KENYA: The water that brings new life

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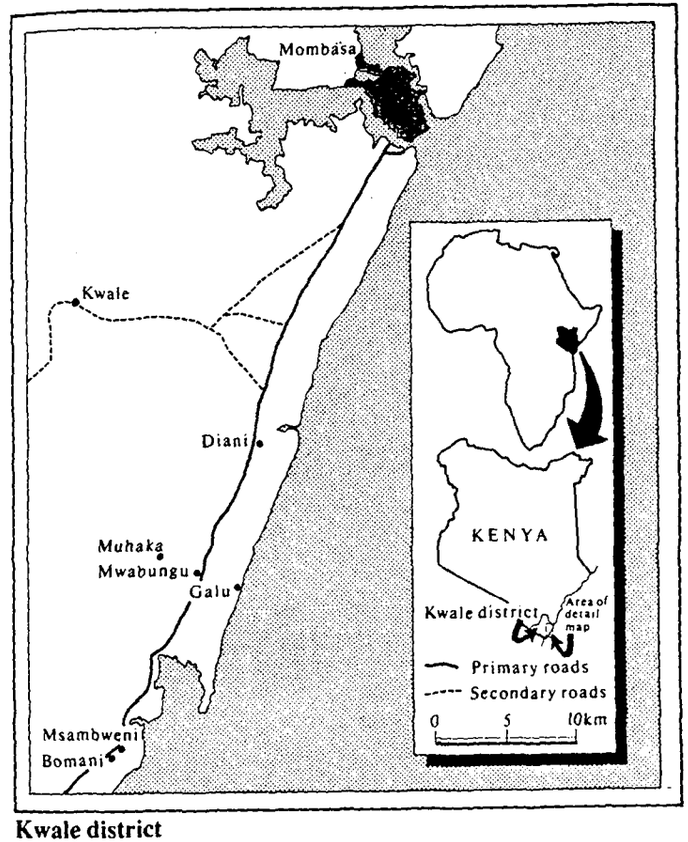
With her feet on the cement rim of the gaping water well, the Kenyan girl balances herself precariously as she lowers a jerrycan at the end of a rope to the water some 10 metres (33 feet) below.

Seconds later, the can hits the water with a splash. The girl tugs at the rope several times to get the water flowing into the can, and after a while begins to pull her heavy cargo of 20 litres (4 gallons) up to the surface.

She seems unaware of the danger of her feet slipping as she hauls up her load of water, and the danger of tumbling to her death down the dark pit. She is more concerned about not letting any of the water spill from the can as it sways to and fro on its way up the well. The girl is typical of many other females in Kenya's coastal villages of the Kwale district who risk their lives each time they go to draw water from the well.

The villagers have seen women doing this chore so often over the years that they no longer perceive the danger involved. To them, balancing above a deep well is simply a part of everyday life. But visitors to the village become tense as they watch the women performing the dangerous and laborious exercise.

According to the people in the area, each family in a village risks the life of one of its members in this way about eight times a day. This is because the average family has eight members, each requiring one canful of water a day.



Kwale district

Moreover, some of the wells in the area are 100 metres deep, increasing the danger of any fall and making the work of pulling up the water even more exhausting.

The wells are not even nearby. The village women trudge an average of 3 kilometres (nearly 2 miles) to the nearest source of water, and the same distance back with their precious, but heavy, containers. And when those sources dry up, which happens frequently, they have to walk further, spending more time in their quest for water.

With so much time and effort involved in getting water, it isn't

surprising that the women would prefer to secure their supplies in a way that is not so tiring.

It's better to buy water

Those who can afford to, like Mariamu Hassan, buy their water from a kiosk. Not only does this do away with all the walking and carrying, but the water is cleaner, too. The water piped to the kiosk doesn't have bits of grass in it and other impurities visible to the eye, as is the case with the well water.

Mariamu is in her fifties. She says she would rather pay Kenya shillings 10 (63UScents) per drum of water every day than go through the grinding slog of fetching the water herself from either of the two sources. As far as she is concerned, the river is much too far away. But the other source, although located in a nearby school compound, is a borehole whose cement sides have cracked, making it difficult to draw the water.

Unfortunately, Mariamu has recently had no choice but to go with her container to the school compound because the owner of the water kiosk has again not paid his monthly bill on time and his supply has been cut off by the Water Ministry.

A pilot water programme

In order to ease the water problem, a pilot programme has been under way in the Kwale district of Kenya's Coast province.

Known as the Kwale Water and Sanitation Project, the programme includes the drilling of about 100 boreholes, covering up "traditional" (and dangerous) village wells, and installing handpumps in the Diani and Msambweni locations immediately to the south of the coastal town of Mombasa. These locations each comprise a number of villages, which amount to a rural sprawl.

The aim is to provide safe drinking water in a less arduous way, and basic sanitation. The project is being run by an NGO called the Kenyan Water for Health Organisation (KWAHO).

KWAHO's history goes back to the UN Women's Conference that was held in Mexico in 1975, which set up a voluntary fund for women's projects. The next year, several Kenyan NGOs got together with the United Nations Children's Fund (UNICEF) to set

Women are no longer forced to risk their lives when drawing water from deep wells.

up a water-for-health project to take advantage of the women's fund in a way that would benefit Kenyans, especially the women.

The purpose of that initial water-for-health project was to support the Kenyan Government's attempts to bring safe water to all its people by the year 2000 and thereby improve the quality of their lives.

The name of the organisation has since changed from the UNICEF/NGO Water for Health Project to KWAHO, but the goals are the same.

In most of Africa, fetching water is perceived as women's work. Right from the start the Kenyan citizens' groups decided to focus on small community-based water projects in which women would take part as planners and implementers and be involved in maintenance, too.

Since its inception, the water programme has supported more than 100 water-related projects to help Kenyan women.

Much of Kenya is either arid or semi-arid. And, again in common with other Third World countries, Kenya faces serious difficulties in trying to keep up with the need for safe and ample supplies of water for its rapidly growing population.

At independence in 1963, Kenya's population was about 7 million, but today it is estimated at 22 million. The population growth rate, at 4.1% a year, is believed to be the highest in the world. Unless the rate of growth falls substantially, the population is likely to double within about 15 years.

Most Kenyans live on 40% of the land, of which only 14% is arable. The rest of the people try to eke out a living in areas where rainfall is sparse and unreliable, even at the best of times. They all need water, a vital factor in any kind of development.

Water is life

"Water is life," says Rose Maluma, a KWAHO programme officer. "Almost everything revolves around it. If the water is not clean, it is bound to undermine the people's health. And if the people aren't strong enough to work, they cannot contribute to development. It's as simple as that."

Kenya's Ministry of Water Development is working hard to provide improved water and sanitation facilities to as many communities as possible. But the ministry acknowledges that this is no easy task. It is concentrating on two aspects of the water problem: low-cost and appropriate technologies, and continuous involvement of local communities in existing, and new, water projects.

Although the ministry is providing engineering and technical solutions for the supply problems, it is not equipped to deal with the social and cultural aspects of the planned water and sanitation systems. And it is precisely in these aspects that KWAHO's activities have proved to be so valuable all over the country.

Experience in Kenya has shown that when the potential beneficiaries of a water-supply project are not themselves involved in running and maintaining the scheme, it is likely to end long before the pump itself breaks down.

So community involvement is another crucial factor in a project's success.

Before the Kwale project was started, two earlier schemes had made the costly mistake of not fully involving the community and spelling out the villagers' role clearly. The first was an international aid project in the 1960s which fitted handpumps to existing wells; it failed because the local people were not committed to it. A similar exercise in the 1970s produced similar results for the same reason.

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Strong emphasis on self-help

KWAHO's work always has a strong self-help element. Most of the work, very often, is organised by the local people themselves, especially women's groups, who co-operate with health and water experts from outside and with District Community Development officials.

KWAHO's work has a bearing on the activities of many organisations in Kenya, but its principal partners are: the personnel of the Ministry of Water Development who are in charge of drilling the boreholes and covering over the "traditional" wells; the World Bank, which has been supplying several types of handpumps and providing general technical back-up; the Ministry of Health and the Ministry of Culture and Social Services which have been making available the services of extension workers and administrators

without whom, in Kenya, this kind of work cannot progress; and above all, the villagers who form water committees.

The pilot project, in the Diani and Msambweni locations of Kwale district, now under way touches about 50,000 people in 50 villages. The Muslim Digo people of the area are generally occupied in growing cashew nuts, coconuts, mangoes, oranges and tangerines, and some of them live by fishing.

On higher ground are the Christian Kamba people who cultivate maize, beans and other crops. Although the tourist hotels along the coast provide a ready market for fresh produce, both groups of people in the area are poor and enjoy few modern facilities.

The rainfall where they live is moderate, but very seasonal. The streams are dry during most of the year, and although there is ample groundwater, many "traditional" village wells are not deep enough to provide water all year round.

Women have to trek considerable distances to dig for water with their hands, in the beds of dry streams. The water in the streams and wells tends to be foul and unfit for human consumption.

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In the case of these poor people, water only superficially means life. Deeper down, at the level of micro-organisms, it means disease, listlessness and eventual death because of all the impurities.

Mwanaisha Mweropia is a 21-year-old mother of six who lives in Mwabungo village in Kwale district. Until three years ago, she used to make at least seven journeys a day to the nearest borehole, half a kilometre away in neighbouring Mwembeni village, to fetch the seven buckets of water her family needed.

She had to queue afresh for each bucket of water, the rule being that no one could draw a second bucketful if there were other people waiting to draw their supply. And there were always other people waiting. To beat the queue, Mwanaisha would do her best to be at

the borehole at the crack of dawn each day. But by the time her family went to bed at night, there would be not a drop left, no sign of all the effort she had put in during the day. And she felt exhausted all the time. Her throat was scraped by a perpetual cough and she kept complaining about chronic chest problems.

A less irksome life ...

Then in 1984, KWAHO installed an Afridev water pump nearby. Mwanaisha says she has found the chore of fetching water much less irksome ever since. She almost enjoys using the handpump with its long handle — it is so much easier than hauling a heavy bucket 10 metres to the surface.

The pump also put an end to the frequent quarrelling and ill-feeling that used to erupt among the village women as they pushed and shoved one another while waiting their turn to draw water from the borehole.

Another reason why Mwanaisha is happy about the pump is that her three daughters will not have to lead the arduous life she has had. She dreams of the day when piped water will be available right in the compound of her home. Meanwhile, as she suckles her 18-month-old baby, she says she is content with the Afridev community pump. What is now only a dream for this mother might well become a reality in the lifetime of her daughters.

... and healthier too

Mwanaisha says that after the pump was installed, her cough gradually disappeared and the pain in her chest stopped troubling her. Indeed, the greatest benefit which the villagers enjoy under the KWAHO programme is improved health.

According to Mwanauba Omar, who works in the project, the incidence of water-related diseases is on the decline. Born in Muhaka village but now married to a Mwabungo villager, she says that, before the Kwale Health and Sanitation Project, bilharzia used to kill about 10 people a year in her native village, claiming its victims from those over 30 years old.

The condition known as chronic bilharzia in modern medical terms is called "tego" locally. Traditionally, tego is attributed to

adultery, explains Mwanauba. No one has died from it in the past year, she says.

"In the past, children were almost invariably plagued by worms and had to visit health clinics pretty frequently. Not any more. And the numbers of diarrhoea and vomiting cases have also fallen dramatically," she says. Health officials estimate there has been a 50% drop in the number of diarrhoea and vomiting cases since the KWAHO pump was installed.

'In the past, children were almost invariably plagued by worms and had to visit health clinics pretty frequently. Not any more.'

Traditionally, children with these two complaints were believed by the villagers to be bewitched. But KWAHO community-based workers have gradually been persuading women to take their children to health clinics, says Mwanauba.

Standards of hygiene have also risen. Women have been encouraged to wash their water containers, dry their kitchen utensils on raised platforms out of reach of dirt and dust, cover their drinking water, and, where possible, build and make use of latrines and bathrooms.

Mwanauba is one of two community-based workers who have to visit 55 wells in Diani location where they train mothers to run and maintain the handpumps. Taking turns according to a pre-agreed roster, two women sweep around the village pump every day to ensure that the surroundings are clean. The villagers elect committees to manage all water-related affairs, under the supervision of the community-based workers.

The 'harambee' spirit

The educational programme consists of a series of workshops and seminars, organised jointly by community development officers and public health technicians under the ministries of health and water, says Mwanauba. This integrated approach is regarded as one of the main reasons for the project's success, and can be seen in

other areas as well. At the village level, the "harambee" (pull together) spirit has improved.

"Among the questions I often get asked by communities which have enjoyed the benefits of a water project is: 'Now how do we go about getting a clinic?' I tell them that we in KWAHO do not have funds to help set up a clinic, but urge them to band together and work as a group to achieve their objective."

Mwanauba cites Galu and Muhaka primary schools which are being enlarged by such combined efforts, led mainly by women's groups whose members had themselves been brought together by the water project.

Before the KWAHO project, women in the Digo community stayed indoors as much as possible, according to tradition, to avoid contact with all men except their husbands, brothers and other male relatives. Now the women have broken with tradition and work closely with the men in the water project. The men and women are trained together, too, something which previously was also taboo.

And people from different villages who previously could not sit together in a spirit of co-operation to discuss issues of common interest now work jointly under the water project. They have become aware that together they stand to gain a great deal.

Villagers who participate in communal water ventures usually improve their economic status. The time they used to spend fetching water in the old way — KWAHO tries to site the water pumps less than a kilometre from where the people live — is spent weaving mats or roofing made from coconut palm leaves.

But still many problems

The income raised goes mainly towards school fees and to buy better food. And the free time available is used to grow vegetables in kitchen gardens.

Farming in the area is, however, restricted by poor soils and by the baboons and monkeys which ravage the crops.

Despite the improvements the villagers have enjoyed since 1984 and their greater freedom to become involved in gainful production, Kenya still faces many problems supplying water to its rural areas.

The plain fact is that the country's resources are inadequate and the finances available cannot meet the demand. And even in situations where funds for a project are available, delays occur due to inadequate manpower and the time it takes to expedite aspects of a scheme through the various official departments.

KWAHO tries to meet the problems by reaching communities where projects are to be implemented through teams of trained and experienced field workers. The teams combine sociologists and community-based workers (water-for-health assistants) whose approach to their work is a mixture of formal understanding and analysis with an informal, personal touch when dealing with the villagers.

The project in Kwale district has two sociologists and Rose Mulama is one of them. She serves as a programme officer and also as a training and liaison worker. But the project's nine extension workers are all locally-recruited non-professional people, of whom Mwanauba Omar is one.

One of the less successful handpumps; the wheel has to be turned laboriously by hand to bring up water.

Inappropriate technology is another problem area, with water pumps, engines and other machinery sometimes installed without due regard to whether spare parts are available or whether the villages concerned can afford them. This has a direct bearing on whether any particular water project proves to be sustainable in the long run. The sustainability is also affected by the type of pumps used.

The Kwale project tested 15 pumps over a two-year period to mid- 1987, and the Afridev pump has proved to be the most efficient and popular make.

According to the project's senior programme officer, K. K. Munguti, the most costly aspect of water projects is the drilling of the borehole. This is done by the Water Ministry at a cost of between Ksh30,000 and 50,000 (US$1,875–3,125).

KWAHO provides the pumps, but the maintenance cost of Ksh187 per year (US$12) is left to the community to find.

Number of people per pump

Working on the assumption that each pump is designed to be used by some 250 people (40 families) and to last 10 years, each family pays only Ksh1 (6 US cents) per week to maintain it, says Munguti. The money collected above Ksh187 is put aside to meet emergencies, such as replacing a pump when it breaks down, which can cost between Ksh3,500 and 7,000 (US$220 - 440).

The Nira pump in Msambweni's Bomani village breaks down quite frequently because of the relatively large number of people living there. Pumps in villages with fewer people tend not to break down so often. Rose Maluma says people prefer the Nira pump because it is easy to operate and gives out plenty of water — only, however, where there is a high water table.

And that is the unspoken constraint on the sustainability of these water projects: the capacity of the subterranean acquifers to keep up their supplies. It is unwise to assume that they are infinite.

The Volonta pump has proved to be among the less successful hand pumps installed under the Kwale project. Dikirika village has a cement-covered well with the two parallel red wheels of the

Volonta mounted on it. The wheels have to be turned laboriously by hand to coax the water up, the contraption coughing out some of it each time the wheels turn completely.

It usually takes two girls working the wheels together to fill a bucket. You can see on their faces how tired they become as they turn the wheels round and round and watch the level of water slowly rising in the bucket under the spout of the pump.

The girls don't talk as they work the wheels with their arms. And for some reason the women in the long queue waiting their turn are also silent. They only start talking when the two girls have filled their bucket and carried it away.

Ongoing community involvement

Community participation per se is, however, not enough if KWAHO's experience is anything to go by. It must be coupled with ongoing community involvement for the entire lifespan of the project. KWAHO insists on exploiting local resources at the planning, implementation, maintenance and evaluation phases of the project.

Rose Maluma says that, in Kwale district, the villagers were involved from the word go. At the planning stage they were asked to identify their needs and priorities. They also participated, for example, in the siting of potential water points, taking into account cultural considerations, such as the mosques in Muslim communities where large numbers of worshippers perform the required ablutions before going in to pray.

One instance of this is the Volonta pump that was installed in Dikirika village about 6 metres (20 feet) in front of the Tawheed Islamic Centre. On their way to the mosque at prayer times, men roll up their sleeves and remove their fezzes as they approach the open water tank. They use a "tiw" (ladle made from half a coconut shell and a stick) to scoop up the water with which they wash their hands, faces and feet before entering the mosque.

According to Senior Programme Officer Munguti, KWAHO's success is attributable at least in part to the way it mobilises the local people. KWAHO, he says, is also integrated into the government

system. Although the Water Ministry's head office is in Nairobi, it has administrative centres throughout the country.

"We KWAHO staff members use the same facilities — including offices and transport — at the disposal of the ministry officials. It is therefore hard to distinguish between the government officers and us, the NGOs. KWAHO staff are part and parcel of the decision-making process in the Kwale project. This way there is less conflict in the implementation of government policy."

Munguti, a sociologist, maintains that the main people who were supposed to benefit from the project — the women and children who jointly carry out the task of fetching water for their households — actually are benefiting.

In most communities, the water workers are two-thirds women. "Consequently the women, being in a position to take decisions that will benefit themselves and their children directly, do so," Munguti observes. He supports this statement by citing the employment trend at KWAHO's Kwale office. All the nine non-professional community-based workers are women.

How is success measured?

Munguti then launches into a discussion of the yardsticks used to measure the success of the Kwale project.

He starts by stressing the response of the community over a sustained period: three years. The initial excitement caused by the launch of a project dies away in many cases within a year, and with it the people's interest and commitment. But in Kwale, people still inquire about various aspects of the provision of water, he notes. And during the three years, the numbers of water committees that have been formed, and the numbers of self-help groups registered, have mushroomed.

KWAHO is no longer able to supervise all the work, due to shortage of staff, but the work is now being done quite competently by the locals, says Munguti.

In accordance with the district focus of its rural development policy, the government has readily agreed to finance the Kwale project now that the handpump pilot study has proved to be so

successful. As a result, the pilot project, which covered only 50,000 people, is to be extended beyond Msambweni and Diani locations, to cover the whole of Kwale district whose population is estimated at 450,000.

Further evidence of the project's success, says Munguti, is KWAHO's plan to hand it over completely to the communities of the two locations. Currently, most of the villages in these two areas handle about 80% of their water affairs, including the security, maintenance and cleanliness of the pumps, as well as the finances and registration of their self-help groups.

'The pilot project is to be extended to cover the whole of Kwale whose population is estimated at 450,000.'

The project has also had its failures, Munguti notes, giving the example of water committees which have not been consistent in these different aspects.

According to Project Manager L. Biwott, although KWAHO has succeeded in promoting the installation and use of handpumps in Kwale and elsewhere, it ought to open the communities' eyes to other realities: "KWAHO should try to motivate communities to move a step further and realise that the handpump is not a long-term solution to water problems."

People need to be informed about roof—rainwater catchment, dams, protection of springs and the augmentation of existing water supplies. Beyond the handpump, communities need to see the value of motorised pumps which, though more expensive, are easier to use and more efficient, requiring no exhausting physical labour.

Communities could also exploit Kenya's rural electrification programme to run diesel or electric pumps they manage to install, he says optimistically.

From modest beginnings, the KWAHO programme has initiated more than 100 water projects throughout Kenya. These projects have freed large numbers of Kenyan women from the daily toil of

fetching and carrying water and have improved the quality of life of the villagers.

KWAHO's experiences challenge a major feeling within the development community: that NGOs should stick to small-scale, low cost projects. KWAHO has demonstrated that NGOs are more than capable of managing projects that have a wider reach as well.

SRI LANKA

GROWING TREES IN THE LIGHT OF THE BUDDHA

MALLIKA WANIGASUNDARA