

Kenya discovers 70-year supply of water in two aquifers

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A massive amount of water has been discovered in [two underground aquifers in Kenya](#) -- enough to supply the country with water for up to 70 years, the government says.

Test drilling confirmed the existence of the vast aquifers first discovered using satellite imagery and ground-penetrating radar.

The aquifers are in the arid Turkana region in the rural north. The area is hit hard by droughts, and many of its 700,000 residents are nomad herders -- particularly vulnerable to water scarcity.

Environment Minister Professor Judy Wakhungu said the aquifers are not deep, and would not be too expensive to tap.

One aquifer, near the main town of Lodwar, is said to hold 10 billion cubic meters of fresh water. The Lotikipi basin, farther north, holds at least 200 billion cubic meters of water.

Satellite data show the aquifers are fed by the surrounding hills and plains, and researchers say they are replenished at a rate of 1.2 billion cubic meters per year -- more than is required to supply the whole country.

Radar Technologies, founded by Alain Gachet, began searching for the water in November with the backing of the UN Education Scientific and Cultural Organization (UNESCO).

Their method produces detailed maps of sub-surface water situated between layers of rock "like a series of interconnected pancakes," Gachet said.

"We processed imagery from the space shuttle," Gachet said. "Then we interpreted radar imagery from the Japanese space agency and deep seismic data from the oil industry. With this approach, we were able to peel back the surface of the earth like an onion."

Scarcity of resources including water has led to generations of conflict in the near-lawless northern border region. The disputed border sees livestock raids from neighboring Ethiopia, Sudan and Uganda.

Some are also skeptical that the infrastructure to access the water will become available to the local people. Oxfam water expert Brian McSorley has been working near another aquifer in northeastern Kenya and says the water doesn't always reach the people.

"Groundwater resources here are not an issue but many of the surrounding communities still lack a borehole or the pumps to access it," McSorley said. "Those that do cannot always afford the fuel to operate the generator to power the pump or have the cash to service and maintain the equipment."

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