Climate and disaster resilience of water-challenged Pacific island communities
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22 Pacific Island Country and Territory Members
Country rankings for exposure and vulnerability as estimated by 2017 World Risk Index

Nations with high exposure & vulnerability
Low lying atoll nations
Nations with no surface water resources
South Pacific islands running out of water

By Hilary Whiteman, CNN
October 4, 2011 -- Updated 0936 GMT (1736 HKT)

Drought hits South Pacific islands
Fiji floods: State of emergency declared as rains continue
Mounting pressures on Pacific water security
Access to improved drinking water

Source: 2013 WHO & UNICEF Joint Monitoring Programme
Access to improved sanitation

Source: 2013 WHO & UNICEF Joint Monitoring Programme
Maintaining water security through innovation

- Minimising the impacts of drought
- Reducing water wastage
- Securing safe drinking water
- Maximising water yields
- Developing new sources of freshwater
Minimising the impacts of drought

**Alert Levels**

- **Alert Level 1 (Watch)**
  - Is 3 month rainfall index < 40%?
  - Is 12 month rainfall index < 25%?
- **Alert Level 2 (Warning)**
  - Is salinity at trunk main (7 day average) > 1,000 us/cm?
- **Alert Level 3 (Drought)**
  - Is salinity at trunk main (7 day average) > 1,200 us/cm?

**Triggers**

- Is salinity at trunk main (7 day average) > 1,000 us/cm?
- Is salinity at trunk main (7 day average) > 1,200 us/cm?

**South Tarawa Water Security**

- **Rain Tanks**
  - Kanganga (Critical)
  - Kauring (Warning)
  - Katauraoi (Watch)
  - Rairoi (Normal)
- **Pub Supply**

Maintaining water security through innovation
Reducing water wastage

Maintaining water security through innovation
Securing safe drinking water

Maintaining water security through innovation
Maximising water yields

Impact of various interventions on water security across individual households

- One additional 10kL tank per HH only
- Repair all gutters to “good” condition
- Repair gutters and extend to 100% of roof area
- Repair and extend gutters, and provide one 10kL tank per HH

Number of failure months diverted over period of record due to intervention

Percentile ranking of households
Developing new sources of freshwater

Maintaining water security through innovation
Tampara masika!
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