WMO Consultation on climate data homogenization

Use case from: Pacific Regional Climate Centre Network
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Date: *16/11*

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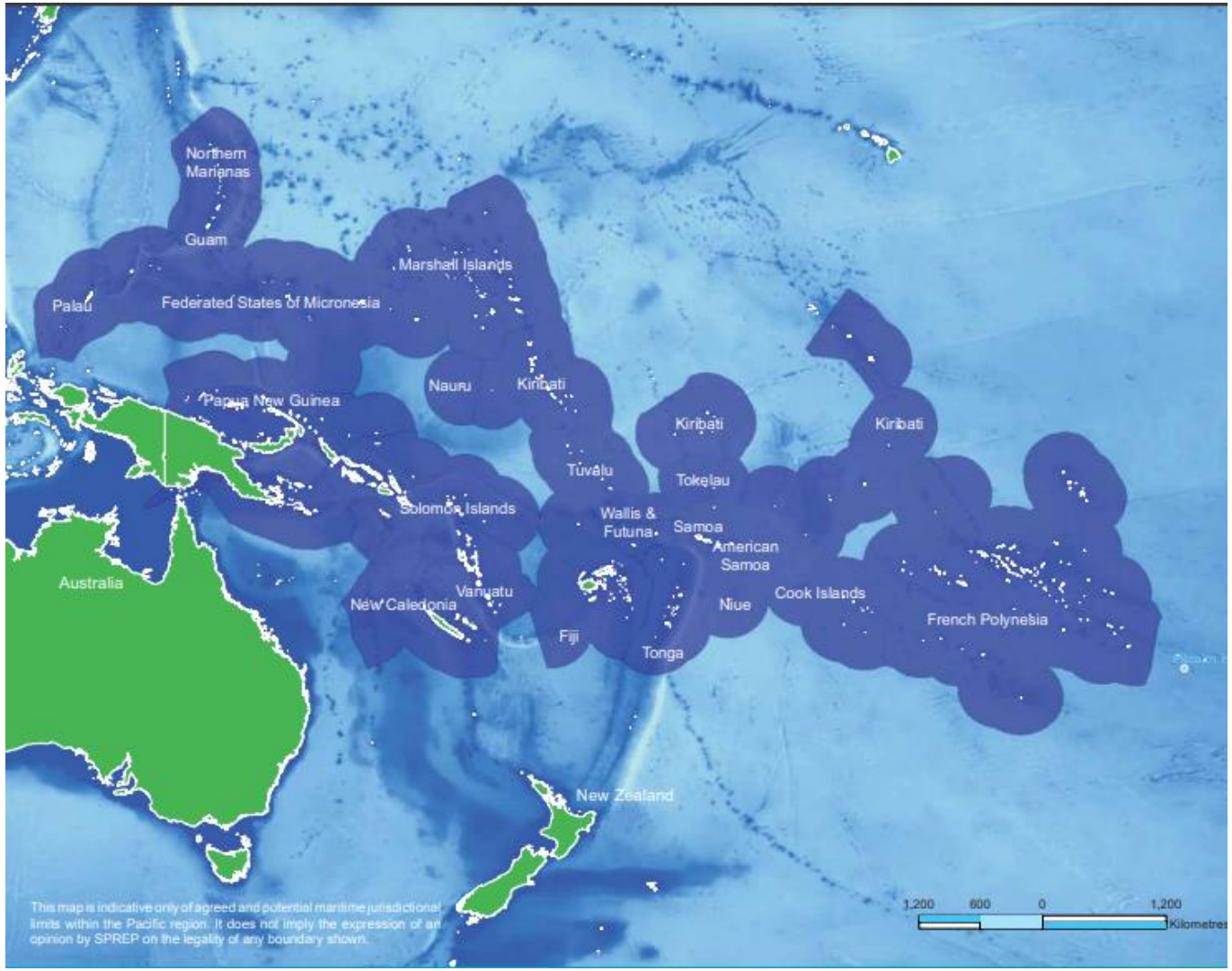
Homogenization: region of responsibility



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Homogenization: data and methods

Data processes

Variables

- ✓ Precipitation, Tmax, Tmin, MSLP?
- ✓ Daily undergoes QA/QC, but homogeneity testing only undertaken at monthly level

Data

- ✓ Station observations and metadata
- ✓ ERA5 sometimes used as reference series
- ✓ Also HadISST1 1° or similar

Methods

- ✓ RHtestV4, RHtestV5, Prodige
- ✓ Detection and adjustment using reference series where possible (where neighbouring stations not available, use SST, DTR)
- ✓ Precipitation tested but not adjusted

People involved

- ✓ Nicholas Herold and myself (Australian Bureau of Meteorology), Earth Sci… New Zealand in the past

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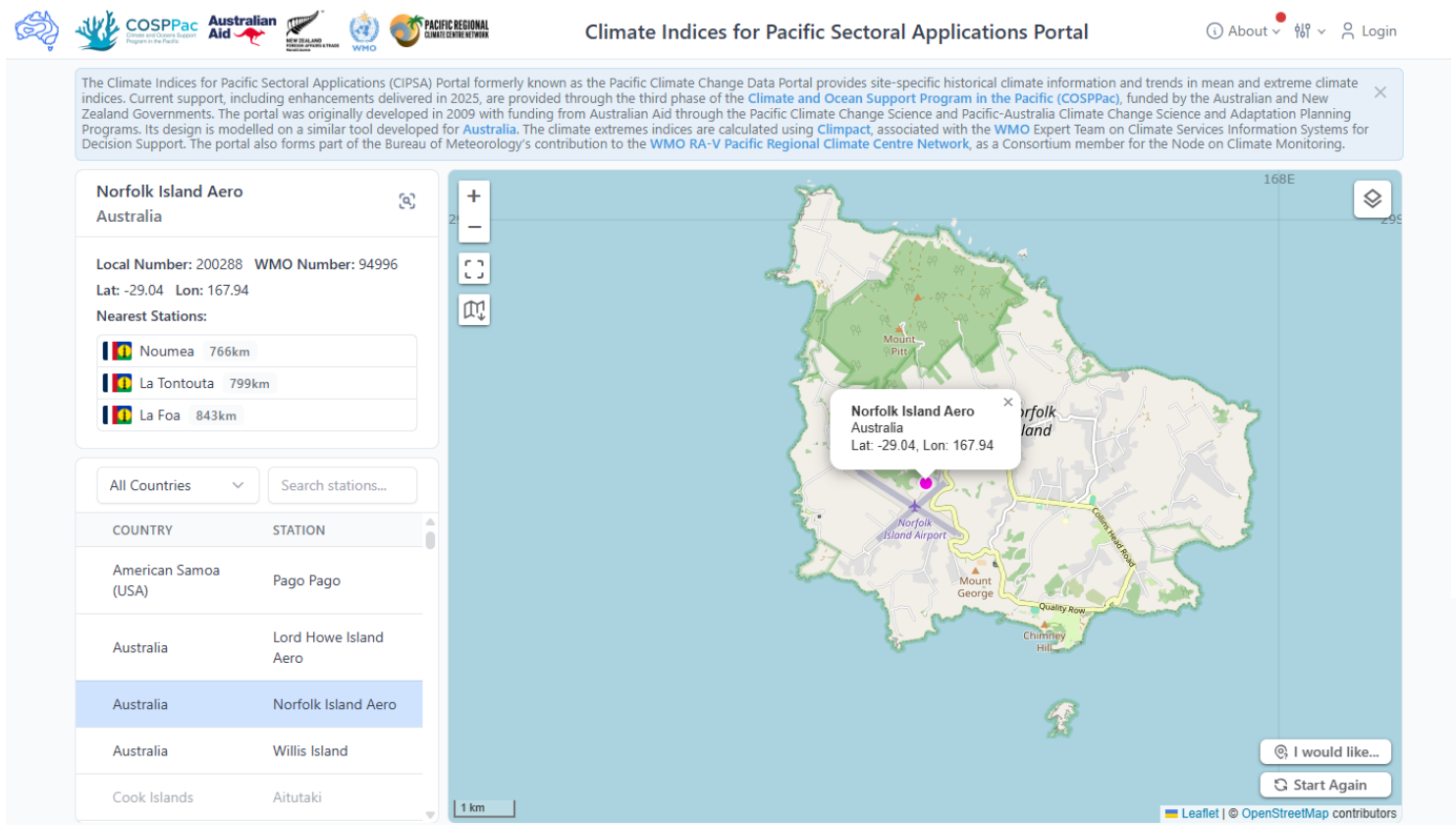
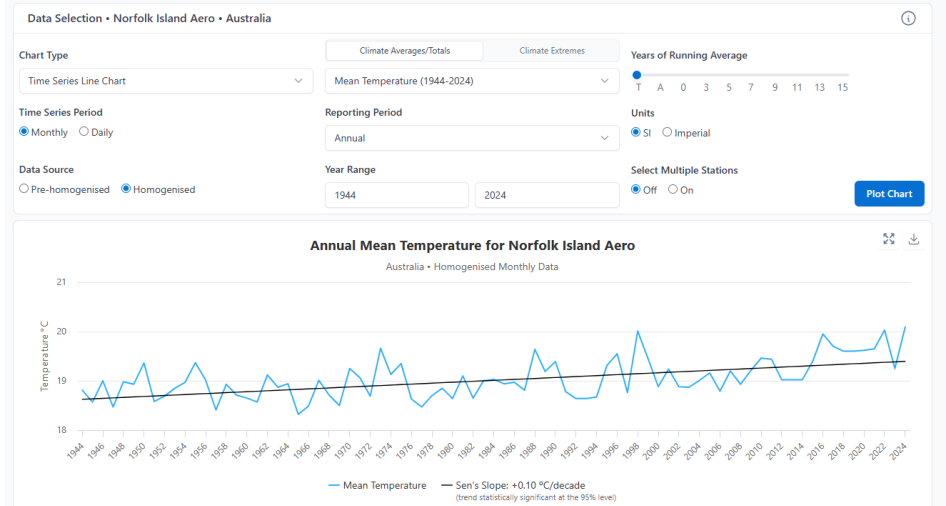
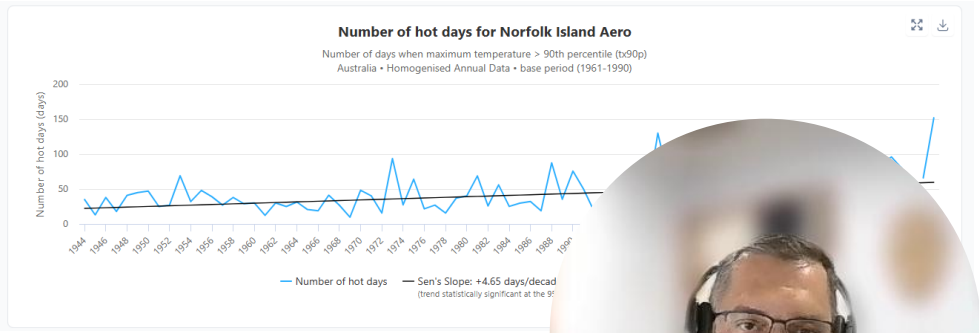
Homogenization: products and services







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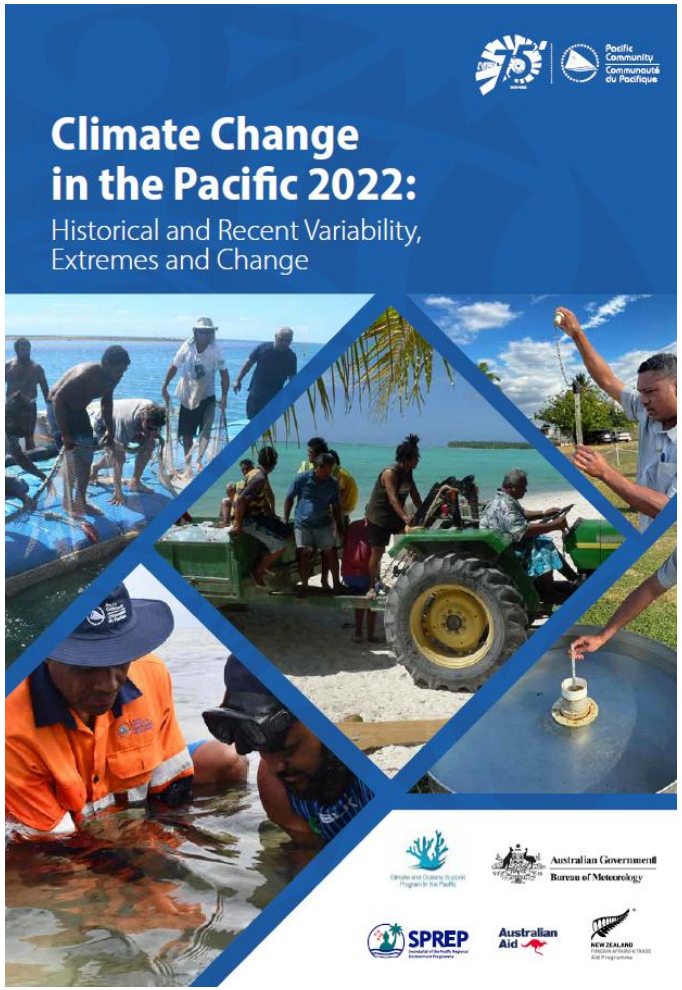
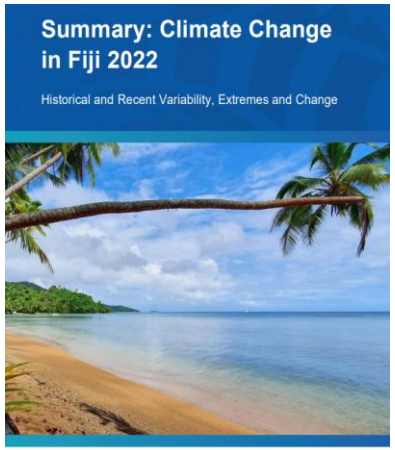
Homogenization: products and services



- Peer-review Pacific Island climate science report containing country scale historical climate and ocean variability and trends information
- Update of PCCSP *Climate Change in the Pacific: Scientific Assessment and New Research, Volume 2, Country Reports* (2011) and PACCSAP Program *Climate Variability, Extremes and Change in the Western Tropical Pacific: New Science and Updated Country Reports* (2014)
- Country specific chapters for program partner countries and territories.
- Country chapters designed to be standalone reports



COSPPac

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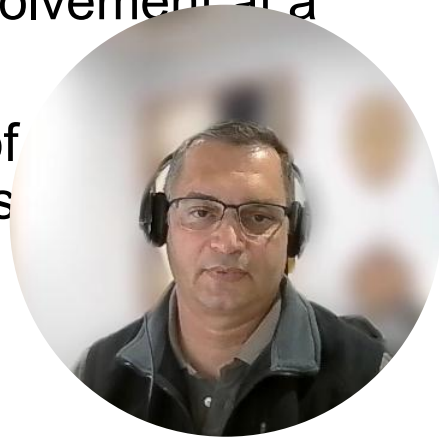
Homogenization: projects, needs and issues

Projects

- ✓ COSPPac3 (Climate Indices for Pacific Sectorial Applications activity)

Needs and Issues

- ✓ Insufficient attention with regards to QA/QC at a CDMS level
- ✓ Address decline in quality and quantity of station observations
- ✓ Address absence of metadata
- ✓ Need stable funding to undertake homogenisation and indices generation work going forward
- ✓ Need to determine level of involvement at a national level
- ✓ Need more/better promotion of policy and community level (vs produce scientific papers)



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