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Desalination pilot project begins



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The United Nations Development Programme (UNDP) - Global Environmental Facility (GEF) has selected Rappelspan, a small village in Kgalagadi South, for borehole water desalination plant to be constructed in the next five years.

The village, located in a semi-arid sandy savanna area, lies south west of Kgalagadi South.

The small village, with a population of about 500 people, makes part of the geographic locations in Southern Africa collectively spread over 900 000km², covering Botswana, parts of Namibia and some regions of South Africa, where the Orange River basin, which originates from Lesotho passes.

In the next five years, Rappelspan will construct a borehole water desalination plant, whose prototype will be replicated in Namibia, Botswana, South Africa and Lesotho, if successful.

The project is a transnational project headed by Orange-Senqu River Commission (ORASECOM), and funded by UNDP-GEF.

The information was revealed by ORASECOM secretariat project coordinator, Mr Sibotwe Mwiya in Tsabong recently.

The borehole water desalination pilot project shall be spearheaded by ORASECOM, which is an institution that constitutes four SADC member states; Botswana, Namibia, South Africa and Lesotho.

The regional body is responsible for managing the resources of the Orange-Senqu River basin, which is a trans boundary water resource shared by the aforementioned countries.

In an interview recently, a hydro-geologist at the Department of Water and Sanitation Mr Force Ramasuswana said Rappelspan was chosen after the realisation that various boreholes in the Kgalagadi District yielded saline water.

"The district is mostly semi-arid, hence ploughing of crops is impractical. Even though livestock farming remains the only economic activity here, availability of water for livestock remains a major challenge. Therefore groundwater is the only source, but it is difficult to find and if found it is usually highly saline," he said.

To deal with the water challenge for livestock, he said, government made efforts in a bid to relieve communities of water problems, especially for livestock.

A programme was in place to equip existing government-owned boreholes and avail them to communities on the basis of one borehole per village.

Such boreholes, he noted, were originally drilled for village portable water supply, which was in most cases given priority.

However, the major challenge with the programme was that some of the villages did not have existing boreholes and government faced budgetary constraints to drill new ones.

Some boreholes produced saline water, but government did not install water desalination plants for livestock. As a result, some villages remained without livestock watering boreholes.

He said the UNDP water desalination project was the first of its kind in Botswana and would go a long way in assisting communities with water for their livestock.

Mr Ramasuswana said borehole number BH10922 in Rappelspan, drilled in 2013 and sealed with a strong casing was capable of yielding 5 000 litres of water per hour and shall be equipped through the pilot project.

It was discovered that the water from the borehole stood at 10 000 millilitres, which was above the maximum allowable solids, which is 7 000 millilitres.

For this reason, he said, the borehole in Rappelspan shall be rehabilitated, equipped, and installed with a water desalination plant, reservoirs and watering troughs.

"The valley here is an aquifer, when you drill water from the quayside stone, we are going to have watering troughs over the sand dune.

We are going to reduce reticulation distance we have been financed and we already have reduced costs," he said, pointing at the sealed borehole and the sand dune closer to the borehole.

For his part, Rappelspan's Kgosi David Matthys welcomed the new development, which he said was long overdue as the community was facing acute shortage of water for livestock.

He highlighted that water was a critical resource to their lives, adding that their forefathers settled in Rappelspan in search of water in 1939 led by Kgosi Titus Matthys.

"They settled in Rappelspan because there was a pan, which was their only water point, they relied on rain water. The following year there was no rain the kgosi decided to dig a well in 1940. The well took about three years to dig as they dug it manually using a rope, a 30 litre bucket, and a spade," He said back then they used a donkey cart for pulling the rope that was tied to a bucket to bring the soil to the surface.

They dug it until they reached water about 40 meters into the ground."

Thus, he explained that their forefather's actions demonstrated that water was an important resource for survival.

In a recent Kgalagadi District Council full session, chairperson Mr Hendrick Jacobs said the water situation had been facing Kgalagadi District for a long time, adding that lack of adequate water resources had negatively affected developments of the district that relied heavily on small stock.

"In the event where water is available, it is too saline for livestock. Moreover, portable water for human consumption is also scarce and where available, the situation has been worsened by poor quality water distributed for human consumption," he noted. **Ends**

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