commitment to bring change, were widely respected, and showed an interest to learn and to teach others.

- Water and Sanitation Committees

Each village has a committee of 7 people (4 women and 3 men) - so that the scheme has 98 individuals in such a role.

- The General Assembly

2 members of each WATSAN committee are elected onto the General Assembly (so that it has 28 members in all).

- Water Management Board

9 individuals are elected from the General Assembly to form the Executive Committee of the Water Management Board. There are 5 women and 4 men on this rural Board.

- Birks

Some villages are using this government-introduced small team structure to promote environmental sanitation.

- The kebele and woreda administrations

In general these government administration units (made up of elected - and paid - community members) have been supportive of the scheme. Meanwhile the "difficult" villages invariably have kebele committee members who do not want change, and WATSAN committee members who are weak: preferring to prioritise their relationship with the kebele committee above that with the Water Administration Office (as they have been elected to do). In this case the scheme has needed to ask the support of the wider

kebele and woreda administrations, the woreda Water Desk and the police (in the case of vandalism against the pipeline). Presently Robe-Melliya has a plan to ask all these bodies to work with them to find ways to improve the situation with the obstructive committees.

- The Water Bureau and the Health Bureau

The Bale Zone Water Resource Office provides water to 18 districts (both urban and rural) - and is responsible for 9 Boards and 9 town water services. Once the original differences over WA's project design were resolved, the Bureau provided money and personnel, were part of the Steering Committee and saw the project through to its evolution as a viable scheme. The relationship between the scheme and the Health Bureau has also had a mixed history. The bureau supported the project with staff assigned to oversee the hygiene promotion during implementation, however in recent times it seems that their low capacity (staff and budget) has meant there is now less Health Bureau coverage in the scheme area: bureau staff have even requested scheme staff to support them in their work, and effective working links have been few. A recent positive move is a decision to share experiences on health issues at kebele level.

Sanitary strategies

Today it is the majority of households in Horoboka that has a latrine - where 10 years ago everyone defecated in open fields. Likewise Horoboka's streets are clean, with all waste collected in an orderly fashion (see more on this later). Waste management and latrine construction were introduced by the project - and training given on organisation and replication. But Horoboka not only embraced these ideas, they improved on them.

Horoboka's latrines have almost all been built over the last 4 years. There were a handful of latrines from the time of the Derg, but people disliked them. Now the surprisingly fast latrine coverage in Horoboka can largely be attributed to the village's innovative use of a government tool - the "Birk" - that has been developed to mobilise committees for some development activities (e.g. tree planting) - but not for environmental sanitation.

The "Birk" is based on teams and has a competitive element. In Horoboka the WATSAN and Kebele committees organised people into Birk teams of 6. Team leaders were elected on the basis that they had already built a latrine, and with the obligation to encourage each of their team members to construct one. The team leader works for free and is evaluated by the committees. Thus for Horoboka - with its 900 households - 150 teams of 6 individuals were organised - with the result that 150 "team leaders" are responsible to mobilise 750 households. Villagers said that before it was difficult to monitor latrine construction, but with the Birk all is traceable, and a mix of competitive spirit and fear of being noted as a failure has helped maintain momentum. And in addition, the village leaders announced that anyone who did not build a latrine would be penalised 50 birr!



Promoting good health

Training for change

WaterAid is very clear about the centrality of the sanitation and hygiene education component in WSSHP programmes. Though less straightforward to implement, it cannot be a soft add-on to water engineering work, but is an equal and crucial partner. It was interesting to note that Horoboka was rumoured to have close to 100% sanitation coverage, when in fact the real figure was nearer 67%. However, this is still significant and the rumour a sign of the village's enthusiasm for sanitation: in a random survey of 15 households all but one had a useable latrine. And awareness of the benefits of safe water and latrines was high - the contrast with years of suffering being so great.

The initial design for Robe-Mellyu had 5 years of sanitation and hygiene education work alongside the water and community management capacity building work. Staff seconded from the Ministry of Health carried out this aspect of the project, and WaterAid monitored and supervised them. In all 55 individuals were trained in sanitation and hygiene promotion work, 180 cement covers/slabs for latrines were made and distributed free of charge and 11 people were trained to produce them. Amongst the 55 trainees were tap attendants who would be employed to open and close the tap stands, collect money and give hygiene education. The 14 voluntary Focus Groups (all women) - with between 10-20 members each - and drawn from some of the most enthusiastic trainees, provided another group of people committed to education. Trainings were also given via the school, the WATSAN committees and the church and mosque committees. The project started by motivating influential people such as the kebele administrators and elders, and then these individuals went on to convince and motivate others: another key to Robe-Mellyu's general success.

Nevertheless an evaluation on project completion showed an extra year of sanitation and hygiene promotion was needed. The Focus Groups had changed a great deal but in other people there was less change. For example: people were fetching clean water but their usage of the water was poor. Thus the same promotion staff worked for a sixth year. As Abdulrahim Hassan from the Water Bureau said: "hygiene promotion is always slower: because it is connected with human behaviour". To date over 33,000 people have received hygiene education.

Is Robe losing out?

Although they received training, the job description of Robe town tap attendants does not include giving sanitation and hygiene education. The community would like to receive the training and the attendants are willing to teach, but as employees of the Water Bureau, they are not expected to do this work.

Zetu Alif from Horoboka. She is a member of a Focus Group, the village WATSAN committee and sits on the General Assembly. She displays her cement sanitation latrine she and her family built.



A healthier, cleaner life

The difference the WSSHP project has made to people's lives is demonstrated starkly in the words of people interviewed in Horoboka:

"We used to go to the River Shaya - where we washed clothes, dead animals were thrown and many dirty things. People were using that same water to drink. It was full of disease. After we got this safe water it is like milk. But even raw milk, which is not boiled, may cause discomfort. But this water is safe directly."
- Hassen Churra -

"Before everywhere you go it was full of faeces, and polluted, and people faced many different diseases."
- Mengistu Ayana -

"Before we went to the River Shaya. Poor people who couldn't afford the hospital but their children because of the dirty water. There were ascaris worms - big ones - that come through the nose. Sometimes there would be 80 in one child. It was a recurring problem and we had to go to the clinic. There was also cholera and we suffered from diarrhoea, which was full of blood."
- Haji Abdur Kadir -

"We have gained a lot of things since having a pit latrine. Now you will not see any faeces nor rubbish everywhere. It is clean."
- Aman Adem -

"We have got some advantages now: a neat compound, having privacy with the latrine, and not having any time limit on using the latrine. Before not having clean water, we were the victims of disease. Nowadays there is no disease."
- Zeyetu Subi -



Back to the river

Top - Aishu Barisu (right) and her daughter Jemilla Abo pictured with Robe Mellyu's Project Coordinator, Kris Abdul Magid. The two women were found collecting water at the Shaya River. Aisha was born in Horoboka and had received hygiene education there, so why had she gone back to the river? Aishu: "I was born in the Horoboka area, but I lived in Kaladi where I have land. With the villagisation I was moved to Horoboka village. And that is where I received training about hygiene. But I decided to move back to my farm lands and the only source of water close by is the Shaya River."

It seems that when the project was planned no one was living in Kaladi - everyone had been moved to Horoboka. Hence the line does not pass anywhere nearby the area: an example of how difficult it is for the scheme to serve those who are leaving the villages. Below - Kris tests the women's understanding of the risks of using dirty water and asks if they at least boil it before use. With him (far right) is Keria Abduraman (Finance and Administration Head).



While some pipe breaks are acts of vandalism, others have been made by people returning to their farm lands. They have tried to make a small hole to extract the safe water they need, but have not realised the high pressure the water is under. Finding they cannot patch it again they have run away and hidden in shame.

"I took hygiene and technical training organised by the Water Aid and Water Action people. My community selected me because I had studied till grade 11 and they believed in me. But the training has to continue. In as much as possible we try to teach people, but we only have the one training material (a flip chart). I feel that people can get bored so we need other materials as well. There needs to be a drama group - from school children maybe - for a change. It would also be good if we got training in HIV/AIDS and include that in our programmes. And it would be good if we had a stronger relationship with the Health Bureau people."

-Mulnesh Gutema, tap attendant in Horoboka -



Tsige Bekala uses a flipchart to teach Grade 4 Horoboka pupils about sanitation and hygiene.

The children know all the answers - they have seen the charts tens of times - but is their knowledge really deepening and do trainers feel limited by the resources they have? Is there a need for a more diverse range of training materials and methods in WSSHP?

Attending the taps

Mulnesh Gutema talks about her work as a tap attendant:

"I work from 8.30 to 12.30 at water point 4, and from 1.30 to 5.30 at water point 3. I have Thursday free. My salary is 171 birr a month. We sell 75 litres of water for 10 cents. From the two stands about 7-8 birr can be collected each day. People who are near the tap stands collect their water according to the scheme, but others will buy from the public vendors (those with private connections). They sell water at 25 litres for 10 cents. To raise our income we also give credit, and as people normally collect water after 5pm I mostly start the afternoon's work at 2pm and go on till 6.30pm."

The work involves teaching about environmental sanitation, the use of latrines, waste pits and personal hygiene - with a once weekly training emphasising what they teach day-to-day at the tap stand. On this day mothers - not children - are obliged to fetch the water so they attend the session.

"Some easily understand and we see changes but some are difficult to change. When I tell them to bring a clean jerry can, they say: it is none of your business, it is me who is going to drink the water. On such occasions I try to control my temper and sometimes others will respond on my behalf"



Sanitation for All?



Design for life

Visits to a number of latrines in Horoboka showed a variety of designs in use. Some followed the training to the word and involved a cash investment: with well-constructed shelters giving adequate privacy, a washed-down cement slab and the correct measurement of pit dug. Others were variations on the theme, built of local materials and often with design errors. The latrine pictured above has a roof so low it can only be entered in a crouching position, while the building provides no privacy. In other cases the wooden poles acting as the slab were unstable or in danger of rotting due to being frequently wet.

Most latrines were clean, but the "public" latrines at the village meeting place were in a bad condition - hardly the best training latrine for those who do not have their own yet. Other issues related to the variation in the depth of pit dug (with associated safety implications) and the cost of cement slabs.

Although Horoboka's use of the Bik structure and energetic community groups has motivated many to build a latrine, there are still plenty of people without one - and even more so in Robe-Mellyu's less enthusiastic communities.

Issues arising from the visit include motivating all households to build a latrine; providing clearer guidelines and support in construction and maintenance; looking at latrine options and the cost of these (and perhaps researching a new design altogether?); investigating willingness to pay and sustainable financing mechanisms. Interestingly the one surveyed household without a latrine was a widow in considerable poverty that was unable to dig the pit herself.

Finally the question arises again: do WSSH programs need more creative, participatory training methods and resources?

Looking at latrines

The random survey of households in Horoboka and the meetings with a variety of individuals and groups revealed interesting insights into the village's sanitation profile, as well as ongoing challenges for the Robe-Mellyu scheme:

❖ Construction costs

Most latrine-owners interviewed had built their own latrines using local materials rather than cement. Mostly these materials were free, but one household had spent 200 birr for wood and sheet metal, while others 5-10 birr on nails. One individual from the survey had received a free cement slab via the project battery system.

❖ Time and privacy

Everyone - but women in particular - commented that a latrine could be used at any time of the day and was private. Previously they went to the open fields before sunrise or after dark to get some privacy, and these time limits were neither comfortable nor even good for their health.

❖ WSSH promotion

Everyone had received some training (citing training given by tap attendants and "youngsters" visiting house-to-house), but likewise all said they felt they needed to learn in more depth and how they would appreciate more education sessions.

❖ Hand washing

Some of the interviewees had followed training advice and mounted a jeny can beside their latrine so they could conveniently wash their hands after using the latrine: something that was easier if they had a private water connection.

❖ Young children

All interviewed said only children of 5-6 years and above were allowed to use the latrine and that they used potties for the younger children. An advantage now was that they could empty these into the latrine.

❖ Latrine design

People much prefer the cement slab latrine: it is easier to keep clean, feels safer and can be moved to a new pit when the old is full. But cost is an issue for most people.

❖ Safety

There is a generalised unease that a latrine may collapse and a user fall into the pit. It was noted that some household latrines looked old and in a state of poor repair: an issue that relates to design and training for construction.

❖ Environmental pollution

Everyone spoke of the improved environmental health where previously open defecation made their surroundings dirty and the water polluted.



A clean environment



House-proud and healthy in Horoboka

Pictured above is the family of Board Chairman Sime Regassa in their spotless compound. Although compounds vary, the general environment in Horoboka is noticeably clean. People talk enthusiastically about the things they have learned – to leave no rubbish lying around the compound, to wash themselves and their clothes more frequently (made possible now water is closer), to separate their animals, and so on. Parents are teaching their children not to play with dust, and how to use the latrine.

But people also admit it can be hard to carry out all the things they have been taught. Sultan Bushra – a member of the village council – says: “We learn a lot about sanitation but we still need to learn more, because there are many new things and we haven’t yet put them all into action. So we want to keep learning and being taught.” His companion Feyesa Ararsa adds: “This is a new way of life, and though it seems hard we have to gear ourselves towards it. It can be achieved. We just have to think about it over and over.”

The training also teaches hand and face washing, washing utensils, changing from dipping into water containers to pouring from them, and covering food and drink vessels.

Feyesa and Sultan see things clearly: “health is our priority.”



Livestock corralled together

The Robe-Melliyu staff members teach the importance of creating a separate place in the compound for animals, because the flies they attract can contaminate people’s food and drink. However many villagers still have their animals living close to their home: suggesting more training is needed.

Managing rubbish

The Robe-Melliyu programme included an environmental sanitation component, with training given on how to build and use household waste disposal pits, and to establish large village-level waste sites. Over 700 waste disposal pits were dug during the implementation phase.

From those interviewed in Horoboka, the majority have a disposal pit in their compound. They use the pits for household waste such as vegetable residue and ash from the fire. Some have chosen to build bigger pits so that they do not fill up so quickly.

Those responsible for sanitation and hygiene promotion encourage the construction of household pits. And if someone wants a private water connection their application will only be accepted if they have a latrine and a waste pit in their compound. The tap attendant they collect their water from must also certify that the family members attend the weekly hygiene education sessions.

For larger rubbish collection Horoboka dwellers have divided themselves up into 10 teams. Each team has around 80 households in it and relates to the section of the village they live in. They do not have a formal rota for cleaning the public areas of the village, but work as the need arises. For example: if an animal dies near someone’s compound, they will call their team members to carry it to the dump. There are 12 large waste pits serving Horoboka village.

When asked what aspects of the education work made most sense to them, people said first the clean water near to their homes – but then the idea of pit latrines and pit disposal: because both are so practical and their positive impact very visible.



The question of gender



A woman's work...

WaterAid stipulates a 4:3 ratio of women to men committee members in their WSSHP work: both to help redress the traditional imbalance of power in Ethiopian society, and because water and sanitation remain the work and concern of women - so it is essential and right that they are closely involved in its management. Since Robe-Melliya was handed over to the community the gender mix in committees appears to have been retained, and women seem confident to assert their views.

With women clearly present in society and working to manage the scheme, it is hard to imagine a time when they spent hours away fetching water each day. As priorities shift towards having a water connection not merely close by, but even in their own household, what are the issues concerning women and gender relations in Robe-Melliya today?

Equal involvement and greater harmony

Horoboka men reflect on the impact of WSSHP:

"It is the women who are pushing us to change the way we live, because they get the training from the tap attendants every time they fetch water. They learn about the pit latrine and about keeping the compound clean and tell this to their husbands and the children."

"We are living more harmoniously now. Before we didn't always clean things in our homes. If a plate or cup was washed in the morning we may just use the same one in the evening. Now after breakfast these things will be washed and kept in a clean place - the same after lunch. I have a small girl who learned about these things and now when we finish eating she takes everything and washes them. We find we have no conflict in ideas because we all like this neatness and using these washed things."

"There is a big change. Structurally we are given responsibility to do things. The men are organised and the women are organised and everyone does their share."

A gradual change

Gishu ToLa (pictured, centre) is a Focus Group member and sits on Horoboka's WATSAN committee. She talks about women's role in society:

- Most people in Horoboka are of medium economic level. Although compound sizes are equal, people's houses and the size of farmlands vary. But someone's poverty can be judged by the woman's burden, and if she has to do additional income-generating work to support the family.
- Before women were considered as possessions, but this is changing now with women gaining more rights, and able to appeal to the kebele if a problem arises.
- Previously Muslim men - who had increased the number of their wives as they became wealthier - were able to throw out their first wife without a single possession (despite her helping him through the hard times). But now even those manying under Shari'a Law have rights to possessions.
- Women in the WATSAN committees are truly involved - in fact they perform better because water is their problem. Women members feel they are seen as equals: that their views are heard and even respected. Their request for one female tap attendant is now being implemented.
- There is a women's association in Horoboka - they contribute 1 birr per month and do weaving. There are 30 members but they hope to recruit others and engage in some real development activities.
- However the fact remains, while there are always job opportunities for men, it is hard for women to compete in education as they are expected to help their mothers at home and there is no time to study. "And besides that, there is always another job ahead of women: marriage."



Women in WSSH P

Menstruation

Gishu Tolba says that the Ministry of Agriculture trained her in home management and family planning. And although she appreciates the W A/W ACT training in hygiene and sanitation, she would like it to include issues that are particular to women, such as sanitation around menstruation and childbirth.

As in most cultures, menstruation in Ethiopia is something of a taboo subject - despite the fact that finding ways to manage it is an ever-present concern for a significant proportion of the population.

Before the promotion of latrines, women were taught by the Ministry of Agriculture to use absorbent cloths. They would then wait until after dark to go to the river to wash them out: a more acute problem for those living far from a water source.

Hence latrines are removing much of the discomfort, shame and health risks associated with menstruation. But perhaps WSSH P still needs to address this subject more robustly?

Women as decision-makers and educators

Women are fulfilling some of the key training roles in the Robe-Mellyu scheme: as tap attendants, Focus Group members, committee members and staff working in the Water Administration Office.

Women are also members of the church and mosque committees which are choosing to give time after religious services to deliver sanitation and hygiene messages. The church in Horoboka has a drama group made up of Sunday school boys and girls, which has focused on environmental sanitation, while women educate the girls - and men the boys - after the weekly mosque service.

Women's access to training materials

The men interviewed say they have not seen the flip chart training materials the women speak of. Rather the women see these at the tap stands - and the children at the school. Men generally learn from their wives bringing new information home.

Teenage schoolgirls speak out

Wessene, Shewaye and Fatuma all attend Horoboka elementary school. They were about 8 years old when their mothers collected water from the Shaya River - and they would help.

Shewaye remembers a cholera outbreak and that her sister was ill for a long time. "When we took her to the doctor he told us to boil the water before using it. Now we realise it was the water that made her so ill. My parents spent 300 birr on medicines."

The girls are taught environmental sanitation in their science class. They also received training about hygiene and sanitation from WaterAid staff. However nothing was said about managing menstruation and they feel that should have been included: though they would not have liked that to be discussed in front of the male students.

All three girls have a latrine at home and prefer to use that one than the one at school. They said the school one had no privacy: there was no door and no proper structure. They didn't know if it is the same as the male latrine: they are afraid to pass by and see. Certainly the teachers' latrine is good (with cement base and a strong metal sheeting building) - having been built by W A/W ACT for dem onstration purposes.

The girls often choose to miss school during menstruation because of the lack of privacy. At other times they have to stay at home to do the household work while their mothers help with the harvest.

There is no water in the school compound. Wessene says: "We have been taught to wash our hands after visiting the latrine. We can do that at home, but it is impossible here at school."

She adds that not only the smaller children, but even the teenagers can't resist drinking water from the river or spring near the school: "My brother (who is in Grade 2) says that he can't concentrate because he feels so thirsty after 2 or 3 lessons - so he and his friends always go to the nearest spring at break time."

The school director, Demisse Erko, explains that they had suffered from money shortages until now, but they do have a plan to get water in the school.

The poorest of the poor

The research team's survey revealed only one home without a latrine. But the head of household was an elderly widow, who had also lost her son, and was unable to dig the pit. She is known as poor and is dependent on her neighbours for food. Can schemes like Robe-Mellyu build in financial assistance mechanisms for the poorest of the poor?



Observations and recommendations

When considering these observations and recommendations it is important to bear in mind the relative "snap-shot" nature of the research visit: 3 days with just one of the 14 communities involved in Robe-Melliyu. And that to verify the points made here, and gain a balanced perspective on what is a complex, evolving, broadly successful scheme, it would be essential to spend time with the other communities as well. Nevertheless, while acknowledging its limits, it is hoped the report may contribute something useful to the wider dialogue on WSSHP work. Due to the Horoboka focus, the points noted below will sometimes relate to the whole scheme and sometimes to Horoboka alone.



ISSUES AROUND FINANCES AND SUSTAINABILITY :

1) Robe Water Service payments to the scheme

To request more than 23 cents per m³ from Robe town could mean a further increase in urban water rates - which raises questions about town users' ability and willingness to pay higher rates. However it could be advantageous to keep this consideration separate from the key facts: (a) that the Robe-Melliyu scheme must receive an income relative to the scale of service it offers the urban dwellers, regardless of any difficulty in raising this money (b) that solving Robe town's payment difficulty should be viewed as a separate problem for which a solution can be found (c) that in any case the whole Robe-Melliyu scheme needs to find ways to generate additional long-term income - and how the Robe Supply Service - as users and colleagues - might support such efforts (and thereby potentially solve (b)). Robe-Melliyu's finances show a trend of income higher than expenditure in recent years. However the profit is not enough to provide real security in the face of major structural repairs and unexpected costs. Rather perhaps this profit could most usefully be ploughed back into the scheme, to help generate day-to-day income and stability; and then other sources of income accessed to help generate money for a reserve fund for the large-scale costs. Increased payments from Robe town could be one of several sources of this reserve. To determine whether the 23 cents rate is viable and fair long-term needs more study, but the rural communities' perception is that it is too low.

2) Robe town water and sanitation profile

While the rural communities differ in their attitude to the scheme, their profile as water users is broadly similar. But Robe town users range from industries, to middle class households, to people struggling to survive. Qualitative information about town dwellers' water, sanitation and hygiene status and behaviour could complement existing quantitative data, and help in the formulation of WSSHP strategies for the future of Robe town and Robe-Melliyu. Case study research could facilitate discussions around income-generation options.

3) Public tap stands in the rural villages

People in Horoboka find the tap stands too far from their homes. If profit were reinvested into building additional tap stands this could (a) reduce buying from private connection owners, which decreases scheme income, and may mean that people use less water (detrimental to health) because the rates are high (b) help people buy more water close to their home at affordable rates, which also benefits the entire scheme.

4) Tap attendants

People complain that the tap stand hours are limiting. If the scheme could finance more staff to work at the existing (or additional) tap stands this would mean a higher salary bill - but would also result in increased water sales, and provide additional opportunities for sanitation and hygiene promotion. Villagers

Summary of observed successes in Horoboka village:

- ❖ Safe water has been brought close to everyone's home via a well-maintained engineering infrastructure
- ❖ The drudgery of women and children fetching water from great distances has been significantly reduced
- ❖ The incidence of waterborne disease has dropped dramatically
- ❖ The majority of villagers have built their own pit latrine and waste disposal pit, which has improved health and reduced the pollution of the environment
- ❖ Thanks to on-going sanitation and hygiene education there is a general understanding of issues around environmental cleanliness, disease transmission, personal hygiene etc. Many people are taking the practical steps, and adopting the behavioural changes, which the training promotes
- ❖ The community has a strong sense of ownership of the scheme and is taking responsibility to protect and manage it. Horoboka exudes an atmosphere of collaboration, trust and transparency in relation to WSSHP activities
- ❖ Effective management and community structures have been put in place, and women are well represented
- ❖ The community response to the scheme is energetic. People are

Robe town water consumption

2002 data found around 38% with a private connection, 55% using tap stands and 17% using sources such as buying from private vendors, or collecting from hand pumps or hand-dug wells. During the rainy season rainwater is widely used for drinking, cooking and washing.

Water costs

Interviewees ranked household expenditure (from greatest cost) as follows: food, children's expenses (school fees etc.), social commitments (e.g. idir payments), government tax, clothing, and water. It is generally accepted that 5% of income is the most a family can afford to spend on water. WHO figures suggest 2-5%.

Horoboka speaks: (this page) Sultan Busha talks about improved family relations since the WSSH program. Next page: (left) Zeitu Ali and women from the Focus Group and (right) Hadji Abdur Kadir with Horoboka village Chairman, Aden Kedir



5) Credit for rural private connections

Many people in Horoboka would like a private connection but find the costs prohibitive. However, many are wasting money buying water expensively from others with private connections to avoid a longer walk to the tap stand, or because the opening times are inconvenient. A middle way for these individuals could be to start to buy their own connections on credit: remuneration being that each new connection brings money into the scheme. Another way to increase scheme income from private connections could be to raise the rural private connection tariff; however this could deter new customers, reduce the opportunity to encourage increased water use for health, and further raise the rates of private vendors.

6) Credit for cement "san plats"

Most people opt for traditional materials when constructing their latrines, but if they could afford it, would prefer a cement san plat. This option could be more widely used if offered on credit: a move that could improve health, as well as re-activate the manufacture of san plats by those trained to make them. Manufacture of san plats on a larger scale could offer an income generation opportunity for the scheme.

7) Animal watering, clothes washing and bathing facilities

The scheme could gradually finance the facilities for these activities that are still carried out at the distant water sources. Purchase of water for cattle and clothes washing could generate income to help maintain the safe water system for all needs - as could payment for showers, which would also increase personal health.

8) Financial assistance for the vulnerable

The scheme knows of people who cannot afford the water tariffs, but until now it has not assisted them for fear that others in uncomfortable but less desperate conditions might also request free water. Despite the difficulty in distinguishing degrees of need, it would be an advantage for the scheme to provide assistance to the poorest or disabled.

9) Staff rights and obligations

The scheme does not have a policy relating to staff employment, and it might be advisable to make this a priority. The present low staff salaries risk losing or losing good staff, where partnership with Water Bureau staff could ensure staff retention. At present staff work on an insecure 85-day renewable contract and they have none of the rights of permanent employees. Although higher salaries would make a dent in the budget, the long-term effects should be productive, especially if staff roles were expanded to include pro-active income-generation work. A review of existing roles would be essential before employing more staff. One area for discussion is that the tap attendants complain that it is too much to give hygiene education as well as managing the water points.

10) Income generation options

The stone crusher referred to on page 7 is the most obvious potential source of non-water sales income for Robe-Melliyu, once issues of staffing in plants, markets, etc. have been worked out. But it might also be worth Robe-Melliyu looking into other ways to raise income - even on a quite small scale.

11) People's choice to return to their farm lands

It could be useful to research the rate and reasons of people returning to their farm lands from the Robe-Melliyu communities. People are risking their health returning to contaminated water sources and being out on sanitation and hygiene education. While for the scheme these people not only represent lost income from safe water sales today, but they may also become a source of concern and cost if the pipeline network needs to be extended to their lands.

ISSUES AROUND SANITATION AND HYGIENE PROMOTION:

12) The Birk system for latrine construction

The Birk system of working in teams has been one of the successes in Horoboka: motivating people to build their own latrine and achieving a sanitation coverage rate that appears faster than in other communities. Could the Birk system also be encouraged in other villages in Robe-Melliyu? It could be useful to know how well the Birk has worked when used for the development issues for which it was designed, likewise to know if incentives have been given, or particular training methods used, that could be helpful in Robe-Melliyu's sanitation promotion.

13) Public places as positive demonstration sites

There were two obvious omissions in Horoboka's sanitation and hygiene promotion work: both the school and the kebele meeting place failed as demonstration sites due to the state of their latrines. Still more troubling was the lack of



The future plans of the scheme include

- 1) Revisit the strengths and weaknesses of each WATSAN committee and tap attendant and organise training
- 2) Encourage others to use the Birk system for latrine construction as in Horoboka
- 3) Use crusher to produce and sell gravel
- 4) Produce cement sanitation slabs to sell to the community on cash or credit terms

water at the school. Ensuring sufficient budget for water in schools could be a government priority – and if not, it might be appropriate to advocate for this. As regards appropriate latrine construction and maintenance: a collective building project for school children might be as useful a health and sanitation lesson as any bookwork. Pumping water to the school in Horoboka (perhaps on credit) might be an urgent priority as well as rebuilding the latrine superstructures. It is not that the project neglected the school originally: they built a sheet metal demountable latrine for the teachers, but as a model for high school budgets this may not be the most easily replicable. Ideally, those responsible for WSSHP in the community should have picked up on such situations: a lesson that public services must not be neglected in the move for private facilities.

14) National integration of water, sanitation and hygiene promotion

It is notable that the tap attendants in Robe town do not have sanitation and hygiene education as part of their job description – which must have a negative impact on the town's health and prosperity, and leave many still using any free (generally contaminated) water sources close to their homes. Discussions with the Water Bureau in Robe suggest that at the local level, government offices do want to initiate closer collaboration between the water and health sections; but this is not yet national government policy. WA's own experience at Robe-Melliyu (and more widely in Ethiopia over the years) shows that the "software" of sanitation and hygiene promotion takes much longer, and is far more complex than the water construction work and community management; and that leaving the software as a lower priority can seriously hamper a project. Is there a need for greater dialogue on this issue at all levels in Ethiopia? Certainly both Robe's government officials and the scheme staff are pressing for more information (such as this report and others like it) from which they can learn, and strengthen their own case for change.

15) Women's and girls' needs in sanitation and hygiene education

Although generally the reserve of health and family planning, Horoboka interviewees requested that menstruation, childbirth and even HIV/AIDS issues should be included in sanitation and hygiene training. In addition it would seem important to reinforce messages that are already taught, but not necessarily adhered to: the most obvious being latrines seen in Horoboka without doors, and with slatted walls that offer little or no privacy.

16) Sanitation and hygiene education for men

Although men are active in the management of Robe-Melliyu and have roles as educators in sanitation and hygiene, the main recipients of regular training are women and children collecting water at the tap stands. Although people feel the few educational materials in the community are being their impact through time and repetition, they are aids to learning, and men feel they have lost out on these. Is it possible that certain training has had reduced impact in Horoboka compared to others because it is seen as a male area of life – and men have not been sufficiently encouraged?

17) Improved training resources and methods

Much of Horoboka's success in sanitation and hygiene promotion seems to be the result of the positive use of community structures for mobilisation and training. However despite this, every person interviewed said they needed more education, and those with responsibility to provide it said they needed new tools, as people were becoming bored. The few materials circulating in Horoboka cannot be enough to maintain indefinite momentum and allow for deepening understanding. Although well researched and clear, they are designed for the early days of a project, not the continuing evolution of a community scheme. Could those with an educational role in Robe-Melliyu work with the community to devise new and creative materials and approaches – or would an outside facilitator be needed? Could the positive and the more obstructive communities be motivated to work together on educational materials development, and might this alleviate some of the difficulties holding the scheme back? Could something starting in Robe-Melliyu be replicated elsewhere? What would be the priority areas for educational resource development?

OTHER ISSUES - AND TAKING THE LONGER VIEW

18) Improved household nutrition and income

Might the opportunity to start a kitchen garden be an incentive for people to save for their own private connection?

19) Longer-term sustainable development and environmental protection measures

A present Robe-Melliyu is a relatively young project, but its urban/rural make-up has the potential to develop in an unusual way as Robe grows and becomes a significant urban centre. Could this be a good testing ground for a number of pilot projects that work to put resources back into the environment, and an opportunity to investigate measures that could reduce the potentially negative impact of rapid population growth?

20) Alternative designs for latrines

Clearly all WSSHP professionals internationally are working to improve pit latrine design. Could others who are not involved in WSSHP be challenged to come up with design ideas – perhaps as a high profile competition in Ethiopia or internationally?



Who's who

WaterAid

WaterAid is an international charity 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, government 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 wellbeing of communities it works with.

In addition water supply projects are coupled with health education programmes and improvements in sanitation coverage.

WaterAction

WaterAction is a non-profit making indigenous Ethiopian NGO involved in the fight against rural poverty through development programmes that integrate the provision of safe and adequate water supplies, hygiene education, sanitation and natural resources protection and development.

WaterAction's main concern is with sustainable development programmes rather than emergency and relief activities. Wherever possible WaterAction works with the most underprivileged and in remote areas where other water organisations are not active.

WaterAction works to support local partners in their efforts to implement projects and endeavours to mobilise the knowledge and experiences of local experts on a voluntary basis.

WaterAction was established in Ethiopia in 1995 with the active support of WaterAid.





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