

New Zealand - Pacific Partnership on Ocean Acidification (PPOA)



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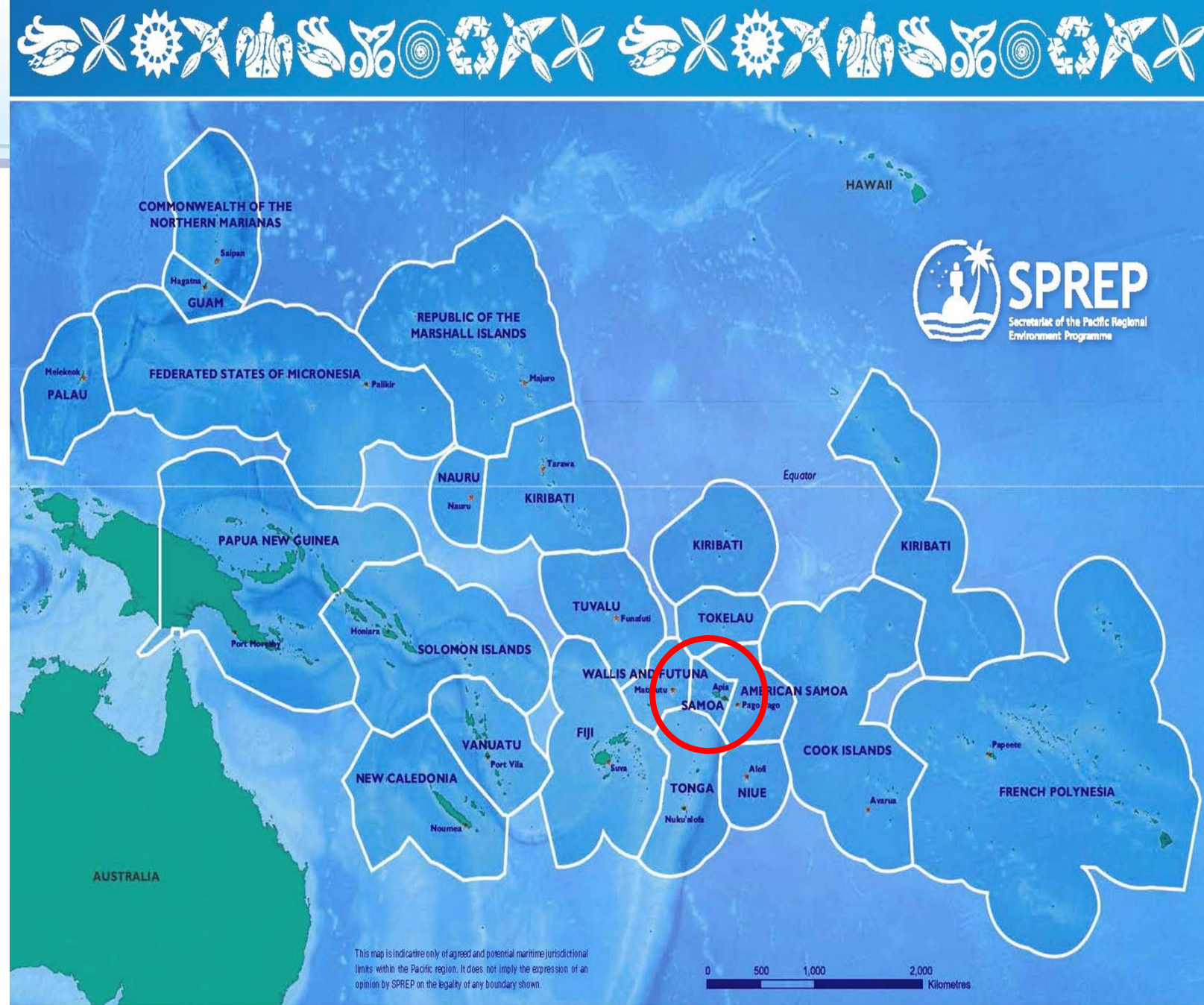
Intergovernmental org.
for protection of Pacific
islands environment

HQ: Apia, Samoa

**21 Pacific Island
Countries & Territories**

+

5 Metropolitan Members:
Aus., Fr., NZ, UK, USA



Background

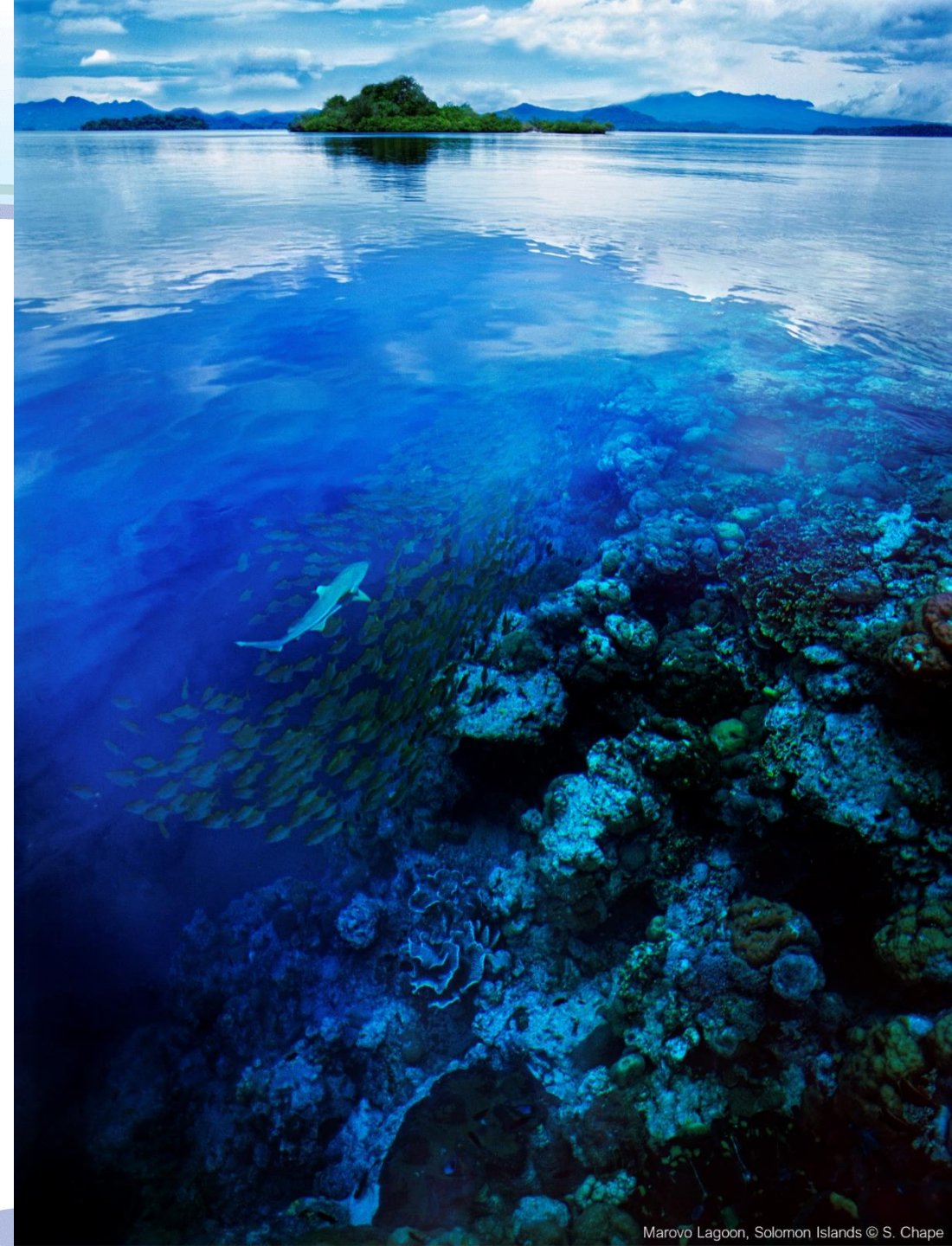
The 3rd UN SIDS Conference:

- **Identified need for:**

- Monitoring Ocean Acidification
- Building capacity & resilience
- Implementing adaptation strategies



UN Conference on
Small Island
Developing States
Apia, Samoa | 2014



Partnership

NZ Pacific Partnership on Ocean Acidification:

- Collaborative effort between:



- Financial support from:

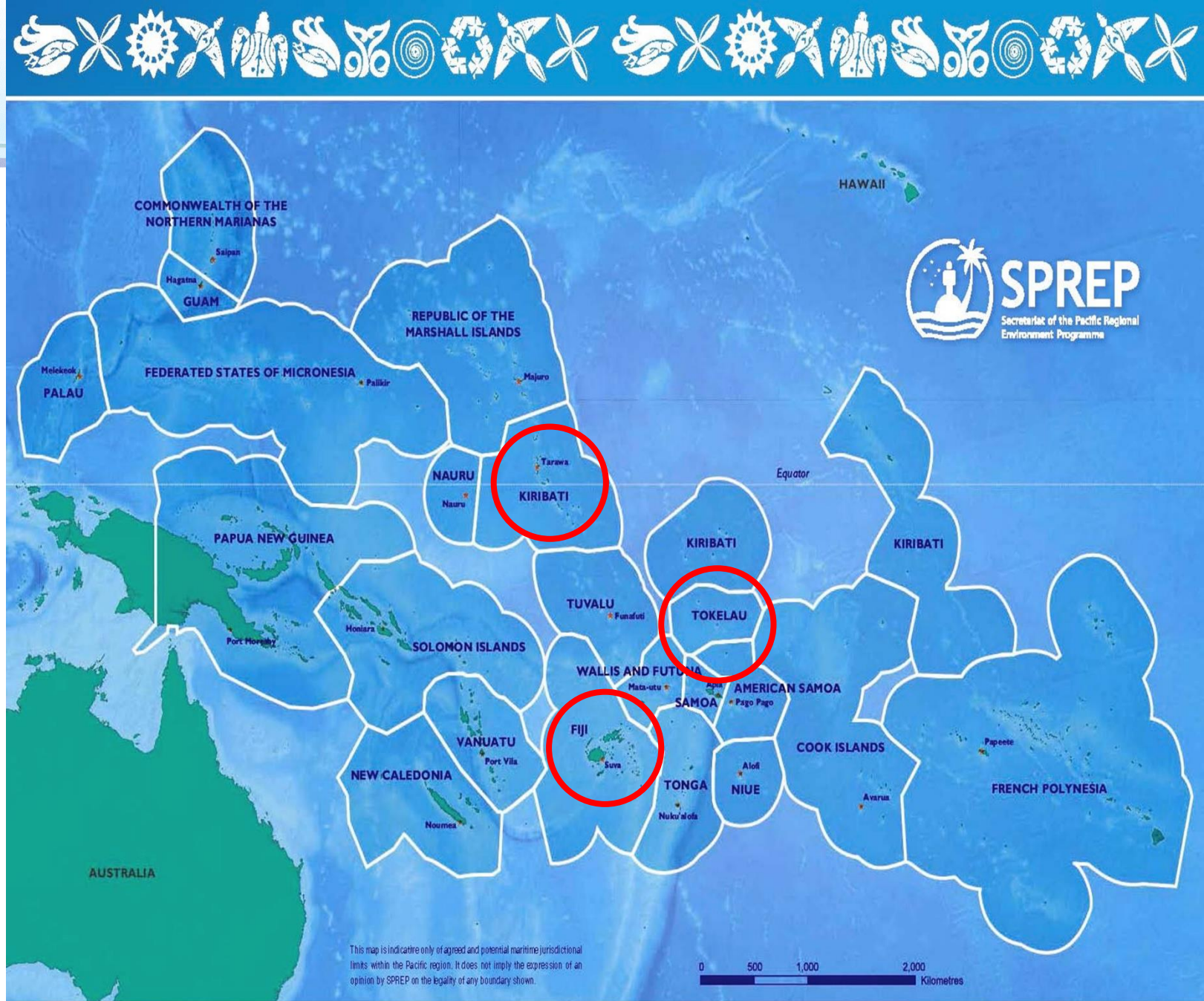


Design

Focus Areas:

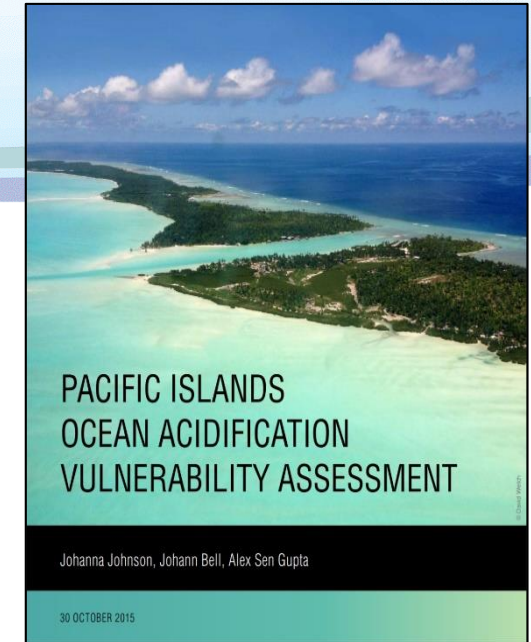
1. Research and Monitoring
2. Capacity Building
3. Policy Support
4. Adaptation Actions

Pilot Sites: Fiji, Kiribati, Tokelau



Research: Vulnerability Assessments Completed

- Regional OA Vulnerability Assessment:
 - <http://www.sprep.org/attachments/Publications/CC/ocean-acidification.pdf>
- Vulnerability Assessment of Pelagic Fisheries
 - <https://www.wcpfc.int/node/29559>



Outreach: Informational Posters Translated

OCEAN ACIDIFICATION

1 WHAT IS OCEAN ACIDIFICATION (OA)?

The burning of fossil fuels continue to increase the amount of atmospheric carbon dioxide.

The carbon dioxide (CO₂) in the atmosphere rises, larger amounts of CO₂ will be taken up by the ocean. This causes a change in the oceans water chemistry by increasing hydrogen ions (H⁺). An increase of H⁺ in the ocean will cause an increase of acidity in the oceans water.

2 THREATENING:

- Biodiversity
- Fisheries
- Tourism
- Food Security
- Jobs and Income
- Coastal protection
- National Economy

3 EFFECTS OF OCEAN ACIDIFICATION?

As the ocean becomes more acidic it will cause effects to many marine resources.

It will make it difficult for corals and sea shells to build, resulting to weaker sea shells, weaker coral skeletons, weaker coral reefs and coral reef habitats

It will affect the growth and reproduction of many types of shell builders, fin fish and plankton species

Clams

Oysters

Starfish

Urchins

Prawns

Lobsters

Crabs

Fin fish species, including Tuna

4 WHAT YOU CAN DO NOW & AS A COMMUNITY WHAT WE CAN DO:

You can help your Coral Reefs health by:

- Protect and conserve your coral reef, seagrass and mangrove areas
- Support your communities conservation efforts
- Stop overfishing
- Stop destructive fishing practices
- Do not pollute your land, beach or ocean (keep it clean)
- Reduce the use of plastics
- Reduce your carbon emissions (walk more and drive less)
- Reduce use of fertilizers
- Stop fertilizer and waste run off (including human and animal waste) into our rivers and oceans
- Keep your eyes on the reef and report any changes
- Help save your ocean and coral reefs, educate others and spread the word

Kiribati

KAKANGIN TAARI

1 E KANGA N RIKIRAKE KAKANGIN TAARI?

Man labuakun te naan buava ao e a kakorokora mwelin te ega ke te kueti ae ananaki bwa te kaabon.

Rikirake te ega ke te kaabon are a kakorokora mwelin te ega ke te kueti ae ananaki bwa te kaabon.

2 ITERA TAEVUA AIKA ANA ROOTAKI:

E na bon roota ara reita ni malu

- Te akawa
- Te amwawake
- Te kanowaba
- Te kareke tiant
- Matanwin te aba
- Ao al bon - Rikirake te aba

4 ANA N TOTOKOA TE KANGANGA

Tina karekebi n katemata mawirin te oia ao rikirake ebora

- Komomi ara nake te te naan are ake a buka karekese abara, uretan taari ao tale tonga
- Bouraken te boranmata te akawa n ala mwelin. Bua n karekese mwelin o kauruwan abara mai taari
- Kauruwan anakin marin abara
- Katolan kabonganan bwa n akawa ala a urubwai man abubu
- Katoko te kauruwan (Taari)
- Kauruwan kauruwan ega ala bolin nakon abara ao bwa te nakonko ao kauruwan kabonganan te naan bwa ni mwawawanga
- Kauruwan kauruwan te naan fertilizer
- Kauruwan kauruwan te naan fertilizer (man ao aomata) man te aba nako taari.
- Tauruwan te oia ao ribon kauruwan ala tei nako ala kauruwan taari taari
- Kauruwan ao n reitewa kan rakin ibukin kauruwan are aare

SPREP

Fijian

VAKAWIWITAKI NI WAITUI

1 NA CAVA NA VAKAWIWITAKI NI WAITUI?

Na cava na vakawiwitaki ni waitui

2 RIRIKO:

Wakawa, Oukuli, Sowanaka, Mamanaki ni Kauru, Oukawa te na Kauru, Oukawa te na Kauru, Oukawa te na Kauru

4 NA CAVA O RAWA NI KAKAWA ENA GAUNA QO?

Na cava o rawa ni kakawa ena gauna qo

3 REVUREVU NI KENA VAKAWIWITAKI NA WAITUI?

Na cava o rawa ni kakawa ena gauna qo

SPREP

Supporting Monitoring

Building capacity of Pacific Islanders to monitor and report **ocean acidification** data

Partnered with TOF to provide equipment & training to 7 Pacific island nations to monitor OA & report data to **SDG Indicator 14.3.1**:

*Average **marine acidity (pH)** measured at agreed suite of representative sampling stations*



Photos: The Ocean Foundation



Stakeholder Consultations:

- Building Capacity
- Planning Adaptation Actions

Taveuni, Fiji



Nanikai, Kiribati



Tokelau



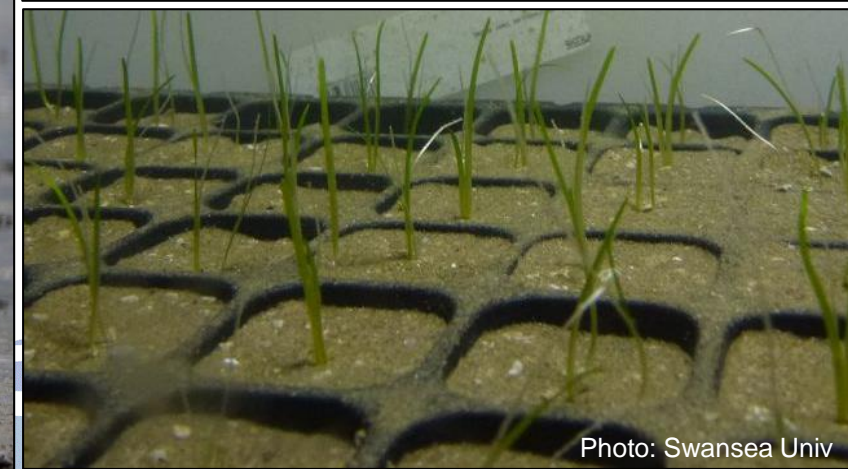
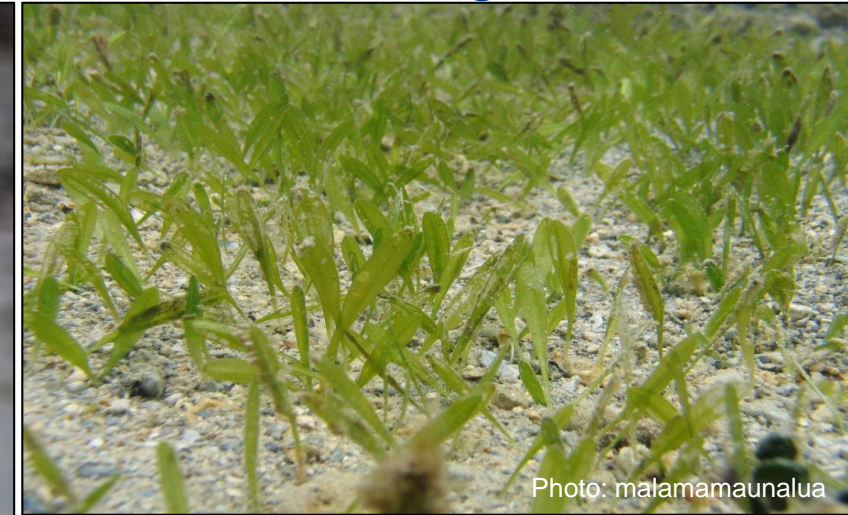
Potential Adaptation Approaches

Enhancing Primary Producers to Locally Buffer pH

Mangroves



Seagrass



Potential Adaptation Approaches

Coral Restoration to Enhance Reef Resilience

In situ Nursery



Ex situ Culture



Reducing Reef Stressors: Locally Managed Marine Areas (LMMA)

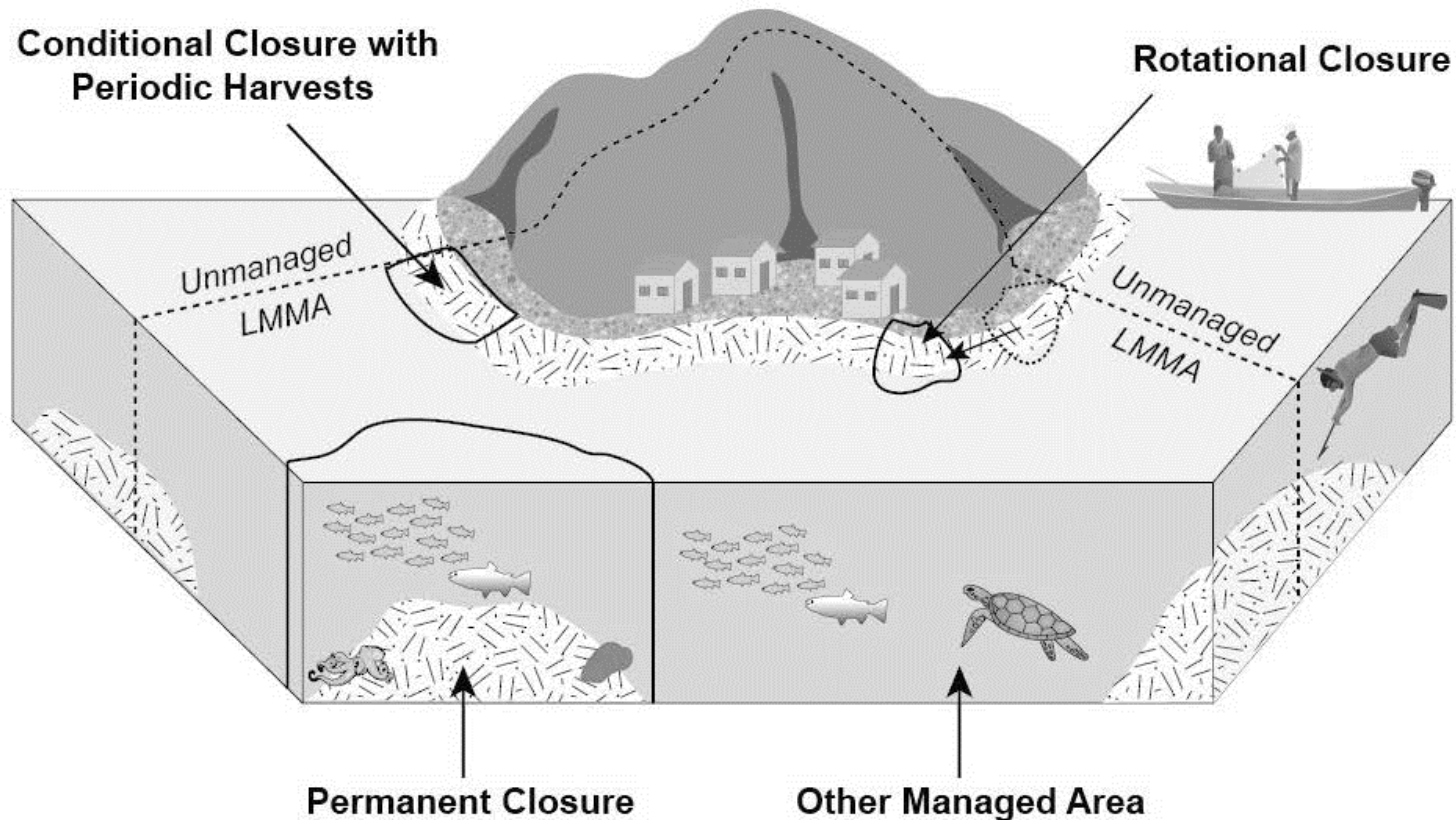
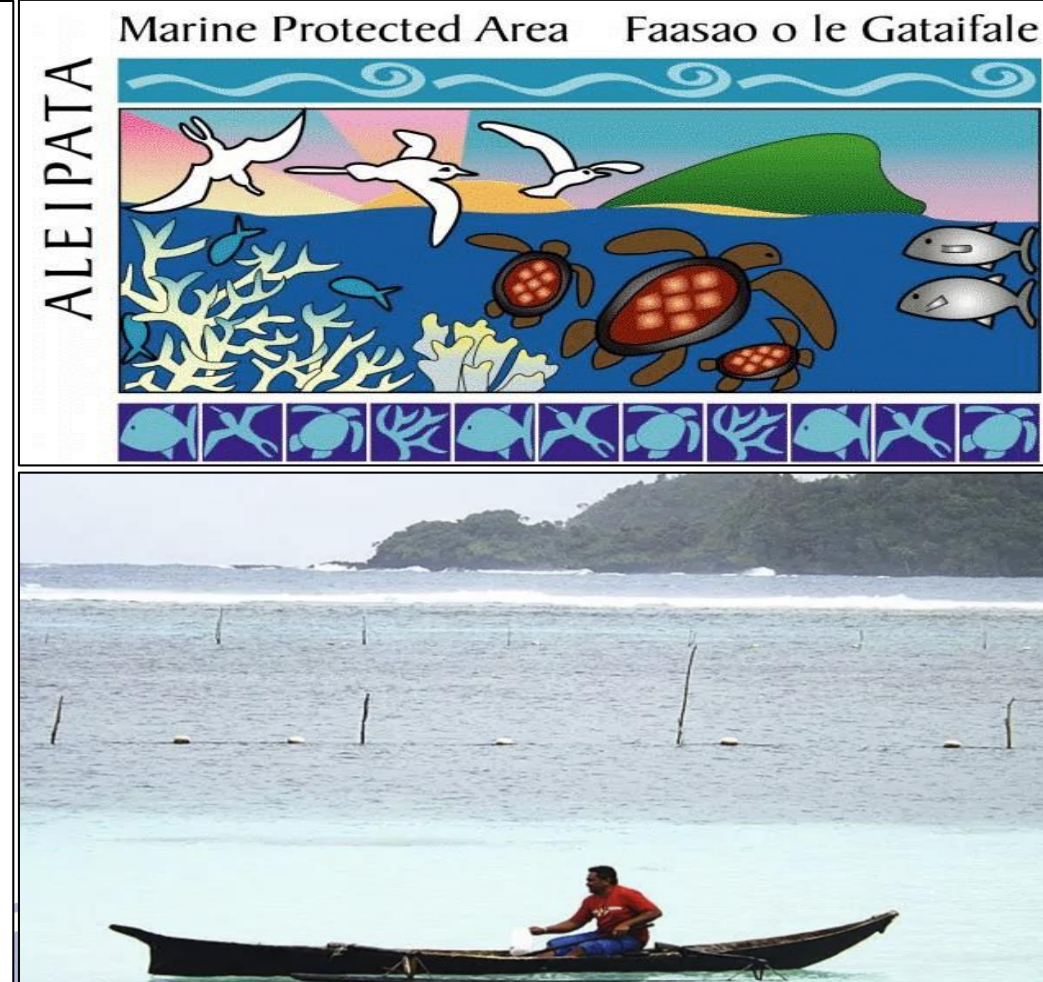


Fig: Jupiter et al 2014



Reducing Reef Fishing Pressure: Alternative Livelihood: Aquaculture



Photo: World Fish



Photo: www.farmingmethod.com



Photo: World Fish



Photo: www.farmingmethod.com



Photo: World Fish



Photo: World Fish

Implementing Adaptation Actions

Stakeholder-Determined Priorities:

- Mangrove Restoration
- LMMAs
- Alternative Livelihood

Partner with:

The Fiji Locally-Managed Marine Area (FLMMA) Network



Planning Adaptation Actions

Fakaofu

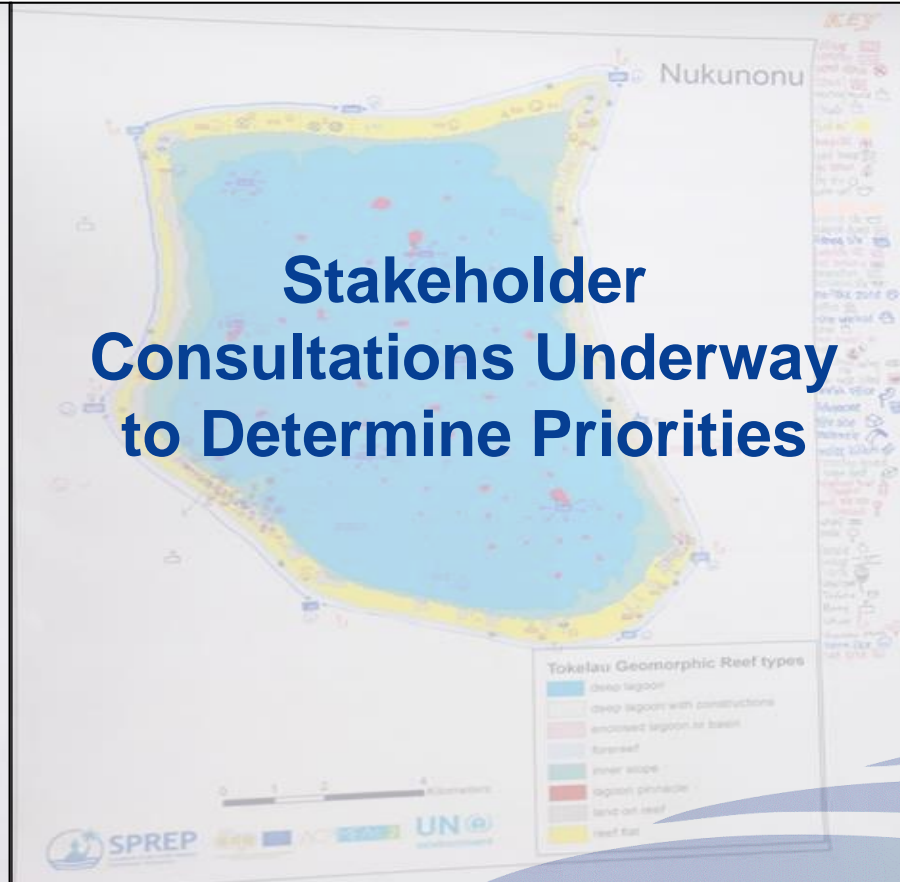
Stakeholder Determined Priorities:

- Coral Restoration
- Erosion control
- Potential Partner:



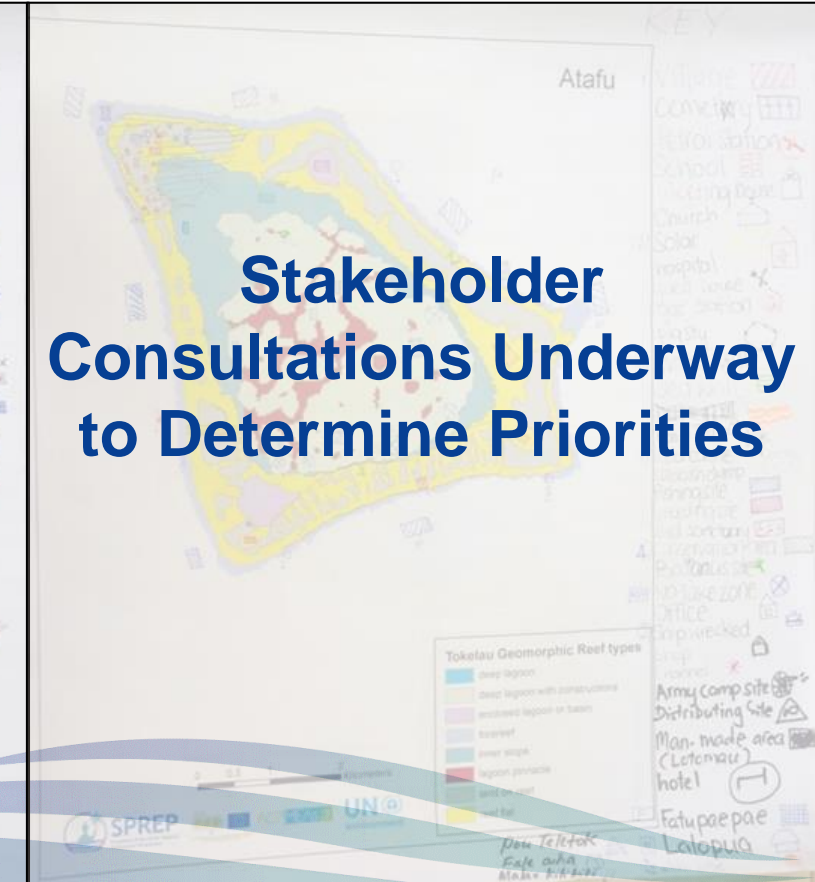
Nukunonu

Stakeholder Consultations Underway to Determine Priorities

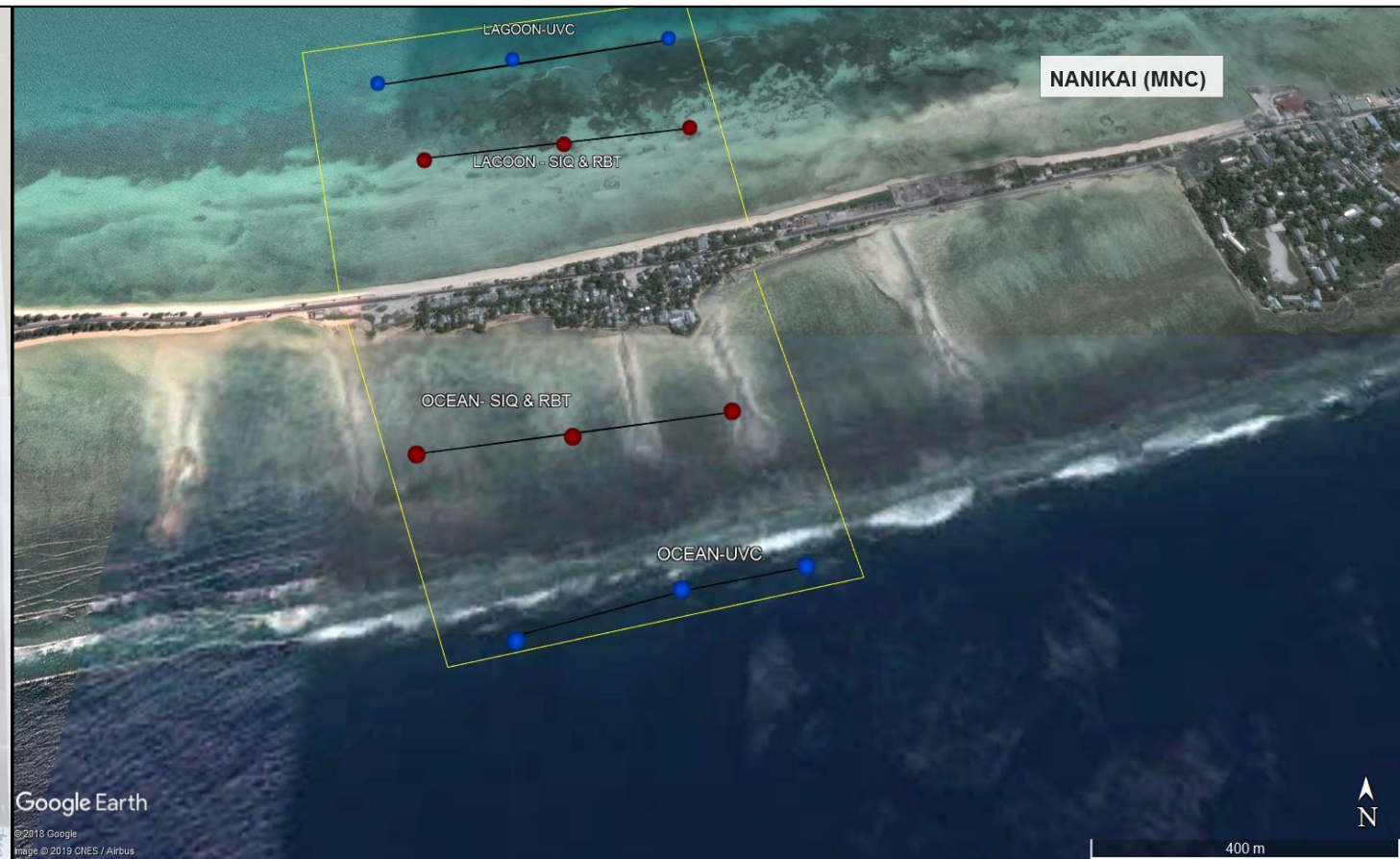


Atafu

Stakeholder Consultations Underway to Determine Priorities



Conducting Marine Baseline Surveys to Plan Adaptation



Next Steps: PPOA Project

**Seek Additional
Support**

**Expand Project to
Other Pacific Island
Sites**



Whakawhetai Kia Koutou Fa'afetai Lava Thank You!



For more information contact:

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