

# CASE STUDY KIRIBATI

## SOLAR POWERED WATER DESALINATION FOR REMOTE COMMUNITIES

### Client

Government of Kiribati

### Location

Kiribati/Tarawa

### Introduction

Kiribati is an island country in the Pacific consisting of 33 atolls/islands with a total population of approx. 115'000 people. Many communities are living in remote areas where no basic water and sanitation infrastructure is available. Dependence from weekly water deliveries by boat or buying expensive bottled water becomes a major challenge for the inhabitants. The government has therefore established a program to install decentralized sea water and borehole water desalination systems. Trunz Water Systems is appointed supplier and delivered not only the relevant equipment but also performed installation assistance as well as on-site technical trainings.

### On-site condition

Access to location	island, boat access only
Ø amount of people served	approx. 200 inhabitants per village
Water source	borehole
Common contamination in raw water	organic contamination in some areas slightly salt water (brackish)
Ø distance from source water to unit	approx. 10 metres (depth of well up to 10 meters)
Ø water temperature	20 – 30° C
Ø air temperature	20 – 40° C
Site preparation work	flat concrete platform, fence, roof

### Technical layout

1 Water source (borehole) and feed pump 24V with 20m hose
2 Solar panels, 24 V, 205 Wp
3 Power Center TSPC (Batteries, Inverter, Controller etc.)
4 Trunz Seawater Box (TSB), approx. 250 l/h
5 Water storage tank(s)

