

# OSMOSUN® solar desalination in South Africa

## PROJECT TITLE:

**OSMOSUN® solar desalination in South Africa**

## COUNTRY:

South Africa

## AN INCUBATION PROJECT SUPPORTED BY :



[www.osmosunwater.solutions/](http://www.osmosunwater.solutions/)

## VERBATIM OF THE PROJECT LEADER :

« The Community of Witsand has resumed its consumption of tap water: This is the best compliment we could have received ... »  
Patrice Boyer, IWS CEO, January 2019

## GEOGRAPHICAL LOCATION:

More than 3,000 people in the municipality of Hessequa in South Africa benefit from the 100m<sup>3</sup> of fresh water produced by the solar-powered OSMOSUN® 16 SW seawater desalination plant.



## SCALE OF INTERVENTION:

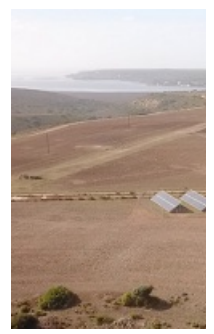
With a capacity of 100m<sup>3</sup> per day in 100% solar power, the OSMOSUN® unit has been in operation since the 2017-2018 Southern summer, with the capacity to increase the daily production capacity via a power supply through the local grid for a tripled production during the consumption peaks during the high tourist season.



## CONTEXT AND ISSUES OF THE TERRITORY:

The Cape Province, and more broadly SouthWestern of South Africa, is experiencing an unprecedented water crisis, with a structural decline in rainfall due to the El Niño weather phenomenon.

The exact social and economic impact of the feared 'Day Zero', which is approaching, is not being revealed as it is difficult to gauge the extent of the impact. The day the area's water supplies run out, schools, offices and hospitals will close because they will not be able to meet the sanitary needs of users. The economy could come to a complete halt and exacerbate tensions between communities in this country, where the social climate is always tight



Installation of OSMOSUN® 16 SW - Witsand, Hessequa Municipality, South Africa - Photo credit Mascara

## GOAL(S) OF THE PROJECT:

This seawater desalination project installed in the Municipality of Hessequa is thus of major strategic importance to meet the freshwater needs of the local population, which suffers from recurrent water shortages.

The objective of this project and its co-financiers, the Cape Province and the French Government, was to secure access to safe drinking water for the inhabitants in a reliable, cost-effective and sustainable manner.

This project has met this objective, making this first installation a crucial demonstration of the relevance of solar desalination in addressing the water crisis in South Africa in a sustainable manner.

## SDG TARGETED BY THE PROJECT:



**SD Goal 6:** Clean water and sanitation- Clean and accessible water for all is an essential part of the world we want to live in.

**SD Goal 13:** Climate change

## PROJECT ISSUE:

Security of water supply - Drought - Solar desalination

## SECTORS CONCERNED:

Local Government - Municipality

## EXPECTED RESULTS:

- Municipality's water supply is secured
- Securing the water supply of the municipality of Hessequa,
- Demonstration of the relevance of solar desalination for the sustainable securing of water issues on the Southern African coast

## STAKEHOLDERS OF THE PROJECT:

### Actors involved:

Mascara

Impact Water Solutions

**Project Operator(s):**

Impact Water Solutions

**Technical partner(s):**

Mascara

Impact Water Solutions

**Financial partner(s) :**

DG Treasury, French Government

Western Cape Province, Emergency Drought Fund

**ESTIMATED COST OF THE PROJECT:**

700,000 €

**SHORT-TERM ACTIONS (3 YEARS):**

- Operation & Maintenance
- Replicable at scale for thousands of local authorities

**LONG TERM ACTIONS (10 YEARS):**

Optimisation of system performance in view of technical progress in OSMOSUN®