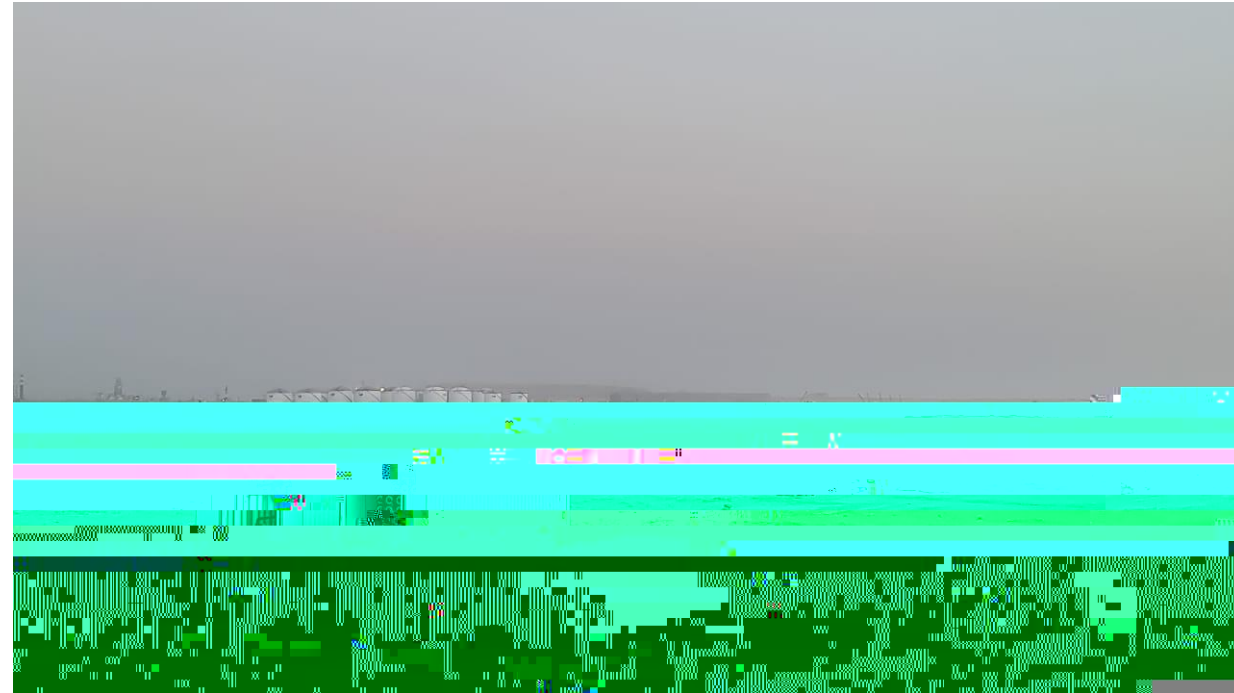




# About IDWT

For more than **38 years** International Desalination and Water Treatment (IDWT) group has been active in the water industry, providing solutions for numerous ranges of water related issues. In 1988 we introduced to Egypt the first desalination plant using reverse osmosis membranes, in the Sinai Peninsula. In our projects we have been covering all the process stages.

IDWT has executed in the Sultanate of Oman more than 45 SWRO Plants. Most of them are Containerized Compact Solutions. Ranging from 50 m<sup>3</sup>/D to 10,000 m<sup>3</sup>/D.





25 YEARS OF MOBILE SWRO SOLUTIONS

# SWRO

TIWI - Sultanate of Oman  
3 X 500 m<sup>3</sup>/D

Qarn Allam - Sultanate of Oman  
4 X 600 m<sup>3</sup>/D

SUR - Sultanate of Oman  
1 X 2400 m<sup>3</sup>/D

QURIYAT - Sultanate of Oman  
4 X 500 m<sup>3</sup>/D

Containerized UP TO 10,000 m<sup>3</sup>/D

Hij - Sultanate of Oman  
3 X 500 m<sup>3</sup>/D

# Our Modularized 10,000 m<sup>3</sup>/D SWRO Plant



# Introduction

Desalination Plants are very important now and some countries like Egypt are now searching for Opportunities to localize the manufacturing and fabrication of Desalination Plants

Desalination technologies are always developing for one purpose which is reduce the Power Factor

If the Power Factor decreases this will affect the overall view on Desalination Plants  
Renewable Energy such Solar Energy, Wind Turbines and BioGas can be a Solution.

Desalination Plants can affect the Environment and the Marine Life



# The African Continent

Desalination is becoming the water source for some countries because of the decrease of Fresh Water sources.

Desalination and Water Reuse are now options for Agriculture

East African region is now searching for Desalination Opportunities to cover their deficits. The main issue there is the power is very expensive and not enough for the big Plants.

East Africa must add wheeling to their grid for Solar Energy option, to solve the energy deficit during night.

East Africa is very green so they can use the plants wastes to produce Biogas for the Future planned SWRO Plants



# Problems of SWRO Plants can be solved by Power

The Brine rejected from the SWRO plants can be decreased by using higher power consumption.

The existing technologies now for Brine Treatment are the Forward Osmosis and High Pressure RO Membranes.

These technologies have not been tried on large scale plants

The Electrical consumption is between 8 – 12 kWh/m<sup>3</sup>. Compared to 3.5 kWh/m<sup>3</sup> in normal SWRO Plants