

# CASE STUDY MYSTERY ISLAND

## TOURIST SPOT WITH INDEPENDENT SEA WATER DESALINATION SYSTEM

### Location

Mystery Island, Pacific

### Introduction

Mystery Island is a well-known tourist spot but lacks on-site water supply infrastructure for visitors and staff. The cruise ship operators used to buy bottled water on a weekly basis which leads to complicate logistics, creates a lot of plastic waste and costs too much money over the years. The installation of a solar powered sea water desalination system provides the island enough drinking water to remain independent from transport of water and has a great impact on the environment thanks to the renewable energy which is used to operate the system as well as the significantly reduced plastic waste.

### On-site conditions

Access to location	island, boat access only
Ø amount of people served	approx. 200 tourists and staff per day
Water source	sea water
Common contamination in raw water	organic contamination, salt water
Ø distance from source water to unit	approx. 70 meters
Ø water temperature	20 – 30° C
Ø air temperature	20 – 40° C
Site preparation work	pipeworks, water tanks

### Technical layout

1 Water source (sea)
2 Solar direct pump
3 Solar panel for solar direct pump
4 Raw water tank
5 Power Center TSPC (Solar Panel, Batteries, Inverter, Controller etc.)
6 Trunz Seawater Box (TSB), approx. 250 l/h
7 Water storage tank(s)

