

Case | Grundfos SafeWater in Burundi

Transforming an entire country away from hand pumps

– with help from Grundfos

Amazi Water, the main implementing entity for clean water access in Burundi, switched several years ago from installing hand pumps in its boreholes to using Grundfos solar-powered submersible pumps exclusively. The NGO, with the help of Grundfos and its SQFlex pumps, aims to provide every citizen with water access by 2028 by drilling a total of about 3,000 boreholes.

See the video at [YouTube](#)

GRUNDFOS 

Possibility in every drop



Using hand pumps is time consuming and physical demanding.

The situation: Hand pumps fail to meet Amazi's needs

In 2014, when the NGO Amazi Water launched its ambitious campaign to provide access to clean water for everyone in Burundi by 2028, it began by installing basic hand pumps in the boreholes that it drilled.

John Peake, a co-founder of the NGO, says: *“Most of the first 200 wells at Amazi Water were supplied with hand pumps because that was the only thing available at the time.”*

But hand pumps have their drawbacks. They require physical effort to operate, and it is invariably women and children who are responsible for water collection duties in Burundi, as is the case in most of sub-Saharan Africa. The pumps offer only a modest flow rate in terms of litres per minute, which means filling water containers is a slow, time-consuming process.

Unlike solar-powered submersible pumps — the technology that is fast superseding hand pumps across the developing world —

a traditional, manually operated pump cannot be used to fill an elevated storage tank. Such a tank can feed several taps simultaneously, with a water supply that is available 24/7, all but eliminating queues for water collection.

The team at Amazi Water realised they would struggle to meet their target of making clean water easily accessible to the entire population — which now stands at about 13 million and is growing rapidly — if they continued to rely on hand pumps.

“Africa, the world, Burundi has grown significantly over the last 30, 40, 50 years, and while hand pumps may still be used here and there, the era of hand pumps is coming to an end,” says John Peake. “We have a vision, and we believe that one milestone on our journey is seeing a hand-pump-free Burundi.”

The Solution: Grundfos SQF pumps prove to be a game changer

Robert Vanman, chairman of the board of Amazi Water, says the answer to the problems posed by the limited capacity of hand pumps was to switch to solar-powered submersible pumps that can operate in areas where there is no electricity grid.

“I’ve been a huge proponent for years of moving away from hand pumps to building water projects that are based nearly exclusively on solar-powered submersible pumps,” says Robert Vanman.

“And the main advantage is that we can serve a lot more people with these types of systems than we can with a hand pump. So the cost per person served is much lower with these large solar-powered systems. But not only that, the community acceptance is much higher when people can draw their water from a tap rather than a hand pump.”

According to the NGO, a basic, single hand-pump system can supply water to 1,000 people a day.

“Our preference is solar-powered, submersible pump system technology with connected tanks and taps where possible,” says John Peake.

“These larger, more sophisticated systems deliver much higher yields, serve double or

triple the amount of people and are easier to maintain.”

When it came to choosing a water solutions partner, Amazi Water decided on Grundfos, and now installs various versions of the SQFlex submersible pump in all its boreholes.

Ronald Nyangaga, one of Amazi Water’s engineers, is full of praise for the SQFlex.

“We like Grundfos pumps because one, they are easy to install, they are basically plug and play. Our technicians are getting a really easy time installing them on site,” he says.

“They’re also quite durable pumps, we’ve been installing them for the last five years and the number of cases we’ve had for failures is really low. That’s why we keep using Grundfos.”

At one typical Amazi Water installation, in the Bubanza district near the capital, Bujumbura, a Grundfos SQF 1-30 pump powered by four photovoltaic panels feeds water into a 5,000-litre tank.

“So the target for this particular system is to get water to 100 households in the area, and we are basically doing that, and on a larger scale, in the whole of Burundi,” says Ronald Nyangaga.

“Grundfos provides value for us because the SQF enables us to provide water to the people



A Grundfos SQFlex is being installed in Bujumbura, the capital of Burundi.

of Burundi for a longer duration during the day, which is quite fantastic for us. The other thing that Grundfos has been amazing at, is they have been providing a lot of training for our technical staff, for all our systems we are implementing all over the country.”

John Peakes says Amazi Water, the leading water-focused organisation in Burundi, uses only Grundfos solutions. “We have determined that Grundfos is the best value. It normally offers the best price upfront, and always the best long-term price,” he says.

“The Grundfos range of SQF pumps provide the right technology for installations in rural Burundi where access to grid power is limited.”

“Apart from offering durable, reliable and cost-effective solutions, Grundfos also is keen to help build local capacity, especially in terms of maintenance and remote monitoring for the Amazi project, to ensure the systems installed can serve the people of Burundi for several years”, John Peakes says.

“Grundfos is easy to work with, understands the mindset of an NGO and delivers as promised. It is keen on building relations and understands local circumstances,” he says.



Tapping water from a solar powered Grundfos SQFlex, just outside Bujumbura, Burundi.

The Outcome: Better quality of life for millions of Burundians

As Robert Vanman says, clean water “is the foundational building block that helps communities rise above abject poverty. Until access to clean water is addressed, nothing else can be effective.”

So he is proud of Amazi Water’s record in Burundi so far, achieved in collaboration with Grundfos. By mid-September 2023, the NGO had completed nearly 870 boreholes across the country, bringing easily accessible water to 2.5 million people. It estimates another 2,000 boreholes — equipped with Grundfos pumps — will be needed to serve the entire population.

One of those who has benefited already is Jocelyne Bayisabe, 27, from the Giharo district in Rutana province.

“Before having access to clean water from the borehole, we used water from the river,” she says.

“In our community, we lost three children when they were going to get water in the river. They drowned. The first one died in 2016, the second in 2018 and the third just four months ago. It was a painful time for our community.”

“It seemed we were a forgotten people. I cannot even describe all the sickness we faced during that time. Parasites, diarrhoea, typhoid, and other diseases were common because of the lack of clean water,” Jocelyne Bayisabe says.

“The day we heard from the Amazi Water staff that we were getting a well was a happy day. We were overcome with emotion. With this clean water that we have now, we are drinking it, we are cooking with it. We can grow vegetables for our family which is improving our health. Our kids are attending school without being late because the water is so close by now.”

[Watch video](#)

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