



International Civil Aviation Organization

**EIGHTEENTH MEETING OF THE METEOROLOGY
SUB-GROUP (MET SG/18) OF APANPIRG**

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Agenda Item 7: Research, development and implementation issues in the MET field

7.8 Governance and training

QUALITY MANAGEMENT TRAINING ACTIVITIES IN THE SOUTH WEST PACIFIC

(Presented by Australia)

SUMMARY

This paper presents an overview of a quality management Internal and Lead Auditor training activity to ten South West Pacific Meteorological Services.

1. Introduction

1.1 The standard in Annex 3 to the Convention on International Civil Aviation - *Meteorological Service for International Air Navigation*, clause 2.2.2, states that "Each Contracting State shall ensure that the designated meteorological authority ... establishes and implements a properly organized quality system comprising procedures, processes and resources necessary to provide for the quality management of the meteorological information to be supplied to the users..." Additionally guidance is available through the International Organization for Standardization (ISO) 9000 series of quality assurance standards, which provides a basic framework for the development of a quality assurance programme. The details of a successful programme are to be formulated by each State and in most cases are unique to the State organization. Guidance on the establishment and implementation of a quality system is given in the *Manual on the Quality Management System for the Provision of Meteorological Service to International Air Navigation* (ICAO Doc 9873).

1.2 The World Meteorological Organization (WMO) Executive Council EC LXII formed a Task Team on Quality Management (QMTT). A key role of the QMTT is the development of a quality management (QM) approach to the delivery of all weather and ocean services globally by all National Meteorological and Hydrological Services. An initiative of the QMTT has been that all Members operating a well-developed QMS form twinning-mentoring partnerships with Members currently planning or developing a quality management system (QMS).

2. Discussion

2.1 A critical success factor in developing a QMS is a rigorous auditing schedule, conducted by qualified internal and external auditors and this was the Australian Bureau of

Meteorology's (BoM) primary focus. The BoM, using AusAID funding, successfully delivered a three phased QM Internal and Lead Auditor training activity to ten SW Pacific Meteorological Services. The ten meteorological services involved in the training were: Cook Islands, Fiji, Kiribati, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

2.2 The aim of the activity was to assist the meteorological services to develop a QMS to ensure they met the ICAO Annex 3 requirements to deliver their aviation weather services in conformity with the ISO 9000 series of quality assurance standards and in particular, the international AS/NZS ISO 9001:2008 Quality Management Standard (ISO 9001). To achieve this, the following was undertaken:

- a) The first phase involved an "in-region" five day internal auditor training course with two participants from each Pacific Island Country (PIC). It was conducted in Port Vila, Vanuatu from 26–30 November 2012. The training provided a balance of theory consolidated with practical exercises. There were 22 participants and 21 successfully completed the course and were awarded a recognised qualification as an Internal Quality Management Auditor;
- b) The second stage involved inviting those participants who had successfully completed the initial internal auditor training course, to participate in real-time audits with experienced BoM auditors. A total of 20 Auditors from each SW Pacific Meteorological Service participated in audits conducted on BoM Sections in Canberra, Darwin, Melbourne, Perth and Sydney. The Section activities varied from the issuing of volcanic ash advices, through to tsunami warning and ocean services. This provided an ideal opportunity to consolidate the participant's workshop training in a practical environment and benchmark their audit techniques and performance as well as provide face-to-face guidance on issues they may be facing developing and implementing their own QMS; and
- c) The third and additional phase, funded by AusAID and WMO, involved the selection of 12 participants, who successfully completed Phases 1 and 2, to be provided Lead Auditor training. The training was conducted in Nadi, Fiji in May 2014, by an Australian Registered Training Organisation and BoM. The Lead Auditor course is approved by the International Register of Certified Auditors (IRCA) and has a written examination with a 70% pass mark. All twelve selected successfully completed the course and achieved an internationally recognised Lead Auditor qualification.

2.3 Overall the training enhanced the skills and knowledge of all successful participants enabling them to now provide high quality audits. It has provided the SW Pacific Region with a core resource of well qualified internal auditors. It also provides the potential for them to make a valuable contribution in not just the area of weather services but other public sector agencies and in doing so, build the capacity within the region.

2.4 The ten SW Pacific Meteorological Services all now have the knowledge and skills (practical and theoretical) to implement the required rigorous audit regime which provides the potential to achieve certification of compliance with ISO 9001.

2.5 Post the QM Activity, the BoM has actively engaged in assisting a number of the SW Pacific Meteorological Services, on a one-on-one basis, in developing and implementing their QMS. The BoM has also worked with the Finnish Meteorological Service to further develop the QM capacity building with the SW Pacific.

2.6 Since 2011 the BoM has hosted the WMO Quality Management website on behalf of WMO which is freely available and open to all WMO Members (refer to http://www.bom.gov.au/wmo/quality_management.shtml). In addition, a WMO QM forum using a social network platform has also been established for WMO Members. Joining the forum is by invitation only to ensure it maintains a WMO specific focus for WMO Members. The purpose of the forum is to provide National Meteorological and Hydrological Services who have, or are developing and implementing a QMS, the opportunity to ask the broad WMO QM Forum membership questions relating to the development, implementation and ongoing sustainability of a QMS. It also provides an environment for the sharing of information and templates applicable to QMS and the associated activities such as auditing. There are currently 197 WMO individuals registered on the forum.

2.7 In 2013, the BoM authored a *Guide to the implementation of a Quality Management System for National Meteorological and Hydrological Services (WMO No. 1100)* which has been published and is available in the five official languages of WMO. The purpose of the document is to provide guidance on how to develop and implement a QMS to ensure and enhance the quality of products and services provided by National Meteorological and Hydrological Services. It also details the steps needed to obtain certification of compliance of an organization's QMS with the ISO 9001 series of standards.

2.8 In March 2013 the BoM hosted the third meeting of the WMO Task Team on quality management systems in Melbourne. The meeting highlighted the activities of the SW Pacific project as well as to confirm the current implementation status of QMS in WMO Member countries.

3. Action by the Meeting

3.1 The meeting is invited to note the information contained in this paper.
