

**3<sup>rd</sup> Workshop on Climate Trends and Variability in Oceania  
(APN 2003-11)**

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### **APN funding:**

US\$ 31,685

### **Participating countries:**

Participants from the following countries were funded: Australia, Cook Islands, Fiji, French Polynesia, New Caledonia, New Zealand, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. Participants from USA were funded by the National Oceanic and Atmospheric Administration's (NOAA) - Global Climate Observation System (GCOS) program.

Representatives of the APN, Dr. Linda Stevenson and Mr. Martin Rice (Programme Managers, APN Secretariat), were funded by APN directly.

### **Brief introduction and background:**

Oceania occupies a large portion of the Pacific Basin, and climate and ocean/atmosphere interactions of global significance occur here on annual to decadal time-scales. These include the El Niño-Southern Oscillation (ENSO), and the Interdecadal Pacific Oscillation (IPO), an ENSO-like variation which modulates climate on time scales of two to three decades, which cause significant climate change in parts of Oceania and beyond. The aims of this workshop are to provide methods and techniques, and to develop a simple database to document and store metadata within Oceania countries, and explore viable options for a regional climate information system. The workshop continued the steps towards enhancing both regional and national capacity for Oceania countries to determine and understand metadata and information systems. There was wide involvement of Pacific Island Countries and national meteorological services, in collaboration with the South Pacific Regional Environment Programme (SPREP) and the World Meteorological Organization (WMO) Sub-Regional Office in Apia.

### **Outline of activities conducted:**

The workshop had three parts. Available country metadata information was presented emphasising storage capabilities, and updating climate trends. The Bureau of Meteorology (Australia) and NIWA (New Zealand) provided background and technical methods for metadata compilations and storage. This focussed on introduction and training in using the metadata database. Climate trends were updated to include data up to 2002. The following specific activities took place during the workshop:

- Background information on metadata requirements for global change research;
- An assessment of metadata capacity, including storage capacities;
- Background information and technical training for metadata compilation, documentation and interpretation;
- Updating of long-term climate observations for trends in temperature, rainfall and atmospheric circulation to determine country and regional climate trends and variability;

- Preparation of a publication on metadata and climate trends;
- Discussion of the application of these results to national human dimensions programmes on climate change and variability;
- Development of a plan to contribute to useful and usable regional climate information services for decision support purposes; and
- A report will be prepared on the results, further collaboration, and recommendations.

A training manual, software and CDROMs will be provided to all the participants. Following the technical sessions, participants were given the opportunity to explore how the creation and maintenance of comprehensive climate data sets (including appropriate metadata) will contribute to the emergence of a regional climate information centre for Oceania.

#### **Outcomes and products:**

- Development of metadata, including simple PC-based software within the region to support global change and variability research;
- Continuation of a programme to assess and monitor local and regional climate;
- Improvement of local capacity for the assessment of historical climate in Oceania states, with improved climate monitoring to improve the quality of existing climate data, which then can be readily used in global change research;
- Development of closer collaboration amongst climate researchers in the region, and updating of reports on observed climate change which will provide direct input into the human dimensions of climate change that will assist countries making policy-relevant decisions in Oceania; and
- Planning for a regional climate information service for Oceania.

#### **Future directions and follow-up work:**

- Recommends the creation of a simple, easily-maintained, user-friendly local climate database system that meets the needs of any small country;
- Encourages Pacific Island Countries to complete their contributions to the GCOS surface reference network archive at the World Data Centre-A at NOAA;
- Recommends the pursuit of planned and proposed initiatives in the context of PI-GCOS for historic data rescue initiatives;
- Encourages countries to actively participate in the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4) process, including nomination of authors and reviewers and ensuring that Pacific Island data and issues are addressed in studies that contribute to the AR4;
- Develop a university-based curriculum, focussed training programmes and educational materials relevant to Pacific Island Countries by appropriate institutions in the region; and
- Encourage agencies to enhance collaboration with the media to improve the communication and understanding of climate information in the region.