2 Descriptions of programmes

2.1 National context - Mozambique

During the emergency phase (1992 – 1995), the responsibility for maintenance and most construction of rural water supplies lay with the Government of Mozambique (GOM). The 1997 evaluation for Care states "supply users regarded the systems as belonging to government and expected government to look after them and repair them, a role the GOM did not have the resources to fulfil. The result was a system which relied heavily on outside funding, with little or no ownership or financial contribution from consumers, and which quickly fell into disrepair." In 1995 the GOM adopted a new policy (PNA) which "accentuates not only the sustainability triangle, but also the organisational triangle with the consumers at the apex." This plan emphasises the role of participation by the users at all stages, and the role of the private sector in improving and maintaining water supplies.

Both Care and World Relief have attempted to follow the national water policy, although Care has been taking a greater lead in the development community responding to the PNA plan. It has not been easy to make the transition to community managed systems and the response varies from area to area depending on local authorities. Care in particular has taken the lead with pre-payment for pump-heads by communities and "stopping of free distribution of spare parts which were undermining the fragile but growing private sector spare parts stocking and sale".

Given this evolution of responses with Mozambique both World Relief and Care have experience of an emergency response to the need for water supplies and of making a transition to a more "developmental" response

In Mozambique the official standardised pumps are the Afridev for up to 45m and the Volanta for over 45m. Both are well known pumps. Details of the Afridev and Volanta can be found in an appendix. The Volanta has some technical difficulties associated with it (eg cracking of pipe joints). World Relief persevered with the Volanta modifying the way it was installed to try to address the technical shortfalls. With the combination of the Volantas poor performance, plus the fact that the spares are relatively expensive and it would be difficult to set up a sustainable supply, Care decided that it was best to install Afridev pumps even to 60m. They reasoned that regular breakdowns of a less expensive pump tend to be better maintained than those with few but costly repairs.

2.1.1 World Relief

World Relief's Emergency Water Supply Programme was a response to the worsening drought situation along the Limpopo Corridor in the province of Gaza during 1992. The programme was designed to complement the governments rural water supply programme for Gaza and was an attempt to rapidly meet the needs of the population by providing access to clean water through the drilling of boreholes and installation of handpumps in accordance with government guidelines. Between November 1992 and July 1993 World Relief subcontracted a drilling company, drilled 41 boreholes and installed 29 handpumps in two phases. This represents a success rate in what was considered an unfavourable area for groundwater development of over 70%. The average direct cost of the borehole during this phase was $6,750. The average total cost per borehole with pump was $16,041.

The emergency proposals state that there would be community involvement during the siting of the pump, and that the community would be trained in VLOM. Inhambane was one of the first provinces to begin to recover from the war, and as a result communities in this region were better established. Even during the emergency phase, CARE was working with relatively stable communities. During the CWSP phase, a high demand for water and lack of alternative sources combined with the stability of the population to present favourable conditions for demand driven responses.

By 1997 there were 400 wells and boreholes in the four districts where Care works. Of these approximately 170 have been constructed or rehabilitated through the CARE projects. The direct costs of a borehole in the 95 to 97 period were on average $9,000 per community. In addition, if the total project costs are taken into account (facilitation and overhead) this figure rose considerably to give high overall costs. These costs include all the social mobilisation such as organising and facilitating prior contribution, post installation hygiene and sanitation education, etc.

As stated in the national context section, Care took a lead in implementing the PNA National water policy. This was not an easy task. New communities who wanted pumps were asked to purchase the pumphead from a local supplier. This “prior contribution” before drilling started was intended to stimulate ownership within the community for the pump. A secondary feature of this approach was to ensure the community made a connection with the local supplier and therefore knew where to get spares. This system was supported by training programmes for VLOM (although these had been in place before). It is interesting to note that the 1997 evaluation 30 0 Tw 10.3199 0j -0j -0.048 Tc Tc -0.144 Tw 5.27

Introducing VLOM in Malawi: The Karonga Experience

The Karonga project provided Afridev pumps to a population of 60,000; subsequently, four years were devoted to motivating and preparing the community for VLOM. It thereby served to test whether, given the right support, a community can manage their own water supplies using the VLOM approach.

In each village a water and health committee was established in addition to one committee per pump with at least two trained attendants for repair and maintenance. High-demand spares were supplied by a local wholesaler to village shops, while the government's role was restricted to monitoring and policy-making. The intention was that even if the government did not fulfill its role, the pumps could still be maintained.

When the project began the Afridev had not been fully tested and some parts had to be changed on all pumps after installation. Appropriate tools had also not been designed. These problems were eventually resolved and in 1997, two years after all project support had ended, a study found that:

- *95% of the handpumps and boreholes were working, with 75% working "well";*
- *communities repaired their handpumps, even replacing pump rods and rising main sections. However, they did no preventive maintenance or repairs to aprons and headworks;*
- *half of the pumps had either no or only one attendant. In most cases, at least one of the four essential tools had been lost or was never issued;*
- *most village water and health committees were defunct but pump committees remained active;*
- *communities had small amounts of cash on hand for maintenance but did not buy spares in advance of a breakdown. No regular contributions were made to maintenance funds; and*
- *village shops no longer sold spares, as there was too little business. Town-based wholesalers, however, still sold them.* *From Colin 1999*

2.2.1 Concern Universal

The combined forces of UNICEF, National Water Department and Concern Universal (CU) equipped Chikwawa District with 100 functioning boreholes through rehabilitation and new boreholes. While there was some consultation with communities, it was in 1994 that CU worked with UNICEF, the Water Department, Ministry of Health and Ministry of Women and Children Affairs and Community Services, to undertake a two year programme with two key training components. Hygiene Education and Sanitation Promotion (HESP) and Village Level Operation and Maintenance (VLOM).

In 1996 CU obtained funding from Department for International Development (DFID) UK to undertake a Water and Environmental Sanitation (WES) project. Its goal was to mitigate the recurrent effects of the droughts and improve health of targeted communities. It was to provide sustainable water supply systems and promote improve sanitation and hygiene practices. This work continued to be in partnership with the government of Malawi in Dedza, Ntcheu and Chikwawa districts. This programme had a planned component of community mobilisation. Participatory Rural Appraisal (PRA) techniques were used to involve the community in the planning and implementation of the project. For this two year project 1996/98 CU installed or rehabilitated successfully approximately 138 boreholes and pumps.

CU used a Eureka small portable drilling rig for much of its work. This innovation can be found described in "Introduction of Low Cost Rotary Drilling to Malawi: Specifically the Eureka Port-a-Rig" *Concern Universal, BOND 1998.* The paper notes that -"Given the present coverage and technologies available, Malawi urgently needs to

people to come. Regarding motivation and payment, the person by the pump gets some benefits – free water, labour for their fields – and notes who is getting lot of water etc.

Some differences between the countries are minor such as the details of tracking water payments. In Malawi the communities have cards for who has or has not paid and the cards were designed by the community. In Mozambique they also use the card system. They have a community member sit by the pump and collect payment, sign the card and/or list.

Community differences:- For some variables, such as storage of money for spares, the situation changes for every community. In Mozambique some communities have treasurers who keep the money. To store the money they sometimes (but not often) use the bank. Alternatively they put it with a man who has a lot of animals so they can reclaim the animals if something goes wrong or they spread it among a few people so that if someone runs away they only lose a small part of it.

It is not necessary to document all the different details of the systems covered by the research project. The preferred options are covered in the results section.