

Global development

Kenyans frustrated by drip, drip approach to search for water

A new aquifer in Turkana county has helped refugees and opened opportunities for food exports. So why is Kenya slow to look for water elsewhere?



The borehole flushing at Napuu, Lodwar. Photograph: RTI

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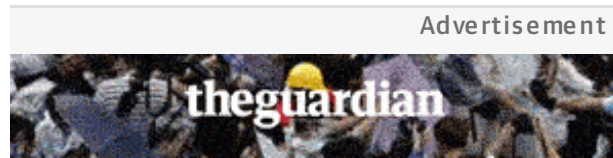
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Thursday 15 January 2015 07.00 GMT



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They come from across east [Africa](#). Some come on foot. Others with their few possessions piled on to rented trucks. Their destination is the camps at Kakuma. Set in the flat, barren plains of north-western Kenya, this is an unlikely location for refugee camps. Yet families from as far afield as Darfur in Sudan, the Democratic Republic of the Congo and Somalia arrive here.



“They come to Kakuma because it is secure - life can get better for them,” says Dominic Gachanja of the Lutheran World Federation, which administers the camps. “They have grown into a small town,” he adds. The camps house 170,000 refugees, most of them fleeing [fighting in South Sudan](#).



Kakuma is in Turkana county - one of the poorest and driest parts of Kenya where it is blisteringly hot. Providing water for the growing refugee population has been a struggle, until now. The [discovery of vast underground sources of water](#), announced in September 2013, has transformed the lives of these people. Since then, seven boreholes have been dug.

“All have been yielding, or high-yielding,” says Gachanja. Some produce as much as 60 cubic metres of water an hour, and a new well providing 110 cubic metres is about to come into operation. “Before, water was scarce; now there is enough.”

The Lutherans were provided with a satellite-based mapping technology developed by a French company, [Radar Technologies International](#) (RTI). This uses ground-penetrating radar to locate water in aquifers. Twenty-eight aid workers were trained to use the laptop, GPS system and maps that indicate where the best prospects for drilling are.

The transformation has been remarkable. “In 2011, before we had this technology, we drilled 10 boreholes,” Gachanja says. “Six were dry, and the best well provided just 25 cubic metres of water an hour.”

Life at Kakuma is hard. Last November the World Food Programme - running short of funds - [halved rations for the refugees](#). Many people could only afford to eat once a day, while others had to beg. However, international donors responded to WFP appeals and the rations have now

been restored to their previous levels.

But at least there is sufficient water. It has meant families have enough for their own needs, and gardens have sprung up around their homes. Vegetables are grown for sale and refugees can keep chickens to feed their families. The town of Lodwar and the nearby village of Napuu have also benefited, according to a follow-up study conducted by RTI.



📍 Turkana pastoralists migrate to the Turkana aquifer at Lotikipi in search of pasture and water. Photograph: RTI

One giant aquifer, fed from the mountains in neighbouring Ethiopia, is [estimated to be recharged at an annual rate of 3.4 billion cubic metres](#), nearly three times the water use of New York City. When the find was made, the government, supported by Unesco, announced that [a nationwide groundwater mapping programme would be launched](#), to locate similar aquifers in the country. The most arid counties would be targeted first, to relieve the acute scarcity of water that many people face.

Since then the programme has gone strangely quiet. According to Abou Amani of Unesco, planning has been under way behind the scenes. A budget is in place, of 1.5bn Kenyan shillings (£10.9m). “We are looking for funding from the stakeholders,” says Amani.

Chrispin Juma, the interim director of water resources in the Kenyan government, confirmed that planning was under way, but said the plans were “restricted” and referred inquiries to the ministry.

Getting a clear indication of just why the search for water appears to have been put on hold, when so many Kenyans face scarcity, is difficult to fathom. No one doubts that the giant aquifers in Turkana exist, nor that others could

NO ONE DOUBTS THAT THE GIANT AQUIFERS IN TURKANA EXIST, NOR THAT OTHERS COULD BE FOUND IF SIMILAR SURVEYS ARE CONDUCTED.

Professor Norbert Akech Opiyo, of the University of Nairobi, attended a [water summit in Turkana](#) late last year. “We are all perplexed by the lack of progress,” he said. “People are still doing further studies, although the finds have been proven.”

He thinks the reorganisation of government brought about by the [introduction of a new Kenyan constitution](#) in 2010 has left considerable uncertainty. “Nobody is quite sure who does what.”

Others have more conspiratorial explanations for the inertia, ranging from government budgets being misspent to the suggestion that key officials have little concern for the plight of poor people in remote, rural communities, far from the capital.



📷 Local herders lead livestock to the Napuu water trough. Photograph: RTI

The environmental and wildlife campaigner Dr Paula Kahumbu believes that, in time, the discoveries will transform Kenyans’ perception of their country. “We see ourselves as water-poor, but this is not the case.”

She believes that Turkana could be a net food exporter, if the underground aquifers are properly exploited. Wildlife could also benefit. “Now there is competition between wild animals and domestic livestock. If we could generate revenue from our water we could set aside larger areas for wildlife,” she says.

Kahumbu accepts that the new constitution has increased uncertainty, and that there is a need for a new community land act, which will define just who

owns the water beneath their soil. “But this is such a huge opportunity. It shouldn’t be on the back burner - we should have seen a faster rollout.”

- **Correction:** In a previous version we stated that people in Kakuma had been reduced to one meal a day after rations had been halved in November. In fact rations were restored to their full previous levels in January.

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