

This is not an ADB material. The views expressed in this document are the views of the author/s and/or their organizations and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy and/or completeness of the material's contents, and accepts no responsibility for any direct or indirect consequence of their use or reliance, whether wholly or partially. Please feel free to contact the authors directly should you have queries.

Asia Water Forum 2022
8–11 August 2022 • Online

Focus Area: Universal water supply and sanitation services

Session Title: 2E Sector Capacity and Stakeholder Engagement

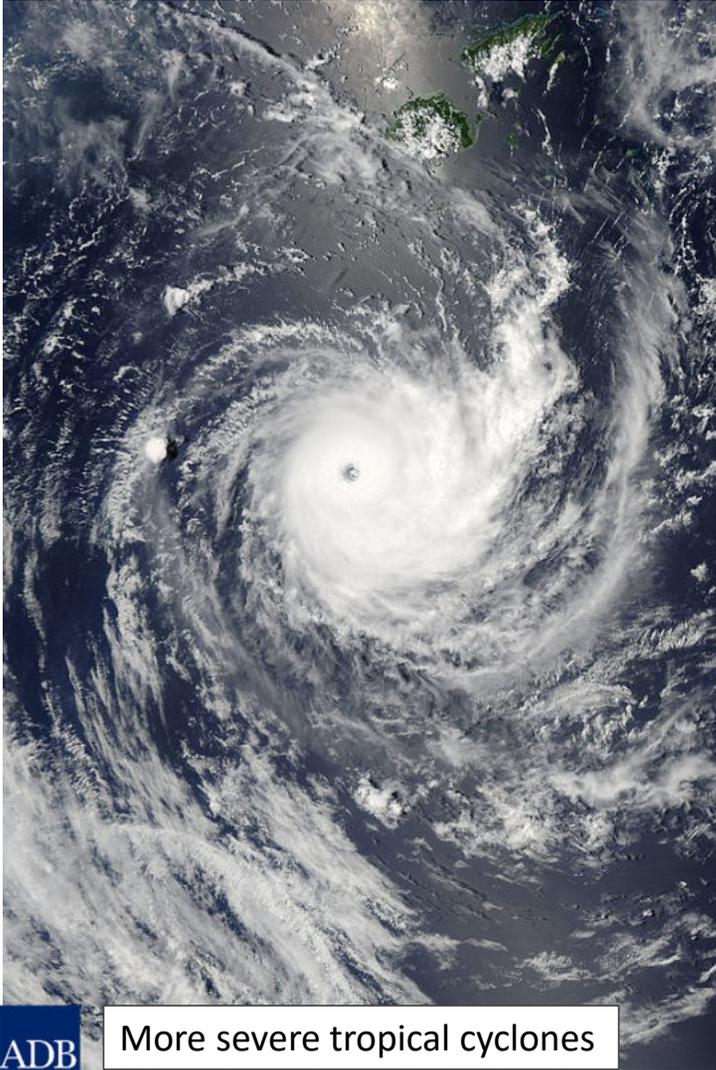
Schedule: [11 August 2022 (Thu) | 9:00 am – 10:30 am (GMT +08)]

Improving desalination outcomes in the Pacific: An iterative design and training-based approach

Dr Mat Francis
Director of Water Chemistry
Moerk Water Solutions Asia-Pacific Pty Ltd

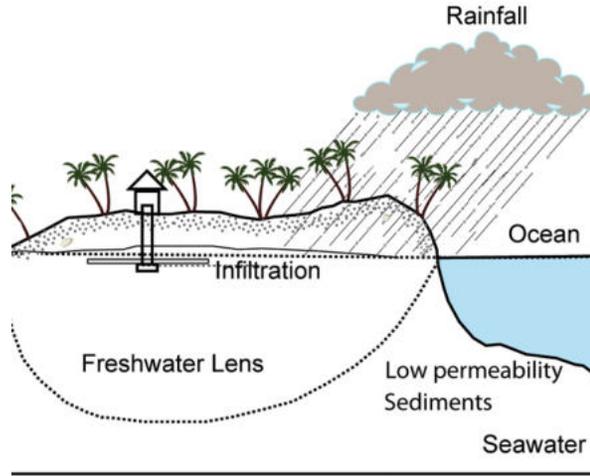


ADB



ADB

More severe tropical cyclones

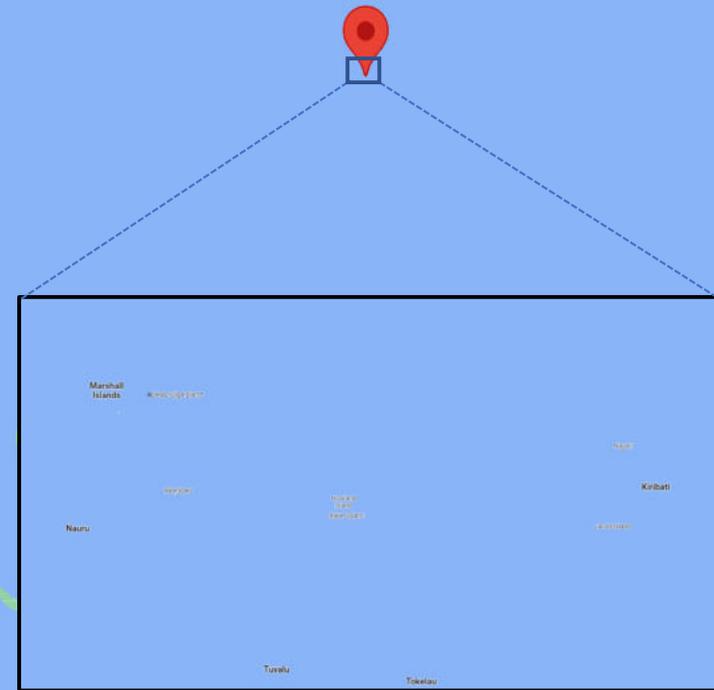


Shifting rainfall patterns

Pacific Island Country Water Security

Image credit: *NASA Goddard Photo and Video (L); UNDP – PACC (R)*

Desalination in the Pacific



Inset: Marshall Islands, Kiribati and Nauru

- Each country has had issues with desalination

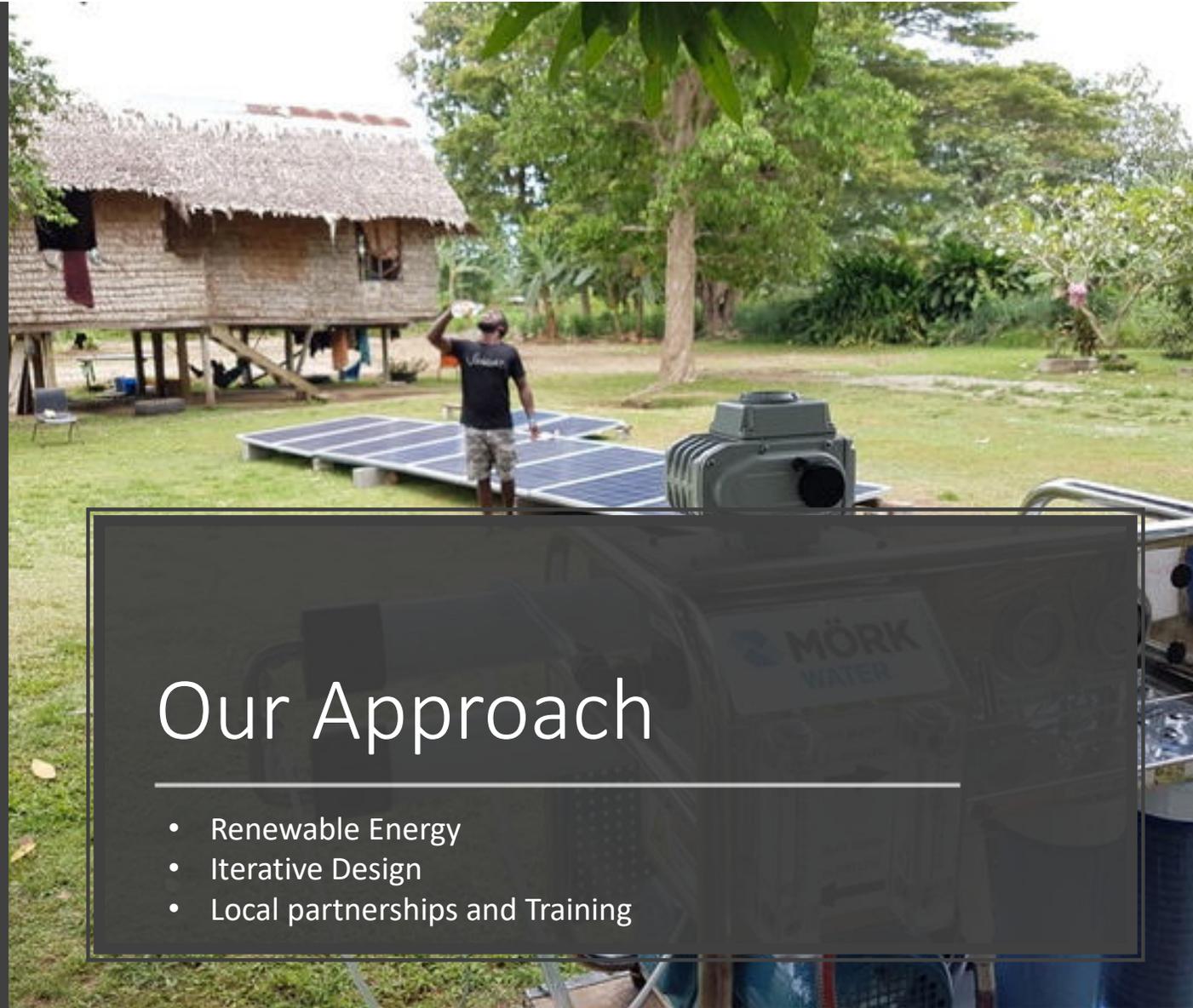


Lack of community consultation/training



Not designed for local conditions: remoteness, environment

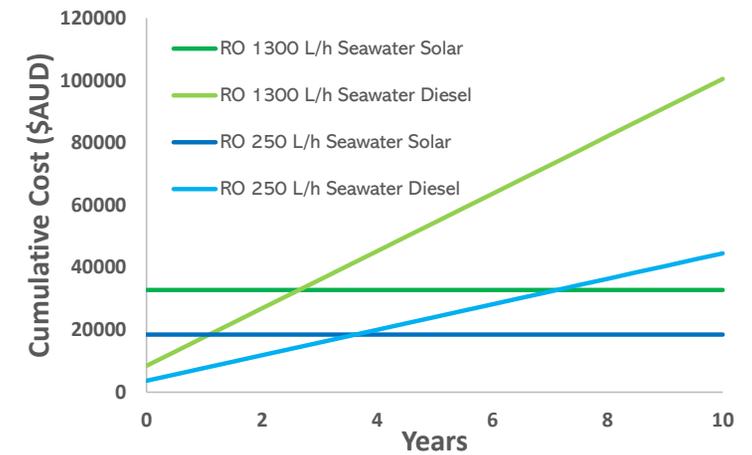
Why does desalination fail in the Pacific?



Our Approach

- Renewable Energy
- Iterative Design
- Local partnerships and Training

Renewable Energy



Clockwise from top: Vanuatu, Somalia, Papua New Guinea and Zanzibar





Iterative Design

- Easier access for servicing
- Portable
- Secure from vandalism
- Rugged construction
- Simplified operation
- Learn from each project



2013



2017



2021



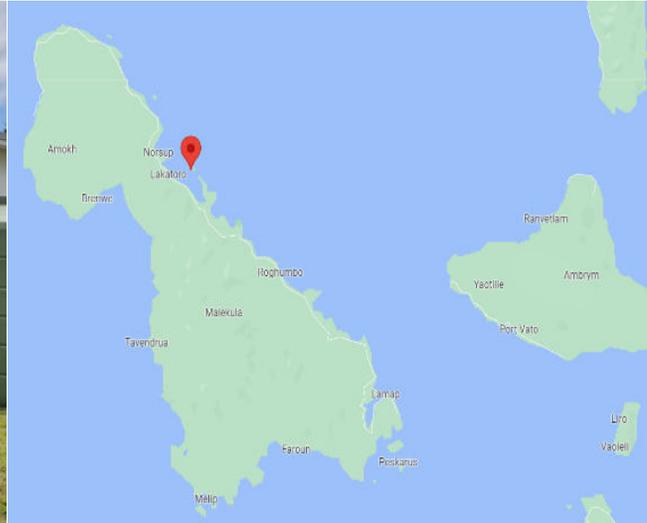


ADB



Training

- Training centres
- Training tiers
- Local partnerships



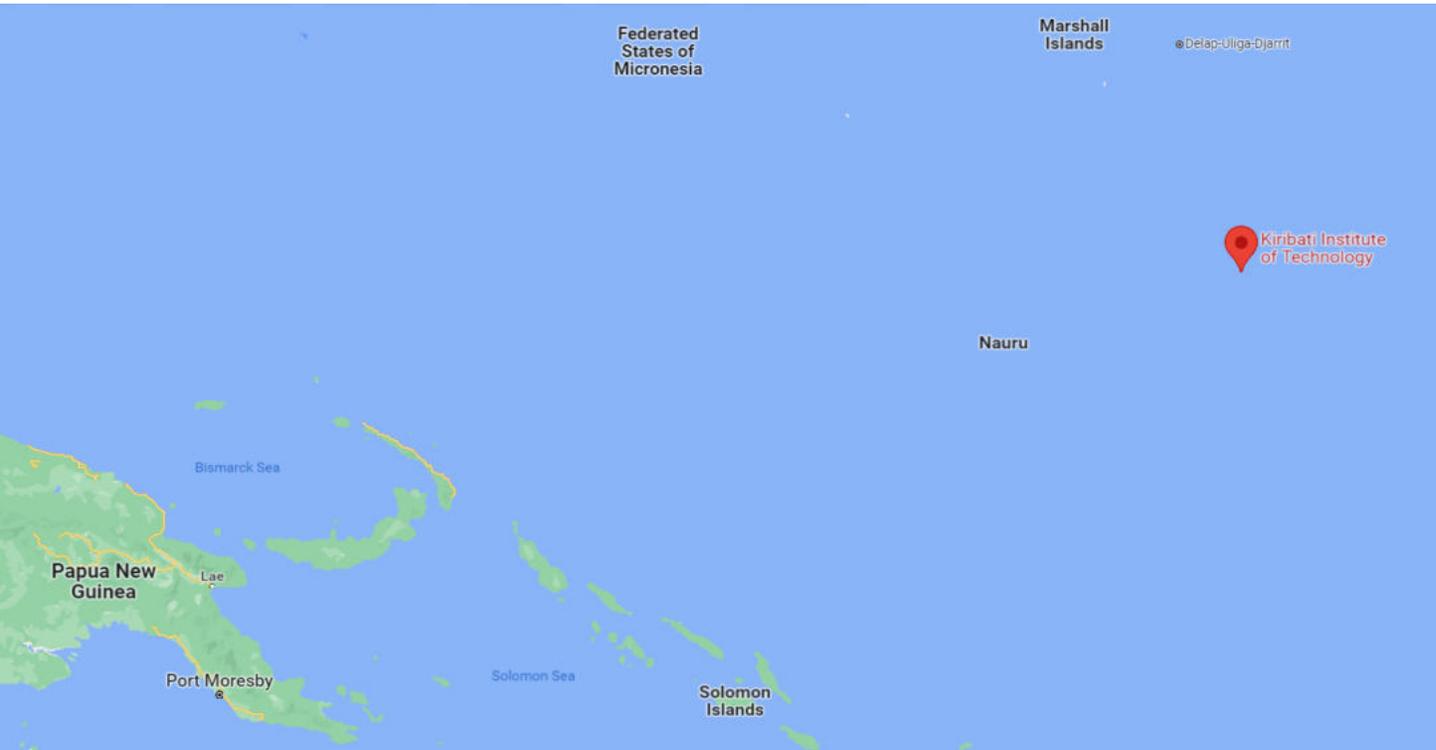
ADB

Case Study 1 – Uripiv Island

- Remote island in Vanuatu with insecure water supply
- Moerk Water installed seawater desalination system
- Running successfully since 2018



Case Study 2 – Kiribati Institute of Technology



- Moerk Water has multiple desalination systems in Kiribati
- Partnering with KIT to develop local knowledge in desalination and solar power





Key Takeaways



- **Renewable Energy**
- **Community Consultation**
- **Training**
- **Iterative Design**



<https://www.moerkwater.com.au/>

Phone: [+61 \(0\) 86118 4178](tel:+610861184178)

Email: info@moerkwater.com.au

Head Office, Research Lab & Factory: Unit 8/10
Rawlinson Street, O'Connor 6163 WA, Australia

