

VARIABLE RENEWABLE ENERGY in SAMOA

Workshop on Sustainable Electricity Access in Pacific Island Countries

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Pacific Harbour

FIJI

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Marshall Islands

1400 mi

1400 km

EQUATOR 0°

Nauru

Kiribati

Pacific Ocean

Tuvalu

Samoa

Tahiti (France)

Vanuatu

Fiji

Tonga



23.5°

OCEANIA

New Zealand



180°

Southern

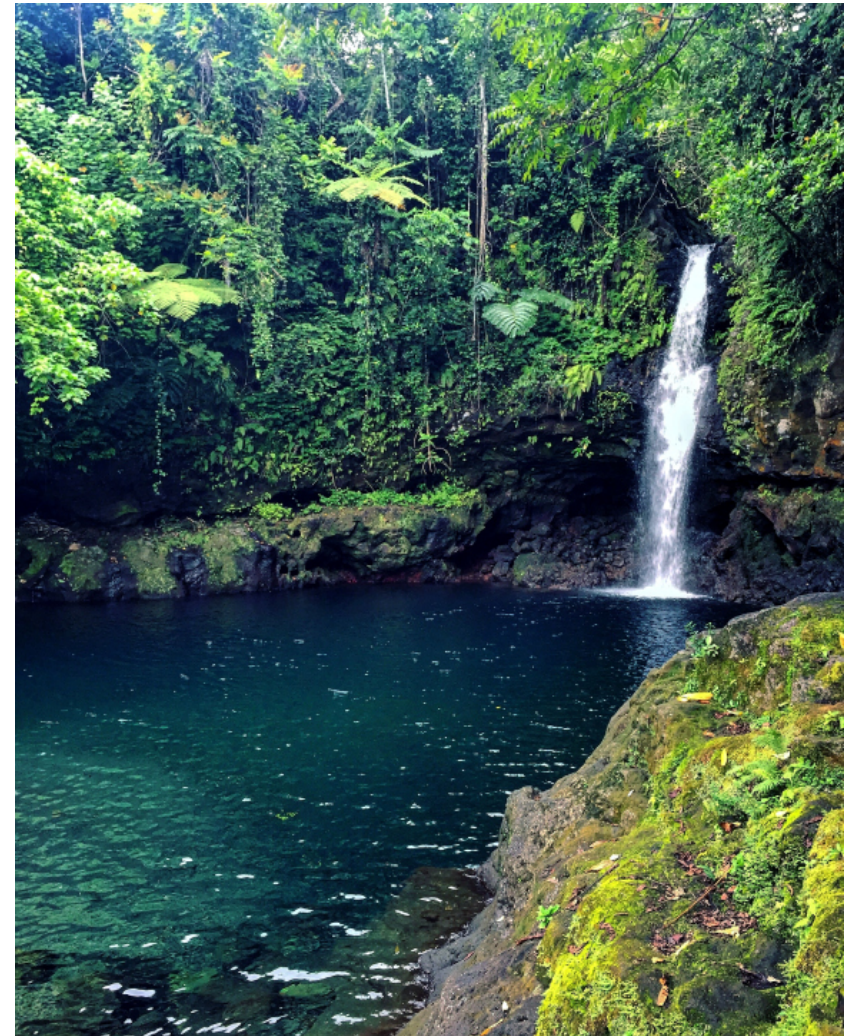




SAMOA



- Population – 192, 126 (SBS, 2016)
- GDP per capita – AUD \$5,670.00
- 4 main inhabited islands
 - Savaii
 - Upolu
 - Manono
 - Apolima





Energy Policies Based On:



- Paris Agreement 2015
- SAMOA Pathway 2014
- Strategy for the Development of Samoa 2016/2017 – 2019/2020
- National Environment Sector Plan 2017 - 2021
- National Energy Sector Plan 2017 – 2022
- SDG #7





Legislation in Samoa



- In use now:
 - Energy Efficiency Act 2017
 - Electric Power Corporation (EPC) Act 1980
 - Electricity Act 2010
- Yet to be finalized
 - Energy Management Bill
- To be reviewed
 - EPC Act 1980





Samoa's International Commitm



- NDC (Nationally Determined Contributions)
 - To have 100% electricity generated from RE sources by 2025
- NAMA (Nationally Appropriate Mitigation Actions)
 - To upscale our coconut biodiesel production
 - Electric vehicles and related infrastructure changes





Energy Sector

- All decisions made by National Energy Coordinating Committee (NECC)
 - Chaired by the Minister of Finance, Honorable Sili Epa Tuioti
 - Co-chaired by
 - 1) Deputy Prime Minister and Minister of Natural Resources and Environment, Honorable Fiame Naomi Mataafa
 - 2) Minister of Works, Transport and Infrastructure, Honorable Papalii Niko Lee Hang
 - Attended by all Chief Executive Officers and representatives from all the Energy sector stakeholders



Renewable Energy Projects

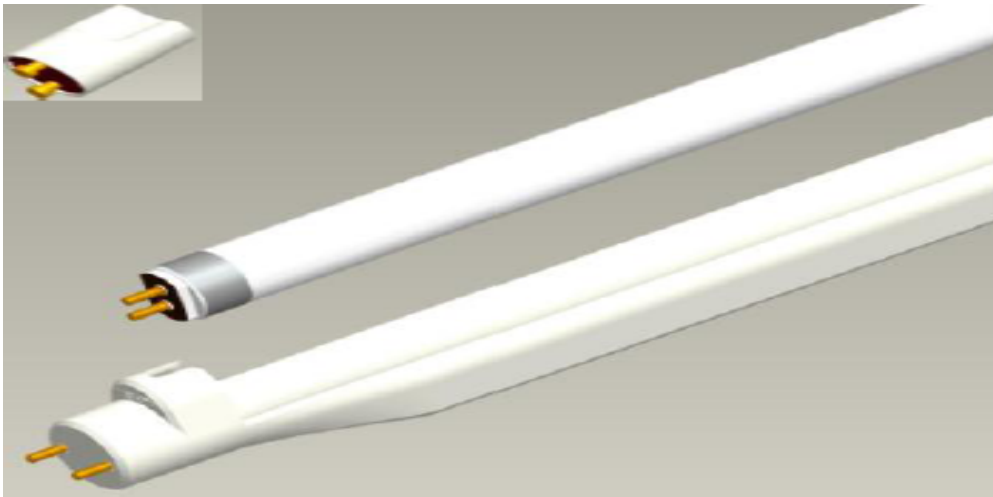
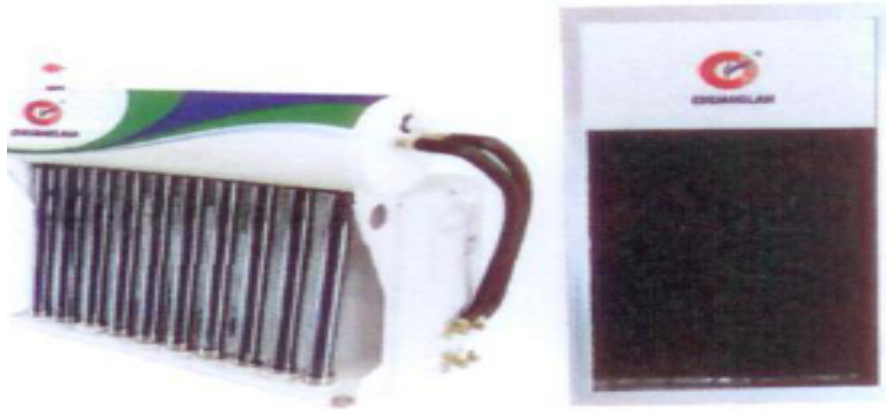


















Samoa's NDC

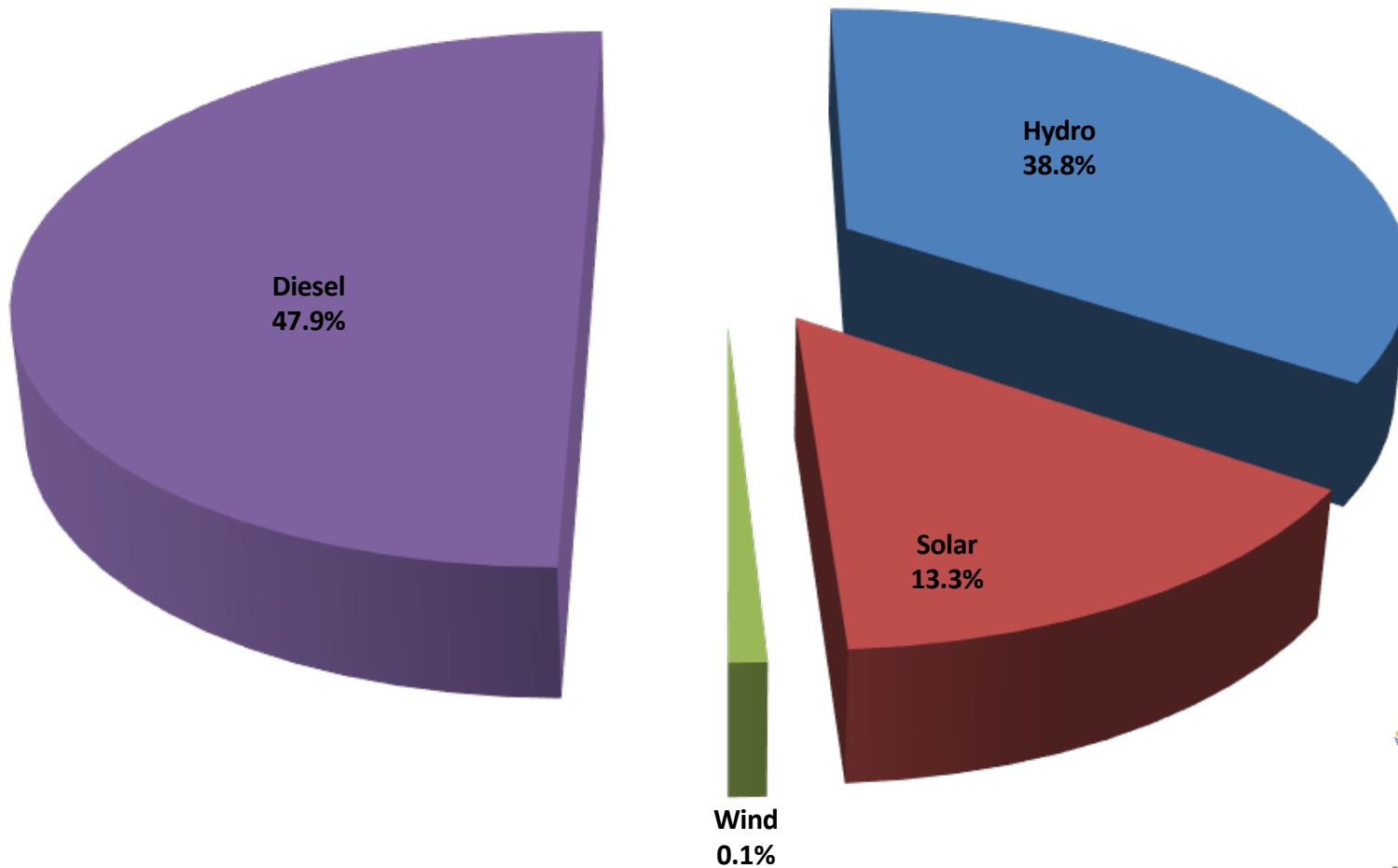


100% Renewable Electricity by 2025



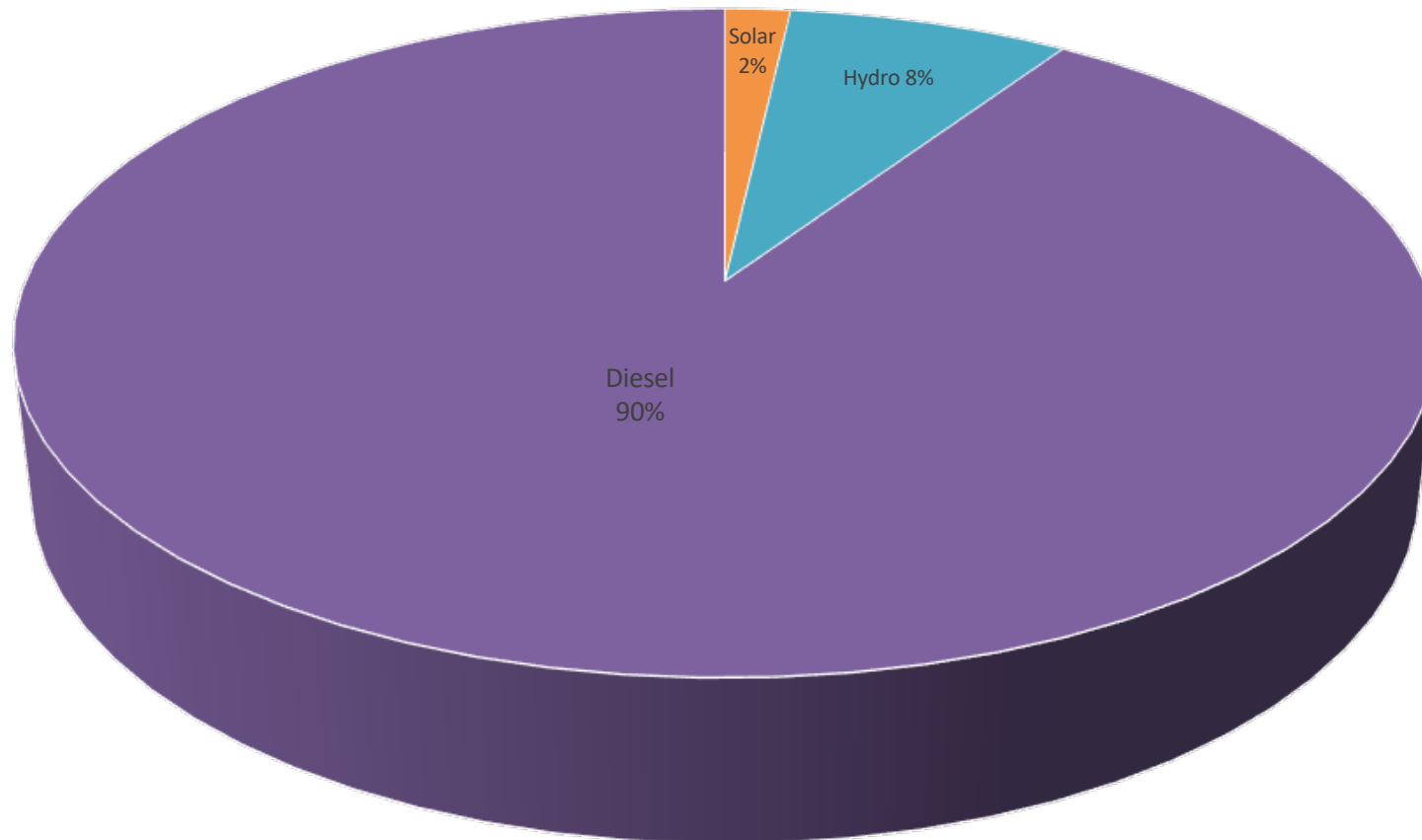


Current Electricity Generation on Upolu Island ~ 25MW





Current Electricity Generation on Savaii Island ~ 3MW





Issues and Challenges

- Revised NDC to produce a more ambitious target for the UN Leaders' Climate Change Summit in September 2019 by including:
 - ✓ Electric mobility (electric cars, charging stations, etc)
 - ✓ Alternative sources of fuel (biodiesel from coconut oil)
 - ✓ Oceans (mangrove for carbon sequestration)
- Grid stability
 - Intermittent supply of RE sources
 - ✓ Solar
 - ✓ Wind
- Land Issues
 - Most RE sources are on land which belongs to village communities





IMPRESS Project



Improving the Performance and Reliability
of Renewable Energy Power Systems in
Samoa

Overall objective – To improve the sustainable and cost-effective utilization of indigenous renewable energy resources for energy production in Samoa





Project Overview and Background

- Pro-Doc Signing was held on the 2nd August 2017
- Project Total Budget – USD 6,075,828 million with USD 46million co-financing by the Government of Samoa
- Funding Source – Global Environment Facility (GEF)
- Implementing Partner – MNRE
- Implementing Agency – UNDP
- Project timeframe – 2017 – 2022 (5 years)
- 5 components







AFOLAU 750 KW BIOMASS GASIFICATION PROJECT

"Improving the Performance and Reliability of Renewable Energy Power Systems in Samoa"



giz



Funded by: Global Environment Facility (GEF)
European Union (EU-GIZ)
Government of Samoa

Project Manager: Samoa Trust Estates Corporation (STEC)
Electric Power Corporation (EPC)
Ministry of Natural Resources (MNRE)

Contractors: Ankur Ltd—Biomass Gasification Plant
Transworks Samoa—Site preparation & Fence

Afolau Biomass Gasification Plant

- 750kW
- Eradicate invasive tree species on government land (e.g. rubber trees)
- One of the by-products will be charcoal which can be sold for extra income
- Commissioning – 5th Dec 2019





Funding Required



- Samoa's Greenhouse Gas (GHG) inventory
- NAMA interventions
 - Commercial upscale of biodiesel at the pump
 - Electric cars & mini-buses
 - Charging stations





Potential Project Ideas

- Waste to Energy (WTE)
 - Reduce waste
 - Alleviates landfill problems
 - Generate clean energy
- Geothermal
 - Expensive drilling and testing
 - Cheaper long-term energy costs
- Wave Energy
 - New technology to Samoa





GREENHOUSE
GAS EMISSIONS
CUTS

G-8 NATIONS

50% BY 2050

MATSON

ST. LOUIS POST-DESPATCH caglecartoons.com

~~WAVE~~ -



DO YOU THINK THE VOICES RAISED AGAINST GREENHOUSE GASSES WILL ACTUALLY BE HEARD?

OR JUST DROWNED OUT?

PACIFIC ISLANDS

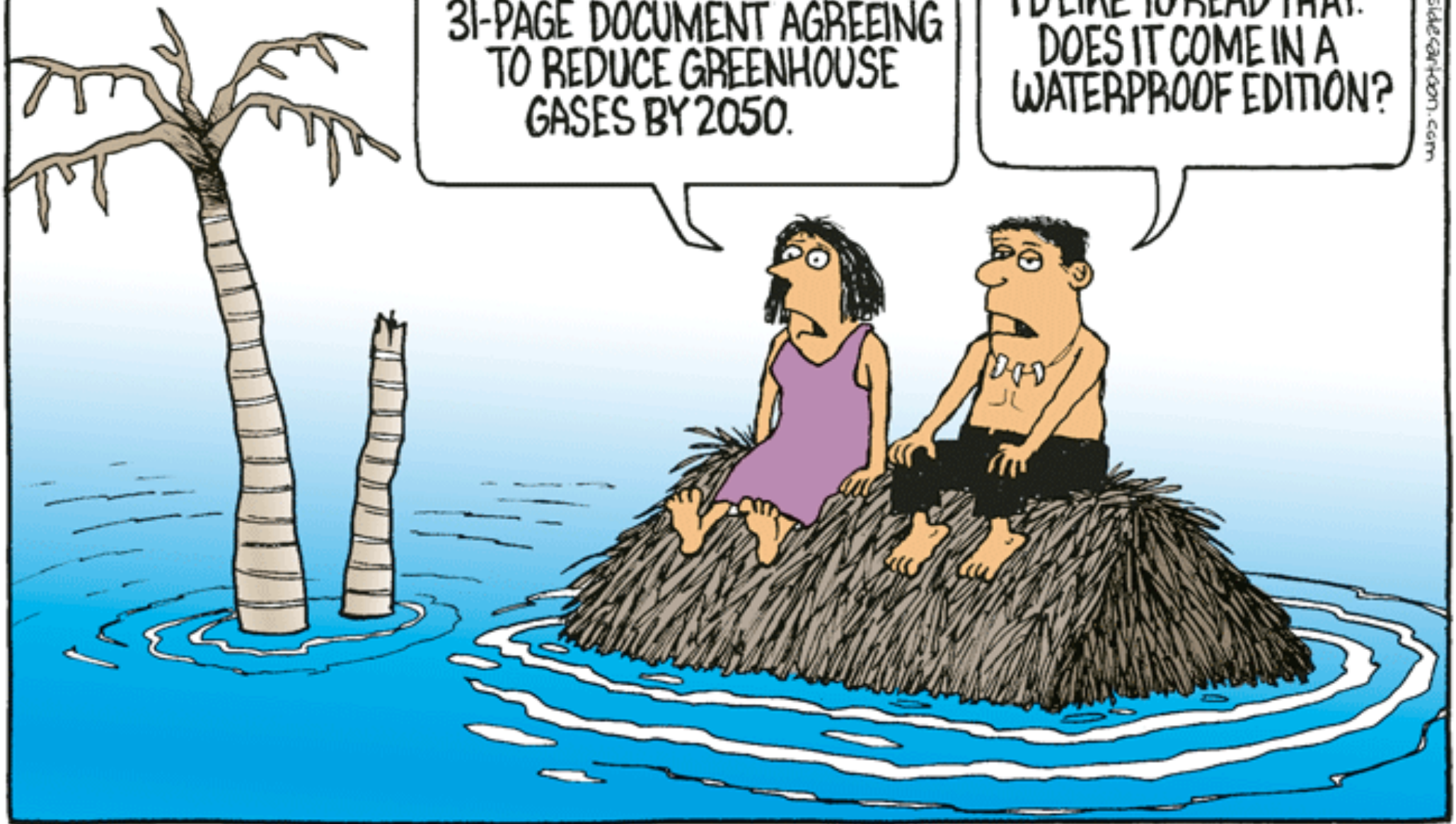


MEANWHILE, ON A LOW-LYING SOUTH PACIFIC ISLAND...

RIFESIDE
9/00

I HEAR IN PARIS, OVER 200 COUNTRIES HAVE SIGNED A 31-PAGE DOCUMENT AGREEING TO REDUCE GREENHOUSE GASES BY 2050.

I'D LIKE TO READ THAT. DOES IT COME IN A WATERPROOF EDITION?





Faafetai lava!
Thank you for your attention!

