

New desalination plant points towards Morocco's drought response

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People in Agadir see their new desalination plant as a model to mitigate Morocco's years-long drought that has parched cities and impoverished farmers, but plans to expand the programme may hinge on efforts to power it with renewable energy.



Source: www.pixabay.com

Successive dry winters have emptied reservoirs that supply homes and irrigate Morocco's key agricultural sector, shrinking harvests, threatening a migration from the countryside and prompting tough restrictions on water use in cities.

Although smaller desalination plants had already been operating in Morocco for years, the one that started working in Agadir this summer is by far the country's biggest, and the first intended to address reduced rainfall.

"In short, without desalination Agadir could not have found enough water to drink and we would have had longer, worse cuts in supply," said Rachid Boukhenfer, a local official.

That early assessment of the plant's effectiveness comes as the government plans a further 12 desalination facilities, part of an expected investment in water projects of \$12bn in 2020-2027.

The new plants, which will be added to nine smaller ones already operating, are supposed to open by 2035, the state water and electricity utility ONEE said in an email.

Morocco now relies on surface and underground water for nearly all its freshwater consumption, using mostly a network of 149 large dams.

Five consecutive years of drought have left many of these reservoirs depleted and agriculture minister Mohammed Sadiki last week told parliament most water would be diverted from irrigation to supply drinking water.

Rainfall is often the single biggest factor in determining Moroccan economic growth rates and this year, the cereals harvest was two-thirds smaller than in 2021 and milk output down by 30%.

"I'm not even sure I will sow wheat this year because the rainfall has been so late," said Zakaria Khatabi, a farmer in Zhiliga, north of Rabat.



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Irrigation

Some of the worst effects of Morocco's drought have been felt in Agadir, an Atlantic coast city of 1 million people, several hours' drive south of Casablanca.

In past years, city authorities had to cut drinking water supply to homes at night to get through the summer, as well as divert water from reservoirs meant for crop irrigation.

The dams that supply Agadir are almost dry and the city has had to rely on the 275,000 cubic meters a day of water supplied by the new desalination plant.

"I was having to fill jerry cans of water to use at night and it was hard even to find those," said Ahmed Said, an Agadir resident. "Thank God, water is available now," he said.

The plant does not only supply drinking water but will also be used to irrigate some farmland.

Abdeljalil Drif of the United Farmers Association of the Souss region near Agadir said farms in the Chtouka region that will be irrigated by the new desalination plant had been digging ever deeper wells as aquifers ran dry.

"We hope the area irrigated by this plant will be expanded because the dams are empty after years of drought," he said.



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Renewables

The 12 new desalination plants already planned or underway should reduce reliance on surface and groundwater to 80% from 97% by 2035 with a daily output of 1.3 million cubic meters, ONEE said.

The most important one - to supply Morocco's biggest city Casablanca - is due to start construction next year and come on stream in 2026.

However, Morocco relies for most of its power production on imported fossil fuels whose surging costs have added to the trade deficit.

Energy represents 45% of the total cost of desalination, ONEE head Abderrahim El Hafidi said.

Morocco wants to expand renewables as a share of its total power output to 52% by 2030 from 20% now to reduce dependence on imports and lower electricity costs.

All the new desalination plants, including Agadir, were meant to be powered by renewable energy. But, the Agadir plant is so far being powered directly from the national grid.

A source close to the project said the government is considering a tender for a renewable energy plant to power the Agadir desalination facility to reduce the cost of water.

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