

CBA2010-05NSY-Lorrey

Improving Pacific Island Meteorological Data Rescue and Data Visualisation Capabilities through Involvement in Emerging Climate Research Programmes

The workshop on “Improving Pacific Island Meteorological Data Rescue and Data Visualisation Capabilities through Involvement in Emerging Climate Research Programmes” was held in Auckland, New Zealand from 27-29 September 2010. The workshop saw participants from Australia, Europe, New Zealand, U.S.A., South America, and the island nations of the southwest Pacific in attendance. The attendees engaged on current issues of data rescue and the use of the data in new visualisation platforms for climate and weather research. An overarching theme at the workshop was to garner support for the Atmospheric Circulation Reconstructions across the Earth (ACRE) initiative, which is feeding daily weather observations into new surface pressure-based re-analysis data sets (the 20th Century Re-analysis [20CR] and Surface Input Reanalysis for Climate Applications [SIRCA]). The ACRE initiative received a unanimous endorsement from the World Meteorological Organisation (WMO) Regional Association V at the 13th Regional Meteorological Service Directors meeting, and was seen as a critical opportunity to improve climatology analysis and climate/weather forecasting capabilities for the region. The general feeling at the workshop indicated that data rescue and data sharing were very important issues for consideration.

Development of new climate and weather data visualisation tools were demonstrated in Google Earth at the workshop, and illustrated how the 20CR, tropical cyclone tracks, and station-based rainfall could be used in hands-on demonstrations. Significant feedback about the use of Google Earth as a tool was provided by all of the representatives. This feedback is resulting in improvements to first-issue releases of several products that are nearing completion, such as the South Pacific Rainfall Atlas (SPRAT) and the South Pacific Extended Archive of Tropical Cyclones (SPEAR-TC).

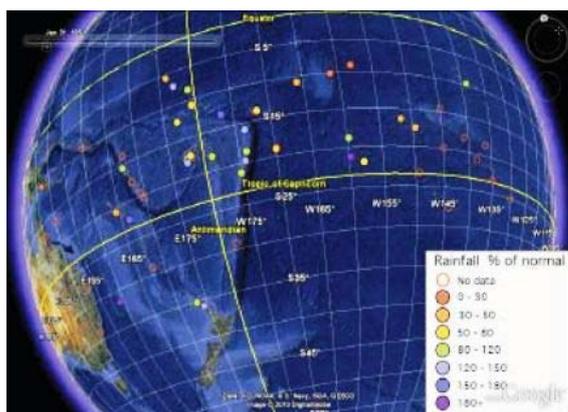
Common interests that were identified at the Auckland workshop through break-out sessions highlighted the desire



to increase support for current monitoring and data gathering in the southwest Pacific. When viewed from a long-term perspective, the spatial coverage of environmental monitoring on land is on the decline because of high costs associated with upkeep of instrumentation. More support for the meteorological services is needed to maintain and expand current monitoring programmes. In addition, many paper data exist in archives, so fostering capabilities for Pacific Island meteorological services to conduct data rescue exercises in-house are also required.

A central point of discussion highlighted the importance of fostering data base development for the continued longevity and support of the Pacific Island meteorological services. To that end, regional assistance from organisations like NIWA and the Australian Bureau for Meteorology (BOM), through the Pacific Climate Change Science Programme (PCCSP), are expected to reach goals of long-term secure data storage and access, database development, and crafting of new analysis tools connected to the databases that are relevant for the services provided to end users of climate and weather guidance. The meeting also saw the development of the ACRE Pacific faction, which will seek to foster and continue the region-wide collaboration to address the central issues identified at the Auckland workshop. Thus far, a highlight of the post-workshop collaboration in ACRE Pacific has seen the significant contribution of four long daily surface pressure observations from the Cook Islands Meteorological Service to the International Surface Pressure Databank in support of the extended reanalysis. Similar contributions are expected from the other Pacific Meteorological Services in the near future. Directed assistance to the Pacific Island Meteorological services will occur in the future through the ACRE Pacific faction via several pilot projects, including development of a data rescue planning and execution

routines specific to the southwest Pacific islands. An additional spin-off will see colleagues from MeteoFrance becoming involved in the regional effort to rescue surface and marine observations from traditional meteorological registers and non-traditional archives (like ships logs).



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