

Aquiva Foundation Marks Two-Year Anniversary Of A Sustainable Desalination Plant In The Maldives

In February 2014, the small island of Gulhi welcomed a Membrane Distillation plant, which uses a revolutionary membrane distillation technology that enables desalination of water for the 1,200 inhabitants and tourists on the island using waste heat from a local generator.

“We chose an environment with very difficult operating conditions to test the strength and reliability of our system. We are very excited about the sustainable performance of the plant. This is a viable solution for many coastal communities and inland areas with growing water problems through increasing salinity of groundwater,” says Florian Bollen, CEO of Aquiva Foundation.



As this plant is a world's first in many aspects, many hurdles had to be overcome: Getting approval for the unique small scale bottling facility; interruptions of the salt water supply because of problems with the borehole pump; water storage tanks that collapsed; and changes of the generators that supplied the waste heat to run the plant. None stopped the plant, which produces up to 10,000 litres of drinking water per day, immeasurably improving the quality of life and health on Gulhi.

The most notable results of these first years of operation include the reliability of the desalination performing without down-times despite very difficult conditions and no engineers to remedy problems; the plant's energy efficiency; and the consistent high quality of the water being produced.

Today, the Island is celebrating the success of the plant with a small event: A new pipe from the desalination plant to the port is put in use, so that the fisherman of the atoll can fill up their tanks locally with excellent drinking water.

Haisham Ali, Director of Stelco Aquiva Pvt Ltd, Maldives, says: “We are very impressed with the results of the first two years of operation and pleased that our partner STELCO (the state owned electricity company) is feeling the same way. Following the positive experience in Gulhi, we are looking to implement the same technology on more remote islands on the Maldives where STELCO is providing electricity.”

The water is being desalinated using the memsys membrane distillation technology by using the waste heat of the local diesel generators to power the desalination units. The improved cooling of the generator can even create efficiency gains on the electricity generation. This energy efficient system creates distilled water, which is then mineralized using local coral sand. The water is distributed in re-usable bottles of 20 litres and 1-litre glass bottles to the local population, the school and hospital. Guesthouses and the port are getting the water via pipes.

The pricing of the water is very moderate to make it affordable to the population but covering the costs of the plant and operations.

About Aquiva Foundation

The goal of the Aquiva Foundation is to provide people in developing countries with the tools to create long-term sustainable answers to their water needs. It is the first charity to focus on sustainable desalination of seawater and saline groundwater to avoid depletion of existing sweet water sources. Based in the UK, the Foundation works closely with existing aid organizations and governments at the local and international level. It employs a micro-finance approach, providing the technology, training and support needed to generate save water for personal, industrial and agricultural use. For more information, visit www.aquiva-foundation.com.

SOURCE: Aquiva Foundation