

Women handpump mechanics in Kenya

by Lane Hoffman

Putting the important tasks of operation and maintenance of handpumps into the hands of the people who are the main users, the women, has proved to be an effective and practical change.

AS I WAS ACCUSTOMED to seeing only men repairing village handpumps in rural West Africa, it came as quite a pleasant surprise to see a group of women in a village in Western Kenya pull out the below-ground components of a NIRA 85 handpump, repair them, and reassemble the pump.

Village women who have been trained and equipped with the necessary tools to repair the VLOM handpumps situated in their own communities are one of the mainstays of a decentralized maintenance system that is now operating in the Western Province of Kenya under a government-supported rural water-supply programme funded by FINNIDA. The performance of these female handpump mechanics has been very good and they have proved themselves to be highly motivated and very reliable. The NIRA 85 and India Mark III VLOM handpumps have functioned continuously in the communities since they were installed.

Women are the key

One of the key factors in this success is simply the fact that it is now the women who are capable of and responsible for maintaining the handpumps in their villages. In spite of the initial scepticism and the cultural resistance which many of the men had to the idea of women carrying out such a technical task, (and one which, until then, had always been reserved for men), the fact that the handpumps now run smoothly has persuaded them to accept the change.

Providing water for the household is the woman's responsibility, so the availability of a convenient supply of water is a daily concern for the women mechanics, just as it is for the other women in the village. A pump breakdown usually results in a long and arduous walk to a traditional water source: a task that can add an additional two to four hours to a day that already begins at dawn. Given the women's already heavy workload, any additional time spent in water collection means less time for sleep at night. This social reality explains the high

degree of motivation that these female mechanics have.

The job of handpump mechanic, however, is a new one for these women. Initially the women had been selected by their communities to be the pump caretakers, a role in which they carried out preventive maintenance tasks and ensured the cleanliness of the pump area on a voluntary basis. Whenever a breakdown occurred, the pump caretaker would notify one of the (male) mechanics who was operating in the district, and who had been

trained by the project and equipped with the necessary tools and spare parts to carry out the repairs in that area. After carrying out the repair, the mechanic charged the community enough money to cover the cost of his time, labour, and spare parts. This money was paid out of the community's maintenance fund, to which every user household had contributed on a monthly basis. (Failure to pay the monthly contribution could have resulted in a household being refused access to the pump.)

As women are responsible for any and all costs incurred in the collection of the household's water supply, the financial burden for handpump maintenance fell upon their shoulders as well.

This decentralized maintenance system worked very well for a certain



UNICEF/Carolyn Wilson

This India Mark II pump has now been updated; the new version is lightweight and easy to assemble and disassemble without heavy equipment.

period of time; but, as the male mechanics became increasingly competent in carrying out their work, the attraction of the cities and the higher salaries to be earned there increased as well. With the gradual migration of a large number of the project's trained mechanics to the nearby cities, it became increasingly difficult to ensure the maintenance of the handpumps.

Almost out of necessity, then, the project turned to women. Married village women, trained as mechanics, were less likely to leave their rural community in search of a better opportunity in the city. The women who were trained to repair the handpumps were usually already pump caretakers. The replacement of the INDIA Mark II and NIRA 76 handpumps with two others which are lightweight and are easy to assemble and disassemble without heavy equip-

ment — the INDIA Mark III and NIRA 85 — has made the process of transferring the handpump maintenance responsibilities to women easier.

New roles, new strengths

After the women mechanics had repaired the pump, we sat down together under the shade of a tree to talk. The women spoke with quiet pride of their new role and important status in the community. They had gained entry into a profession previously open only to men. They expressed a confidence in their ability to keep the pumps working. Men and women alike respected them.

The transferral of the role of handpump maintenance to women, has brought not only benefits but costs as well. The participation of women in handpump repairs has created new

problems — not for the project or the beneficiary communities, who are very satisfied with the smooth operation of their pumps, but rather for the women mechanics themselves.

These women have taken on a time-consuming new task for which they receive no pay or remuneration of any kind. They are expected to provide this service to the community on a voluntary basis, just as they did before when they were only pump caretakers doing simple O&M tasks. As we have seen, the labour of a pump mechanic, when carried out by a man, is considered to be of monetary value, and as such is financially compensated. But when women perform the very same task, their labour does not have the same monetary value. The assumption made is that women's time is plentiful and therefore less valuable.

During the discussion, the women mechanics indicated that their present duties including the maintenance and repair of the pump and the site, and helping other women mechanics in neighbouring villages when heavy work had to be carried out, now consumed up to two full workdays per week of their time. And even though they are not paid for their mechanic's work, they are still expected to pay the monthly water tariff or risk being denied access to use the pump for their own water needs. The fund is used to pay for spare parts and to pay the project (male) mechanics if they are called to carry out a repair that the women cannot do. The women presented a cost-benefit analysis indicating the benefits handpump maintenance brought them versus the additional burden the duties of handpump mechanic entailed, which showed clearly that their resources were being stretched too far. The loss of two workdays to waterpoint maintenance means that the women have less time to engage in the income-generating activities necessary to earn cash to purchase the household's water, protein supplements for the family's diet, and medication. This situation has already had a negative impact on their infants' health, resulting in an increasing rate of infant malnutrition from the high carbohydrate (inexpensive) diets.

Women's time is valuable

Although they enjoyed the benefits of their increased role in handpump maintenance, the cost of this voluntary work could prove to be too high, given the women's limited time and resources. Some of the women mechanics indicated that if the situation worsened, they would have no choice

WHO/B. Genier



Providing water for the household is the woman's responsibility, as are all costs incurred in water collection.



The availability of a clean water supply will improve this child's health, even if she doesn't like collecting the water!

but to give up the position of handpump mechanic in order to have the time to earn money in other ways.

Taking part in this discussion were not only the female handpump mechanics, but also some of the female water committee members and some of the male project staff members responsible for the maintenance system. What had become increasingly apparent during the course of the discussion was that the full costs of the women's participation in handpump maintenance had not been fully appreciated. The committee members and project staff had been unaware of the amount of time the women were investing in maintaining the community's water supply system, or of the additional burden this placed upon the women's already heavy workload, particularly when they were expected to

do this work as a community service. It came as quite a surprise to many of those present to hear that the women had neither enough time nor money to work voluntarily as mechanics.

A female water committee member, the treasurer, pointed out that the women mechanics had proven to be more effective sustainers of the water supply system than the previous male mechanics. If the community did not take action, they might risk losing these women's valuable contribution. This was obviously a matter that needed to be discussed by the village water committee.

One of the male project staff members then asked 'Would not a few bags of sugar every month be sufficient compensation for the women's work?' In a quiet but purposeful voice, a female mechanic replied that a few

bags of sugar would not help them feed their children or pay the water tariff.

Looking around at the faces of these present, one could see that these words had made an impression. It was clear enough that a solution would not be found right away, for many old values were being questioned and new ideas were being raised. Nevertheless, on the part of some of the community members, at least, there was a growing recognition of the value of the women mechanics' time and work, and a realization that these women's resources could not be stretched too far. ●

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