



## Access to water

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# Handwashing and hot tea: Eswatini celebrates roll out of solar-heated water

**New stations at health clinics improve hygiene in locations where warm water seen as ‘an absolute luxury’, helping to tackle Covid**

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In Eswatini, the southern African country [which lost a prime minister to Covid-19](#) in December and where most people have no access to hot water, handwashing - a key weapon in the fight against the pandemic - has been a problem.

No government health clinic in the kingdom, formerly known as Swaziland, had hot running water for patients. Nine out of 10 didn't have hot water for operations and cleaning instruments.

But in just nine months, a solar sanitation project has reversed that, bringing hot water to all 92 clinics scattered across [Eswatini](#). “To places we'd never have dreamed

would have hot water,” said Lizzie Nkosi, minister for health.

Hot water stations have been set up outside clinics with solar-powered tanks drawing cold water from the mains.

“In 25 years working as a nurse, I have never had hot water in a clinic. Not for patients, not for nurses,” said Lindiwe Magongo, head nurse at the Ezulwini clinic, 14km away from the administrative capital, Mbabane.

“Not only have all my patients had clean, hot water, I have also had a hot cup of tea every single day.”

The country has 14 hospitals but because of the poor state of the roads most people rely on their nearest clinic to deal with everything from emergencies to minor illnesses and vaccinations.

Eswatini has the highest incidence of HIV in the world, [according to Unicef](#), and among the lowest life expectancies. Levels of tuberculosis and obesity are high and 63% of the 1.3 million population live in poverty.

Ezulwini, and the Lobamba clinic 20km away, each have a dozen staff who live on-site. They each treat 200 to 300 patients daily, who will often have walked 10 to 15km and queued for hours to be seen.

Robert Frazer, managing director of Frazer Solar, the German company behind the tanks, said the impact is “massive”.

“We take hot water for granted in the west but in Eswatini it’s an absolute luxury,” he said.





📷 Hot water is a luxury in Eswatini, where 63% of people live in poverty. Photograph: Courtesy of Frazer Solar

The system needs no electricity or moving parts. The water from the mains is fed into the storage tank using water pressure. The coldest water flows to the bottom of the solar panel, which traps the warmth of the sun, heats the water and sends it back up to the tank in a cycle that takes the temperature of the supply to between 80 and 90C. No servicing should be required for 20 years and the system benefits about 10,000 people every day.

The project, which cost €300,000 (£260,000) , was finished last month. At the Lobamba clinic its completion was marked with a ceremonial handwash for the cameras by Themba Masuku, the deputy prime minister who has been acting PM since the country's leader, Ambrose Dlamini, died in December after testing positive for Covid.

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