

AFFORDABLE DRINKING WATER AUTONOMY

Home » Project Stories » Affordable Drinking Water Autonomy

CUSTOMER

Malta Government via Water Services Corporation (WSC)

LOCATION

Malta, Gozo Island

PROJECT TYPE

SWRO Desalination Plant

COMMISSIONED

2020

CAPACITY

11,000 m³/day

STATUS

Operational

OVERVIEW

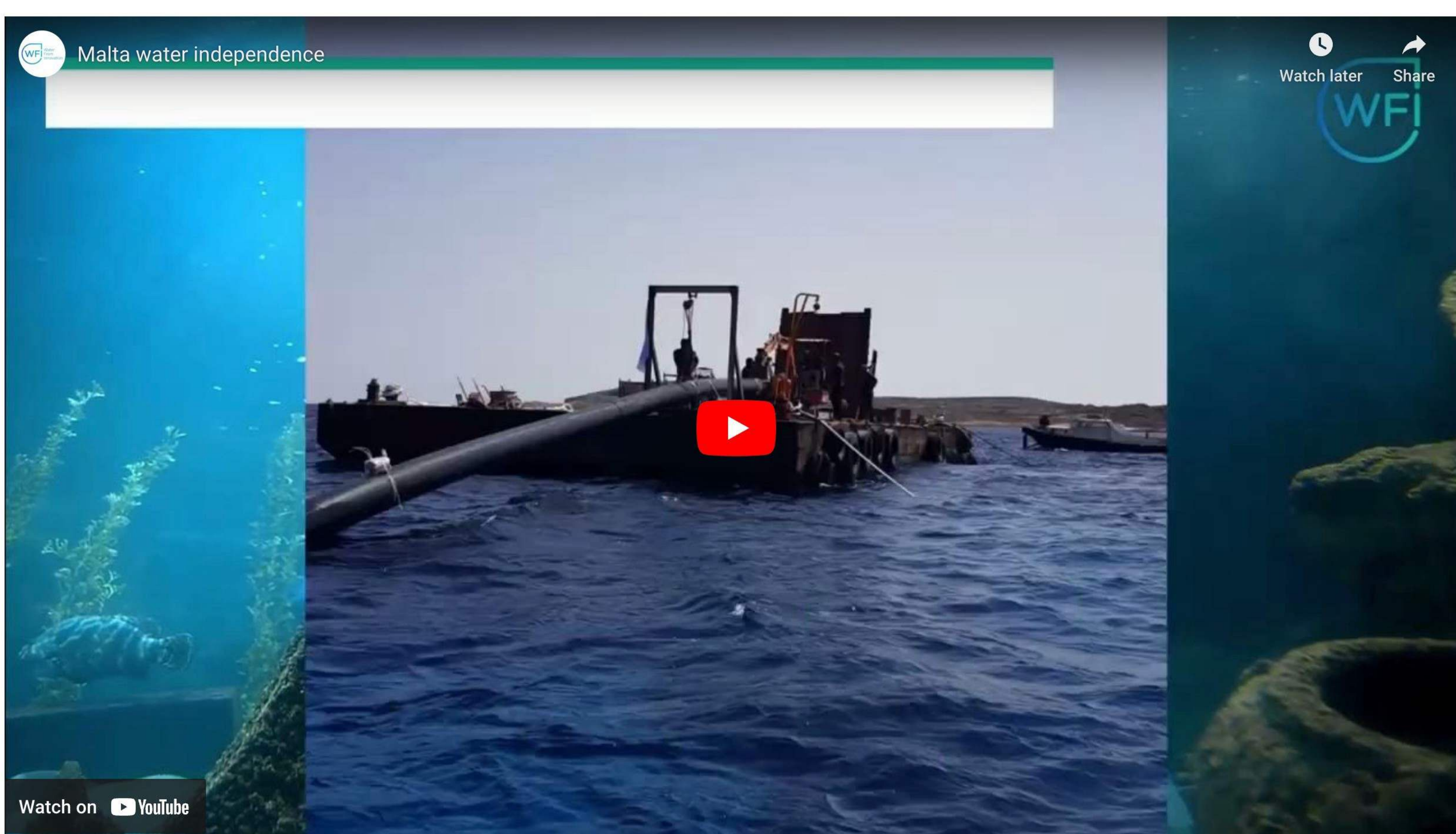
A seawater reverse osmosis desalination project including design, construction, commissioning, operation and support, with a 5-year extended warranty, in collaboration with Mekorot – the Israeli National Water Company.

The project forms part of a €100 million program funded by the European Union to improve water quality across Malta.

After competing with 7 companies, AST was awarded the project worth €10 million due to 7 major benefits:

1. Our bid was based on an exceptionally low total water production cost and low energy consumption
2. Meeting the challenge of installation of pumping intake and outfall under the seabed in a rocky terrain while maintaining the public beach
3. Attractive pricing per customer – high-spec tender requirements including 20 years sustainability
4. Innovative elements for enhanced operation and savings:
 - Island oriented service package: minimal chemical consumption and handling, highly convenient operation – easy access and maintenance, no need for highly trained personnel, fully and remotely automated
 - Post treatment: Improving water quality and taste – adding both magnesium and calcium with no acid, decreasing chemicals and hauling
5. Maintaining water sanitation through cost-effective chlorine generation on-site for high quality water, reducing OPEX and haulage as well as eco-footprint
6. Onshore boreholes using state-of-the-art polymeric technology to install and maintain 6 wells enabling redundancy and sustainability
7. Building restoration – our collaboration with a local team of architects and sub-contractors meeting stringent construction and environmental regulations

Once the design was completed, we began construction and renovation of the actual building, including the outdoor and indoor structures and systems.

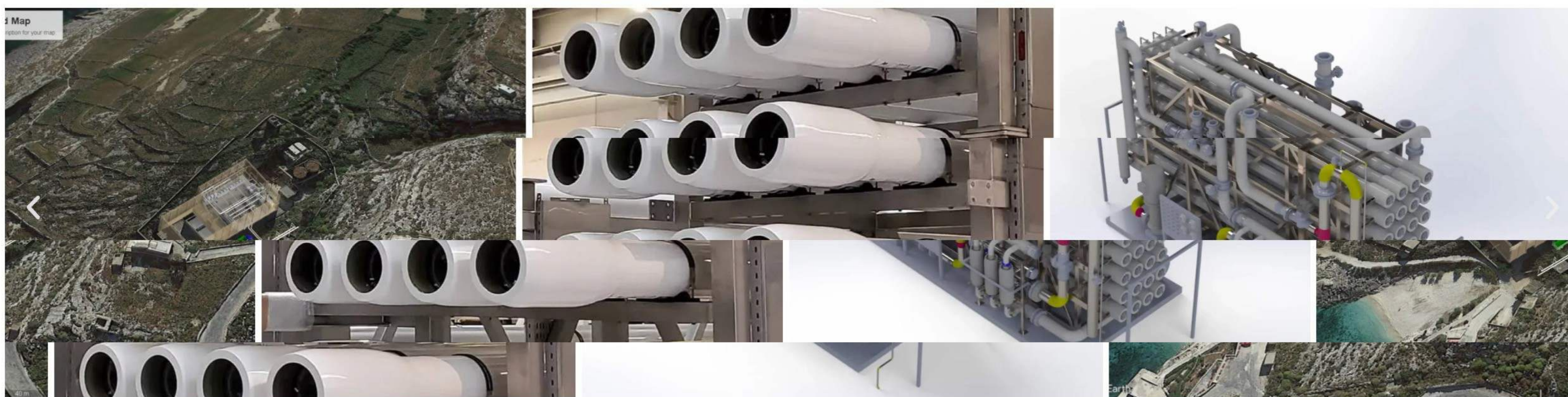


THE NEED

So far, Gozo has predominantly depended on ground water and a submarine pipeline from Malta. The government of Malta was in urgent need of creating additional water sources, in order to supply potable water for the Gozo island residents and tourists while enhancing its quality and public health, accordingly. The requirement was that the entire project would rely on constructing an old plant while preserving the building.

THE PROCESS

First, the seawater is pumped from the onshore wells, then the feed water is transferred to the adjacent desalination plant. The Reverse Osmosis desalination takes place and at the post-treatment phase the permeate water is hardened using an advanced OMYA reactor system, that adds the required hardness without contaminating the water, reducing the ecological footprint. Since the brine is discharged at sea 300 meters from the plant, we designed and built a special HDD (Horizontal Directional Drilling) pipe.



SUSTAINED HIGH RECOVERY FOR SELF SUFFICIENCY

A self-contained flexible source of high-quality drinking water for the Gozo island, enabling water independence.

The project involved a smart, unique design and restoration of an ancient building for the desalination facility, delivering potable water at the peak tourism season.

The turnkey solution aimed and delivered a highly efficient plant, cutting operational costs (OPEX) in a very short time, due to the outstanding innovation, creative thinking and highly skilled team with vast experience and genuine care for water.

This investment offers the island of Gozo a secure water supply, radically improving drinking water quality, while ensuring the sustainability of the island's water balance.

Malta's WSC Hondoq project in Gozo has been awarded the prestigious 2023 Energy Globe Award, recognizing our pioneering approach to sustainable water management and setting a new benchmark in environmental conservation.

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*First Name

*Last Name

*Company

Title

*Tel

*Email

Message

ROTEC provides holistic, modular reverse osmosis desalination solutions and services. With our eco-friendly approach based on our FR-RO technology, we enhance water recovery, efficiency, and reliability, supporting healthy communities.

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