



## 2<sup>ND</sup> MEETING OF THE PACIFIC METEOROLOGICAL COUNCIL

*Strengthening the resilience and security of Pacific communities through an integrated approach to minimise weather, climate and water risks*



## SUMMARY REPORT PMC-2 PROCEEDINGS

Novotel Hotel, Nadi, Fiji Islands

01-05 July 2013



## OFFICIAL CEREMONY

1. The 2<sup>nd</sup> bi-annual Pacific Meteorological Council was held at the Novotel conference Centre, Nadi, Fiji from 1 to 5 July, 2012.
2. Members of the Pacific Meteorological Council from the following countries attended: American Samoa, Australia, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Kiribati, Republic of the Marshall Islands, New Caledonia & Wallis and Futuna, New Zealand, Niue, Palau, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, United States of America and Vanuatu. Observers from the Finnish Meteorological Institute, GIZ, Intergovernmental Oceanographic Commission of UNESCO, Secretariat of the Pacific Community, University of Oklahoma, University of South Pacific, World Bank, World Meteorological Organisation also attended. A list of participants is attached as Annex I. Apologies were received from Papua New Guinea.
3. Netatua Pelesikoti, Director of the SPREP Climate Change Division, invited Reverend Savenaca Nakeke to open proceedings with a prayer.
4. Reginald White, Director of the Marshall Islands National Weather Service gave a welcoming address thanking the delegates for attending the first Pacific Meteorological Council in the Republic of Marshall Islands. He noted that this is just the beginning, and thanked the supporting agencies for giving much needed support. The PIMS is a great guide, but can only be fulfilled with the cooperation and support of many.
5. Kosi Latu, SPREP Deputy Director General, gave the key note statement, commending the government of Fiji for providing critical services to the region. He noted the commitment of the Fiji government to cover the cost of regional services and He expressed delight that the PMC and the Disaster Risk Managers were interacting throughout the week.
6. The Honourable Timoci Lesikivatukoula Natuva, Minister for Works, Transport and Public Utilities for Fiji welcomed representatives, noting the commitment of the Fiji government to meteorology in Fiji and the region. He noted that the Fiji Government is committed to climate, weather, and water services based on science, and that RSMC Nadi has been committed to providing regional meteorological and climate services since its establishment in 1977 and will remain committed for the years to come. He reaffirmed that Fiji is committed to neighbouring countries, especially to those that have not yet set up their own services and advised that NMS must work closely with their NDMO to forecast hazards and take actions to save life and property. On this note, the Government of Fiji and the WMO/IOC/JCOMM and Technical Commission for [Oceanography and Marine Meteorology] Hydrology, will implement a demonstration coastal inundation project, with a goal of improving timely warnings on coastal inundation. The project will be spearheaded by Government of Fiji and Development partners and lessons learned will benefit other countries. Severe floods in January 2004 and 2012 resulted in transferring the responsibility of hydrological services to the FMS. The Minister also announced that the MRND Seismic programme will now come under the Fiji Meteorological Services, to bring Hydrological Services, Tsunami and Seismic services all under FMS.

## WORKING ARRANGEMENTS FOR PMC-2

### Interim Rules of Procedures

7. The secretariat introduced Working Paper 2.1 – Interim Rules and procedures. It was noted that these were interim rules so the Meeting could commence until permanent PMC rules were developed.
8. New Zealand sought clarification from the secretariat in relation to the arrangements for and administration of meetings, in particular the preparation and circulation of meeting documents both in electronic and paper as detailed in rule 9.1 and rule 9.2. The Secretariat noted that the Rules of Procedure are specific to the SPREP Meeting, and for practical reasons, not all rules would be fully applicable to the PMC. In that regard the secretariat proposed to adapt the SPREP Rules of Procedure to PMC-2. In relation to the point raised regarding hard copies of documents, recent practice at SPREP Meetings implements a paperless approach.
9. Samoa raised a question over the legal status of the PMC. The Secretariat responded that the PMC was a properly constituted subsidiary body of the SPREP Meeting. The formation of the PMC was endorsed at the 2010 SPREP Meeting and its Terms of Reference were tabled for noting at the 2011 SPREP Meeting.
10. The interim rules were adopted as described in the Working Paper.

### Election of Chair and Vice-Chair

11. Vanuatu nominated Fiji to chair the Meeting and was seconded by Samoa. The Meeting approved by consensus.
12. The outgoing Chair of PMC, Reginald White (Republic of Marshall Islands) thanked the PMC for their support and cooperation during his tenure as Chair and encouraged participants at the Meeting to support the incoming chair in his work over the next week and coming 2 years.
13. The PMC-2 chair thanked the outgoing chair for his work over the last two years, then called for nominations of the vice chair and drafting committee.
14. Tonga nominated Cook Islands as Vice Chair. This was seconded by Australia and the Meeting approved it by consensus.

### Adoption of Agenda and Working Arrangements

15. The meeting
  - **adopted** the agenda; and
  - **agreed** on the working arrangements for the Meeting

## **Establishment of a Drafting Committee**

16. The chair invited nominations for the drafting committee. An open ended committee was established under the leadership of the vice Chair (Cook Islands) with representation from Republic of Marshall Islands, Tonga, United States, SPC, and WMO.

## **WMO POLICIES ON WEATHER, CLIMATE AND WATER - FROM GLOBAL TO REGIONAL CONTEXT**

17. The Regional Director of the WMO Asia-Pacific office, Dr. Park, presented the WMO strategy 2012-2015, which is based on 4 building blocks; a strategic plan, an operating plan, a results-based budget and a monitoring and evaluation system. This Strategy was approved at 16th World Meteorological Congress in 2011. The Strategic Plan has 5 priority areas: Global Framework for Climate Services (GFCS), Aviation Met Services, Capacity Development, Implementation of WIGOS and WIS, and DRR. Five Priority areas for the Pacific were agreed at the 15th session of WMO RA V; Better Climate Services, Sustainable Adaptation Services, Capacity Development, Improved Infrastructure, and improved Multi Hazard Early Warning Systems (MHEWS)

18. Noting the intervention by Samoa and Australia on the lack of projects submitted to the GFCS, the meeting encouraged PMC members to submit project proposals to the GFCS office.

19. The meeting noted that the next session of the RA V Tropical Cyclone Committee will not be held in conjunction with the 16<sup>th</sup> session of RA V in 2014. It further noted that the next TCC session is planned to be held back to back with the next Meeting of the IOC PTWS SW Pacific Tsunami Working Group.

20. The Meeting stressed the need to strengthen the linkages between the Pacific Island Meteorological Strategy (PIMS) and the WMO RA V Strategic Operating Plan, noting the need for synergy between the two at the activities level.

21. The meeting suggested the establishment of a panel from the PMC to advise Members on GFCS climate services and the Tropical Cyclone Committee (this might have to be included in the agenda item on GFCS)

22. Fiji, as a current member of the RA V to the WMO Executive Council, is on the WMO EC task team on GFCS. Those that need advice on GFCS should contact Fiji for information.

23. New Zealand asked for clarification on the role of the UK within the PMC now that they are a Member of SPREP. The secretariat noted that an invitation was sent to the UKMO through the SPREP focal point system, but they regrettably could not send anyone. A working relationship does already exist between the secretariat and the UKMO.

24. Samoa asked for clarification on the status of relocating the WMO Regional Office for Asia and the SW Pacific, and asked if the PMC could consider the possibility of hosting the office in the region. The WMO informed the meeting that an official letter would be distributed in August asking for the intention of governments to host the office.

25. The Meeting:

- **Agreed** to request PMC members to be more active in participation in the WMO Policies, Strategic Planning process, WMO SOP 2012-2015, and the Strategic Priority areas and related programmes and activities.
- **Encouraged** PMC members to contribute to the detailed activities to support Pacific Key Outcomes through approved work plans for the individual RA V subsidiary bodies as well as through the activities of the Scientific and Technical Programmes, Technical Commissions, and other WMO working groups.

## **ACTIONS TAKEN ON MATTERS ARISING FROM FIRST PACIFIC METEOROLOGICAL COUNCIL (PMC-1)**

26. The Secretariat reported on the progress of work since 2011, noting that over 80 percent of the recommendations from PMC-1 have been implemented by the Secretariat and partners.

27. The Pacific Meteorological Desk Secretariat had been strengthened through recruitment of a number of key positions within SPREP, the formulation of the Pacific Islands Meteorological Strategy 2012-2021 and the signing of a letter of agreement with WMO.

28. It was noted that the HF Radio systems are highly useful particularly for small island nations such as Tokelau, Tuvalu, Tonga and Kiribati. Samoa requested further information on this, noting that continuous support (rather than reliance on consultants) is needed.

29. USA advised there is funding to strengthen the HF regional network and to establish another regional hub. The pattern has been to use consultants but USA proposes to re-establish the Pacific Meteorological training desk in Hawaii, which will include communication system training. This should help build the necessary training as identified by Samoa.

30. SPREP noted that the secretariat has purchased an EMWIN system with a view to enable assistance to resolve any EMWIN issues countries might face.

31. The Meeting:

- **Noted** the summary report on Matters Arising from PMC-1/RMSD14

## **SUMMARY OF COUNTRY REPORTS**

32. Members of the PMC provided brief presentations outlining their work to date against the Pacific Key Outcomes (in the PIMS), gaps and opportunities in addressing their meteorological needs. The presentations are attached as an Annex. Discussions and key points resulting from the presentations are outlined below and a summary of the gaps is provided.

## **American Samoa**

33. Mase Akapo, Meteorologist in Charge, presented regarding the American Samoa Weather Service Office. It is part of the US NOAA NWS, managed by Pacific Regional Headquarters. The office is responsible for Weather, Hydrology, Aviation, Marine and Tsunami Warnings, Advisories and Forecasts for the territory of American Samoa. The territory was recognised in 2012 as “Tsunami Ready” and is working towards obtaining a weather radar and aspire to become a fully operational forecast office with 24/7 capability.

34. American Samoa requested that they be considered to participate in the US NOAA NWS funded training for tropical cyclone forecasters provided through the Pacific International Training Desk, hosted at RSMC-Honolulu.

35. It was noted that the proposed microwave “hotline” to link American Samoa and Samoa during disasters is a very valuable tool that should be re-established. A proposal was made to include disaster managers, service providers and SPREP at the next two-Samoas tsunami coordination Meeting to be held in Apia in 2013.

## **Cook Islands**

36. Arona Ngari, the Director of the Cook Islands Meteorological Service, presented on the Cook Islands Meteorological Service (CIMS). CIMS became part of the Ministry of Transport on 1 July 2011. The CIMS is a Member of ICAO, and provides aviation services in the Cook Islands sector of the Auckland Oceanic Flight Information Region. The CIMS’ mandate is given by the Meteorological Act 1995/1996, with observations commenced in 1899 in the Cook Islands.

37. The Cook Islands advised that the training they received during the RA V WIS/TDCF Training Workshop (29 April – 3 May 2013) has provided them with the capacity to address the need to transition away from emailing of data.

## **Federated States of Micronesia**

38. Johannes Berdon, Officer in Charge of the Weather Service Office, Chuuk, FSM, presented and noted there are three Weather Service Offices in FSM; Chuuk, Yap, and Pohnpei. Key achievements over the past two years are: one new meteorologist, a new RSOIS station using GPS sondes, installation of Chatty Beetles for outer island weather observers and new Hydrogen generators for all three offices.

## **Fiji**

39. Aminiasi Tuidraki, Acting Director, Fiji Meteorological Service, presented and highlighted the Service is responsible for providing weather forecasts for Fiji and many other Pacific Islands. Core services are public weather, aviation weather, marine weather, climate and hydrological services. The mandate for flood warnings was moved into the FMS in March 2012.

40. Fiji advised that it has not started working on cost recovery for regional services. Samoa suggested that Fiji should consider its role as an RSMC that is supported by development partners if it were to introduce cost recovery for provision of aviation weather services.

## **French Polynesia**

41. Gerard Therry, Regional Director, Météo-France French Polynesia, presented and noted Météo-France French Polynesia is responsible for supporting disaster risk reduction management, services to air navigation, supporting the Armed Services, information to the public along with the core operations of observations, forecasting and climatology. They have a total staff of 84, and all funding is provided by Météo France. The QMS system is certified ISO-9001 by VERITAS since 2009. French Polynesia requested for future PMC Meetings to provide French interpretation.

## **Kiribati**

42. Ueneta Toorua, Climate Officer, Kiribati Meteorological Service presented and highlighted that the Kiribati Meteorological Service moved from the Ministry of Communication, Transport and Tourism Development to the Office of the Beretitenti. The Kiribati Meteorological Service Strategy and Implementation Plan 2013-2018 was developed. There is now 24/7 operation at the Kiritimati Island Aerodrome and improved climate archiving and services through the CliDE database, and the addition of one new climate officer funded by COSPPac/AusAID.

43. Kiribati noted that while training and weather forecasting tools have been provided by MetService New Zealand and others, there is still a need to build the confidence of staff in using these forecasting tools.

44. The USA requested that Pacific NMS' prioritise training needs. The US NOAA Pacific International Desk will be operational again soon, and prioritisation will help ensure the training is tailored to the needs of the region.

## **Republic of the Marshall Islands**

45. Reginald White, the Director of the Marshall Islands National Weather Service Office, presented and reported that the RMI Meteorological Service has improved its upper air observations through the use of GPS tracked radiosondes and the installation of a new Hydrogen generator. They are using LRIT, EMWIN and Chatty Beetles, and have started incorporating climate data into the CliDE database.

## **New Caledonia & Wallis and Futuna**

46. Phillippe Frayssinet, Director of Météo-France New Caledonia & Wallis and Futuna, presented and noted the Meteorological Service of New Caledonia is a joint authority between New Caledonia, and Meteo-France. Key duties are the observations, weather forecasting and climate data archiving. Services are provided for public, private, aviation and Ministry of Defence needs. They have a staff of 70 people with 6 in Wallis & Futuna. The Meteorological Service of New Caledonia & Wallis and Futuna relies heavily on Météo-France, for training, observation facilities, information systems, analysis and production tools, and research and development.

47. The partnership arrangement between New Caledonia and Vanuatu was highlighted and such partnership could be extended to other Pacific Island Countries.

## Niue

48. Sionetasi Pulehetoa, Director of the Niue Meteorological Service, presented Niue's progress. Most targets have been met in the national strategy & in UNEP CC project and funding secured from WMO to develop met policy & bill with support from SPREP provided for drafting. They plan to develop a new 5 year corporate plan for the department. The department consists of 7 staff, with a budget of \$166k per year and under resourced for cyclone season responsibilities. Planning is underway for a new tide gauge. Further assistance with training and general support to the Niue Met Service is required. Niue noted that they still provide an HF Radio service to mariners.

## Palau

49. Dilwei Maria Ngemaes, Meteorologist in Charge, presented that the Weather Service Office in Koror, Palau is operated in cooperation with the US NOAA NWS Pacific Region. The office consisted of 9 staff with 24 hours operation. The WSO Koror is undertaking a range of climate change projects, and request support for grant writing support/education. The WSO is looking to the construction of a new building at the international airport.

## Samoa

50. Mulipola Ausetalia Titimaea, ACEO, Samoa Met Service Division, presented on the progress of the Samoa Meteorological Division, which is part of the Ministry of Natural Resources and Environment, and has a staff of 23 across 4 divisions: Weather, Climate & Ozone, Climate Change, and Geoscience. Current challenges faced include the limited number of staff with technical knowledge and coping with increased overheads associated with essential equipment and the timely issuance of weather, earthquakes and tsunami events. Samoa has been an active participant in the WMO RA V SWFDDP project.

## Solomon Islands

51. David Hiba Hiriasia, Director, Solomon Islands Meteorological Service, presented on the progress of the Solomon Islands Meteorological Service, which is part of the Ministry of Environment, Climate Change, Disaster Management and Meteorology. It is mandated by the 1985 Meteorology Act and consists of four divisions; weather observation, weather forecasting, climate services and engineering. Major achievements over the past two years have been the establishment of the Tingoa met station and completion of the Henderson office and met station. A mock audit was also carried out.

## Tokelau

52. Kelemen Navucu, Manager of Environment Division, presented. [CONNECT] There is only one staff working on meteorology in Tokelau, based in Samoa. Tokelau is still dependent on Fiji, via the Samoa Meteorological Service. There was a drought in 2011 of six months, and there has been an increase in coastal erosion and temperature.

53. Tokelau requested assistance from NZ on installation of AWS and training of met officers. Tokelau noted support on the development of Tokelau Climate Change Strategy and the Tokelau Emergency Management Plan to improve Early Warning response.



54. Tokelau agreed to review the MOU with Samoa for continued support. Tokelau will consider requesting manual observing equipment under the second proposal of the PACC+ project. In addition, Tokelau requested further discussions with New Zealand, the US, and Samoa on continued support on EMWIN and chatty beetles.

## **Tonga**

55. 'Ofa Fa'anunu, Director of the Tonga Meteorological Service, presented the Tonga Met Service achievements since PMC-1 and updated the meeting on the planned activities for the next two years with regards to its programmes. They have programmes in forecasts, observations, climate, coastal radio services and technical support. Legislation is currently being developed to give the met service a mandate.

56. Niue sought clarification on participation costs of the Weather Observation Refresher Course planned by Tonga. Tonga responded that participants will have to meet their own costs.

57. Kiribati requested detailed information on the Sea Level Monitoring Network program, relating to costs and technical assistant. Tonga will provide further detailed information on this at a bilateral level.

## **Tuvalu**

58. Hilia Vavae, Chief Meteorological Officer of the Tuvalu Meteorological Service presented on Tuvalu's achievements, noting that Tuvalu recently became a WMO member. Tuvalu proposed the development of a national strategy and implementation plan for the met service. Tuvalu recently requested assistance from WMO to develop legislation for the NMS. Tuvalu requested assistance to develop and implement a QMS. Tuvalu reported that they do not have the capacity to issue their own tsunami warnings based on the new PTWC products.

59. WMO noted that it is important to identify which countries across the region have legislation. Samoa noted that WMO undertook a survey in 1993, but many issues have not been addressed, including legislation. WMO have been working with SPREP to develop legislation for Niue and Vanuatu. SPREP noted that Vanuatu can be used as a model and that cost recovery could be included in the legislation. Niue offered a copy of their draft for reference.

## **Vanuatu**

60. David Gibson, Director of The Vanuatu Meteorology and Geohazards Department (VMGD) noted that they recently incorporated the Geo-Hazards division to become the VMGD. The department includes Weather, Climate, Project Management Unit/Climate Change Adaptation, ICT, Geohazards and Observation Section. The forecasting section operates 24/7 and incorporates the Vanuatu Tropical Cyclone Warning Centre. The Climate Section is active in climate research on processes such as ENSO. Vanuatu also reported that there are 3 active stations that transmit ash/plume data. Vanuatu shares a seismic server with New Caledonia, which gives information on an earthquake within 5 minutes after an event to assist with tsunami warnings.

## Australia

61. Ram Krishna, the Acting Manager of International Affairs at the Australian Bureau of Meteorology, presented on BoM activities including;

- Three projects were implemented under the Pacific Public Sector Linkages on WIS, tsunami inundation modelling, and on QMS.
- Training activities accessible through the Bureau of Meteorology Training Centre;
- Guidance products from the National Meteorological & Oceanographic Centre and the Darwin RSMC;
- BoM's role in hosting the WMO Regional Instrument Centre; and
- Activities the Bureau has supported directly through its core funding allocation and activities conducted under part cost recovery arrangements.

62. A summary and update was provided on COSPPac and PACCSAP, which are covered in more detail in 12.3 and 12.4.

63. Information was provided on the new Government Partnership for Development Facility of AusAID, and it was encouraged that the council members and SPREP seek funding of projects through this mechanism in collaboration with BoM.

64. During discussions on the southern hemisphere tropical cyclone training, WMO clarified that it will be held on 24 Sep - 4 October 2013, Nadi Fiji.

## New Zealand

65. Penehuo Lefale, Pacific Manager of the MetService, and Alan Porteous, Group Manager, Climate, Data and Applications, NIWA, summarised New Zealand's long and ongoing support through direct management of selected Pacific Island countries and territories NMHS up until the late 1990s. Since then, New Zealand support has focussed on provision of advice and support on a project basis, jointly with PICTs and other partners. A summary of New Zealand and its collaborating partner support through PIMS to date was provided to the meeting (attached as annex XXX). The support covers all four priority areas of the PIMS and contributes to virtually all of the PIMS PKOs. This support will continue, subject to available human and financial resources.

66. The New Zealand / US NOAA Agreement to support the Pacific Island GCOS programmatic support programme is likely to continue, subject to funding. Marshall Islands requested to be added to the countries included in the *Island Climate Update*. NIWA confirmed they can be added into the list of countries, and further discussion will follow.

## United States of America

67. Edward Young, Acting Director, NOAA National Weather Service (NWS) Pacific Region, presented US activities in the region, including

- the near completion of the upgrade/replacement of EMWIN systems in the Pacific with the remaining upgrade in Kiribati to be completed in early July with the assistance of SPREP PMDP and SOPAC Division/SPC, and WMO, for their assistance in this project.

- The relocation of all NOAA offices in Honolulu (except RSMC Honolulu and the Fisheries Observer Programme) to the NOAA Inouye Regional Centre in January 2014.
- NOAA/NWS support to the US Navy Pacific Fleet's Pacific Partnership 2013 Mission to Samoa, Tonga, Republic of the Marshall Islands, Kiribati, Solomon Islands, and Papua New Guinea. NOAA contributions included tsunami and marine meteorological information, subject matter expert exchanges to Met Services, and monitoring of meteorological observations from the six Host nations.
- regional Fisheries Observer Programs, and the need to collaborate with national and regional fisheries agencies and organisations to explore the possibility of establishment of marine weather observation reporting to fill in the gaps recognised in the greater Pacific.
- the success of the RANET Chatty Beetle Demonstration Project in the north Pacific, where outer island observers are now transmitting their synoptic observations via satellite to the RMI, FSM and Palau Weather Service Offices, and noted significant improvements in receiving these observations to be included in synoptic maps, models, and daily and monthly climate reports.

### **3<sup>rd</sup> JOINT MEETING OF THE NATIONAL METEOROLOGICAL SERVICES (NMSs) AND THE NATIONAL DISASTER MANAGEMENT OFFICE (NDMOs)**

#### **6.1: Introductory Remarks**

68. The PMC Chair introduced the joint session between the Pacific Meteorology Council and Disaster Risk Managers. The Chair noted that this is the third joint Meeting between Meteorological Service Directors and Disaster Risk Managers and gives us a chance to discuss the challenges and successes we have shared in making our communities more resilient to natural disasters that are becoming more severe in our changing climate.

#### **Pacific Islands Meteorological Strategy (PIMS) 2012-2021, the Pacific Islands Framework Action for Climate Change (PIFACC) and the Regional DRR and DM Framework for Action – Interface with NMS and NDMOs**

69. Netatua Pelesikoti, Director of the Climate Change Division, SPREP, presented linkages between existing frameworks (PIMS, PIFACC and DRM) in the Pacific and the roles of NMSs, NDMOs and Water Managers. Mosese Sikivou, Deputy Director of the Disaster Reduction Programme, Secretary of the Pacific Community, thanked the PMC for the invitation and expressed hopes that these conversations, particularly on Multi Hazard Early Warning Systems, would contribute to a clear voice from PMC and DRM at the joint Meeting.

#### **National initiatives: Key Implementation Challenges and Opportunities Pertaining to NMSs and NDMOs Arrangements;**

##### **Tsunami Warnings and Responses – Solomon Islands**

70. Loti Yates (Director, NDMO) presented on Tsunami Warnings and Responses in the Solomon Islands and discussed the tsunami warning system developed by Australia Bureau of Meteorology. It was noted that the system used the PTWC warning to calculate a threat assessment for the country and Non-technical warning messages targeted at communities.

71. He emphasized that in special instances, such as locally generated tsunamis, national authorities can act on information available to them at the time. Continuous public awareness is the best option when quick actions are required. The Meeting noted that the PTWC tsunami early warning systems is designed to monitor and warn for tsunamis that are generated that have impacts away from the source region.

72. US NOAA informed the Meeting that the cost of disseminating warnings via fax for Pacific basin wide tsunami events is extremely expensive and requested if communication by fax is still a preferred option.

### **Tropical Cyclone Warnings and Responses – Samoa**

73. Ausetalia Titimaea and Filomena Nelson presented on tropical cyclone warnings and responses during cyclone Evan in December 2012, and stressed the importance that warnings must be in simple language for public to understand the situation. Flash flooding during TC Evan caused great damage and killed four. Ten fishermen left port during the storm and are still unaccounted for. Samoa informed the Meeting that the mandate for flood warning is with the Hydrology section and the Met service can only provide advice, thus links to flood warning systems needs to be improved. Power and internet cuts during TC Evan resulted in communication difficulties with stakeholders. Facebook updates were provided as an alternative from Samoa NMS.

74. Samoa informed the Meeting that they are developing visual educational materials to demonstrate the varying strengths of cyclone winds. USA asked if a system to 'talk' was in place (e.g. on phone) could clarify issues with warnings more quickly. Samoa asked if there was a voice over IP system to communicate between the two Samoas, the US responded that the hotline using the existing VHF microwave link between Samoa and American Samoa needs to be restored.

### **Integrated Water Resources Management – Nadi Demonstration**

75. Vinesh Kumar, Nadi IWRM project manager, presented an overview of the Nadi IWRM project and the challenges of working in a catchment with a diverse range of stakeholders and communities.

76. IWRM shared the Nadi, Fiji experiences of the two flood events in 2012, and the importance of linking national DRR and CC initiatives to national policies and government process. There is a need for collaboration between government agencies, public sector and civil society organisations. IWRM also stressed the benefits of engaging with communities in risk assessments, and the design and implementation of (DRR) mitigation measures. There is also a need to ensure adequate long-term Operations & Maintenance and monitoring and evaluation.

### **Drought Warning System and Response – Republic of the Marshall Islands (RMI)**

77. Reginald White, Director of the RMI Weather Service Office presented and reported that the RMI is primarily dependent on rainwater catchments, groundwater resources, and occasionally used reverse osmosis units during drought.

78. RMI informed the Meeting of the need to expand the number of weather observation stations on outer islands and noted the special roles communities can play in collecting weather and climate data, given resources and training. The current drought is very severe, with staple food sources severely affected. UNDAC, USAID, and other key partners provided vital support in the drought response. NDMO capacity needs to be increased with additional staff and training.

### **Severe weather systems other than tropical cyclones [and large waves not associated with tropical cyclones] Events and Products – Vanuatu**

79. David Gibson, Vanuatu Meteorological Service, outlined the importance of the SWFDDP in addressing severe weather forecasting and warning services not associated with tropical cyclones. Vanuatu demonstrated the products and services Vanuatu Meteorology and Geo-Hazards Department (VMGD) issued during such events to assist in the management of associated risks. Vanuatu noted the number of deaths associated with severe weather events not associated with tropical cyclones is far greater than those associated with tropical cyclones, and the need for NDMOs and NMHSs to coordinate their efforts. Vanuatu also highlighted the importance of the SWFDDP in providing guidance for NDMOs to respond effectively.

80. The Meeting noted that SPREP collaborates with WMO to secure funding and other support for the continuation and sustainability of the project.

### **Regional initiatives: key implementation challenges, issues and opportunities to enhance collaboration**

#### **PTWC Enhanced Products for the PTWS**

81. Rajendra Prasad, IOC UNESCO, presented on the new/enhanced PTWC warning products which will not use the current WARNING/WATCH system, and instead provide guidance products that each National Tsunami Warning Centre (NTWC) will use to determine their own threat. An Intergovernmental coordinating committee will make the final decision on service change (next Meeting 9-11 Sept 2013), after which it is up to each individual country to use new products once they are available.

82. Tonga asked if local early warning systems were appropriate and noted that if a strong earthquake is felt, then that can be considered the early warning system for local tsunamis. Concerns were also raised over the new wave height criteria, as wave properties change for each coastline.

83. Countries welcomed the new products, but some have reservations over their capacity to apply the new/enhanced products, and as such, request that the existing products continue in parallel with the new.

84. The Meeting:

- **requested** SPREP collaborate with IOC and SPC to undertake a needs assessment of NMS capacities to use the new products before ceasing dissemination of the existing products.

## **WMO Regional Association V (South-West Pacific) Severe Weather Forecasting and Disaster risk reduction Demonstration Project (SWFDDP)**

85. James Lunny, MetService, summarised the progress made by WMO SWFDDP in the South Pacific and its relevance to the PIMS. MetService explained that SWFDDP aims to improve the accuracy of forecasts and the lead time of severe weather warnings. It also aims to improve the interaction between NMS and NDMOs.

86. WMO highlighted that the SWFDDP is making a vital and significant contribution to disaster risk reduction, climate change challenges as well as assisting Pacific Islands Countries and Territories fulfil their obligations under various international agreements and conventions such as the Millennium Development Goals, UNFCCC, GFCS, etc. WMO commended all participating countries and contributors to the SWFDDP, which makes it a success. WMO informed the PMC about the need to ensure the project continued as it moves from demonstration to operational stage. The meeting reinforced its recommendation (in paragraph 80.) that SPREP and other relevant CROP agencies work closely with WMO to secure financial resources from relevant development partners in supporting the SWFDDP, in particular, funding to sustain MetConnect Pacific.

### **South-South Cooperation–Disaster Risk Reduction (DRR)**

87. Karen Bernard, UNDP, gave an overview on the status and relevant achievements of the project, the valuable new partnerships for NMSs and NMDOs in the Pacific and Caribbean, and its relevance to other countries not involved in this initial phase.

88. A suggestion was made to encourage donor agencies and development partners to provide critical funding support to Phase 2 of the project, and that a concept note for continuation and cooperation with the Caribbean Community Climate Change Centre, and the Indian Ocean Commission, and should find opportunities to showcase this inter-regional collaboration at the SIDS 2014 Meeting in Apia, Samoa.

89. The US advised that other opportunities are also available through NOAA support to the Caribbean. CROP agencies and their respective Caribbean counterparts should be included in concept notes and UNDP should continue to play a facilitation role.

### **Pacific Climate Change Portal**

90. The Secretariat presented the Pacific Climate Change Portal ([www.pacificclimatechange.net](http://www.pacificclimatechange.net)) to the PMC and outlined its value in identifying gaps in projects and initiatives of relevance to climate change in the region. A regional steering committee of CROP agencies ensures the accuracy and quality of what goes onto the portal, and planned activities for the next phase were outlined. Palau requested that the NMSs be included in future portal trainings and Meetings to ensure better coordination. SPREP should ensure more regular updating of the database by proactively seeking input from the NMSs.

91. Australia recognised the importance of The Portal for aid coordination. The Secretariat advised the Meeting that only information already approved/authorised by countries for public distribution will be placed on the portal. To date, only Fiji, Kiribati and RMI have responded to the request for national editors.

## HYDROLOGICAL SERVICES

92. Neville Koop (SPREP Secretariat) and Peter Sinclair (SPC-SOPAC) presented on the need to strengthen the relationship between meteorology and hydrology in the region, citing recent floods and droughts as examples.

93. The Meeting acknowledged the importance of coordination on operational issues, however noted that there is a need for clarification over the current regional mandates of SPREP (meteorology) and SPC-SOPAC (hydrology).

94. The meeting noted that there are different arrangements at the national level for the provision of meteorological and hydrological services, but that coordination can be accomplished, for example by including hydrology and meteorology in CliDE. Samoa used TC Evan as an example, as the met office had no access to stream flow data, which led to lower quality flood forecasts.

95. The meeting:

- **Noted** the importance of a joint session between hydrology and meteorology at the next PMC 2015 and invites SPC / SOPAC and SPREP to facilitate this.
- **Encouraged** PMC members to consider in detail how meteorological and hydrological services could most efficiently and effectively collaborate in the future keeping in mind the commonalities they both share as regards data and services to users.
- **Requested** SPREP, in collaboration with SPC, WMO and other partners to investigate specific regional and national actions and activities designed to improve the capacity of Pacific Island Hydrological and Meteorological Services to provide improved and coordinated services to their respective governments, especially in the area of flood and drought management and warning.

## OCEAN ISSUES

### Improving Pacific Islands' Participation in IOC-UNESCO

96. Philip Wiles, SPREP, presented and noted that several PMC members were not Members of IOC-UNESCO (Nauru, Vanuatu, Federated States of Micronesia, Republic of Marshall Islands and Palau), and that there was little Pacific involvement in the IOC mechanism.

97. The process of becoming a Member was discussed, and it was noted that this is cost free, as all non-members are already part of UNESCO. The IOC governing council was concurrently convening in Paris, and votes new Members on to the executive council.

98. The range of working groups was discussed, and it was noted that there are a number of technical working groups relevant to the Pacific, as well as the South West Pacific regional working group. The IOC-UNESCO representative, Rajendra Prasad, offered to give more information to those that request it.

99. The Meeting:

- **Requested** those PMC Members who are not IOC members to **encourage** their governments to join.
- **Encouraged** PMC members to increase Pacific Island representation on the IOC Executive Committee and involvement in working groups (e.g. tsunami).

### **The status of the ENSO early warning system, TAO-TRITON**

100. Philip Wiles, SPREP, presented on the importance of the TAO-TRITON array, and the issues as maintenance for the array transfers from research to operational institutions.

101. The Meeting:

- **Endorsed** the statement;

“The Pacific Meteorological Council recognises the value of the TAO-TRITON array in providing early warnings of El Niño and La Niña events and the associated seasonal climate forecasts that provide substantial benefit to Pacific Island Communities.”

“As such, the Pacific Meteorological Council strongly request that support for the TAO-TRITON array be maintained so these valuable services can be continued.”

### **EDUCATION, TRAINING AND RESEARCH**

102. Arona Ngari presented on education training and research, noting the number of training opportunities available, the need for clear career paths for NMS personnel, and the need to be flexible with prerequisites for some trainings. Research is not explicitly included in the PIMS, although there is a great need for ongoing collaborative research on climate drivers.

103. PACCSAP was thanked for their mentoring, and further funds for fellowships were requested. NIWA (NZ) noted they were waiting for confirmation of the NZAID mechanism for attachment/mentoring program at NIWA. Samoa advised of their Meteorological Research Group which convenes annually and the Meeting commended USP for their focus on weather and climate science and urged them to continue these efforts.

104. The Meeting agreed training is of great importance, but it was difficult for smaller services to utilise all opportunities offered. Trainings need to be tailored, as each NMS is unique. Coordination is important, and gaps should be identified through the COSPPac training audit. Australia advised that some training courses include prerequisites, which are part of the QMS. In-house NMS training also needs support from regional experts and recognition of training for met observes would also be of benefit. Fiji suggested collaboration between WMO and USP to develop further relevant programmes.



105. US NOAA referred to the attachment regarding the Pacific International Training Desk, and recommended the establishment of a working group to review training courses offered in the region and whether they fully meet Met Service Director's requirements. There is a need to identify what progression of training activities are needed, and to identify where these can be undertaken, to meet NMS staff development needs.

106. The Meeting

- **Encouraged** the development of career pathways for staff and as a result send appropriate staff to trainings that support that development.
- **Encouraged** training providers to consider flexible prerequisites for high level training.
- **Noted** previous and current opportunities for collaborative research, mentoring and attachments with developed country institutions and **requested** for these arrangements to increase
- **Requested** that RMI, FSM and Cook Islands will form a working group on education and training, and the PMD secretariat will facilitate this working group.

## **SUMMARY OF PROGRESS IN IMPLEMENTING THE PACIFIC ISLANDS METEOROLOGICAL STRATEGY (PIMS) 2012-2021**

107. The Secretariat presented its report on progress by donors and partners of the PMC and the Pacific Meteorology Desk Partnership (PMDP) towards achieving the 14 Pacific Key Outcomes (PKO) of the Pacific Islands Meteorological Strategy (PIMS) 2012-2021. The report captures all the activities known to have been implemented in the Pacific region to support the NMSs from August 2011 to June 2013.

108. It was recognised that a number of activities and developments funded by bilateral or other budgets at the national level may not be reflected in the report and the challenge of collecting information on an annual basis from all the NMSs was highlighted. The Secretariat also recommended that coordination between the PMDP and the Partners continues to be strengthened to allow information (data) collection to assist the M&E framework (presented under Agenda 11.0).

109. The Meeting:

- Noted the report on the summary of progress of implementing the PIMS in the PICT NMSs.

## **MONITORING AND EVALUATION FRAMEWORK FOR THE PIMS 2012-2021**

110. Mark Graham, SPREP, gave an overview of Monitoring and Evaluation (M&E) processes and the proposed M&E for the PIMS.

111. Other regional M&E efforts were discussed by the Meeting, and outputs from those (e.g. COSPPac) were offered to the secretariat to support the PIMS M&E process. PIMS M&E activities must link with WMO standards and the WMO Strategic Operating Plan. PMC Members discussed the move to performance measures from quality and quantity.

## PROGRAMMES, PROJECTS AND OTHER INITIATIVES TO SUPPORT NMS CAPACITY

### The University of the South Pacific (USP) - Capacity Development Relating to Weather, Climate and Water

112. Elisabeth Holland, USP, presented on courses at PACE-SD relevant to meteorology and research. A particular highlight is the tropical meteorology course which was offered for the first time this year. This course was developed by COMET, has been designed to meet WMO standards and is being offered at other universities including the University of West Indies.

113. The Meeting recognised that the tropical meteorology course is an important step for the Pacific region, being the first course offered in the region that included a strong fluid dynamics component to the atmospheric sciences. The Meeting also discussed the synergy between USP and international training centres in meteorology and recognised the need to work more closely with them.

114. USP acknowledged the support of AusAID in setting up PACE-SD. Special mention was made of scholarships available to the Pacific, including those working in NMS. USP also noted support from NMS in initiating new courses and that they were seeking successful case studies on the application of climate services, particularly for a workshop in October.

115. USP noted that the undergraduate diploma in meteorology that had recently been offered by FNU is no longer available and is unlikely to be reoffered due to loss of staff. If this is the case, USP are interested in taking up this vacancy.

116. Several Members noted gaps between courses available at educational institutions in the region and prerequisites for courses offered by regional partners and WMO.

117. The Meeting:

- **requested** the PMDP Secretariat to report on these gaps and work with education institutes in the region to fill them (see WP 9.0).

### The World Meteorological Organisation (WMO) - Regional Components of WMO Programmes and Regional Programme for Region V, Including Policies

118. Henry Taiki, WMO, informed the Meeting of the WMO Capacity Development Strategy Development Implementation Plan (CDSIP) and WMO activities in Region V, which addresses one of the strategic thrusts of the WMO Strategic Plan 2012-2015. WMO noted CDSIP provided a coordinated and cohesive approach to capacity development activities by the WMO

119. The Meeting:

- **Noted** the information on assistance provided to WMO Members in the Pacific region and WMO activities for period 2013-2015;
- **Encouraged** SPREP to work closely with WMO through PMDP and PMC to assist NMSs of the Pacific Islands to further improve capacity development and delivery of meteorological services in the Pacific.

## Climate and Oceans Support Programme in the Pacific

120. Janita Pahalad, Manager of COSPPac, presented the work of COSPPac which the Meeting commended. The Meeting and requested that BoM work closely with the SPREP in relation to COSPPac.

121. Samoa requested COSPPac to reconsider moving the communications officer from SPC-SOPAC to SPREP to align itself with the Pacific Met Desk Partnership, as noted at the COSPPac steering committee in April 2013.

122. While the Meeting commended SCOPIC, particularly with building capacity within Met Services, Samoa noted the low skill of SCOPIC for dry season forecasting. The Meeting agreed that an open source of SCOPIC would be advantageous.

123. It was noted that the COSPPac capacity mapping of the meteorological services will identify met service capacity and stakeholders they want to engage with, which leads to better targeted training.

124. COSPPac noted that they wanted to keep the focus of the ocean portal on climate variability, rather than overload it with climate change data.

## Pacific-Australia Climate Change Sciences and Adaptation Planning

125. Geoff Gooley, Director of the PACCSAP Science Programme presented on work achieved during the PACCSAP programme and plans for the stand alone 12 month extension to June 2014. He noted that PACCSAP were planning for a second phase of the project and asked for the interest of NMS and CROP agencies for collaboration.

126. The Meeting noted that this programme builds on previous work done in the Pacific and that this is the first time that Pacific Island specific climate futures have been made available. A request was made to ensure the new CMIP5 models from the upcoming AR5 would be included. Continued development and maintaining support for the climate databases is important. Samoa requested that another workshop on the SPCZ and rainfall indices be pursued, and commended PACCSAP for their work.

127. The Meeting:

- **noted** the importance of the PACCSAP programme for climate science in the region, and strongly advocated for a next phase of the project.

## Finland-Pacific (FINPAC) Project

128. Alberto Blanco Sequeiros presented on the FINPAC project.

129. Samoa requested more than 2 Pacific Countries to be represented in the steering committee, but the secretariat noted limited funds. Documents will be circulated before Meetings for comment to enable inclusion in the proceedings. Australia applauded the FINPAC commitment to the RBSN improvement, and requested if COSPPac could join the steering committee, and the secretariat agreed to explore this option. SPREP will ensure all the necessary coordination is in place between FINPAC and all other relevant projects.

130. The secretariat advised that FINPAC has not yet decided when the severe weather training will be provided, but it will be integrated into WMO regional training activities. The Meeting advised that all projects (e.g. FINPAC, COSPPac, PACCSAP, SWFDDP) need to coordinate, and WMO noted that FINPAC should be represented on the regional management team and vice versa. The new, full time FINPAC manager will be responsible for coordination, but other secretariat staff will also play a role.

### **Radio Internet (RANET) Communication**

131. Edward Young, Acting Director of the NOAA National Weather Service Pacific Region, presented on Radio Internet (RANET) in the Pacific. RANET was established in 2003 and is a collaboration between NOAA, MetService, BoM and SPREP to set up HF radio and satellite communication systems for dissemination of Met data to the internet. Upgrades of EMWIN and LRIT were carried out across the Pacific in 2011-2013 (except for in Kiribati), and Chatty Beetles have been deployed across the Marshall Islands. Fifteen RAPIDcast (RANET Asia Pacific Information Dissemination Broadcast) stations have been shipped to the Pacific. The location of these assets deployed can now be seen on [www.maptack.org](http://www.maptack.org), a new data portal to track the status of backup communication systems.

132. New Zealand informed the Meeting that the Met data coming through their backup Pacific HF transmitter is minimal and therefore not commercially viable to support, however they will continue the hub while looking at other options. A new site is being identified as an HF radio hub, which requires good power and connection to the internet, and was hoped to be operational by the end of this year. Cook Islands requested a regional survey on the use of RANET FM radio for warning purposes, to identify the highest needs it addresses.

133. The expertise lost with recent retirements was identified as an issue, and the US has funding to create a training facility to rebuild that experience. US NOAA intends to include training on communication systems in the new Pacific International Training Desk. Tokelau noted with appreciation the joint US-NZ willingness to provide chatty beetles, AWS, training and a draft bill for legislation along with the PACRAIN programme at the University of Oklahoma for providing material for schools.

134. The Meeting:

- **agreed** for each of the Members to Identify and submit national focal points and technical leads for the mapack.org initiative.
- **advocated** for the establishment of a regional 'messaging fund' to support on going message and service costs of systems and infrastructure, such as the Chatty Beetle and RAPIDCast, to avoid administrative costs of per country payments and to provide longer term service stability.

### **Pacific Islands Climate Information System (PACIS)**

135. John Marra, of US NOAA, presented the Pacific Climate Information System (PaCIS). This is a programme planning framework and mechanism to support US climate services in the Pacific. He noted the three priority actions; building a network of networks, assessments, and developing products and services.

136. Discussion was held on aligning climate activities. Planning needs to be done for this, and an example could be the consolidation of climate teleconferences.

## **EMERGING AND ONGOING PRIORITIES**

### **International Civil Aviation Organization (ICAO) Competency/Standards Including Forecasters and Training Requirements, Deficiencies in the MET Fields, Quality Management System (QMS) and Cost recovery for Aviation Weather Services**

137. 'Ofa Fa'anunu, the Director of the Tonga Meteorological Service explained that there are 2 documents (SARPs) listing standards each Met Authority must comply with (Annex 3 to the ICAO Convention – Meteorological Services for International Air Navigation and WMO Technical Regulations No. 49).

138. He highlighted that States must comply with the Aeronautical Met Personnel (AMP) competencies by 1 December 2013, and that the Quality Management System (QMS) must be in place by 15 November 2012. In addition, there are still long standing deficiencies filed at ICAO with some NMSs in regards to aviation meteorological services.

139. WMO has written to all Members not compliant with the relevant ICAO regulations in paragraph 2.2.3 of the ICAO Annex 3, emphasizing that it would be advisable to inform ICAO of this fact using the standard procedure of filing a difference, stating also when and by what means they expect to become compliant in the future. Such a notification will protect both the Member and the service provider from serious legal consequences in case of any weather related incident or accident that could be considered to be related to any non-compliance with ICAO regulations.

140. The Meeting acknowledged that Fiji was certified for aviation forecasts in January 2012, thanked FINPAC, WMO, Météo-France and BoM for their QMS support and noted the upcoming QMS training in Apia. PMC members should include the cost of participating in ICAO meetings in their cost recovery plan. Members should also be aware of the implications of cost recovery when developing any future legislation. Certification and documentation can be costly, but should be recovered from end users. It was noted that cost recovery for aviation services is complicated when more than one service provider is involved. This issue was left open for further discussion at future meetings. Fiji as a service provider requested for efficient data exchange of accurate and timely information, and offered their assistance to other NMS for QMS. Finland noted the July 2013 QMS workshop in Apia.

141. Pacific NMS should work together with their respective CAA on issue pertaining to QMS, and those who have not completed QMS can seek mentoring from those who have.

## 142. The Meeting:

- strongly **recommended** that Service agreements should be formalized between NMS where applicable.
- **encouraged** Members to use resources such as the Pacific Safety Office (PASO) when seeking certification.
- **encouraged** SPREP Member countries who are ICAO Members to become Members of the Asia Pacific Air Navigation Planning Implementation and Reporting Group (APANPIRG) and to attend the Annual MET Subgroup Meeting of APANPIRG.
- **requested** SPREP to work more closely with WMO and other regional organizations to assist countries to meet their Aviation Meteorology requirements and the implementation of the Pacific Regional Priority Activities under PKO 1 of the PIMS

### Implementation of the Global Framework for Climate Services (GFCS) in the Pacific Islands region

143. John Marra, US NOAA, presented, observing that priorities identified in the GFCS aligned with PMC priorities, and noted progress made in implementing climate services in the region since PMC-1. He reiterated statements from PMC-1, and requested the endorsement of a Pacific Islands Climate Services Panel (Terms of Reference included in annex 13.2).

144. The Meeting noted the merit of the concept, and the need to include met services and key agencies, and to take a cohesive, effective and efficient approach to training & capacity development, multiple information portals and seasonal outlooks. The Meeting suggested a Pacific Islands Climate Services Panel (PICSP) within WMO RA V, and emphasized that this is a structured approach to consultation.

145. Tonga, Solomon Islands and Samoa requested the meeting to have an inception workshop to be held for the SW Pacific region on the GFCS framework.

## 146. The Meeting:

- **Noted** considerable progress has been made on implementation of climate services in Pacific Islands since PMC-1;
- **Noted** the outstanding support provided by SPREP and collaborating partners such as WMO to date towards advancing the implementation of the GFCS in the Pacific Islands region;
- **Reaffirmed** the outcomes of the various meetings and workshops on the GFCS and related matters, in particular, the recommendation from the Majuro 2011 workshop to investigate organizational structures and functions to support robust and sustained climate services at the regional level and identification of Pacific CoA from the 2013 PICSF;
- **Noted** the critical need for a more strategic approach with greater alignment and coordination to support robust and sustained climate services' activities and investments in the Pacific Islands region;
- **Endorsed in principle** the establishment of a Pacific Islands Climate Services Panel (PICS Panel) to serve as the PMC's Advisory Committee on PICS matters,
- **Requested a clear Terms of Reference for the PICS Panel, linking it to the GFCS and to existing mechanisms.**

➤ **Requested SPREP:**

- (1) To make the necessary arrangements for the establishment of the Panel and to convene its first meeting as soon as possible after the designation of its members. In consultation with the Chair and Vice-Chair of the PMC, determine the date and place of the first Panel meeting. The Chairman of the PMC will preside over the first meeting until the Panel elects its [independent facilitator][Chair], who shall preside over the meeting;
- (2) To provide support to the Panel and seek funding and other support for its work;
- (3) To keep the PMC Members, SPREP Council, and as appropriate, relevant partners, informed of progress and developments on the Panel's work;
- (4) To bring this matter to the attention of all concerned.

**Implementation of the Regional Plan for the WMO Information System (WIS) and Table Driven Code Format (TDCF) in Region V, especially in each Pacific Island NMS and the region**

147. Henry Taiki, (WMO) presented on behalf of Russell Stringer (WMO) and outlined WIS, the global infrastructure making available weather, climate, water and related information available. He noted that the WIS will migrate to TDCF by Nov 2014.

148. The Meeting suggested all countries join the GTS (which carries WIS), as this is the primary transmission method for tsunami and weather warnings. A country can have more than one national centre (e.g. NMS and NDMO). USA noted that EMWIN was part of WIS, but had dropped off the GTS table as an official dissemination method without explanation.

149. The Meeting noted the recent useful workshop in Melbourne [April 2013], but it was aimed at ICT people, and not all Members gained significantly. Samoa requested the next workshop to be held in the Country NMS. NMS' were urged to put effort into understanding the issue, be proactive and approach the BoM to address issues.

150. US NOAA noted that the Nov 2014 deadline to convert from Table Driven Code Format could be problematic for some Pacific Island Countries and questioned whether Melbourne could transfer the new data format over the recently installed infrastructure.

**Implementation of the Regional Plan of the WMO Integrated Observing System (WIGOS) for Region V, especially in each Pacific Island NMS and the region**

151. Henry Taiki, (WMO) presenting on behalf of Russell Stringer (WMO) outlined WIGOS, which brings GCOS, GOOS and GTOS together into a single framework, and Misaele Funaki (RSMC Nadi) discussed cyclones over the previous two years and associated issues and requested feedback on RSMC performance.

152. The Meeting commended Fiji Met Service on its role as an RSMC. IOC observed that models give guidance, but should be used with other information.

153. The Meeting acknowledges the work of the PACRAIN/SPaRCE programme at the University of Oklahoma in assisting the PICTS with enhancing their observation networks, and in augmenting and preserving the climate record in the region.

## **PMC STATEMENT TO THE JOINT MEETING OF THE PCCR AND PPDRM**

154. The meeting noted the unclear issue of the legal status of SPREP, and Samoa requested an additional agenda item to discuss this in PMC-3.

155. The meeting made amendments to the proposed statement to the Joint Meeting and:

- **approved** the PMC statement to the Roadmap as presented in Annex XXX.

## **PMC/PMDP WORK PLAN FOR JULY 2013 - JULY 2015**

156. Salesa Nihmei, SPREP, presented a revised template for a PMDP work plan to the Meeting, noting that commitments are required from the partners to populate the template.

157. The meeting noted that this template would raise the visibility of PMC activities in the region. SPREP informed the Meeting that the current known PMDP activities will be submitted to the 24<sup>th</sup> SPREP meeting within the SPREP Climate Change Division budget.

158. The Meeting:

- **agreed** to the revised format for the work plan that was presented; and
- **agreed** to provide information on activities and budget to SPREP to populate the template and circulate out of session for approval.

## **PMC/DONORS AND PARTNERS ROUNDTABLE (5TH JULY 2013)**

159. Due to the unavailability of a number of partners and donors, the roundtable session was not convened at this time. Those donors in Nadi during this series of meetings were informally approached with a positive response.

160. Samoa requested for SPREP to arrange a donors and partners roundtable at a later date and involve some PMC members, including the chair and vice chair. The meeting noted that the project concept document (annex WP\_16.0.Att1) builds on a needs analysis from an analysis of gaps and needs from country reports and the PIMS, but that needs should be further prioritised to attract donors. A refined project concept document will be developed for the donor roundtable. The refined report should recognise that instrumentation and infrastructure for observations is a major gap in the region.

161. The meeting was informed that the only MoU for the PMDP partnership is between SPREP and WMO. The secretariat encouraged other partners to the Pacific Meteorological Desk Partnership to develop similar MoUs.

## **RULES OF PROCEDURE OF THE PACIFIC METEOROLOGICAL COUNCIL MEETING**

162. The SPREP secretariat presented the proposed Rules of Procedure.

163. Samoa noted some difficulties in the administrative operation of PMC-2 and requested for a review of the existing institutional arrangement for consideration at PMC-3.



164. The meeting:

- **agreed** to adopt formal language outlined in the SPREP publication “Taking the Floor, A Pacific Island Country Guide to Negotiating International Environmental Agreements” .
- **adopted** the SPREP Financial Regulations insofar as they are applicable as the interim Financial Regulations of the PMC, until such time as the PMC adopts its own Financial Regulations.
- **adopted** the Rules of Procedure as amended, and **requested** SPREP to present them at the 24<sup>th</sup> SPREP meeting for endorsement.

### **DATE AND VENUE OF THE THIRD MEETING OF THE PMC**

165. Tonga, Vanuatu and Samoa offered to host PMC-3, and after discussion, it was decided that the meeting will be held in Tonga. Dates will be decided in consultation with the PMC.