



Agenda Item 2: Review of Project H3 – Implementation of the MET Information Quality Management System (MET/QMS)

Analysis of MET/QMS Implementation in the SAM Region

(Presented by the Secretariat)

SUMMARY	
This working paper presents the status of MET/QMS implementation in the SAM Region.	
References:	
<ul style="list-style-type: none">• Annex 3- <i>Meteorological Service for International Civil Aviation</i>• Guide for the Implementation of the Quality Management System in the CAR/SAM Regions• ISO 9001• Report of the Third Meeting of the Programmes and Projects Review Committee (PPRC/3)• Report of PPRC/4.	
ICAO strategic objectives:	<i>A - Safety</i> <i>B - Air navigation capacity and efficiency</i> <i>E - Environmental protection</i>

1. Introduction

1.1 ICAO Annex 3, Chapter 2, paragraph 2.2.2 specifies that “Each Contracting State should ensure that the designated meteorological authority referred to in 2.1.4 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 listed in 2.1.2”.

1.2 In paragraph 2.2.3, Annex 3 recommends that the quality system established in accordance with paragraph 2.2.2 should conform to the International Organization for Standardization (ISO) 9000 series of quality assurance standards and should be certified by an approved organization.

1.3 The Standard specified in 2.2.2 should have been implemented in the States since 12 November 2012.

1.4 In order to assist States, a MET/QMS implementation guide for the CAR/SAM Regions was developed under Project H3 – MET/QMS Implementation, and made available to States for their use.

1.5 ISO 9001, which is the model recommended by ICAO in Annex 3, has undergone some changes, which were published on 15 September 2015.

1.6 The PPRC/3 and PPRC/4 meetings analysed the status of implementation of Project H3 – Implementation of MET/QMS, and issued some recommendations regarding this project.

2. Analysis

2.1 The PPRC/3 meeting reviewed the status of implementation of Project H3 – Implementation of MET/QMS, and formulated Conclusion 3/9 in this regard. In this conclusion, paragraphs a) and b) made reference to the implementation of the MET/QMS, noting that it should be measured through certification by a MET/QMS certifying company, and that, following certification, States should send a copy of such certificate to the Secretariat.

2.2 In its analysis, the PPRC/3 meeting noted that no real commitment towards implementation was observed in those States that had not yet implemented MET/QMS, specifically in terms of budgetary support.

2.3 The PPRC/4 meeting noted that the changes made to ISO 9001 in September 2015 entailed a reformulation of implementation plans in those States that had not yet implemented the standard, and a revision of those MET/QMS already implemented in order to adjust them to the new requirements.

2.4 The PPRC/4 meeting reiterated the need for States to assign more budgetary support for the hiring of companies to certify the quality management systems already implemented. Furthermore, the Meeting should take into account the support provided by the World Meteorological Organization (WMO), through the holding of seminars and its official participation giving lectures at seminars organized by ICAO, and the support provided by ICAO, through ICAO-sponsored GAP analyses performed in the States.

2.5 The Secretariat is aware of the efforts made by the States for MET/QMS implementation, as reflected in the number of States already certified. However, it is necessary to reflect the true status of implementation, since, upon reviewing MET/QMS certifications, it can be inferred that not all the offices providing aeronautical meteorological services at the airports, as listed in the CAR/SAM eANP AOP table, have implemented the MET/QMS.

2.6 The Secretariat has noted that, although Uruguay, Ecuador, Panama, Bolivia, and Venezuela have made progress in the implementation, they have not completed the process nor achieved certification.

Status of implementation of MET/QMS in the SAM Region

MET/QMS Implementation – SAM Region			
STATE	Implemented	Certified	In process of certification
Argentina	✓	✓	
Bolivia	In process of implementation		20%
Brazil	✓	✓	
Chile	✓	✓	
Colombia	✓	✓	
Ecuador	In process of implementation		Not started
Guyana	✓	In process	Not started
French Guiana	✓	✓	
Panama	✓		30%
Paraguay	✓	✓	
Peru	✓	✓	
Suriname	✓	✓	
Uruguay	✓		30%
Venezuela	✓		Not started

2.7 However, the results shown in Table 1 do not reflect the efforts made by the Secretariat.

2.8 The Meeting will recall that in September 2015, ISO 9001 was modified to include Risk Management and Leadership requirements. This change offers a new picture of MET/QMS implementation, since those States that have already implemented and certified their MET/QMS should adjust it for re-certification, since all certifications issued under the ISO 9001:2008 version expire in September 2018 and will no longer be valid.

2.9 The following information was provided by States during the last teleconference held in May 2017:

- **Bolivia:** The internal audit was conducted and they are in the process of resolving the “non-conformities.” Certification has not been obtained so far.
- **Ecuador:** No progress was reported. Certification has not been obtained.
- **Panama:** The implementation process has been completed but legal issues precluded certification in 2016. Their system has been adjusted to version 2015 of the standard. The internal audit has been completed and certification audits are scheduled for November this year.

- **Uruguay:** MET/QMS implementation has been completed. The certification process has not been finalized.
- **Colombia:** The provider of the aeronautical meteorological service in Colombia is the Institute of Hydrology, Meteorology, and Environmental Studies (*Instituto de Hidrología, Meteorología y Estudios Ambientales - IDEAM*), which has its MET processes already certified. The MET area of the UEAC, which also provides meteorological services to aviation, has not certified its MET processes.
- **Venezuela:** Has completed MET/QMS implementation, but not the certification process.
- **Guyana:** MET/QMS documentation has been completed, and the certification process has started.

2.10 Regarding the implementation of ISO 9001:2015, the Secretariat has collected information on the status of such implementation in those States that have already implemented and certified MET/QMS, as shown below:

- **Argentina:** No planning reported.
- **Brazil:** The alignment process has been completed. Certification is expected in November 2017.
- **Chile:** The implementation process has been completed. Certification audits have been conducted, with minor observations. The CAPs have been submitted and certification is expected in November 2017.
- **Colombia:** No plans have been reported for alignment with ISO 9001:2015.
- **Paraguay:** The implementation process has been completed. MET/QMS certification was obtained in July 2017.
- **Peru:** Alignment with the 2015 version has been completed. Discussions have started with a certifying company for re-certification of the ISO 9001:2015-compliant MET/QMS. The certification audit is scheduled for November 2017.
- **Suriname:** No plans for alignment with ISO 9001:2015 have been reported.
- Furthermore, **Panama** noted that its current process already incorporated the requirements of ISO 9001:2015.

2.11 Regarding the Project Coordinator, it was noted that Mr. Claudio Mattio, representative of Argentina, no longer belonged to the National Meteorological Service staff, reason why he could not take over the position of Project Coordinator. At the last teleconference, it was decided that Mr. Pablo Malve, of Argentina, would be the Project Coordinator.

2.12 **Appendix A** to this working paper lists the activities to be carried out under Project H3, with the changes suggested by the Secretariat.

3. **Conclusion**

3.1 The Meeting should review all the information contained in this working paper in order to analyse the plans for the completion of the MET/QMS implementation process.

3.2 Those States that have completed the MET/QMS implementation and certification of the aeronautical meteorological services provided at the main airports should consider extending the implementation to cover all the airports listed in the AOP Table of the CAR/SAM ANP.

3.3 States that have not completed the MET/QMS implementation process are urged to do their utmost to complete this task.

4. **Suggested action**

4.1 The Meeting is invited to:

- a) take note of the information provided in this working paper;
- b) review the list of activities presented in Appendix A;
- c) review, analyse and, if appropriate, update Table 1; and
- d) agree on any action it may deem appropriate.

APPENDIX A

PROJECT FOR THE IMPLEMENTATION OF THE MET INFORMATION QUALITY MANAGEMENT SYSTEM (QMS/MET)

SAM Region	PROJECT DESCRIPTION (DP)	DP N° H3	
Programme	Title of the Project	Start	End
Aeronautical Meteorology (Programme coordinator: Jorge Armoa)	Implementation of the QMS/MET <i>Project coordinator:</i> Pablo Malvé (Argentina) <i>Experts contributing to the project:</i> Arturo Lomas (Ecuador) Xenia Guardia (Panamá) Edward León (Venezuela) Roberto Salinas (Paraguay) Ricardo Reyes (Perú)	January 2016	June 2019
Objective	Assist States in the implementation of the QMS/MET and certification, where applicable, and establish guidelines for the transition to the standard ISO 9001: 2015, aligned to ASBU and projected to the interoperability of meteorological information, in compliance with Annex 3.		
Scope	Establishment and application of a quality management system of meteorological data safety-oriented at each MET unit of all SAM aerodromes listed in CAR/SAM ANP and compliance with the standards and recommended practices of Annex 3 and the CAR/SAM e-ANP, Vol. I and Vol. II.		
Metrics	Number of AOP aerodromes certified under ISO 9001 in force.		
Strategy	All tasks will be carried out by experts nominated by SAM States participating in the project, led by the Project Coordinator and under the supervision of the MET Programme Coordinator through the “GoToMeeting” tool. Upon completion of the tasks, the results will be sent to the MET Programme Coordinator as a final document for submission to, and if necessary approval by, the GREPECAS CRPP through the GREPECAS fast-track procedure. For the purpose of collaborative decision-making, meetings will be held with the areas involved.		
Goals	a) 100% of SAM States have established QMS/MET system in accordance with standard ISO 9001:2008 on 30 June 2016; b) 70% of SAM States apply and certify QMS/MET system in accordance with standard ISO 9001:2015 on 31 December 2017; and c) 100% of SAM States have QMS/MET system certified by an organization in accordance with standard ISO 9001:2015 in June 2019.		
Rationale	More accurate and timely meteorological information will optimise flight path planning and prediction, thus improving ATM safety and efficiency; improved aerodrome reports and forecasts will optimise the use of available aerodrome capacity; and meteorological information will minimise the environmental impact of air traffic. Performance management will be an important part of meteorological information quality assurance.		
Related projects	<ul style="list-style-type: none"> ➤ Automation ➤ Improved ATM situational awareness 		

Project Deliverables	Relationship with the regional performance-based plan (PFF)	Responsible Party	Status of ¹ Implementation	Date of Delivery	Comments
Guidelines for the transition to Standard ISO 9001:2015	PFF SAM MET 02, 03, and 04	MET programme coordinator and project director		September 2016	The guidelines will facilitate the drafting of ISO 9001: 2015 documentation by MET service provider States.
Survey to States on MET personnel completed	PFF SAM MET 02, 03, and 04	MET programme coordinator and project director		November 2016	One of the main problems facing MET service provider States is the lack of personnel with the qualifications and competencies required by WMO and ICAO. State requirements will be officially communicated to ICAO contracting States.
Table of compliance with Eanp CAR/SAM, Part VI – MET, Vol I.	PFF SAM MET 02, 03, and 04	MET programme coordinator and project director		June 2016	Close monitoring of compliance with Part MET of Volume I of the e-ANP CAR/SAM.
Report of the MET service risk management workshop	PFF SAM MET 02, 03, and 04	MET programme coordinator and project director		August 2016	June 2016 has been scheduled as a possible date for the development of the workshop seminar on “Risk Analysis”.
Update course in Leader Auditor	PFF SAM MET 02, 03, and 04	Project Director		October 2017	An update course for the auditors trained under the standards of ISO 9001:2008 should be developed in order to have the required knowledge in the new standards introduced in version 2015.
Resources needed	Availability for GoTo Meeting teleconferences is required.				

¹

<i>Grey</i>	<i>Task not started yet</i>
<i>Green</i>	<i>Activity being implemented as scheduled</i>
<i>Yellow</i>	<i>Activity started with some delay, but will be implemented on time</i>
<i>Red</i>	<i>Activity not implemented on time; mitigation measures are required</i>