Enhancing Observations in Solomon Islands and the Region to support preparedness and adaptation in a changing climate

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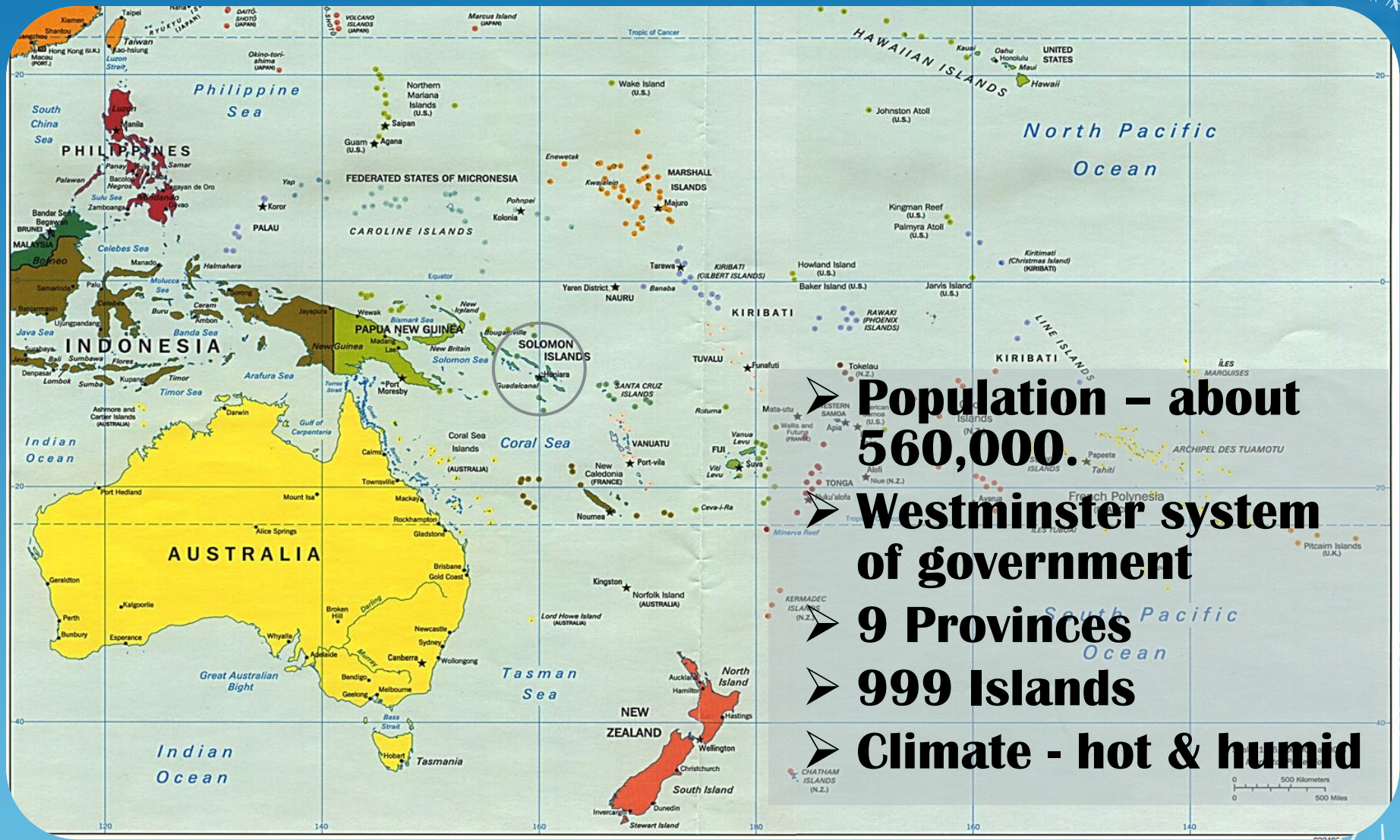
Presentation Outline

- Introduction
- Solomon Islands Observations network
- Solomon Islands Climate Risk
- Regional needs
- Summary
- Question & Challenge

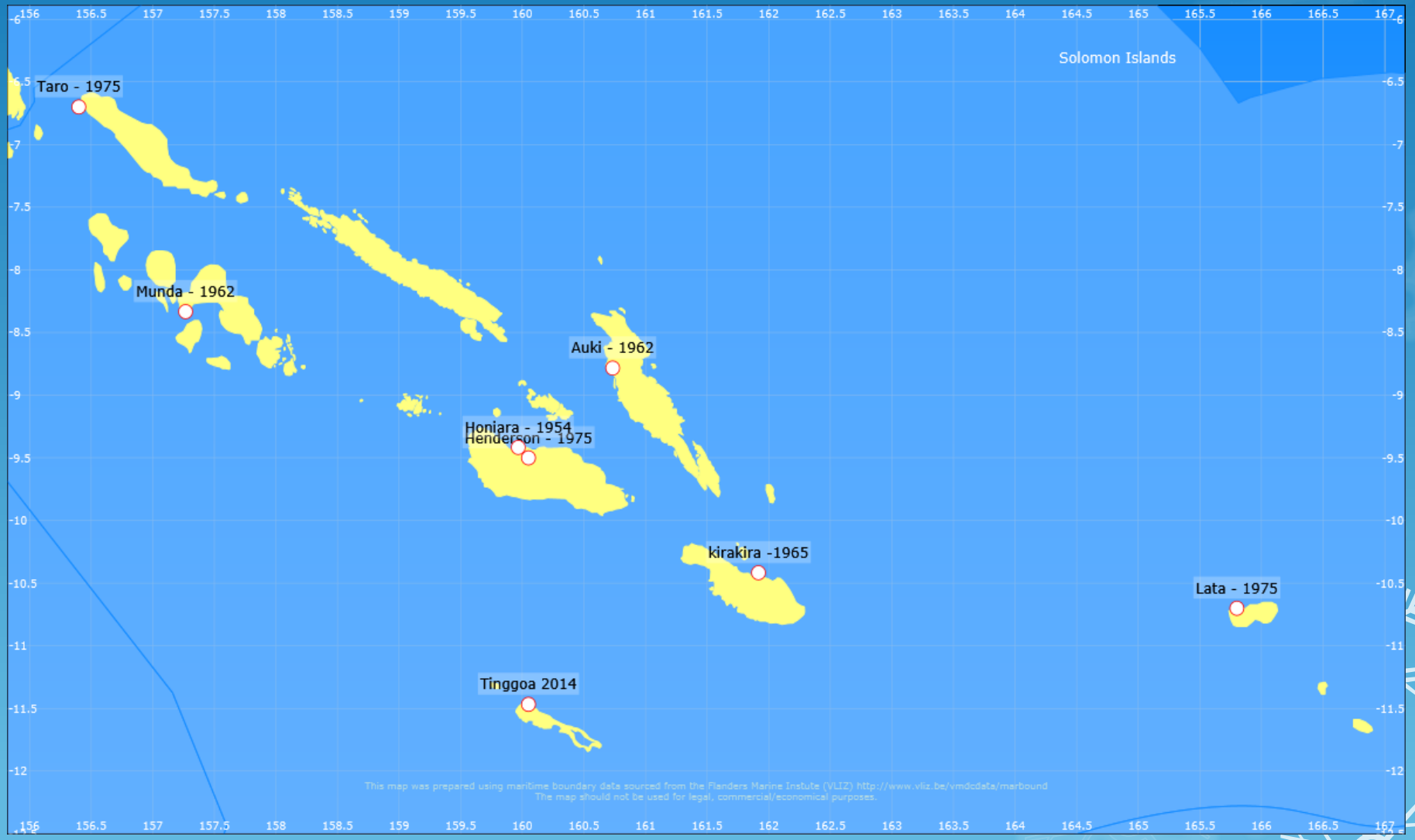
Introduction – Solomon Islands



- Population – about 560,000.
- Westminster system of government
- 9 Provinces
- 999 Islands
- Climate - hot & humid

Solomon Islands Observation Network

Distribution of current observation stations:

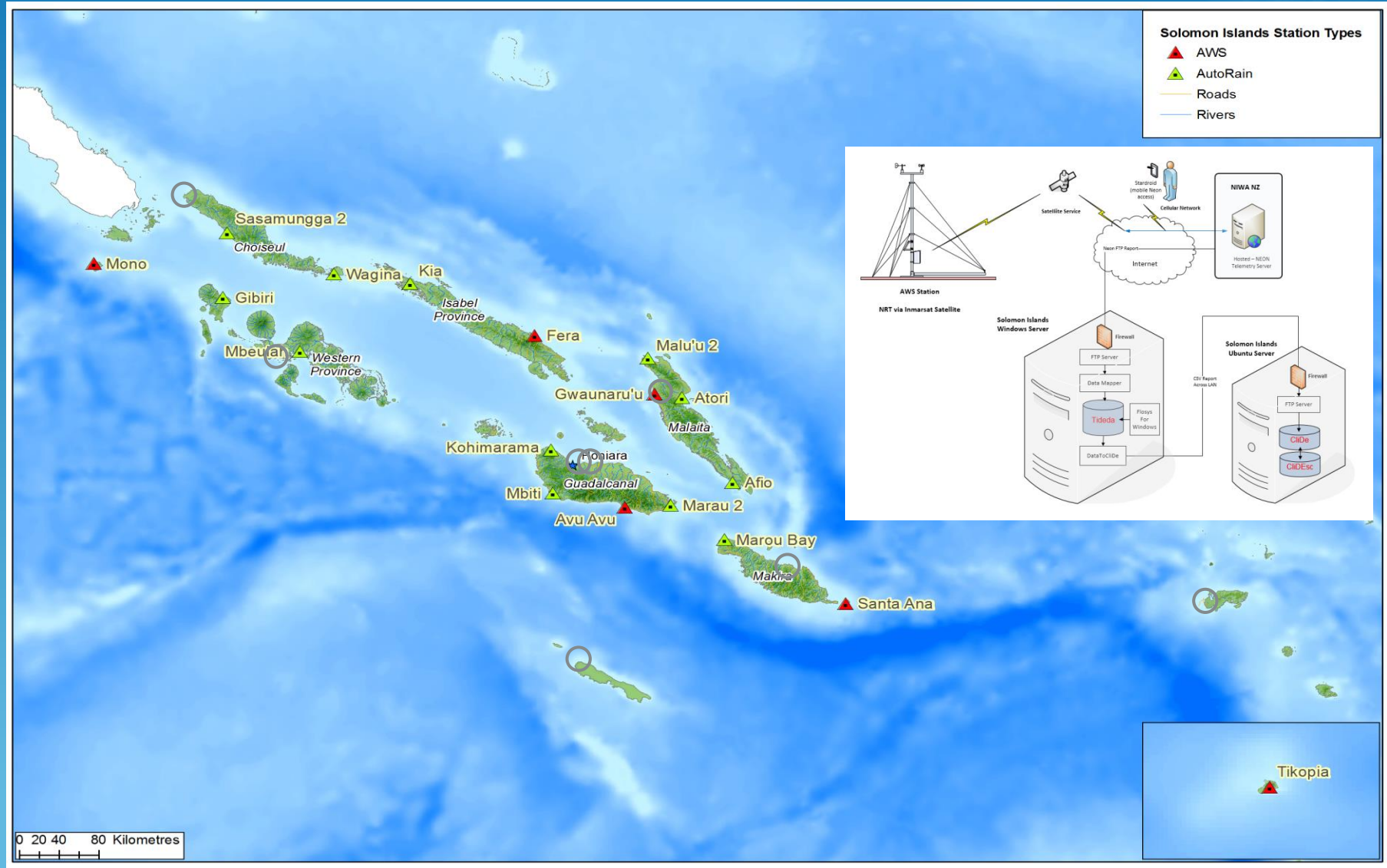


Solomon Islands Observation network

- Solomon Islands is highly vulnerable to climate change impacts and variabilities – lack of data
- National Government policy – to strengthen National Meteorological observations network – well distribution of data collection.
- To provide the data required to meet the needs for:
  - Climate system monitoring; Climate change detection and attributions.
  - Improve research understanding, modeling, and prediction of the climate system.
  - Application to the GFCS priorities:
    - ✓ Health sector - Malaria
    - ✓ Agriculture – food security
    - ✓ Disaster Risk Reduction -
    - ✓ Water Resources - drought monitoring and prediction
    - ✓ Infrastructure – buildings, bridges etc.
    - ✓ Energy – renewable energy

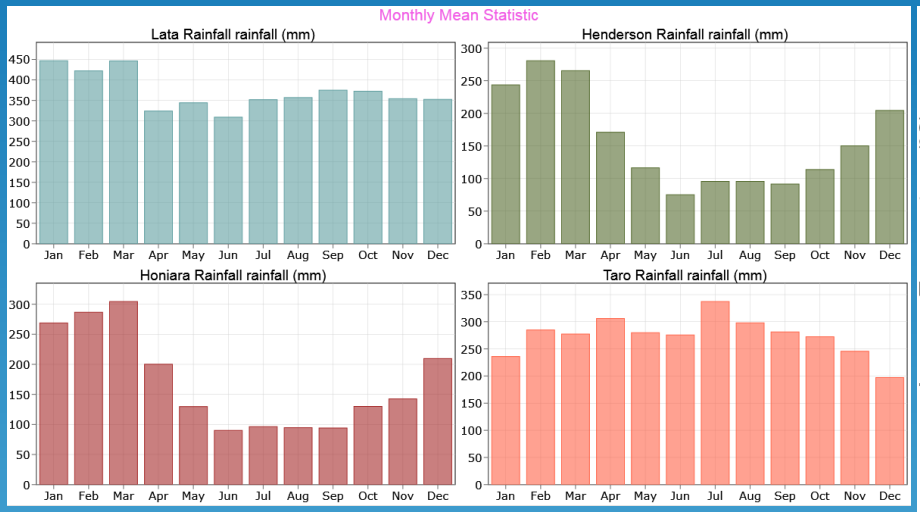
Solomon Islands Observation network

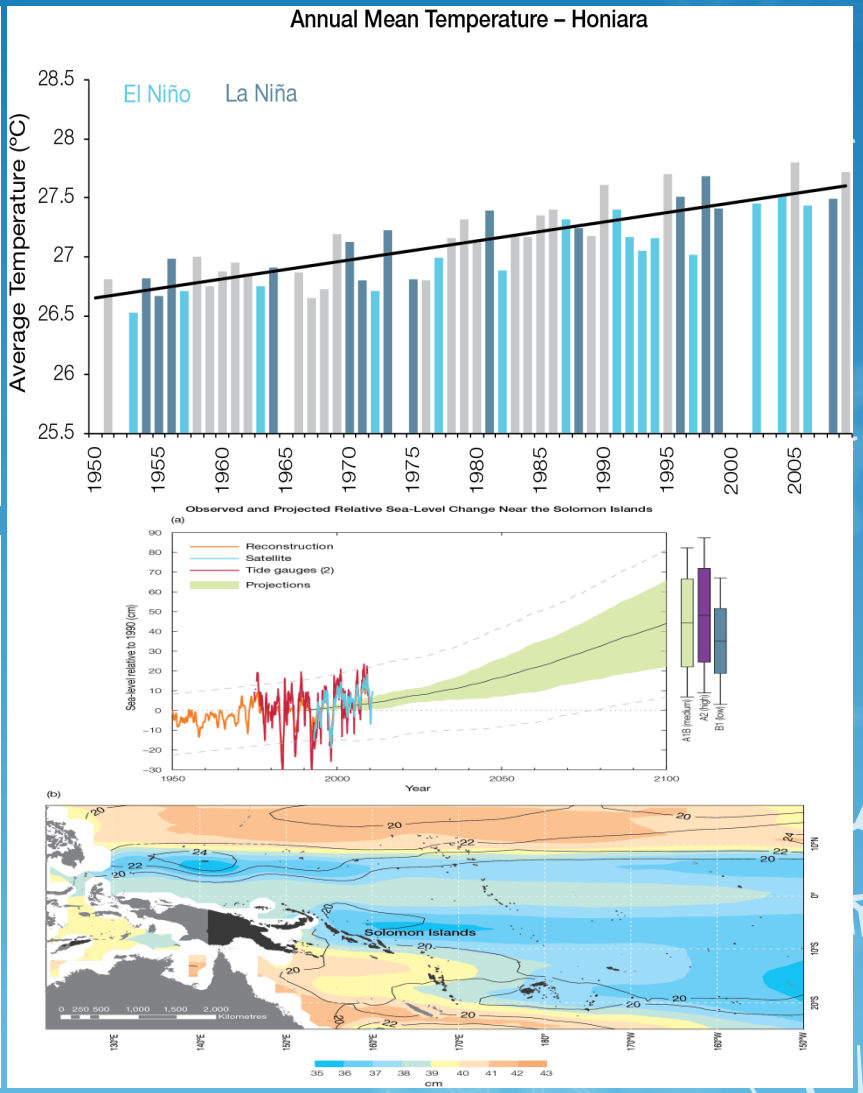
Distribution of new observations stations:

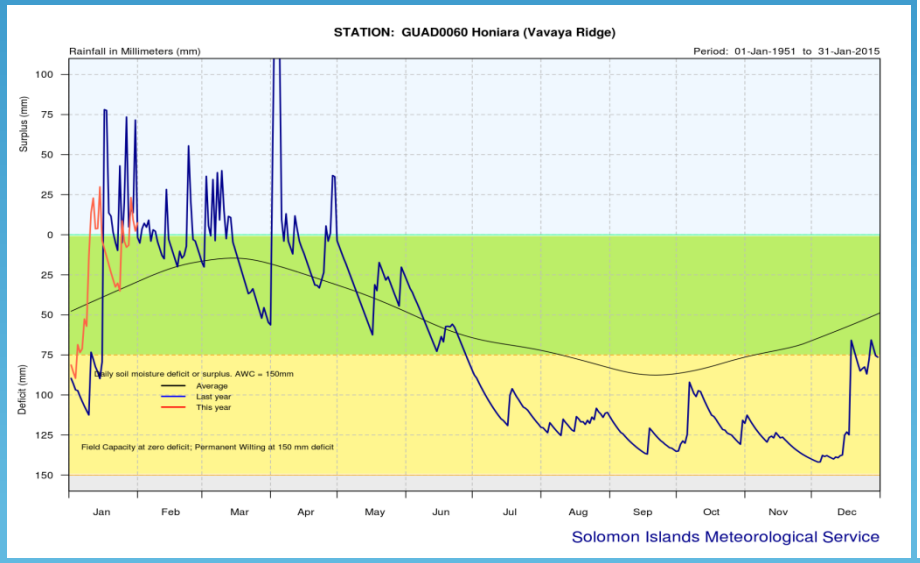


Solomon Islands Observation network

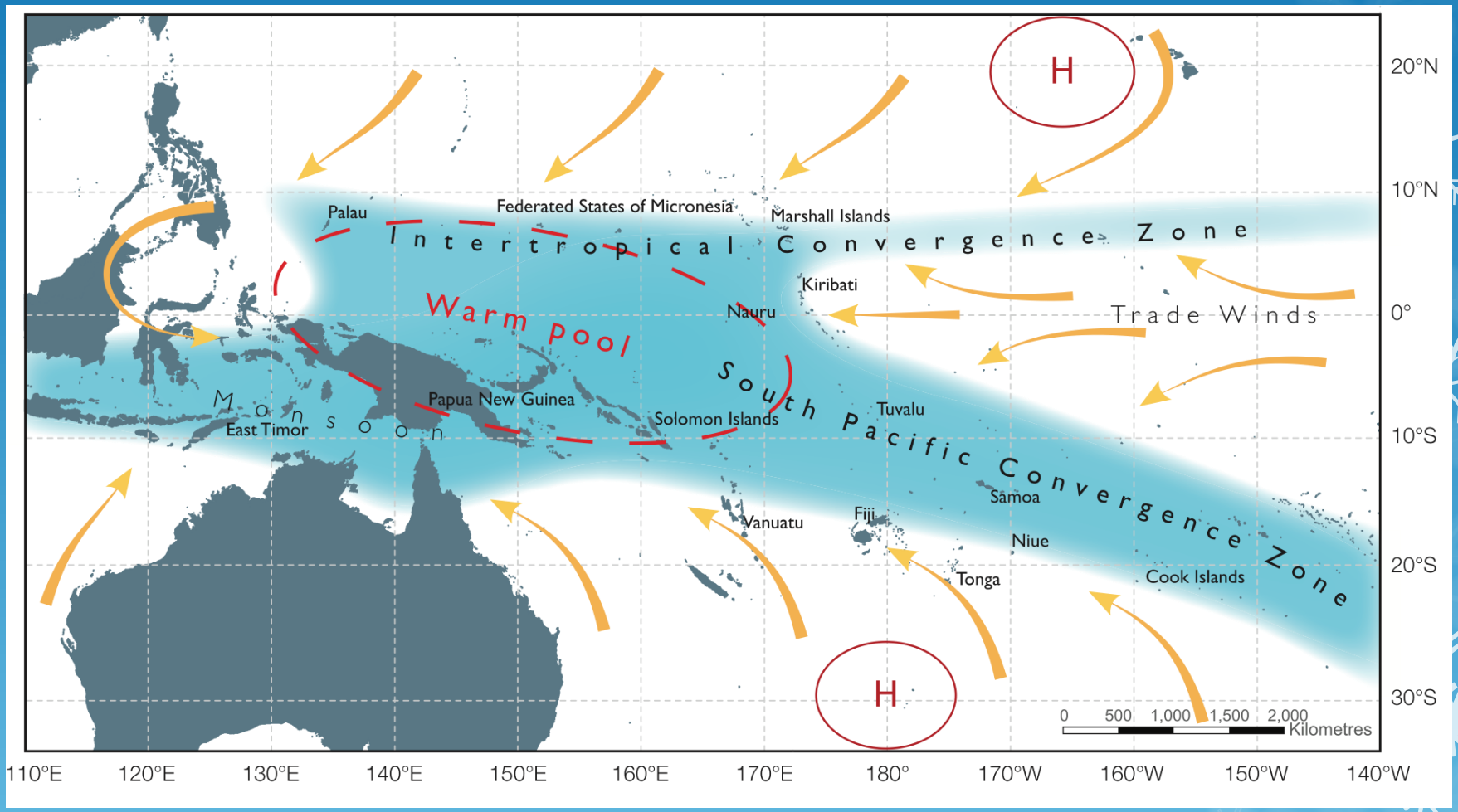
Climate Products:







Solomon Islands Climate Risk



The average positions of the major climate features in November to April. The arrows show near surface winds, the blue shading represents the bands of rainfall convergence zones, the dashed oval shows the West Pacific Warm Pool and H represent typical positions of moving high pressure systems – PCCSP, 2011

Solomon Islands Climate Risk

- **Increase in Air temperature:**
  - lead to thermal expansion in the sea (sea level rise)
  - heat stress to bio-diversity
- **Extreme weather events:**
  - Tropical Cyclones:
    - ✓ Sea surges
    - ✓ Flooding
    - ✓ Strong winds
  - Heavy Rainfall: severe flooding\flash flooding, cause damage to infrastructure and agriculture and; loss of life
  - Drought – affect agriculture, water resources etc.

Solomon Islands
Climate Risk

- SEA LEVEL RISE - AGRICULTURE AND FOOD SECURITY
- WATER SUPPLY AND SANITATION – SETTLEMENT, HEALTH, EDUCATION, AWARENESS AND INFORMATION

Regional Needs

- **Pacific Island Countries are considered among the most vulnerable to the consequences of human-induced climate change, in particular, global warming and the potential threat associated with extreme weather events and sea level raise.**
- **The region need improved observations of climate will enable provision of information and forecasts which greatly assist the governments and national communities of member countries to prepare for the season-to-season and year-to-year variations of the climate associated with El Nino and other natural phenomenon, as well as to detect and better prepare for long-term, human-induced climate change**
- **The Pacific Island countries currently face significant challenges associated with natural climate variability, including droughts, tropical cyclones, floods, sea level variations, and changes in Ocean temperatures.**

"Resolution concerning the improvement of Global Climate Observing Systems in the Pacific Region – GCOS Pacific Islands Regional implementation workshop on Improving Global Climate Observing Systems, Apia, Samoa, August 2000"

Summary

- Lack of observation systems in Solomon Islands.
- Need strategic approach to regional observation systems in the Pacific Island Countries.

- **Question?**
  - How can national and regional needs on systematic observations can be addressed in Pacific Island Countries (PIC).

- **Challenge:**
  - To identify best approach to support national and regional observation systems in the PIC.