

AFRICA MAY STRUGGLE TO EXTRACT GROUNDWATER, EXPERTS SAY

Vast groundwater resources have been revealed in Africa by the first continent-wide quantitative maps. But the resources may not be easily accessible because of political and technical challenges and costs, say experts.

The new groundwater maps, published last month (19 April) in *Environmental Research Letters*, are based on an extensive review of available maps, publications and data. They show the continent has a total underground water storage capacity of 0.66 million cubic kilometres more than 20 times the freshwater storage capacity of lakes on the continent. The largest aquifers are in northern Africa, mostly in Algeria, Chad, Egypt, Libya and Sudan.

The study says that many countries designated 'water scarce' have substantial groundwater reserves, and concludes that boreholes for community hand pumps would be feasible in these.

But although some media reports have suggested that the discovery could mark the end of water shortages on the continent, experts say it is not that simple.

The study makes it clear that these groundwater [aquifers] are far from population centres, Mohamed Gad, professor of hydrology at the Desert Research Center in Egypt, told *SciDev.Net*. Most of the aquifers in North Africa are also very deep underground, at 100250 meters, making them costly to develop, he added.

Gad said North African countries need to develop extraction technologies, have the political will, and find new funds to make use of the groundwater.

North African countries need to resume negotiations about the management of the shared groundwater, as most of the aquifers in this region are crossing borders between more than two countries, he said, adding that countries like Algeria, Libya and Tunisia already have an agreement for the preservation of the groundwater resources, but countries like Egypt, Libya and Sudan still have challenges managing shares.

Reda El-Damak, director of the Center of Studies and Designs for Water Projects at Cairo University, Egypt, highlighted Libya's lead in harnessing its groundwater reserves, pointing to its Great Man-Made River project, which cost US\$20 billion and is considered the largest irrigation project in the world, providing fresh water for 70 per cent of Libyans.

But El-Damak cautioned that such large-scale dependence on non-renewable groundwater is neither a suitable nor sustainable way to use Saharan aquifers.

The Libyan project has already started to reduce groundwater levels in the west desert of Egypt, making it more expensive to extract water there, he added.

Meanwhile, the Algerian Minister of Water Resources, Abdelmalek Sellal, announced in a radio interview with *Radio Algerie* last month (21 April) that Algeria will launch a scientific study to investigate how best to deliver water to the Algerian desert in its quest to promote a rational use of groundwater.

Our challenge now is developing the least expensive technologies to extract groundwater.

Source: <http://www.scidev.net/global/capacity-building/news/africa-may-struggle-to-extract-groundwater-experts-say.html>