



**PRELIMINARY REPORT ON SELF SUPPLY,
LUAPULA PROVINCE, ZAMBIA**



SALLY SUTTON, APRIL 2009

TABLE OF CONTENTS

PRELIMINARY REPORT ON SELF SUPPLY IN LUAPULA.....	1
ABBREVIATIONS.....	4
ACKNOWLEDGEMENTS.....	5
EXECUTIVE SUMMARY.....	6
1. INTRODUCTION.....	7
1.1 Background to Luapula province.....	7
1.2 Aims.....	7
1.3 TOR of this study.....	8
1.4 Structure of report.....	8
2. FOCAL AREAS AND APPROACHES FOR PILOTING.....	8
2.1 Focal areas.....	8
2.2 DAPP approach.....	9
2.3 Wateraid approach (ref 1 and 10).....	10
2.4 Conclusion.....	12
3. STRENGTHS.....	12
3.1 Suppressed demand and strong ownership.....	12
3.2 NGOs with high competence.....	12
3.3 High motivation of community level sensitisers.....	13
3.5 Major emphasis on software/ training for long-term sustainability.....	14
3.6 Planned documentation of lessons learnt.....	14
3.7 Visual expression of Self Supply.....	14
4. WEAKNESSES.....	15
4.1 Definition of responsibilities.....	15
4.2 Communications.....	15
4.3 Transport.....	15
4.4 Provincial and District capacities.....	16
4.5 Elements of project planning for implementation rather than research.....	16
4.6 Gaps in artisan training and equipping.....	16
4.7 Low level of monitoring.....	17
4.8 Timing.....	18
5. OPPORTUNITIES.....	19
5.1 Widening up-take.....	19
5.1.1 Improved communications and greater involvement of district, provincial and national levels.....	19
5.1.2 Loan schemes.....	19
5.2 Improvement to rural economy.....	20
5.2.1 Increased employment/ Income generation.....	20
5.3 Possible inclusion in sector strategies.....	20
5.3.1 Filling gaps and addressing cross-cutting issues in RWSS strategy.....	20
5.3.2 Links to SOMAP.....	21
5.4 Funding for studies.....	21
6. THREATS.....	21
6.1 Project dependency.....	21
6.2 Staffing.....	21
6.3 Late development of loan systems.....	22
6.4 Low involvement of district administration hinders extension staff activity.....	22
6.5 Reluctance of well owners to move beyond first improvements.....	22
6.6 Insufficient market to encourage private sector.....	22

6.7 De-motivation of householders with unclear drilling targets.....	23
6.8 Credit crunch erosion of initiative and demand.....	23
7. DRAFT ACTION PLAN.....	23
7.1 Plans for 2009/10 in order of priority	23
7.1.1 Establish water quality monitoring as soon as possible	23
7.1.2 Put revolving fund or similar facilities in place.....	23
7.1.3 Organise artisan trainings and equipping.....	24
7.1.4 Plan for inclusion of Mansa.....	24
7.1.5 Strengthen links to national, provincial and district bodies (especially MLGH and health).....	25
7.1.6 Institute more learning exchange between districts/ NGOs and more discussion of studies in their design stage.....	25
7.1.7 Strengthen documentation and accessibility of information	25
7.1.8 Consider longer term volunteers for documentation and research.....	25
7.1.9 Implement evaluation study.....	25
7.2 Summary of Aims for 2010/11.....	26
7.2.1 Extension to cover complete wards.....	26
7.2.2 Trained artisans as part of an association and capable to train others – linkages to SOMAP	26
7.2.3 Clear evidence for national debate to support or refute inclusion of Self Supply in NWSSP	26
7.2.4 Definition of models for scaling up.....	26
REFERENCES.....	27

Cover photos. Upper. Rings at the well of Charlie Joseph who has bought 6 bags (enough for 18 rings) in Milenge District
Lower. Well head improvements in Chipayeni village Nchelenge

ABBREVIATIONS

ACOs:	Area Community Organizers
ADC	Area Development Committees (now sometimes called Ward DCs)
CHW	Community Health Workers
DAPP:	Development Aid from People to People
DDCC	District Development Coordination Committee
DHID	Department for Housing and Infrastructure Development
DHMT:	District Health Management Team
DISS	Department for Infrastructure and Support Services
D-WASHE:	District – Water, Sanitation and Health Education
EWB	Engineers without Borders
JICA:	Japan International Cooperation Agency
MLGH	Ministry of Local Government and Housing
MOH:	Ministry of Health
NHMC	Neighbourhood health management Committee
PST	(Provincial) Program Support Team (MLGH)
RHC:	Rural Health Center
SOMAP	Sustainable Operation and Maintenance Project for Rural Water Supply
TOR	Terms of Reference
TOT	Training of trainers
UNICEF:	United Nations Children’s Education Fund
VAG:	Village Action Group
VWASHE	Village water, sanitation and hygiene committee
WDC	Ward Development Committee

ACKNOWLEDGEMENTS

People met whose ideas and discussions are gratefully acknowledged.

Name	Position/ organisation
Peter Harvey	Chief. WASH UNICEF Zambia
Peter Lubambo	Director DHID, MLGH
Davey Ngoma	DHID, MLGH Lusaka
Mahesh Mishra	Country Rep, Wateraid, Lusaka
Renée Schulz	Director DAPP Lusaka
Elise Soerensen	Project Manager, DAPP
Fordson Nyirenda	Chief EHO Ministry of Health
Christopher Mooya	EHO General , Ministry of Health
Paulos Workneh	UNICEF WASH Lusaka
Rees Mwasambili	African Development Bank, Lusaka
Malama Munkonge	UNICEF WASH Lusaka
Marjorie Lusaka	DHID/ MLGH Lusaka
Morris Chimbeta	WaterAid, Milenge
Jerry Layford	WaterAid, Mansa
Bodex Kaputu	D-WASHE coordinator Mansa
S.M Kapumpa	Town Clerk Mansa
Clement Bowa	Head Engineering Mansa Trades
Elisha Lungu	Acting training Manager, Mansa Trades
Serenje George	Laboratory Mansa
Stephan Ngoi	Environmental health and planning Rep Health on D-WASHE
Chris Likombeshi	DAPP rep in Nchelenge
S Sinkala	PST, MLGH Luapula.
A Nyombose	PLGO Luapula.
Kalumba Kennedy	Area Leader Nchelenge ward DAPP
Chipili Kennedy	Area Leader DAPP Chiengi
Alice Musuku	Area Leader Nchelenge
Rogers Kalumba	Rope pump producer Nchelenge
Mr Nkunda	Director of Works, Milenge DC
DWASHE members	Nchelenge
DWASHE members	Chiengi

Special thanks to Marjorie Lusaka (DHID/ MLGH) and Malama Munkonge (UNICEF) who accompanied me to Mansa, Milenge, Nchelenge and Chiengi. Also to WSP who covered travel costs to Zambia for the consultant.

EXECUTIVE SUMMARY

1. This report forms a preliminary review prior to a more detailed evaluation to be carried out later. It is primarily in the form of a SWOT analysis, which is summarised in Appendix 1.
2. In June 2008 UNICEF entered into an agreement to fund the piloting of Self Supply in rural water in three districts of Luapula province. The agreement was with WaterAid in Milenge and Development Aid from People to People (DAPP) in Chiengi, Nchelenge. This piloting is aiming to be without any subsidy to supply improvements.
3. Luapula, like Northern, North-western and Western Provinces has generally easily accessible groundwater, a scattered low density rural population which commonly has seasonal migratory patterns and in addition has very low coverage with protected supplies.
4. The two NGOs have taken slightly different approaches, which will allow evaluation of differing elements of each. DAPP have concentrated principally on software of behavioural change, through lines of communication that they have already developed for several health-related interventions. Wateraid, on the other hand have concentrated more on building up local technical capacity, working mainly through government supported channels and the private sector to household level.
5. Change of mentality from donor dependence to self help takes time to establish. Milenge is now beginning to see a significant response leading to private cash investment and employment of newly trained artisans. Nchelenge and Chiengi show more a response of behavioural change and use of local materials and existing skills. Both show that pride of ownership may be a strong and effective driving force for change. Preliminary results suggest that, as originally planned, Mansa district should now also be included.
6. Most people are accepting and planning with the idea of small incremental changes, but many are impatient to see the final product. So far they have had to respond at a time when household funds are at their lowest (the three or four months before harvest), and yet have responded increasingly positively. But it also means that they see the need for revolving funds which would allow them to spread their outlay and so reach higher levels more quickly. Such funds are likely to prove a major benefit.
7. The main weakness in implementation so far lies in communications and linkages. Greater exchange of information and ideas with government at all levels, and between and within other partner organisations could significantly increase impact and sustainability.
8. Self supply offers opportunities in rural employment and income generation which are important issues for rural families. It may also assist government to develop self help approaches which can contribute to greater rural water coverage especially where conventional community approaches are not yet possible. In this case Self Supply also includes household water treatment as well as the reduction of contamination and turbidity at the source.
9. Nine months is a short time to establish such a different approach. A remarkable amount has been achieved in the time in three of the poorest and remotest districts in the country. The next year will be critical in seeing whether Self supply can become sustainably established, and whether its scaling up would be justified.

1. INTRODUCTION

1.1 Background to Luapula province

Luapula was chosen as the first province for piloting Self Supply for several reasons.

- It is the province with the lowest coverage (average of less than 20% for the three targeted districts).
- It has a low density rural population (15/km²) with scattered households in many villages, and rural towns with low density peri-urban zones without piped supplies.
- Rural migration to fields for Dec- Jan is common, as are fishing communities some of whose inhabitants move during the season when fishing is prohibited. High cost supplies are therefore often not used year- round.
- Less donor activity in the sector for Luapula. ADB and JICA plan drilling in the province but coverage will still be below the national average, partly because dispersed settlements make it difficult to cover many households with each water point.
- Community water points are often out of action, and people commonly have access to household water points, of which there are over 7,500 in Mansa district alone.
- Previous piloting of traditional source up-grading showed that sense of ownership is high for household wells and people are keen to improve them

The first districts chosen have major problems of road access to villages, few markets and low rural employment opportunities, other than in subsistence agriculture.

Self Supply is an approach which encourages incremental improvements to water supply in steps which are affordable to households and is particularly relevant in areas exhibiting the characteristics found in Luapula. It is very different from community supply in that the subsidy is not to hardware but to the development of services which make it possible for householders to plan and implement their own improvements according to their means. Such services can also benefit the maintenance of community supplies. Further details on the province and the background to Self Supply can be found in References 4,5, 11 and 12.

UNICEF decided in 2007 to support piloting in Luapula, following agreement with MLGH that it was an approach which fitted into the NRWSSP element of Research and Development. This aims to develop a sound scientific and socio-cultural framework for adoption of particular technical solutions in any given setting. It is within this context that it was proposed to explore the practicalities and potentials for greater user investment in rural water supply. As a result, plans were developed, both by UNICEF and in subsequent planning workshop (Sept 2007) by district councils, but funding was not available until June 2008. DAPP and Wateraid were then contracted to implement the piloting.

1.2 Aims

The main aims of the piloting are -:

- to develop a Self Supply package with replicable and internally driven solutions which do not require subsidies
- and that these solutions contribute significantly to improved water supply and poverty reduction by 2010.

The purpose is to provide evidence of the cost-effectiveness and impact of the approach, so that policy makers can assess whether it merits inclusion in the National Programme for Rural Water and Sanitation, which aims for the MDG target by 2015 and universal coverage by 2030.

Since this is therefore a research-orientated piloting rather than pure implementation, the desired outputs are not simply those of improved water supply on the ground but also a significant element of learning from what is being done. This requires intensive inputs, and at this stage outputs will be relatively expensive while methods are being developed and monitored. The primary aim is to develop replicable systems which are internally driven. This means finding technologies that are effective but that people can afford to copy without subsidy, and that they see as desirable, so are driven to find ways to achieve. Desire can be because of real tangible benefits but may equally be driven by a wish to have the same or better than their neighbours. In both cases the drive is fundamentally from the householders/ community and a role of the piloting is to build up an environment within which they themselves can find ways to achieve what they desire. A second role is the collection of evidence to see if any level can count towards national coverage, but also whether the technologies promoted provide rural employment and income generating opportunities.

The target populations consists of households or small communities which can act in a unified fashion in their wish to improve their situation, and are prepared to raise the necessary funds.

1.3 TOR of this study

This review is in preparation for a more detailed evaluation which will look more systematically at the results of the piloting to date, in the light of the aims above. The consultant is here required to include the following-:

- Reviewing the documentation strategy for the initial implementation phase of the self supply pilot and make recommendations on the data collection tool design
- Recommending ways of conducting the review, the expertise required and the period of time required
- Conducting a SWOT and Gap analysis of the overall management of the rural water self supply pilot project in Zambia
- Recommendations on key activities to focus on for the remaining 2 years of the Self Supply pilot project

1.4 Structure of report.

To reflect the TOR, this report is in several sections. Section 2 looks at the approach and progress to date in the three districts. Sections 1 and 2 provide the background for the SWOT analysis (sections 3-6) and conclusions (Section 7). The SWOT analysis, in turn, forms the basis for outline plans for 2009/10 and indications of the stage to be aimed for by 2010/11. Appendix 1 gives a summary of the SWOT analysis, whilst Appendix 2 gives comments on the documentation strategy and guidelines for the proposed evaluation study (called also review in TOR).

2. FOCAL AREAS AND APPROACHES FOR PILOTING.

2.1 Focal areas.

Activities on Self Supply did not really start until after June 2008, with early work being mainly in familiarisation with the focal areas and baseline surveys. Piloting has

so far taken place in three districts, Chiengi, Nchelenge, and Milenge. DAPP have worked in the first two and WaterAid in the third. Wateraid were also planning to work in Mansa, possibly the district with the highest potential, but that has been delayed for a variety of reasons including limitations in staffing. Wateraid are working in four wards of Western Milenge on Self Supply.

2.2 DAPP approach

DAPP has one coordinator per district (for Chiengi just being installed). These are also working on a schools sanitation programme and so combine the two initiatives in terms of focal areas, choosing villages to promote Self Supply around the four targeted schools each area leader (ACO) is allocated. The nine ACos are most involved in training and promotion of sanitation, Self Supply and maternal and child health, each with their own focal villages in their wards (eg. targeting 3 or 4 out of some 20). The ACOs are mainly men (8 out of 9) and are paid for ten days' work a month. They are often community school teachers or community health workers and so may carry their promotion into their other work, but also set up village action committees (VAGs) who act as house-to-house promoters and encourage model households. The organisational structure is therefore to some degree parallel to government systems but includes village WASHE committees.

"Before the rope was anywhere and it made the water dirty. Now the water is clean."
Sakkala's village Chienge
"We are proud of our well and will do more to make it safe" Town Clerk Chienge
"We are limited in what we can grow because of the time and effort it takes to draw water"
Chilongoshi village. Nchelenge
"We are worried because the water has risen above the rings we put in ourselves and we are frightened of collapse."

DAPP undertook a general baseline survey (ref 8), collecting data on wellhead protection, contamination risks, ownership, maintenance and management issues for 241 wells. This provides a useful definition of well status before promotion of self supply, the aspirations and capacity of well owners, and good recommendations on the necessary elements to build an enabling environment.



Protecting the well mouth in Kampampi, Nchelenge, with high lip, lid and apron. (Vertical view downwards)

Subsequently DAPP have worked on the principle of how to get incremental improvement using locally available materials and skills at minimum or no cost. This has meant a largely 'soft' approach promoting steps to reduce contamination. Inputs have been mainly therefore in behavioural change and how to promote simple well protection. In order of increased risk reduction the measures promoted include -:

- A raised lip, drum or bottomless bucket to protect and support the top of the well and seal it from inflow
- A mound around the mouth of the well to avoid ponding of water and seepage back in
- A lid to close the well opening and protect it from wind-blown debris and items/ animals falling in
- A single rope and bucket used by all
- An old basin to hold the rope and bucket and keep them clean
- A roof to keep the rain out and the area around the well dry
- A stand for bucket filling and associated drainage to take away spilled water

- Strong ownership to ensure that rules on water drawing and site hygiene are adhered to.

DAPP are encouraging incremental improvement and so far over 60 well owners have begun improvements since August 2008. This is the period of high water and the time of greatest agricultural activity, so eliciting such a response is an achievement. As an example, in Kanbwale zone, the village of Kampampi, with 17 wells, twelve have begun to make improvements. Four have improved them fully (all the elements above) 6 have constructed roofs, made well mouth protection with mounds and buckets or drums and lids, and two have constructed roofs and made mounds. Well collapse is a widespread problem for below-water-level sections of wells in Nchlenge especially, but artisans have not yet been equipped or trained in how to address this problem.



First stages of improvement in Nchelenge, stopping surface and rainwater running in. Keeping the rope clean

DAPP have also been much involved in Zambia in the introduction of the rope pump. They have now established production in Nchelenge and have installed four demonstration pumps. However none have so far been sold as people feel they would need a microfinance system where they could pay back over several months. Despite this, six individuals have previously bought India Mark 2 pumps at much higher cost in Nchelenge and there is certainly large potential for sales in peri-urban areas where the piped supply does not reach. If the rope pump is established there, it will be regarded as a progressive move which many rural people may want to copy.



Rope pump production in Nchelenge by Rodgers Kalumba

2.3 Wateraid approach (ref 1 and 10).

Wateraid are working in four wards of Milenge with an office in Springa, and a main office in Mansa. There has generally been one person full-time coordinating activities, assisted by an Engineers Without Borders volunteer, till November 2008, recording the lessons learnt from the progress being made. Efforts to date have been initially in creating awareness of Self Supply issues among local CBOs and traditional / community leaders and giving them decision-making powers and knowledge to develop selection criteria for priority areas and artisans for training, and to explore suitable financing mechanisms. These local CBOs are those created by government (Ward Development Committees, Neighbourhood Health Management Committees, WASH committees), and so have some support from local government and Ministry of Health. Particular efforts were also made to build up the capacity of and confidence of local masons (two training courses, one at Mansa Trades College). Wateraid have also worked with Milenge council, (although it is based over 300 km away), at one point funding a water engineer within the council, and

working with the Director of Works. They have also done a baseline survey which identifies some 117 traditional wells (mostly privately owned) in the four wards.

Artisans (4 per ward) have been trained in well protection, ring making, basic metal work and brick laying, and have been equipped with ring moulds, trowels, bicycles, safety helmets, and overalls. They have built up a good team spirit and tend to work in groups of four rather than as individuals. Their training only finished in March but they had previously had training in Self Supply theory and ring making and so have begun to promote their skills.



Trained and equipped artisans in Itemba ward.

The systematic building up of the small scale private sector and CBO capacity to promote self supply, with additional technical knowledge to respond to

demands, is just beginning to bear fruit. Although the harvest has not yet begun to provide income for this year, people who previously felt that they had no way to improve their supply, are beginning to ask masons to make rings, preparatory to



Sila Mumba's first two rings with the unimproved traditional well behind. He started the trend.

installation during the dry season. From the first well owner who decided he could afford cement and mason's labour for one ring, others are rapidly wanting to copy his initiative. He has since found funds for a second ring. Some 95 well owners have now expressed a wish to become 'model houses' and to undertake improvements, and there are requests coming in from neighbouring wards. These improvements are particularly in well lining in areas prone to collapse, but then also in well-

head protection. Several well owners have already commissioned rings, and masons

"I drink from the stream because the well water is dirty. I plan to put in rings and stop collapse so I can drink it. I chlorinate my water when I can afford to, but the stream is cloudy in the rains. The well is much nearer my house"

"The artisans came and talked to the community about improving our wells. Before I did not have any idea what I could do. I asked the mason to come to my home and tell me what he could do."

I was amazed after the first ring was made – so many people came to look. I think at least 15 out of the 20 nearest wells will make rings this year. " Quotes from Sila Mumba March 2009

are now expressing the fear that demand may exceed their capacity and have asked if they can train more, or include more in further training at Mansa Trades. A trader in Itemba has now registered to sell cement which will make it easier for the provision of small quantities, where

previously people had to arrange for it to be brought from Mansa. Orders for improvements range between a single ring (limited by affordability of cement) to

begin protection against collapse, and full lining at owners cost combined with a request for a loan for a solar pump.

Wateraid is also introducing the rope pump, with Mansa Trades as the producer. So far two pumps have been produced, but they have not been tried out locally, and will need further development, or more collaboration with the DAPP initiative in Chiengi (and Southern Province). Household water chlorination is being promoted through health centres (where it is for sale at subsidised price) and by artisans and shops.

2.4 Conclusion.

Incremental improvements with no subsidy are beginning to be accepted as a way forward in the target areas. The two NGOs undertaking implementation of Self Supply have taken slightly different approaches which allow assessment of the lessons learnt from each. The lessons can be of use both to the participating organisations but also to government in evaluating the justification for including Self Supply in the NRWSS strategy, and also to other countries contemplating inclusion of Self Supply and/or going to scale. A SWOT analysis (Sections 3-6) follows to identify some of the aspects to consider from the progress to date in Self Supply piloting.

3. STRENGTHS

3.1 Suppressed demand and strong ownership

Initial response to the idea of self-financing for water supply was a widespread refusal to believe that householders could in any way improve their own water supply situation. However it appeared subsequently that this was more because they did not have ideas of how to improve or access to the skills and equipment necessary for making the improvements. Once these were made available the situation has changed dramatically. Marketing by artisans and by sub-district CBOs and ACOs has brought about a significant change in thinking. People are beginning to see that they can do things themselves, and voice strongly their wish for individual rather than community solutions if they are to invest or take out loans. Demand is being unlocked by a cascade effect from the first ones to pick up the idea.

Up to now, people have been able to dig wells and have put an average of \$75-100 into having a supply (seasonal or permanent) on their doorstep. The amount they have been prepared to pay and the additional sums they have spent on annual or bi-annual maintenance (\$12-20) show that they value this supply. However they had no way of progressing beyond this point and it now appears that there is considerable suppressed demand to do so, not least to reduce annual maintenance costs. Response has been good, even though at this time water levels are high, cash availability is low, rain still threatens construction works and people are very busy in the fields preparing for harvest.

STRENGTH 1. The approach is building on a strong sense of ownership and apparent underlying demand for supply improvement which has been constrained by lack of access to skills and technologies which are affordable.

3.2 NGOs with high competence

Both Wateraid and DAPP have much experience in capacity building and technology development in Zambia, although to both, their Luapula areas of operation are relatively new. DAPP have additional projects in sanitation and maternal and child

health in Nchelenge and Chiengi, and Wateraid is working on CBTS and Self Supply at present in parallel but with room for further convergence.

These two NGOs have developed slightly different approaches, based on their previous experience, which helps in seeing what ways the aims can be achieved and which elements of each are most effective. WA has started by tackling the main technical problem for access to water which is the constant need for deepening/cleaning out, whilst DAPP is concentrating more on water quality improvement through well head protection and behavioural change.

STRENGTH 2. The participating NGOs are well qualified and competent, and have other work going on with which Self Supply is compatible. Each has had adequate freedom to develop differing approaches.

3.3 High motivation of community level sensitisers

The VWASHE and VAG who volunteered have now a well-defined role and have been trained to provide advice. South of Mansa these people are supported in their task by the NHMC and the WDC and in particular by the artisans. For the artisans the motivation is in part due to their wish to sell their skills, and a pride in the new services they can offer. The provision of ring moulds has expanded their capacity to respond to demand and to offer a solution to well collapse below the water table, at a cost which is comparable to that of the annual cost of cleaning fallen debris in the well. They also provide information on household water treatment and aspects of site hygiene. North of Mansa the ACOs are the driving force which acts as the link to communities and CBOs.

STRENGTH 3. Those promoting the approach are motivated by their training and understanding of Strength 1, but in many cases also by opportunities for personal gain (artisans and ACOs).

3.4 Broad technology options and standardisation

The piloting does not require any specific level of improvement, but encourages movement up the ladder as far as people feel able to move. The steps available depend on the training of the artisans and promoters concerned, but however small the changes a well-owner can make, if they are likely to reduce risks of contamination, they will be encouraged. At the same time well owners are told about higher level options so that they can plan for these in the future. Household water treatment is included as an option and is widely used in the lakeside districts of Nchelenge and Chiengi.

Being a ladder approach, the lower steps which do not provide perfect water quality are acceptable because they progressively reduce risk and facilitate access to higher level steps which can provide safe and reliable supply. There are standard steps but they can be implemented in different ways depending on an individual's resources. When more water quality data is available it will be possible to define what step needs to be reached to count as a 'protected supply'.

STRENGTH 4. The approach concentrates on breaking down options into steps which are affordable to average well owners. This can already be seen to be encouraging others to copy them and market dynamics are introduced, which motivate people to move on up the ladder.

3.5 Major emphasis on software/ training for long-term sustainability

The emphasis to date has been on training, and building up capacity to promote and provide technical support in Self Supply. This is, especially in Milenge, associated with permanent social structures within or maintained by government which can provide long-term support. The capacity building in the private sector is also sustainable in that it is through their newly acquired skills that artisans and pump producers can obtain increased income. The use of local training resources also makes it easier to continue strengthening capacity in the future. Building up links between artisans, traders/ producers and consumers enables well owner/ householders in the future to access services for maintenance or further improvements. Thus a more sustainable model is emerging, which can also be of use to community supplies and which is founded principally on investing in training rather than hardware.

STRENGTH 5. The piloting is investing primarily in training to develop a model which is more sustainable than, but can also be of use also to, community-based supplies.

3.6 Planned documentation of lessons learnt.

UNICEF has developed, with its partners, a documentation strategy to record the evolution of Self Supply through piloting. EWB has also reported on the lessons learnt to date, raising a set of very pertinent questions which need considering in planning the next phase. This structured approach to documentation increases the value of the piloting and helps adjustments to be made to increase effectiveness. This is a strong start which needs nurturing during the next year.

STRENGTH 6. The piloting has been regarded as a learning process and its evolution is being documented for partners and others to learn from.

3.7 Visual expression of Self Supply

Many people have difficulty to visualise what Self Supply means on the ground. Equally they can fear the provision of sub-standard water quality. The pilot implementation of Self Supply makes it possible both to see the real driving force of ownership, pride in progress and wish to improve quality of life and how this can lead to supply improvements. It also tends to show how lighting a small fire of demonstration can lead to a widespread blaze of people picking up the idea and adopting new practices which reduce health risks and open up opportunities for income generation and better nutrition as well as time saving. Water quality can then also be monitored, the effects of improvements quantified, and different levels of upgrading be compared with water quality in conventional protected communal supplies.

STRENGTH 7. People can now see what Self Supply means on the ground and this makes it easier to transfer to new villages/ wards, and to judge what role it can play.

4. WEAKNESSES.

4.1 Definition of responsibilities

Roles and responsibilities could be better defined. There is always a difficulty to monitor progress and discuss effectiveness and yet avoid micro-management. Some issues such as the omission of Mansa district implementation (despite the planning process of Sept 2007 and inclusion by the DHMT of Self Supply in its budget), and the lack of involvement of district councils/ DWASHE in Nchelenge and Chiengi despite their contribution to the planning process, could perhaps have been addressed earlier if the definition of the roles of UNICEF, Wateraid, DAPP and the districts were better defined. Now the PST is being developed this too may have a role to play, and would facilitate feedback to provincial level local government.

RECOMMENDATION 1. A planning meeting with PST, districts and NGOs for the next phase would allow a) agreement on roles and inputs especially on monitoring and b) improved district and provincial awareness of progress to date and plans.

RECOMMENDATION 2. A regular meeting between UNICEF, DAPP and Wateraid would allow better information exchange and clarification of who would do what in relation to studies, training and advocacy.

4.2 Communications

Linked to the point above is the need to develop better communications, both between and within organisations. The fieldworkers in Milenge have never been to see what is being done in Nchelenge// Chiengi, and only the main coordinator from the latter has been to see progress in Milenge. Nchelenge field workers have never visited Chiengi or vice versa. There has been little or no cross-fertilisation for instance -:

- between rope pump production in Nchelenge and in Mansa, or
- sharing of training content for fieldworkers, artisans and districts
- debating on baseline study and other design or results .

Each NGO has some elements of progress which would help the other move forward more effectively, but there has been little collaboration to date. This is understandable in that each may initially be a bit protective of what it has developed, but the overall aim is to produce models which are most effective in enabling successful personal investment in water supply, and UNICEF as the overall coordinator could encourage more dialogue.

Luapula is not an easy province to access, but in planning it is necessary that those who make the plans are up-to-date and with experience on the ground of what is going on. Communications is not just a case of fieldworkers reporting back to a provincial office and provincial office to head office. For planning it is necessary for part of the process at least to take place in the district.

RECOMMENDATION 3. Regular meetings should not just be at national level, but are even more important at district and field level. Exchange visits would allow artisans to see each other's work, CBOs to exchange experiences and pump manufacturers to compare problems and solutions found.

4.3 Transport

One reason for lack of good communications is that none of the districts has its own vehicle for Self Supply. Each only has a motor bike for the coordinator and bicycles for those in the field. Distances are large, it being over 300 km from Mansa to Chiengi, and Mansa to Milenge. After that staff have long distances on dirt roads which are often dangerous for motorbikes in the wet season.

RECOMMENDATION 4. For better communications it is necessary for each NGO to have a vehicle available most of the time for work in their respective districts on Self Supply..

4.4 Provincial and District capacities.

Building up a new approach in remote areas is not easy but additional weaknesses arise because councils in such areas have major problems to attract staff and to support all necessary posts. Thus the three districts chosen have not yet established the Rural water Supply and Sanitation Sections (RWSS) required by MLGH. Since MLGH have offered to support such posts initially the reason has more to do with the overall weakness on councils in poor districts far from commercial centres and good roads. The Provincial Program Support Team might help in this but is only recently established and with unclear roles. (In contrast, Mansa district council has a strong and well-staffed RWSS, but has more resources as a provincial capital). Nchelenge DC is 4-6 months in arrears with salaries and the other two districts are likely to be worse. Wateraid did try to strengthen Milenge DC by providing a water engineer but this proved difficult partly because of lack of clarity as to whom the engineer should report to and be answerable to. In general links to districts have been through individuals (Director of Works or District Planning Officers who do not necessarily pass on information to their council and DWASHE colleagues, leaving a feeling that they are not at all informed of what is going on (especially in Chiengi and Nchelenge).

RECOMMENDATION 5. Closer links to the district and provincial administration may help encourage them to establish a RWSS post in each district. If outside support is given for a post, responsibilities need to be clearly defined.

4.5 Elements of project planning for implementation rather than research

As outlined in 1.2 the Self Supply Initiative is a research project, which requires higher levels of staffing than for ordinary implementation projects. The lack of capacity within district councils means that all capacity must come from the NGOs. The people who have capacity for research within the two NGOs tend to be those who are at the highest administrative levels. These do not have the time to get involved beyond the planning stage. Those at district level tend to have less capacity and in the case of Milenge the turn over has been high, and continuity poor. In that the establishment of relationships with extension staff and CBOs is very important, some permanence of staff is desirable., Staffing levels need to be high enough for those with capacity for documentation to have time to analyse results and make reports and to consider where new strategies need to be developed.

RECOMMENDATION 6. Staffing levels and incentives for retention should be re-considered for the next phase.

4.6 Gaps in artisan training and equipping.

In Nchelenge and Chiengi artisan training has been limited to Sanplat production. They are therefore only able to promote the most basic well improvements, and this is mostly done by the ACOs. There are however artisans who can make and lower rings into wells in Nchelenge, but contact has not been made with them. In contrast artisans in Milenge have been carefully selected (four per ward) and trained for several weeks (two courses and theory) and have been equipped as outlined in 2.3 with necessary tools and equipment for ring making, and well head protection. They now feel confident in advising households in well improvement and household water treatment. However since Mansa Trades does not have the capacity to train on well construction and re-deepening, this aspect remains to be covered. Lowering rings

into place, positioning and sealing, plus low cost well head design with partial or full lining will need to be included before water levels fall far enough for work at the bottom of wells. Artisans in Milenge requested additional training in July, for as much as four weeks. They preferred one block of time to sandwich courses, and July as it was the time when they were least involved in other work. They were very appreciative of the Mansa courses, especially metal work, but some discussion should be held on what aspects they would actually be able to use in their work, in the absence of welding and cutting equipment.

RECOMMENDATION 7. Artisans in Nchelenge and Chienge should receive basic training in aspects already covered in Milenge (with some adjustment to the program relating to what they feel they can actually use, and what else they would like to know). Milenge artisans need training in well construction with rings and partial lining and also refreshers in household water treatment, which EHTs also promote. Rope pump installation and awareness of the options, availability and costs of higher level technologies (submersible pumps with small generators, solar pumps, elevated storage etc) should also be included, and for this traders should be included. (Peri-urban areas may have electricity).

4.7 Low level of monitoring

The monitoring which has been done so far tends to reflect only progress, in terms of training given, improvements made, meetings held. Some measure of the changes being effected also needs to be included. This may require knowledge of wider baseline conditions. For instance if the initial condition of only targeted wells is known, then any copying of ideas by neighbours not being targeted may not be captured. However DAPP tend to make a basic survey of all wells in focal villages and to record what level of change is being achieved at a given time, and WaterAid could capture most changes through records kept by artisans to whom most well-owners go for advice. In general systems to capture these changes remain to be put in place, and so documentation of impact is weak. UNICEF have called for the evaluation survey to assist and simplification and incorporation of artisan monitoring in the documentation strategy could help in more continuous monitoring.

Water quality monitoring has also not become established yet but is critical for justification of considering Self Supply as an element of the NRWSSP. This monitoring will need to have data from the performance of conventional community supplies (reliability and quality) with which to compare, at household and source level.

There is also little or no idea of the up-take of household water treatment, and whether this relates at all to people's perception that they are taking water from a 'safe supply'. EHTs and ACOs in the lake area think that some 80% of people treat their water, but there is no data to back this up nor any idea of how effectively they treat it. In Milenge the estimated figure is nearer 10%. For coverage the question will be with MLGH whether a supply within 50m of a house, with low turbidity, low faecal coliform and household water treatment should count as coverage, regardless of the technical level it has reached. Much more data is needed for an objective assessment of this issue.

RECOMMENDATION 8. Monitoring should be able to reflect more the changes taking place in all wells and people's plans for further improvements. Artisans and ACOs may be the best people to provide the information, but in that case forms will need to be simple and short.

RECOMMENDATION 9. Water quality monitoring needs to be formalised as soon as possible and should use government facilities and personnel as far as possible, for credibility.

RECOMMENDATION 10. A study of household water treatment could be combined with the evaluation, or better carried out as a separate exercise through MOH using extension staff. It should however be linked to drinking water source type and water quality at source and at point of consumption.

4.8 Timing

In a largely agriculture-based economy with relatively well-defined rainy and dry seasons timing of activities needs to take account of local practices and traditions. The issue of timing is a problem rather than a weakness, in that the start date for contracts comes at a time of year (mid-year) which allows little preparation if the best time for specific activities is not to be missed. Thus in the first year the best period for training was missed because much time was needed to undertake baselines and become familiar with the situation, rather than jumping into action without a good understanding of how best to proceed. Thus in all areas, but especially in Milenge, the first year has been largely preparatory. However within that some actions have been unfortunately timed, with practical training in December when artisans could not then promote their new services (everyone in the fields) nor practice their new-found skills fully for six months (high water levels), when much may have been forgotten. Where micro-finance was seen to be needed it would also make sense to have developed any package for loans before widespread promotion of the concept, as this might have made the early stages easier. However it has been useful to see the level of response and the changes in mentality that have been generated even without any micro-credit system in place.

Another aspect of timing briefly mentioned in 4.1 is that of the district planning exercise taking place before partner NGOs were appointed. This has far-reaching effects in that districts had no say in the appointment nor inputs to the plans partners made. Districts therefore did not feel so much part of the partnership (especially Nchelenge and Chiengi),

RECOMMENDATION 11. In the next phase much of the preparatory work has already been done and districts can plan more with the seasonal calendar (see below) in mind. It is therefore important that the two existing NGOs continue to participate, based on the experience they now have and the links they have developed with communities.

RECOMMENDATION 12. If Mansa district also begins piloting it is important to involve the district administration as partner from the start, including in the selection of the partnering NGO. They should therefore have the opportunity both to see the work of the two in Self Supply and consider other options. The capacity of the council (RWSS) and DHMT, and the proximity of the PST are much greater than elsewhere and so could be more involved.

Activity/season	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Farming/ raining												
Harvest/ loan paying												
Well digging/ deepen												
Artisan/ other training												
Marketing/ promotion												

5. OPPORTUNITIES

5.1 Widening up-take

5.1.1 Improved communications and greater involvement of district, provincial and national levels

The piloting is taking place in small areas of each district (specific zones in specific wards), and in districts which are some of the most remote and poorest in Zambia. Without good communications there is no chance of the idea spreading either locally or nationally. Greater collaboration with district, provincial and national local government and health officials may help spread the idea to other districts and also enable extension staff to put Self Supply into the plans and budgets. It may also help access funds to provide more training, equipment and micro-credit as a way of subsidising the spread of Self Supply indirectly, without undermining the essential element of personal investment. Nchelenge District Council has also offered to provide air time on the community radio to promote the rope pump and World Vision (Nchelenge) said that if they had been aware of Self Supply before, through DWASHE meetings they would be happy to promote it in those communities where they were unable to provide a community supply. Greater information sharing with councils could bring councillors on board and encourage them to support CBOs (including area or ward development committees) in their efforts to promote Self Supply. Improving communications and forming an collaborative strategy could lead to demand from other areas. (Milenge district council has already suggested it would like to spread the idea to the eastern part of the district, and ways to support such demands need to be prepared.)

5.1.2 Loan schemes

So far all responses of households have been achieved without any subsidy. However at every area or community meeting attended, the demand was unanimous for some loan scheme which would help people speed up the rate at which they could progress up the water supply ladder. They are impatient to be able to see a real difference in their quality of life and prepared to make the investment as fast as they can. They much prefer to invest as individuals, and do not favour loans to the community as a whole. (see box). Such loans would expand the group of people able to afford improvements as well as increasing the size of step they can make. This is true where full lining is needed because of unstable ground conditions, but also for low and higher cost pumps.

“ People giving a loan will know me and trust me as an individual. How it is paid back is up to me (whether I ask neighbours to help or not)” *(note- but most say they prefer to be personally responsible and to pay themselves)*. “The danger of group responsibility is that we don’t act well together”. “ A revolving fund will put pressure on me to re-pay in a timely fashion”. *Comments from Mulumbi ward*

The Ward Councillor for Yakonde (Milenge) said that the idea was whole-heartedly accepted that individuals should invest for themselves, as they were more capable to keep them working. As for micro-credit he was in favour but warned that “ we cannot sit idly waiting for loans, we should only use them if we don’t have money at a particular time. If a loan is needed we would just like it to be with ‘soft’ loan conditions

not highly commercial ones, and loans should not be uniform but limited by capacity to pay back and the type of improvement wanted.”
(Wateraid have already formed loan committees from ADCs, NHMCs and WASH committees (community request that it should not be just one group), and are planning training.) T

5.2 Improvement to rural economy

5.2.1 Increased employment/ Income generation

Rural employment opportunities are very limited. Expanding the opportunities for artisans, local traders and pump producers increases their ability to earn a living from their trade and encourages small scale enterprise. The artisans trained so far are already planning to take on assistants in Milenge, expanding opportunities further. In addition improved access to water and availability of low cost pumps encourages greater productive use of water. Vegetable growing in the dry season offers additional income, (as well as improved nutrition). Pre-germination of seedlings before the rains start with small scale irrigation offers higher and more reliable yields. Greater demand for cement, rope, buckets, bricks and chlorine (possibly also water filters) all encourage small traders to stock necessary materials for Self Supply, but also of use to those with community supplies.

5.3 Possible inclusion in sector strategies.

5.3.1 Filling gaps and addressing cross-cutting issues in RWSS strategy

The piloting of Self Supply will help to show whether it can offer an option to NRWSSP especially for smaller and more scattered communities where water is available within 15metres of the surface. (or where rainwater harvesting is possible). The strategy developed nationally is geared to larger, more nucleated communities with at least 250 people within 500m radius. Much of Zambia does not conform to this pattern, consisting of smaller or more scattered groups. In this situation community supplies are very expensive in per capita terms (each one serving much fewer than 250 people), and a small group's ability to sustain the maintenance costs is very uncertain. In other parts of the world such groups tend to have to develop their own supplies (14 million still provide their own supply in the US) although most, over time can become incorporated into public supply systems. In the medium term the national strategy may require such lower cost options for remote and scattered people if it is to achieve the MDG target but even more so if it is to reach universal access by 2030.

Good water supply close to the home and household water treatment are two pre-requisites for a good service to households with HIV/AIDS. Self Supply may offer a better service than a more distant community supply in this case. It also offers more inputs from women on management and maintenance and their control over the site hygiene and water drawing practices of neighbours. Opportunities for income generation among women is also enhanced with household ownership of the supply. Thus gender and HIV/AIDS issues are well addressed by Self Supply.

If Self Supply can be clearly seen to contribute to the overall goals and cross-cutting issues of the NRWSSP this would considerably strengthen the opportunities of its wider adoption.

5.3.2 Links to SOMAP

The development of a cadre of trained artisans and their linkage to communities and households offers an additional capacity at sub-district level for water supply maintenance at community and household level – especially if they are formalised within an artisan association. The density of pumps especially among low density populations is seldom going to be high enough to provide an full income to pump menders, and VWASHE committees work on a volunteer basis. Artisans can offer a variety of skills linked to water and sanitation which could help provide the sub-district level capacity SOMAP needs to function effectively. This could strengthen artisan recognition, and replace the NGO support in training and monitoring over time to provide longer term sustainability.

5.4 Funding for studies

It has been mentioned that studies are needed in water quality and in household water treatment up-take and effectiveness. Other aspects (such as the effects and operation of loan systems) may be required at a later date and would need additional capacity to that available among participating partners. ADB, which is supporting districts in Luapula and Northern Provinces but also has funds for research and innovation, offers an opportunity to ensure the maximum of learning from the piloting. Developing a stronger partnership with them offers the chance to learn more but also possibly to spread the idea to other district in both provinces.

6. THREATS

6.1 Project dependency

One of the main objectives of Self Supply is to provide more sustainable improvements in areas where conventional alternatives are less likely to be sustainable. This means that the systems of support to households/ communities needs to end up based in government and viable private sector hands. NGO input is necessary in starting up, but should develop exit strategies and ways of going to scale which will be less dependent on them in the long term. At present DAPP and Wateraid are essential for developing models, training materials and monitoring and adjusting strategies in reaction to the results they record. There is only a danger if they do not work out ways in which going to scale and long term support can be provided by the permanent human resources available locally. This should be written into future contractual Terms of Reference.

6.2 Staffing

Staffing levels and turn-over are a cause for concern. Much has been achieved with the present level of staffing but lack of full time commitment has slowed progress and both NGOs are taking on a significant level of further works. Sharing between projects is unsatisfactory unless some staff are full-time dedicated to Self Supply and others have a fixed input which is supported by time sheets. Necessary staffing levels should be agreed and a consideration given to a contractual commitment to provide them., otherwise there is a risk of staff being spread too thinly and being asked to cover several different projects, often with large distances between them. This will affect monitoring of existing works as well as expansion into new areas if it is not addressed.

6.3 Late development of loan systems

As per 4.8 availability of funds is seasonal with the later months for well digging and deepening being ones during which cash is scarce. At the same time it is with the harvest that people can assess what size loan they will need and how they may be able to pay it back. Thus a loan system needs to be in place as soon as possible, preferably before the end of June, since people are likely to have to pay a deposit or provide surety. If loan systems delay too much another season for construction will be lost.

6.4 Low involvement of district administration hinders extension staff activity

Linking to 5.1.1, if district councils and DHMT (and their provincial and national counterparts) are not sufficiently involved they will not support extension staff and development committees to include Self Supply in their plans and requests for funds. This will make it difficult for them to provide the assistance that they have given so far, or to expand it. They are essential to continued promotion of higher levels on the ladder and future sustainability, so better links will generally need to be forged.

6.5 Reluctance of well owners to move beyond first improvements

In certain communities such as Kampampi (Nchlenge) very high quality improvements have been completed. These reach what might be regarded as the highest level possible in reducing risks at minimum or no cost,. In other areas basic improvements have removed most visible signs of health risks (eg water flowing back in etc) and be unwilling to spend more effort on aspects they may regard as cosmetic. In the first case, to move to low cost pumps or lifting devices such as a windlass would require breaking up the work done so far and owners may well feel that what they have achieved is adequate and will be reluctant to do more. Water quality results may show this level of improvement to be adequate, but it will limit the amounts of water which can be used. With lower levels, motivating people to add other features, such as drainage, may be difficult if people have not a longer term objective of higher levels of supply. Water quality data and income generating figures may help to encourage them, but it may well be that status and neighbourly competition will form the main drivers to improvement, and these are not so easy to generate.

6..6 Insufficient market to encourage private sector

Pump producers and traders selling cement or chlorine require a certain level of trade to make it worth their while to stock goods. Cement and chlorine deteriorate over time, and pump making requires forward purchase of expensive materials. If demand for these items is small it is not likely that the private sector will continue to stock them. Thus demand must reach a certain critical mass for support services to be sustainable without subsidy.

Artisans however have several skills and as long as they are called upon often enough to retain their skills in well protection or pump maintenance, their services are likely to remain available, even if demand is small.

6.7 De-motivation of householders with unclear drilling targets

Self Supply has required a shift from thinking that one's problems will be solved by someone else. Where people believe that such solutions will be provided they will be de-motivated from self help. There needs therefore to be clarity on where communal supplies will be made available in the near future, and which areas or communities are not planned to be served in the foreseeable future, because they are too small, too scattered or too difficult to access. Lack of knowledge of district planning means that one school had started to raise funds for Self Supply and then suddenly found a drilling rig had arrived. Even Chiengi DWASHE said that JICA boreholes were not drilled where they had planned and priorities seemed to differ from theirs. In this situation anyone can hope that they will get a borehole on their doorstep and so will tend to wait in hopes. Clearer planning criteria and well-publicised priority communities would help reduce this risk.

6.8 Credit crunch erosion of initiative and demand

The economic situation is deteriorating for everyone. What effect it will have on the local economy is unknown. If it leads to significant reduction in available cash then fewer people will feel able to invest in non-essentials, and improved water supply would come further down the list than food, seed, medicine, or anything which would help generate income quickly. Falling demand would threaten traders and pump producers and lead to their closing down. This is a situation over which we can have no influence.

7. DRAFT ACTION PLAN.

7.1 Plans for 2009/10 in order of priority

This assumes no delay in continuation to new contracts for Wateraid and DAPP so that actions which have been prepared for can progress without problem.

7.1.1 Establish water quality monitoring as soon as possible

This should be based on bacteriological counts (not positive and negative tests). Del Agua or Wagtech kits should be used and are available in Milenge (and Mansa) but not Chiengi (and Nchlenenge?). Monitoring should include point of consumption water quality both in houses using and not using chlorination. Chlorination practice with wells should also be recorded, and conventional protected supplies ('DWA' wells with windlasses/ handpumps and boreholes) should be included. If possible this should be done with EHTs / district laboratories, in collaboration with environmental health section of Ministry of Health.

Suggested time frame. Within two months.

7.1.2 Put revolving fund or similar facilities in place

There is high demand for a loan system as mentioned in 5.1.2. Experience of such systems is small in the area, but there is a culture of paying back in labour, of paying for fertiliser with crops, and for a few systems for paying a deposit and the balance over time for treadle pumps. Communities appear to favour revolving funds because the loan remains to an individual but there is community pressure to effect timely payment. Wateraid is planning a training for already established loan committees. DAPP would need to establish such a system, both for rope pump purchase and for conventional supply improvements. Both need to consider also small loans to

entrepreneurs/ artisans (eg for equipment such as chain and block, or construction windlass, or purchase of cement).

There is also need for a study to explore what small funds may be available locally which could augment such systems. These may be small investment funds to constituencies or wards, grants to women's/ youth groups, church funds, or some village savings schemes. User fee funds from conventional supplies which are over used and want to develop other supplies to reduce the overload are also an option. However little is known of the potential of all these sources to help poorer people to improve their supplies.

Suggested time frame. Revolving funds in place for Milenge and for rope pumps within 2 months. For Nchelenge and Chiengi wells, and the wider financial study within six months.

7.1.3 Organise artisan trainings and equipping

A continuous personal development plan or training schedule for two years, needs to be worked out and education materials produced for it. Some aspects are not at present within the capacity of Mansa Trades.

Milenge artisans need some further training, which based on discussions with them, should include well lining, business development and marketing. Nchelenge and Chiengi need the above plus ring making and installation, masonry, (especially circular), brick making, well head protection, site safety. Metal work sessions at Mansa were very popular with artisans but it should be considered what skills they can actually use in Self Supply water and sanitation, rather than what modules Mansa Trades have the capacity to teach. Artisans asked for basic guidelines in Bemba which they could refer to later.

Water lifting also needs to be addressed, both in terms of making windlasses (wood and metal) but also in rope pump demonstration/ installation/ marketing. Water treatment (source and household) also needs practical training and clear guidelines which students can take away with them.

Suggested time frame. July was requested by Milenge artisans, but preparations for courses would need to start sooner.

7.1.4 Plan for inclusion of Mansa.

UNICEF need to consider whether they wish to include Mansa District as originally planned. This needs discussion with Mansa DC and PST among others, but the council was keen to do so and DHMT had included it in their budget for 2009 (see 4.1). Mansa has a high number of family wells (over 7,500), a strong RWSS unit, and a belief within the DC that Self supply could help in areas difficult to cover by conventional means, and for which donor input is relatively low. It was involved in the district planning exercise in 2007 and has a large peri-urban population, un-served by piped supply, who could prove a good market for higher level Self Supply options. These could demonstrate to more rural visitors the alternatives to which they could aspire. It is therefore recommended that Mansa should be included if at all possible. There are alternative NGOs working in the sector in this district who could be considered as partners, especially if they are involved in micro-finance, but the systematic approach and experience of Wateraid should not be disregarded.

Suggested time frame. A decision should be made immediately, backed up by discussions in the province. Implementation will be delayed by the need to train artisans and the limited capacity to do so but could begin in August, when water levels would allow practical demonstration of well construction techniques.

7.1.5 Strengthen links to national, provincial and district bodies (especially MLGH and health)

A communications strategy needs to be developed among partners to ensure national and provincial levels are more fully included. This may mean having a provincial workshop to which national key personnel in health, water supply and donors and NGOs active in the province are invited, along the lines of that made in Sept 2007. This should be timed so that administration can include some elements for Self Supply (eg monitoring, training) in their next budgets, but may mean that for this year UNICEF (or NGOs if put in their budgets) might need to fund this in full. DWASHE/ district councils should also be encouraged to report fully on their Self Supply activities to DDCC and PLGO.

Suggested time frame. July?

7.1.6 Institute more learning exchange between districts/ NGOs and more discussion of studies in their design stage.

NGO plans for 2009/2010 should be geared to more flow of information, but also learning from field visits and on the ground discussions for field workers and district council/ DWASHE personnel. Where studies are planned which will be of use to other partner organisations it would be more effective to discuss the TOR and design for these jointly before implementation, rather than each organisation having to commission such studies separately or at least develop unrelated data collection.

Suggested time frame. Exchange field visits in Aug-Sept, research collaboration on a regular basis.

7.1.7 Strengthen documentation and accessibility of information

The documentation strategy developed by UNICEF and its partners provides a monitoring system for activities (see Appendix 2). In addition partners could do more to record changes happening as a result of their training and promotion being carried out as a result of it. This means looking more at how to record impact, not just during evaluation studies, but on a more regular basis, and recording case histories to illustrate what is happening. Also once water quality monitoring is established there will be more data to share on what elements of well protection have the greatest effect. In general so far it is said that accessing documentation is not easy and that all organisations need to encourage sharing of information and perhaps to post a list every six months of what relevant documents they have produced and others they have found useful.

Suggested time frame. Continuous

7.1.8 Consider longer term volunteers for documentation and research

As a learning process the research requires regular, high quality documentation which partner organisations tend not to have the time/ capacity to prepare. Long term volunteers such as those provided by EWB, or VSO or Peace Corps could provide the necessary capacity.

Suggested time frame. Immediate discussion and continuous input if agreed,

7.1.9 Implement evaluation study.

This brief review is designed to precede a more detailed evaluation of progress. However in that there has not yet been a season for implementing well improvement, and training is still under way, this brief review may be sufficient at this time to provide indicators of success and areas of concern. In that the evaluation would look more at impact, it is suggested that the evaluation be postponed until October 2009

when more improvements will have been completed and user opinions can be more founded on concrete results.

Suggested time frame. Evaluation October 2009.

7.2 Summary of Aims for 2010/11

7.2.1 Extension to cover complete wards.

During the rest of this year most efforts will be on consolidating response in focal communities in Nchelenge and Chiengi and in the whole of the four wards in Milenge. The aim in 2010/11 for the former, would be to cover the rest of communities in the focal wards, and in Milenge to cover the remaining four wards in Milenge West. Consideration could be given to how to respond to Milenge DC request to move also into Milenge East. This offers the opportunity to develop ways of scaling up, but that might be easier to start in Mansa district.

7.2.2 Trained artisans as part of an association and capable to train others – linkages to SOMAP

Artisan associations may begin to be formed as part of SOMAP, but this will depend on the speed at which SOMAP develops and also the degree to which it looks beyond handpump maintenance as its role in the early days. Trained artisans need to be given recognition and to be capable to give some training to others (TOT). In collaboration with SOMAP, or carried out by SOMAP, artisans skilled in Self Supply activities need to be incorporated and given opportunities for further training and certification. Thus by mid- 2010 there should be an artisans association in each district for RWSS which includes those with well-digging, masonry, as well as plumbing skills.

As results on the ground become more numerous, combined with supporting water quality data, evidence

7.2.3 Clear evidence for national debate to support or refute inclusion of Self Supply in NWSSP

By the end of 2010 sufficient evidence must be made available to furnish MLGH with grounds for debating whether Self Supply has a role to play in the NWSSP. It should also provide Ministry of Health with information to indicate what degree of risk reduction can be achieved and so what aspects can best be promoted by EHTs/ NHMCs and CHWs. This would mean having a major evaluation of impact and lessons learnt towards the end of 2010, followed by a national workshop to debate the findings and make national recommendations.

7.2.4 Definition of models for scaling up

If the results appear positive, the evaluation should also look at ways in which Self Supply could be scaled up in other parts of the country. These should include different models and cost estimates of establishing the enabling infrastructure to Self Supply, and the degree to which this can also be used to support community water supply.

REFERENCES

1. A Raeside. Self Supply Learning Paper. Engineers Without Borders. Feb 2009
2. DAPP. Rope Pump Water Quality Attachment To The Report Dapp Water Facility / Tazamo - December 2008
3. Ruralnet Associates Ltd. . Rural Water Technology study. UNICEF/ Wateraid
4. S. Sutton Implementation Plan for Self Supply Piloting in Luapula Province RWSN/ UNICEF Oct 2007
5. S. Sutton. Field note on visit to Luapula Province – RWSN/UNICEF October 2007
6. UNICEF Documentation Strategy for Self Supply . 2009
7. UNICEF Minutes of meetings on Documentation Strategy Jan 19 and 21. Jan 2009
8. UNICEF/ DAPP Report on Baseline Survey of Household Waterpoints UNICEF ZAMBIA, WASHE Section, Self Supply and CLTS Programme Nchelenge and Chienge Districts, Luapula Province, - July 2008-
9. Water quality data from MOH.
10. Wateraid Project Proposal and Logical framework for UNICEF on Self Supply and CBTS in Milenge and Mansa 2008.
11. WSP/RWSN Field note, Introduction to Self Supply. 2009
12. Zulu Barrows Baseline Survey For Self Supply In Luapula Province (Mansa and Milenge Districts.. Esther Mbawo April, 2008

APPENDIX 1 SWOT Analysis of the progress of the Self Supply piloting in Luapula

Province Aims. Successful development of replicable and internally driven solutions 2. These solutions contribute significantly to improved water supply and poverty reduction by 2010.

Strengths

- An apparent suppressed demand, through lack of awareness of householders' own capacity to bring change
 - The driving force of well ownership appears high even in busy times with high water table.
- NGOs with high competence in capacity building and technology development, free to develop their own approaches
- High motivation of community level sensitisers.
- Broad technology options and standardisation
- Major emphasis on software/ training to form long-term sustainable systems
- Documentation strategy and learning papers will record process and their differences
- Visual expression of what Self Supply means on the ground

Opportunities

- Improved communications (including information exchange between districts) and advocacy can lead to wider up-take
- Establishment of loan schemes within sub-district management structures can widen participating households and private sector
- Health, artisan groups and CBOs on the ground, will have increased capacity if national/provincial/district are more involved
- Limited employment and income generation opportunities in rural areas can be expanded
- Widening links to include income generation, could increase benefits and sustainability
- Working in gap and cross-cutting issues of NRWSS Strategy may establish a niche where inclusion could be considered
- SOMAP is being introduced and may be able to take over the roles of DAPP and WA by the end of piloting. Self Supply may help SOMAP develop a framework at sub-district level.
- Involvement of other funders eg AfDB for studies
 - HWTS, water quality, baselines, finance?

Weaknesses

- Definition of responsibilities between stakeholders
 - Little participation of partners in planning - DWASHE plans largely ignored
- Communications –
 - Little dialogue between NGOs / districts
 - Low involvement of district and provincial authorities
- Transport/ mobility for field workers and exchange visits
- Provincial and district capacities
- Some aspects (eg staffing) based on implementation rather than research
- Gaps in artisan training and equipping
- Low level of monitoring for research and advocacy purposes
 - process more than product
 - Limited definition of baseline conditions
- Timing of planned activities
- Partnerships not developed before planning process –Financial models not developed alongside promotion
 - Planning activities not related to seasonal work patterns/ water levels.

Threats

- High project dependency for research may not be easy to get rid of in going to scale
- Inadequate staffing for the research element.
- Financial packages are not in place before harvest
- Insufficient value attached by, or lack of, communication with local government/ health limits engagement of district staff
- Credit crunch may erode initiative and resources
- Insufficient value perceived by users, beyond first improvements
- Insufficient market develops to interest private sector
- Households may become demotivated by unclear planning targets for higher service levels (eg drilling)