Sea Level Rise and Adaptation in the Pacific

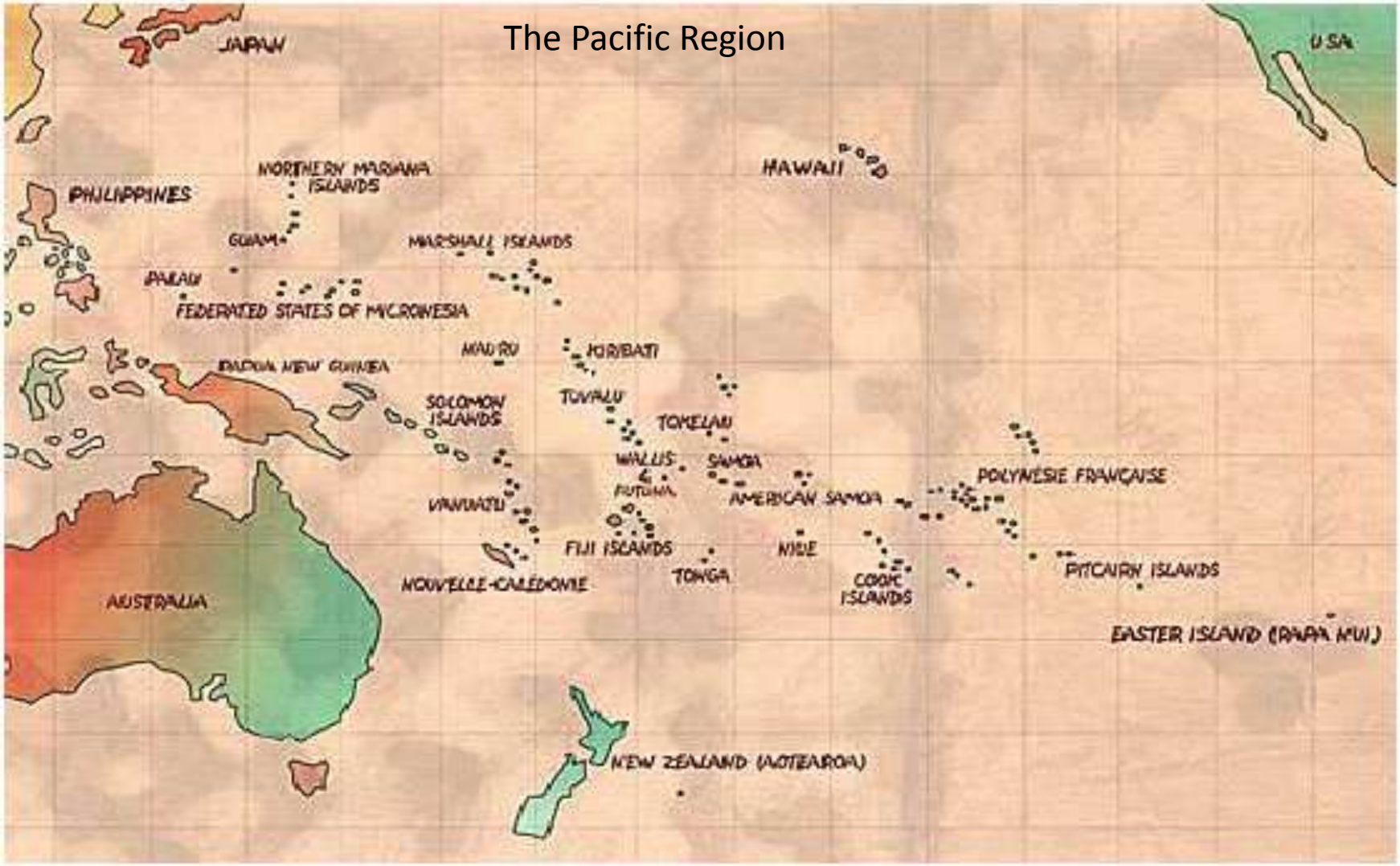
Salesa Nihmei
Secretariat of the Pacific Environment Program (SPREP)
APAN Forum
Kuala Lumbar, Malaysia

Introducing Secretariat of the Pacific Regional Environment Programme (SPREP)

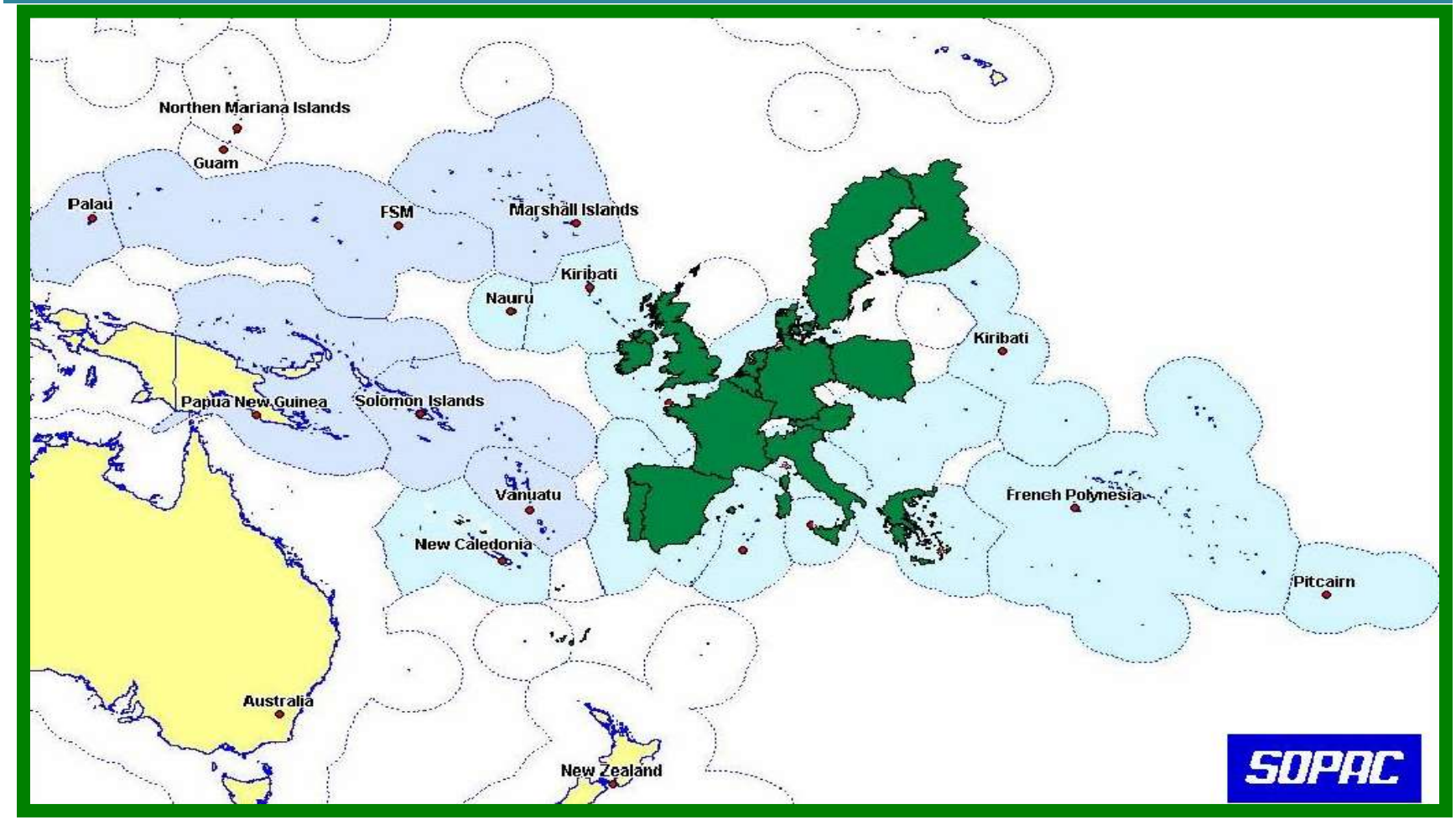
- Working for over **40** years in the Pacific region
- **Inter-governmental organisation**
  - The Pacific regional agency for the environment
  - Recognized as the lead agency on biodiversity, climate change, waste management and environmental monitoring and governance in the Pacific Region
- **26 member countries**
  - 21 Pacific Island countries & territories
  - 5 'metropolitan' states (AU, NZ, FR, USA, UK)

  SPREP is **fully accountable** to member governments through an annual SPREP Meeting and Ministerial Meeting
- Over 90 staff

The Pacific Region

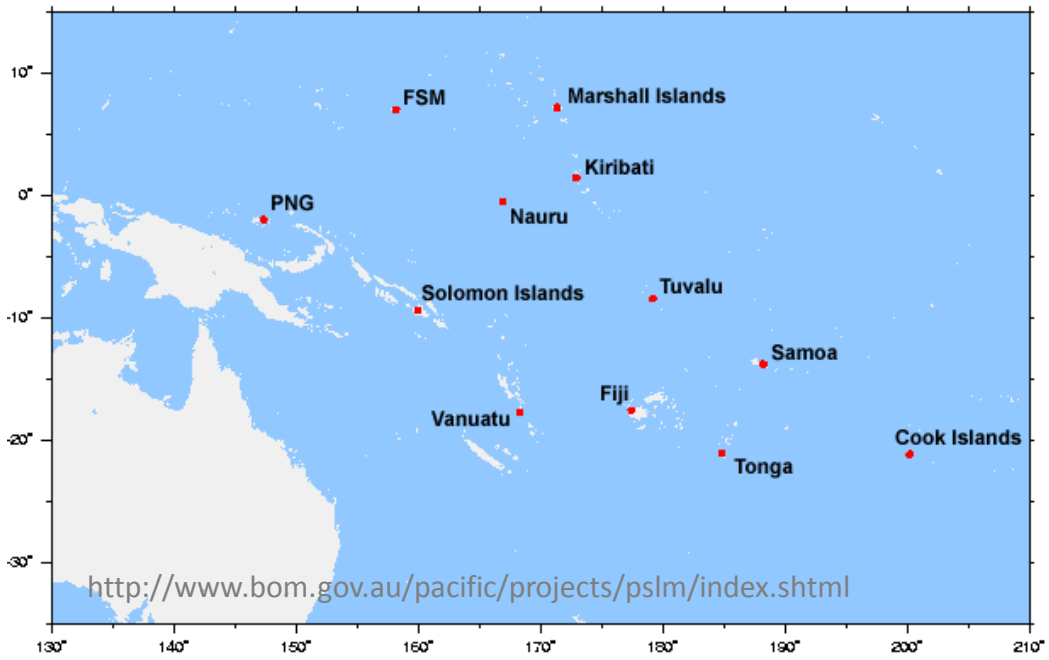


How big is the Pacific region?



U.K. and Western Union superimposed on central Pacific region encompassing 8 Pacific Island nations

Sea Level Monitoring Stations



- These gauges do not include portable gauges used or those gauges installed by other projects

Regional Mean Sea Level Rise

Sea level rise 1993-2009

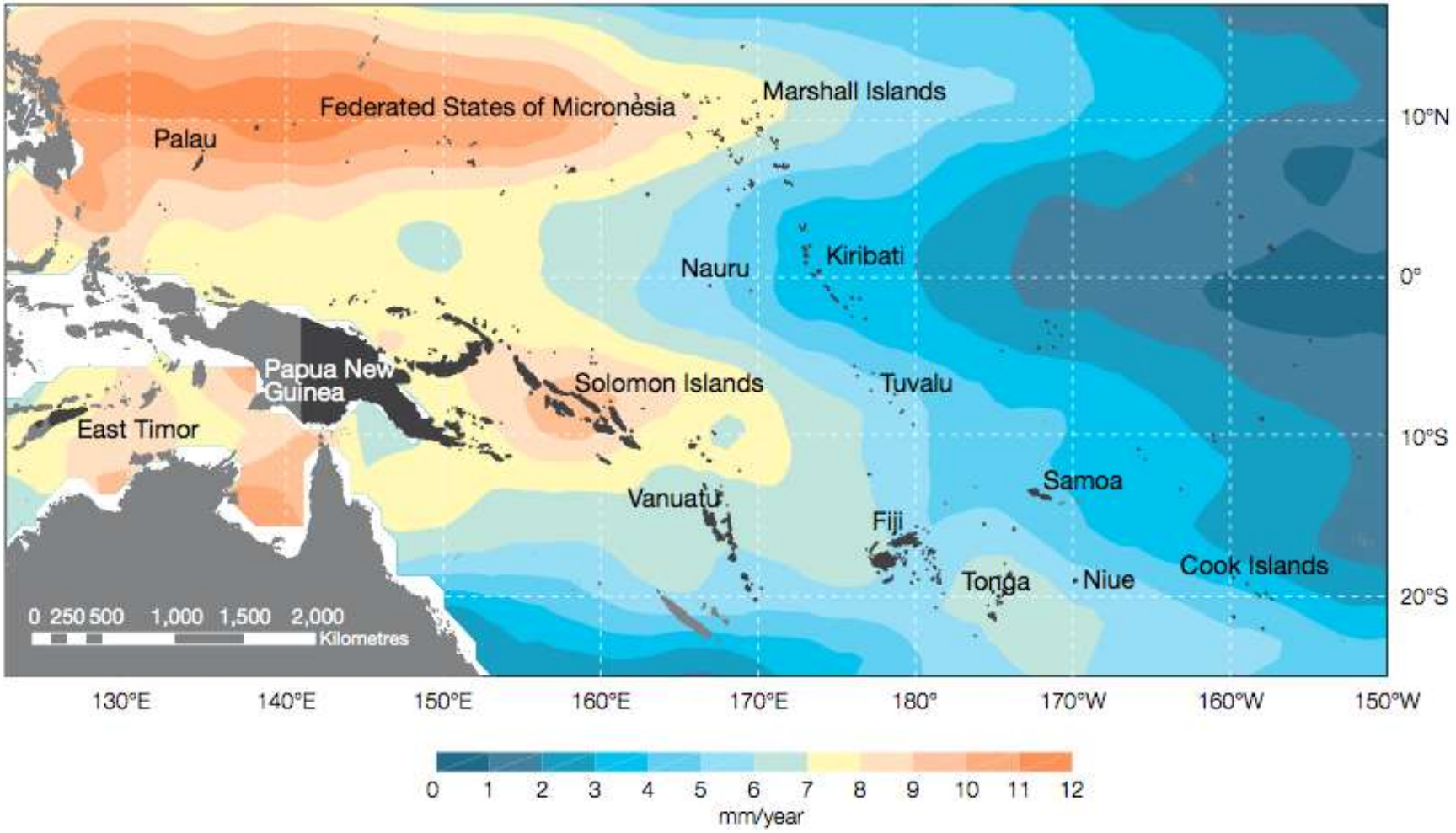
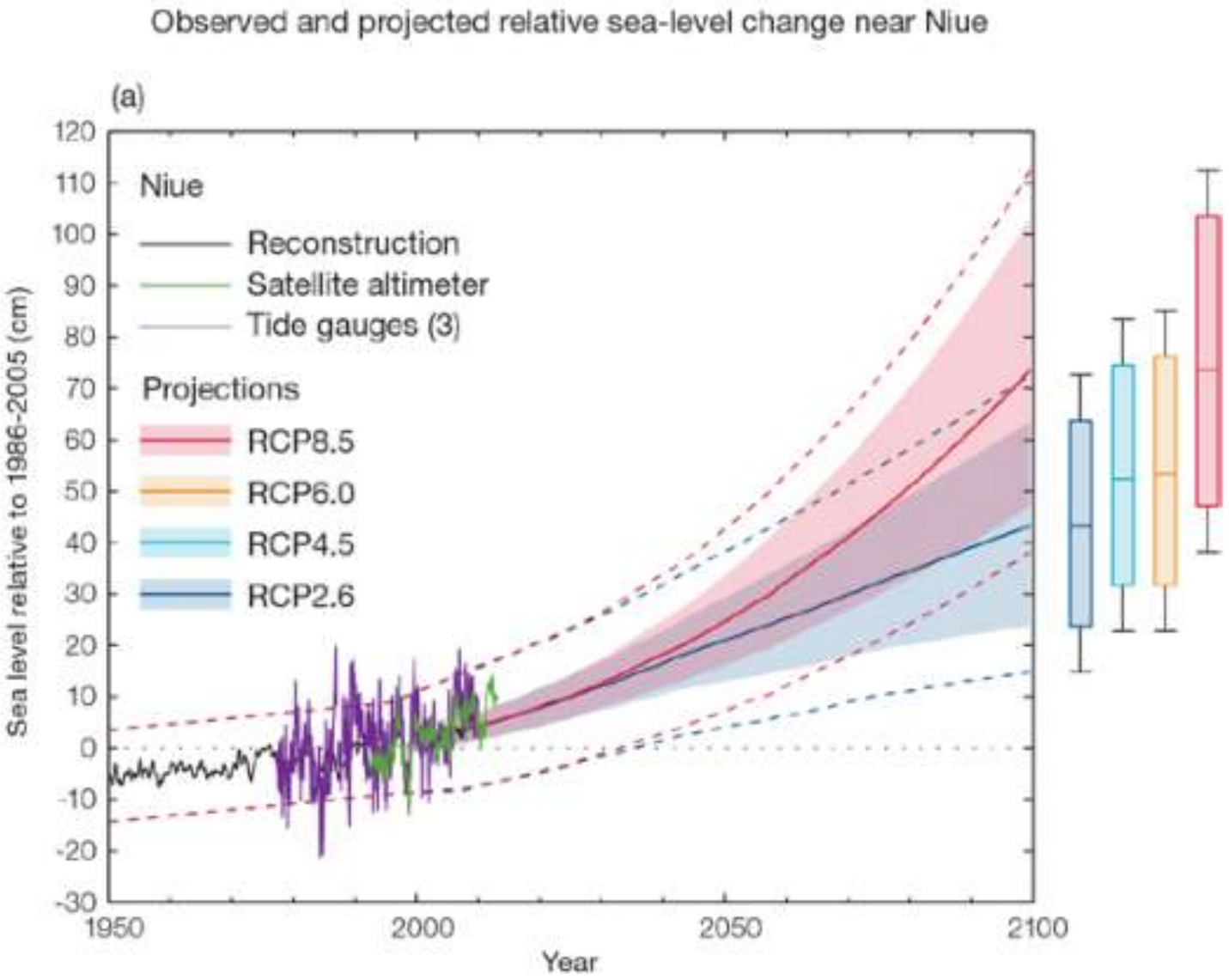


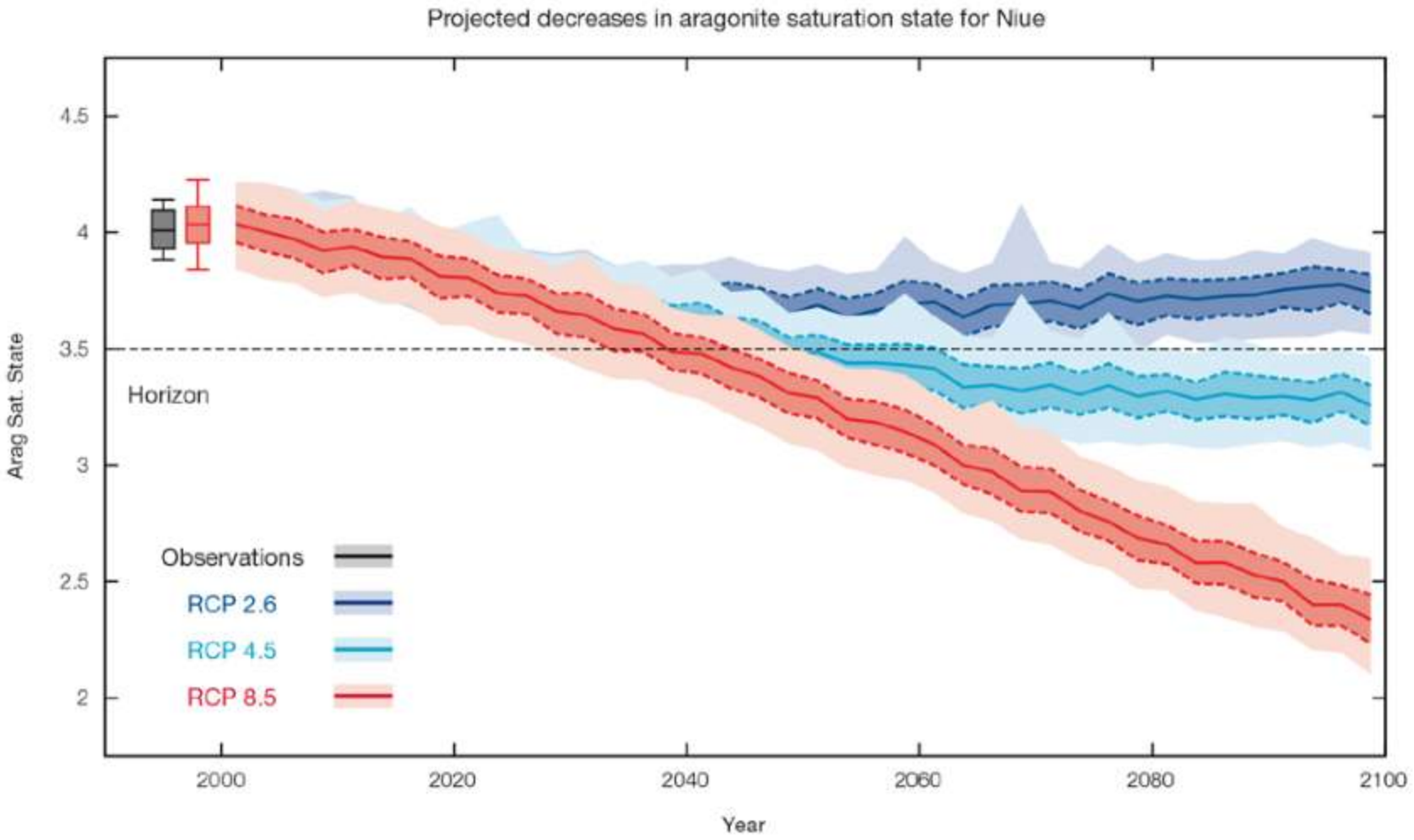
Figure 3.23: The regional distribution of sea-level rise measured by satellite altimeters from January 1993 through December 2009.

Sea Level Projections




ITEM NUMBER TWO - GLOBAL WARMING AND OCEAN RISE - ARE WE TAKING IT SERIOUSLY ENOUGH ?
PACIFIC FORUM

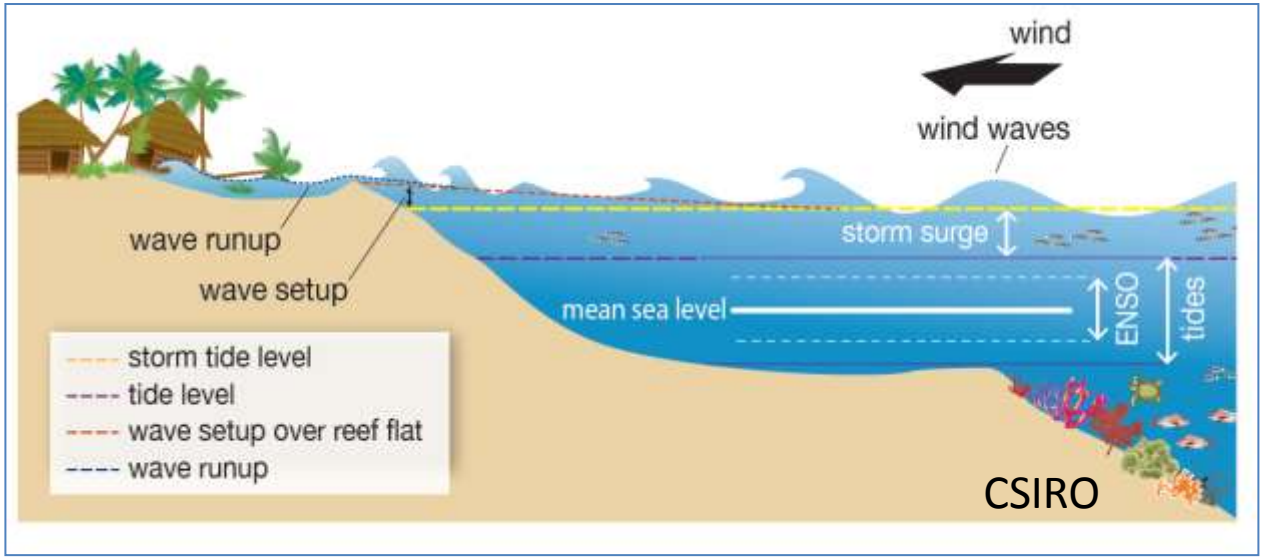
Ocean Acidification Monitoring



Coastal Adaptation

1. Monitoring (Modeling)
2. Sustainability
3. Legislative frameworks and policies
4. Gender
5. Coordination (Whole Island Approach)
6. Ecosystem based Adaptation
7. Effective Partnership and Coordination in a Whole of Island Approach
8. Beyond Coastal Adaptation

Extreme sea levels - Coastal inundation modelling



Coastal inundation risk depends on complex of factors including prevailing weather, tide, bathymetry and coastal geomorphology; compounded by climate change

- Better understanding of the different sets of physical processes that contribute to extreme sea levels and how they may change in the future
- Investment in Data Collection (Litar, weather, etc) as part of Adaptation
- Information on which to make sound investment decisions

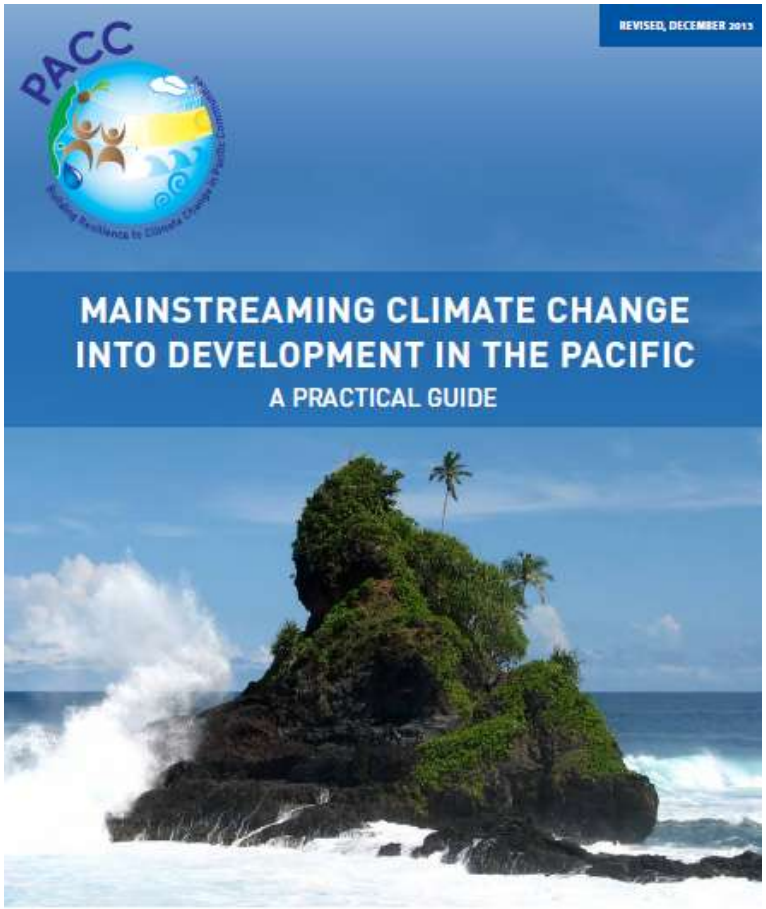
Ownership and sustainability

- Consultative and participatory Approach ensuring local ownership

Legislative Frameworks

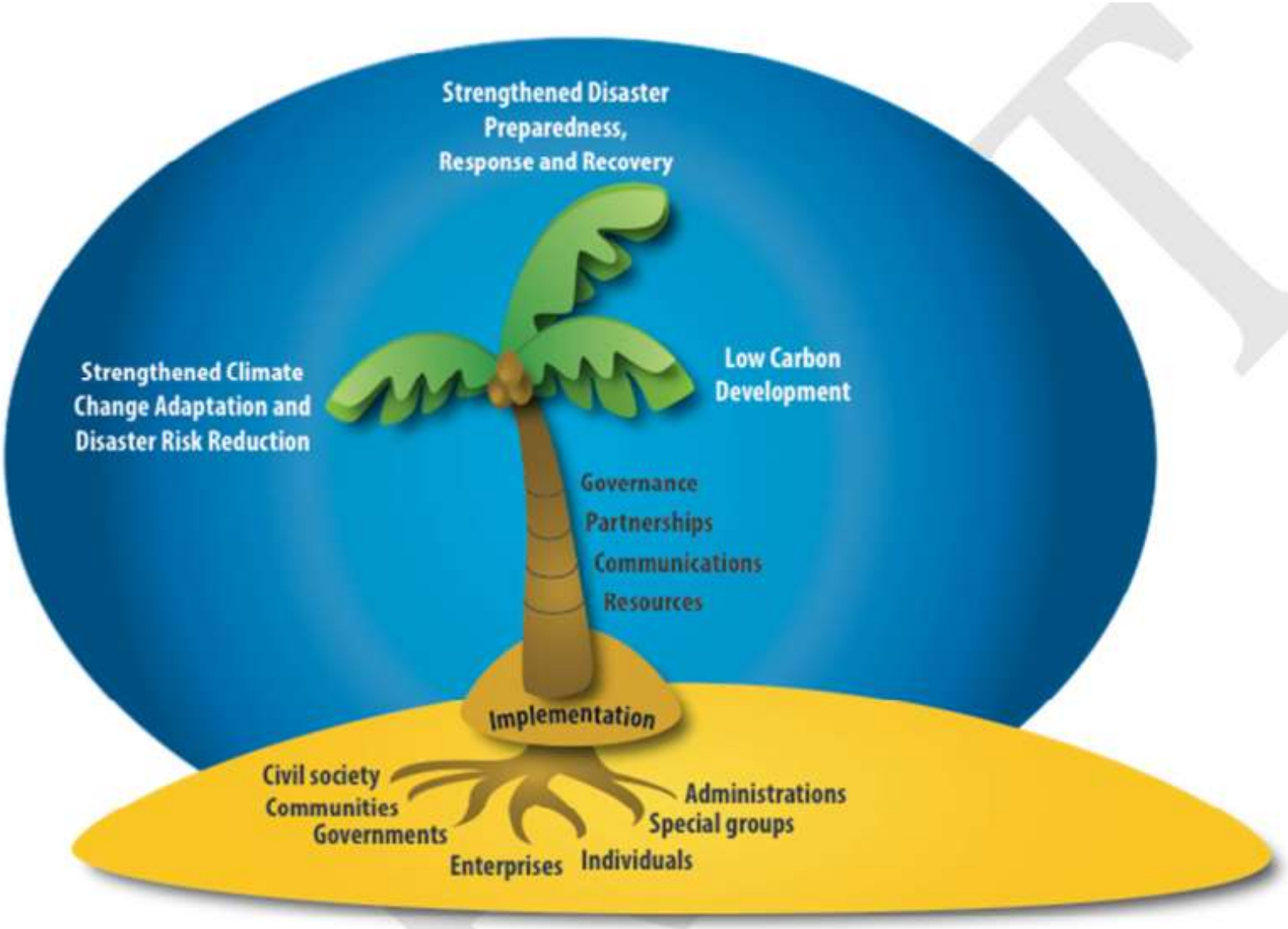
Policy mainstreaming:

- to strengthen the ability of institutional frameworks, policies and plans to take climate change risks into consideration
- to improve the capacity of key national government and community decision-makers to integrate adaptation measures in key decisions.



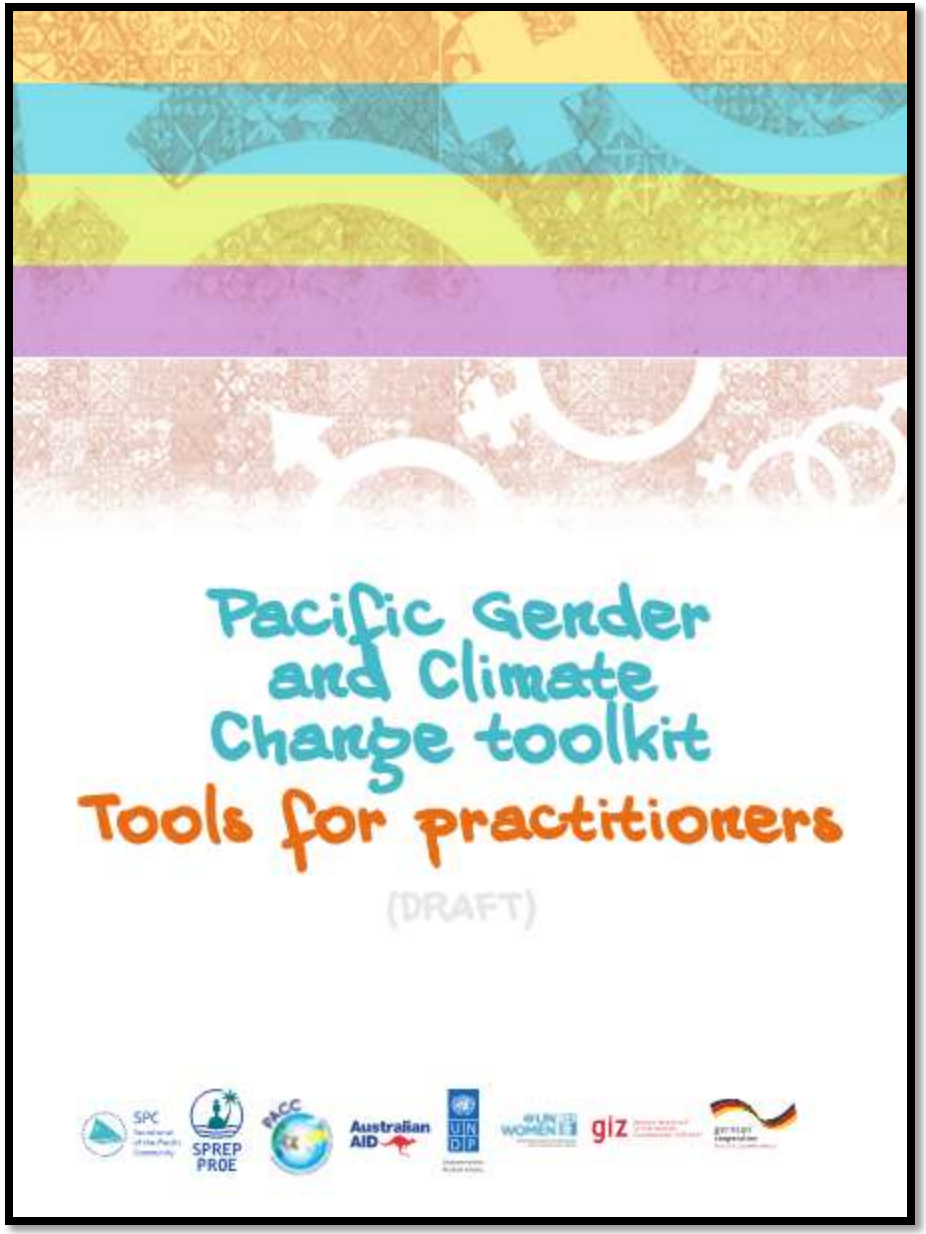
SPREP Secretariat of the Pacific Regional Environment Programme
UNDP
gef
Australian Aid

JNAP's to SRDP



Gender Integration

- Gender integration to adaptation is important
- Sharing of lessons learned is important
- Pacific Gender and Climate Change Toolkit – Tools for Practitioners

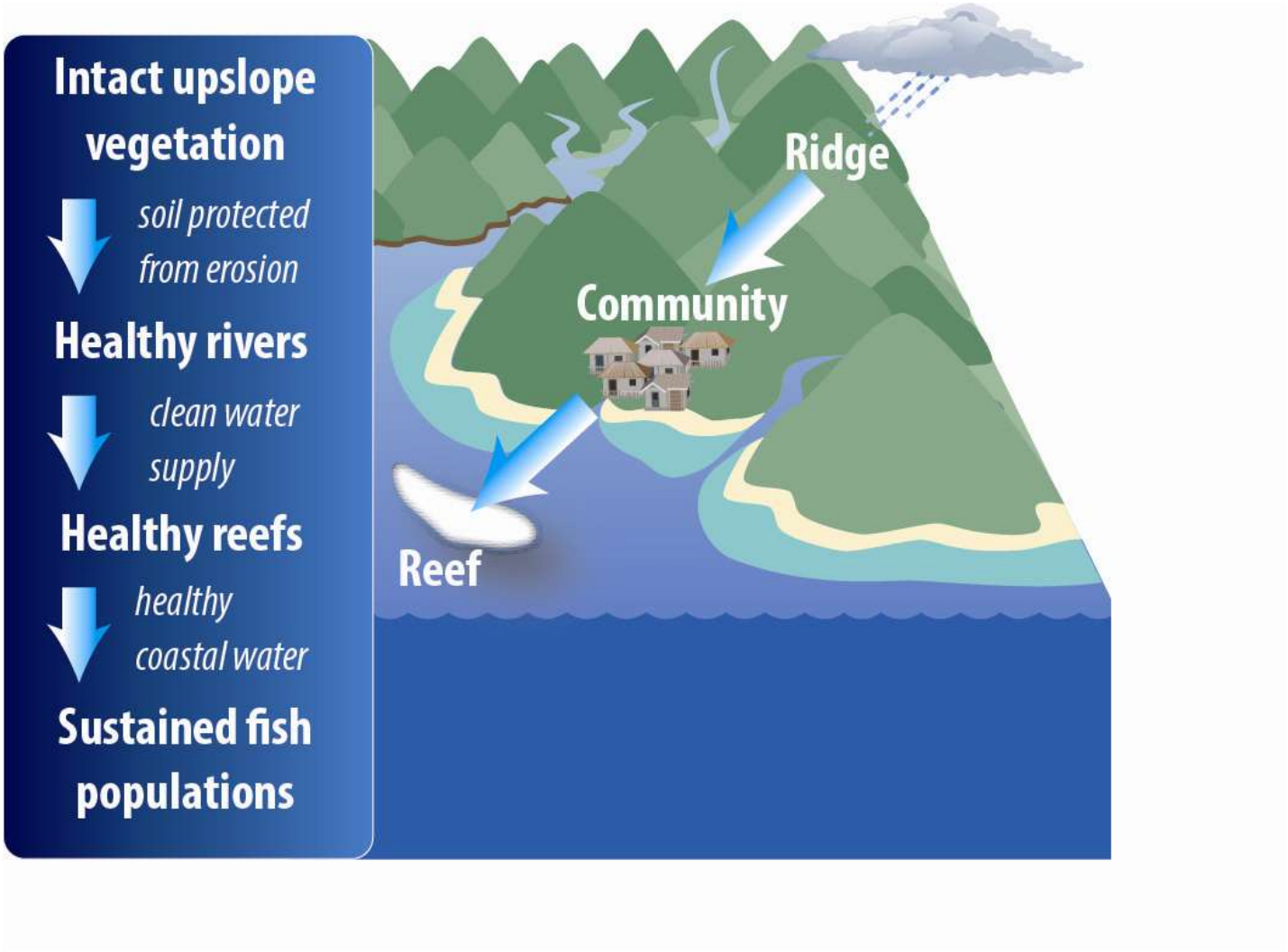


Ecosystem based Adaptation: Tools and Publications

- EbA toolbox & supporting information for Pacific Islands.
- Legal framework for EbA in the Pacific.
- Choiseul Province – full length vulnerability assessment.
- Coastal EbA projects with Samoa, Vanuatu and Kiribati. USAID water sector EbA work in Kiribati.
- Increasing interest from many countries across the Pacific.

Reports and more information at: www.sprep.org

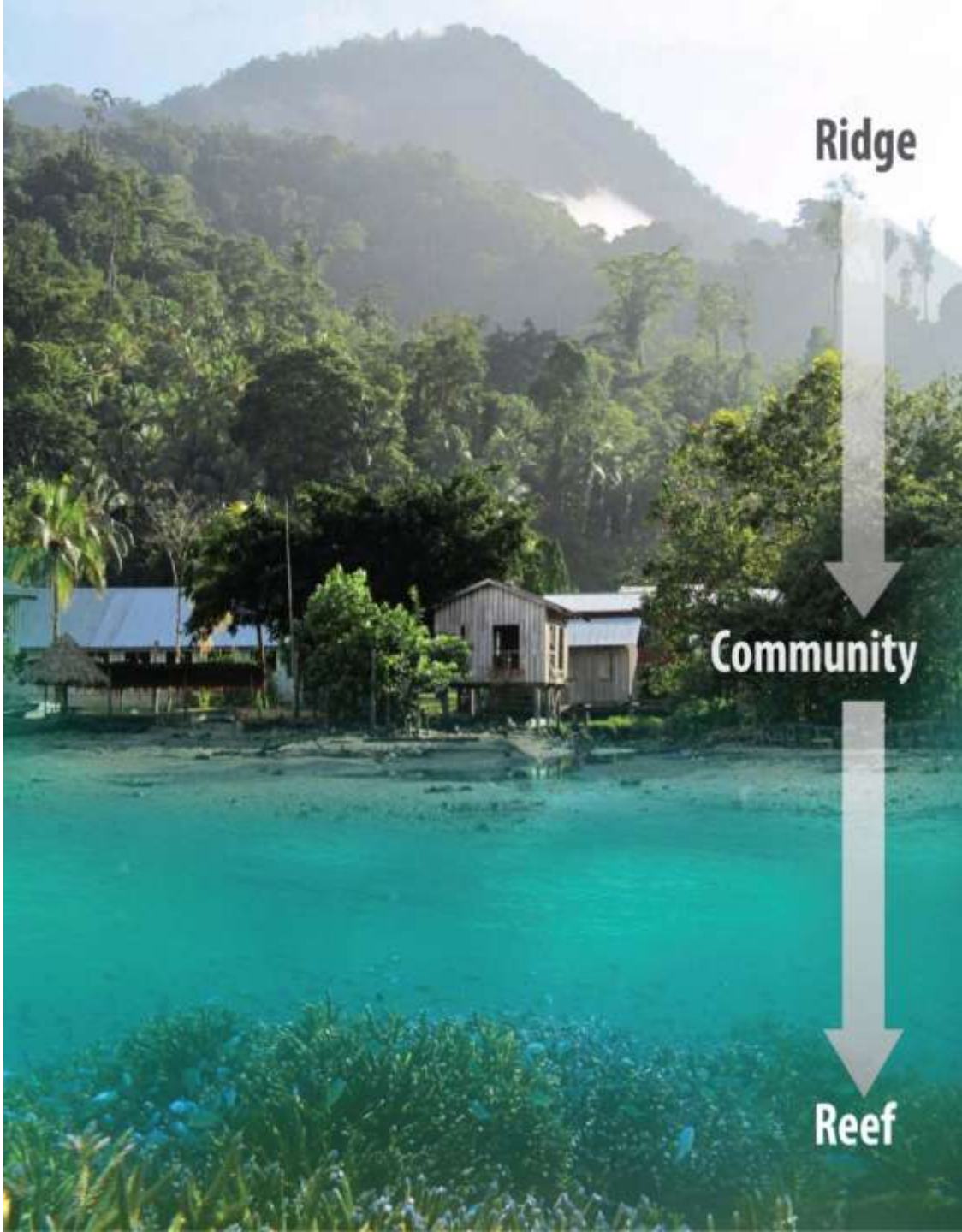
Ridge-Community-Reef



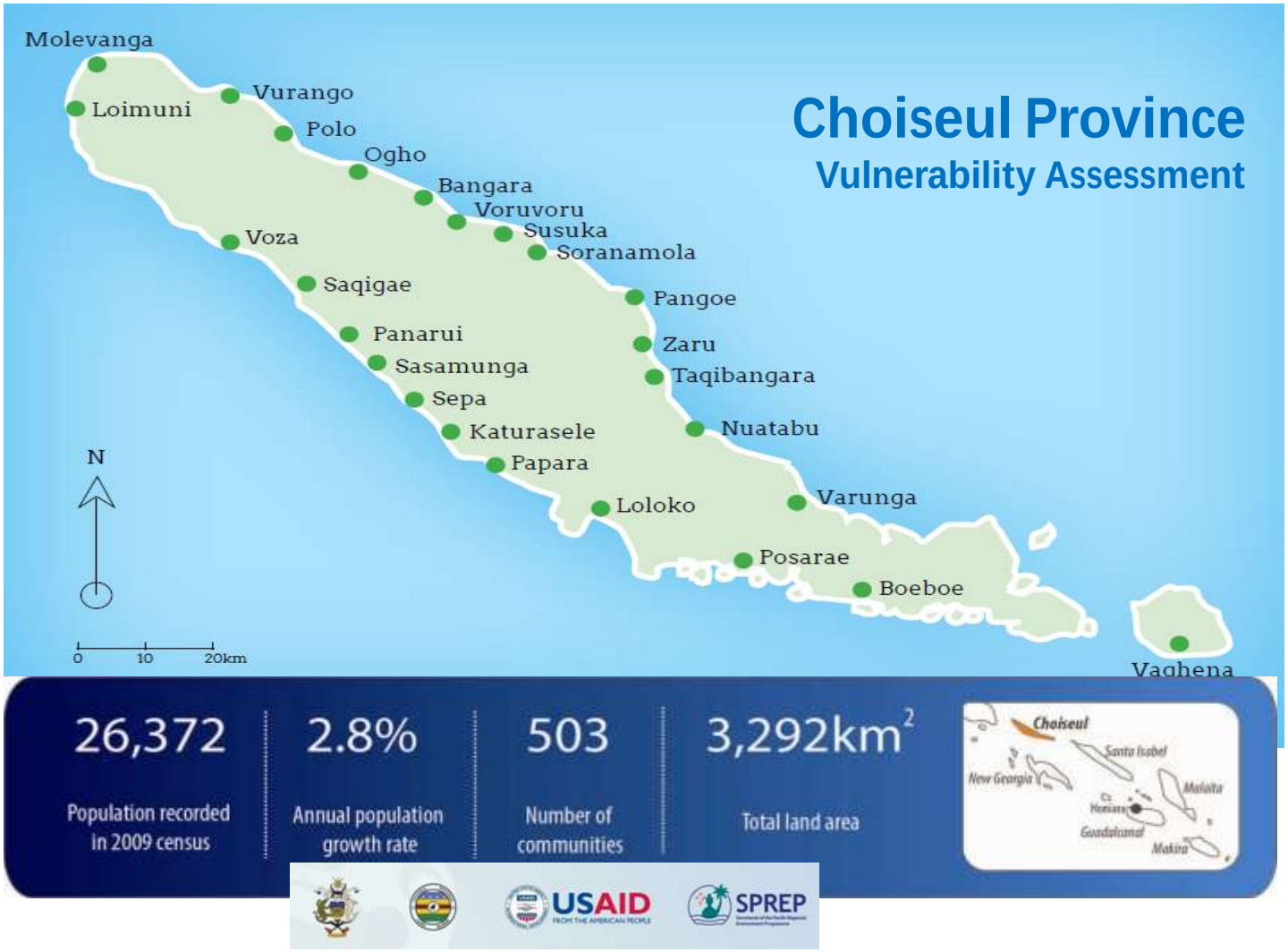
- Almost all Pacific communities are coastal. The terrestrial, freshwater and marine ecosystems they depend on are closely linked by the relatively small catchment areas that connect the mountains, coastline and reefs.

- Ridge to reef planning integrates multiple sectors including agriculture, environment, forestry and fisheries in order to protect community livelihoods.

- Tribal leaders of Choiseul have already decided to work towards a network of protected areas by agreeing to the Ridge to Reef Protected Area Network plan.



Effective Partnership and Coordination in a Whole of Island Approach

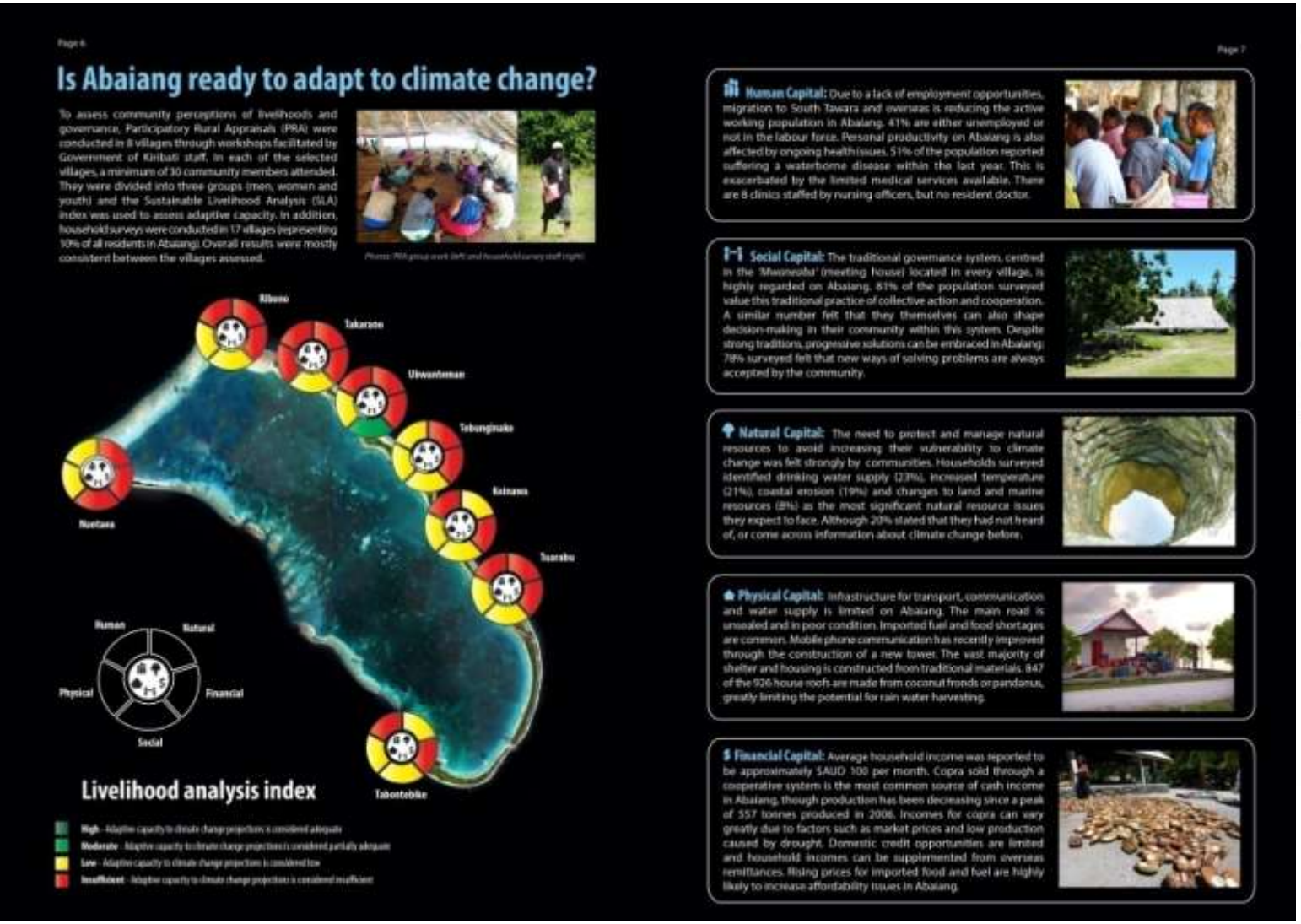


Source of income per household

Data collected by household socioeconomic survey of 10% of households

Abayang Whole of Island Approach

Integrated Vulnerability and Adaptation Assessment



Beyond Coastal Adaptation

Thank you