



“Sustainable Weather, Climate, Oceans and Water Services for a Resilient Pacific”

Fourth Meeting of the Pacific Meteorological Council (PMC-4) Working Papers

14-18 August 2017

Honiara

Solomon Islands

Agenda Item 12.1: Progress on the PIAWS Panel including outcomes of related regional and international meetings and surveys

Purpose:

This paper is presented to inform the Council on the progress on the PIAWS Panel, and to raise awareness of the activities of the International Civil Aviation Organization (ICAO) in the field of aeronautical meteorology and, in particular, the structure and outcomes of expert bodies facilitating the implementation of meteorological service for international air navigation, both globally and in the Asia-Pacific Region.

Background

The paper provides an overview of ICAO activities and background on international air transport and meteorological service for international air navigation are presented in the five attached Annexes 1, 2, 3, 4 and 5:

- ICAO general information, international air transport and meteorological service for international air navigation as presented in **Annex 1**;
- ICAO Meteorology Divisional Meeting 2014 and key outcomes as presented in **Annex 2**;
- ICAO Meteorology Panel and key outcomes from its second meeting in 2016 as presented in **Annex 3**;
- ICAO Asia-Pacific Air Navigation Planning and Implementation Regional Group and key outcomes from its twenty-seventh meeting in 2016 as presented in **Annex 4**; and
- ICAO Asia-Pacific Meteorology Sub-Group and key outcomes from its twenty-first meeting in 2017 as presented in **Annex 5**.

The paper also provides background information on PIAWS Panel as presented in Annexes 6 and 7.

- PMC-3 outcomes on aviation weather services as presented in **Annex 6**.
- PIAW Panel current Terms of Reference (TOR) as presented in **Annex 7**.

The progress of works for the PIAWS Panel is presented below.

Update:

Activities related to the PIAWS Panel (July 2015-July 2017)

- The Panel's first meeting (Nadi, Fiji, 25 November 2015) focused on developing the Terms of Reference (TOR). The TOR is presented in Annex 2. The second meeting (Nadi, Fiji, 27 May 2016) focused on raising awareness among the Pacific Islands Countries and Territories (PICTs) National Meteorological and Hydrological Services (NMHSs) on the importance and requirements to provide meteorological services to air navigation. The third meeting (Honiara, Solomon Islands, 2 September 2016) focused on identifying priority actions for the Panel. About 8 video/teleconferences during the past few months, among other items to discuss and prepare for PMC-4 and PMMM-2.
- Regional training course on understanding and implementing ISO 9001: 2015 quality management standards aeronautical meteorological services (Nadi, Fiji, 16-27 May 2016). The training course is funded the Japan International Cooperation Agency (JICA). 17 participants from 10 PICTs participated in the training.
- Regional Basic Instruction Package for Meteorological Technicians (BIP-MT) training program (Nadi, Fiji, 24 April-29 June 2017), funded by the JICA. The program provided the basic knowledge of atmospheric phenomena and processes, together with skills related to the application of knowledge. Fifteen participants from 8 PICTs participated in the training.
- The Chair of the Panel participated in the ICAO 21st Meeting of the Meteorology Subgroup (MET/21) of the Asia-Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) (Bangkok, Thailand, 29 May-1 June 2017). The Chair of PMC is now member and participating in various expert working groups of the Meteorology Subgroup.
- In-country training for and competency assessment of Kiribati Meteorological Service' Aeronautical Meteorological Observers (AMOs) at Cassidy airport, Christmas Island, supported Fiji Airways, Fiji Meteorological Services, WMO and JICA.
- In-country training for, and competency assessment of, Kiribati Meteorological Service' AMOs at Bonriki airport, Tarawa (13-27 March 2017), co-supported by Fiji Airways, Fiji Meteorological Services, WMO and JICA.
- In-country training for Kiribati Meteorological Service' staff on Tarawa on quality management system and assist them to develop exposition document for the Civil Aviation Rule (CAR) Part 174 (16-24 May 2017), co-supported by Fiji Airways, Fiji Meteorological Services, WMO and JICA.
- In-country training for Cook Islands Meteorological Service' AMOs, supported by Fiji Meteorological Service and JICA.
- Carried out audit of Cook Islands Meteorological Services AMOs by Tonga Meteorological Services with support from SPREP, and the governments of Cook Islands and Tonga.
- Solomon Islands Meteorological Services certified to CAR Part 174.
- Fiji Meteorological Service certified to ISO 9001: 2008 and compliance to CAR Part 174

- Carried out in-country capacity development and assisted Samoa Meteorology Division to be compliance with CAR Part 174 by Solomon Islands Meteorological Service with support from WMO, SPREP, and the governments of the Solomon Islands and Samoa.

Results of International and region surveys

a. **International survey** – Refer to Annex 8 for full WMO CAeM survey results.

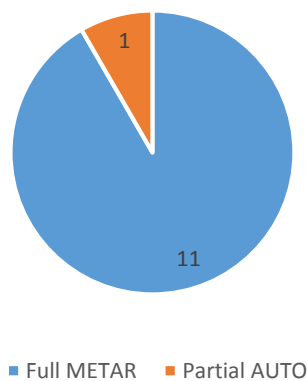
b. Regional survey

12 PMC countries responded to the PIAWS Survey. They were Australia, Cook Islands, FSM, Fiji, Kiribati, Niue, PNG, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

Results were as follows:

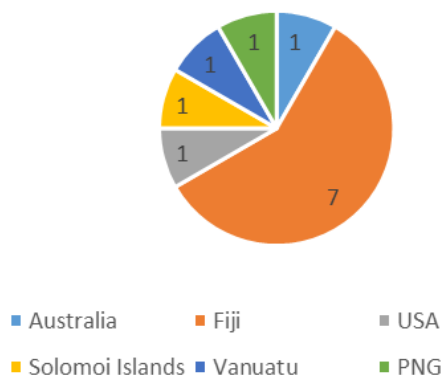
1. The number of states that carryout 24hr METAR reports at their main international aerodrome.

24/7 METAR Reports

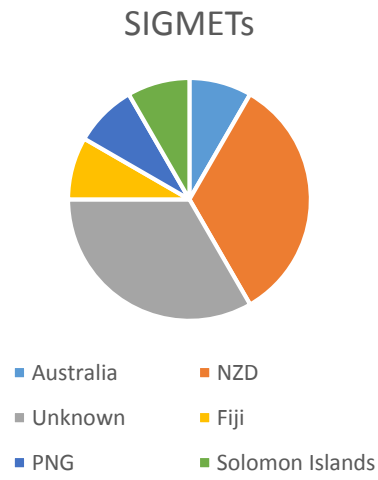


2. TAFs

TAFS provided for

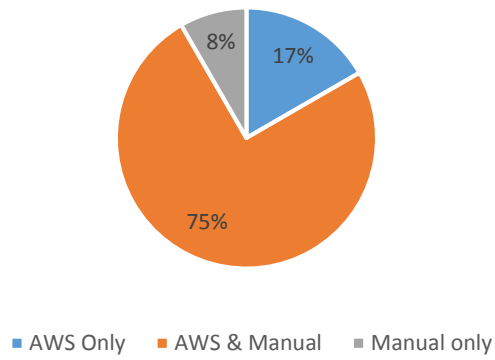


3. SIGMETs



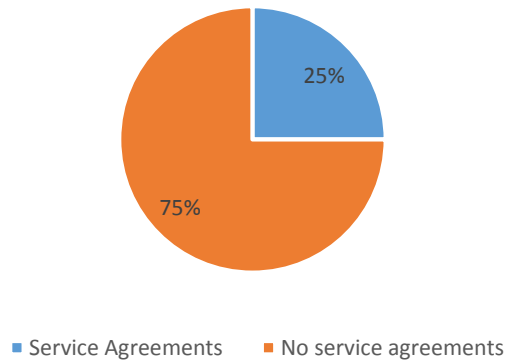
4. Automation of Observations vs Manual

Automation vs Manual instruments



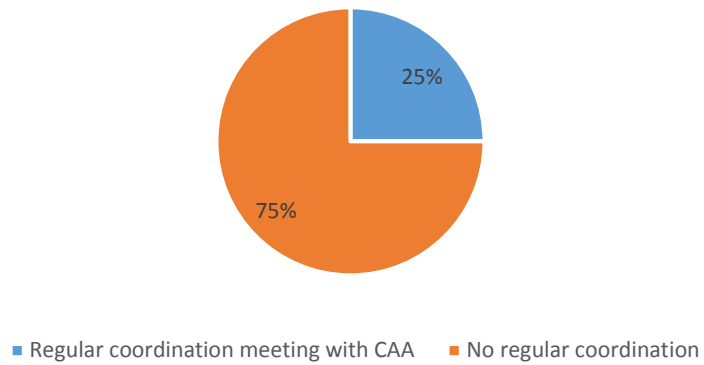
5. Service level agreements

Service level agreements



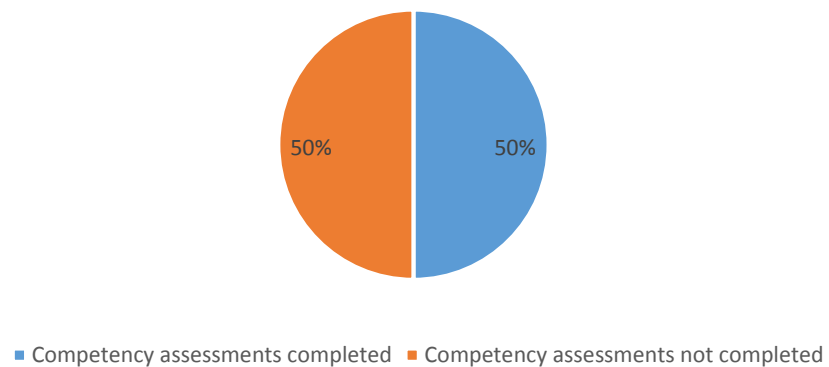
6. Coordination with CAA

Coordination with CAA



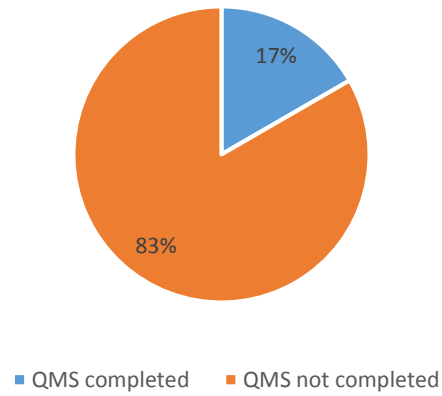
7. Competency assessments

Status of implementation of competency assessments



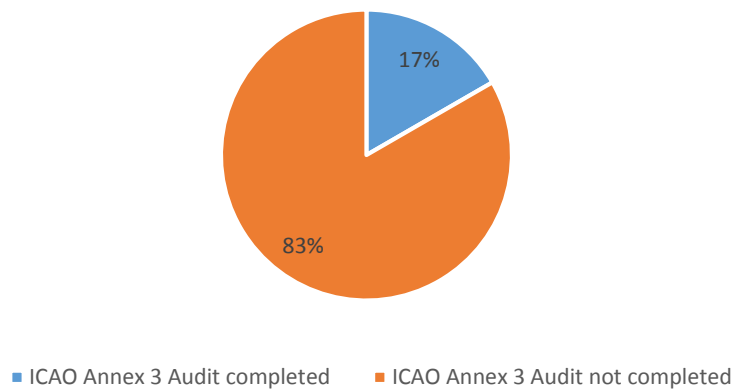
8. Status of implementation of Quality Management Systems (QMS)

Status of QMS implementation



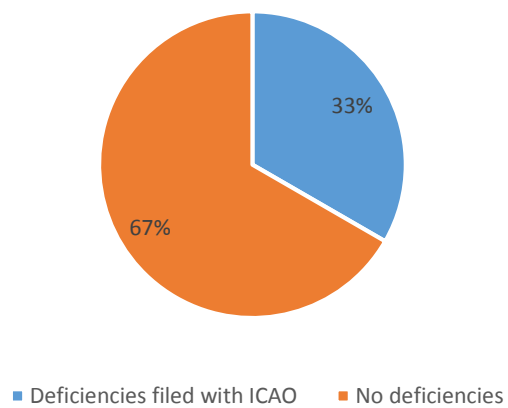
9. ICAO Annex 3 Audit and filing of difference

ICAO Annex 3 Audit



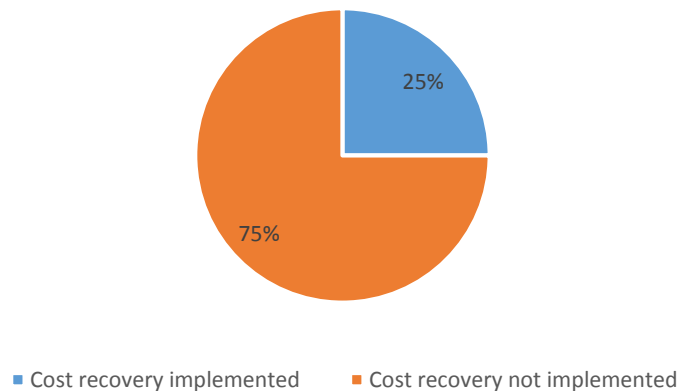
10. Deficiencies

Deficiencies



11. Cost recovery

Cost recovery implementation



Recommendations:

1. The Meeting is invited to:
 - **Noted** the report on the progress of the PIAWS Panel.
 - **Note** the role of ICAO in support of a safe, efficient, secure, economically sustainable and environmentally responsible civil aviation sector, including development of the Annex 3 provisions to ensure the uniform application of meteorological services by States signatory to the Convention that are deemed necessary or desirable for safe and regular international air navigation;
 - **Note** the key recommendations formulated by the ICAO Meteorology Divisional Meeting in 2014 on the enhancement of (global) aeronautical meteorological service provision over subsequent years;
 - **Note** the key outcomes of the ICAO Meteorology Panel as reported in its second meeting in 2016 on the development of ICAO provisions for aeronautical meteorological services and associated guidance materials;
 - **Note** the structure of the Asia-Pacific Air Navigation Planning and Implementation Regional Group, its objectives and outcomes ensuring continuous and coherent development of the Asia-Pacific Regional Air Navigation Plan and other relevant regional documentation, facilitating the implementation of air navigation systems and services with due observance to the primacy of air safety, regularity and efficiency and the identification and resolution of specific deficiencies in the air navigation field;
 - **Note** the role of the ICAO Asia-Pacific Meteorology Sub-Group and its expert contributory bodies in assisting APANPIRG in its work programme, especially in problems requiring expert advice in the field of aeronautical meteorology, and outcomes from the Sub-Group's twenty-first meeting in 2017; and
 - **Note** the importance of the above with respect to improving the coordination between PMC and ICAO in support of the mutual sustainable development objectives.
 - **Note and endorse** the content and results of the Survey.

- **Request** the PMC to task the PIAWS Panel to develop a regional project proposal to address the regional requirements for aviation weather services requirements of member countries identified by the Surveys and by the Pacific Islands Meteorological Strategy (PIMS).
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Attachments

- Annex 1 – Overview of ICAO, international air transport and meteorological service for international air navigation.
- Annex 2 – Overview of MET DIV 2014 and its key outcomes.
- Annex 3 – Overview of METP and key outcomes from METP/2.
- Annex 4 – Overview of APANPIRG and key outcomes from APANPIRG/27.
- Annex 5 – Overview of MET SG and key outcomes from MET SG/21.
- Annex 6 – PMC-3 outcomes on aviation weather services.
- Annex 7 – PIAW Panel current Terms of Reference (TOR).
- Annex 8 – WMO Commission for Aeronautical Meteorology (CAeM) Global Survey.