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

Measuring Quality

(Presented by the Secretariat)

SUMMARY

This working paper offers some recommendations for the implementation of quality measurements in aeronautical information services.

REFERENCES

- Annex 15 to the Convention on International Civil Aviation
- ISO 9001:2015
- Report of the Fourth Meeting of the GREPECAS Programmes and Projects Review Committee (PPRC/4)
- Report of the Third Meeting of Air Navigation and Safety Directors (AN&FS/3)
- AIM/MET/QMS implementation survey results

ICAO strategic objectives:	*A – Safety* *B- Air navigation capacity and efficiency* *E - Environmental protection*

1. Introduction

1.1 The implementation of a quality management system in MET services is a standard contained in Annex 3, Chapter 2, 2.2.2.

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 States that have implemented and certified the MET/QMS have done so based on the requirements of ISO 9001:2008.

1.4 The Secretariat has circulated a State letter containing a survey on the impact of AIM/MET/QMS implementation on the services provided to users.

2. Analysis

2.1 The PPRC/4 meeting noted that the changes made to standard ISO 9001 in September 2015 would affect those States that had already implemented and certified their MET/QMS, as well as the timetable of activities to be carried out by States for completing MET/QMS implementation.

2.2 The SAM/MP1 meeting reminded States that standard ISO 9001 had undergone some changes. These changes were published in September 2015.

2.3 The Third Meeting of Air Navigation and Safety Directors (AN&FS/3) analysed the impact of these changes on States, noting that certifications issued under ISO 9001:2008 would expire in September 2018 and re-certification would be required under ISO 9001:2015.

2.4 Aeronautical meteorological services have focused on the need to implement AIM/QMS, but no analysis has been conducted on the impact of QMS on the provision of services. The question that MET service providers should ask themselves is whether MET/QMS implementation has added value to the service provided. Certifying companies can certify the processes under quality management, but providers should be able to measure the impact of quality implementation and make sure that the products and data provided with quality are really achieving the purpose of the latter. The question is: How can a MET provider become really reliable? Quality is really based on the confidence users have on their data and services.

2.5 This confidence is based on the quality of the image and the reputation gained by the consistent provision of aeronautical meteorological information products and services of an assured quality. An aeronautical meteorological information product or service is a promise of safety if it complies with all relevant regulations and standard message formats, and consistently meets quality requirements.

2.6 Quality management must be an acceptance of the overall MET service management system and should contribute to safety. A quality management system in MET services must provide "real quality" to the user, and not only "formal quality" in products and services. Only when a MET organisation "lives" quality, and not only "formal" quality, will it bring tangible benefits to the user. The purpose should be "real" rather than "formal" quality.

2.7 MET/QMS implementations have been aimed mostly at complying with a standard contained in Annex 3. Following the implementation experience, States should ask themselves whether QMS implementation has really added value to the services provided.

2.8 In order to build a reliable MET service, it is advisable to determine MET/QMS efficacy by:

- ✓ Assessing management principles (work environment, resources, risk management, experience, etc.).
- ✓ Assessing processes in order to define the efficiency of process criteria, process effectiveness and efforts made to achieve quality.
- ✓ Assessing the organisation (quality culture, compliance with requirements).
- ✓ Ensuring data quality and consistency for aviation users, recognising their needs and offering services that meet or exceed their expectations.
- ✓ Ensuring compliance and contributing to safety, following the applicable policies and regulatory standards with full transparency.
- ✓ Striving to avoid data incidents in aeronautical products and services, applying a continuous improvement approach.
- ✓ Securing the commitment of all those involved in the data chain and at all levels of the MET organisation in order to help prevent data incidents.

2.9 The objective must be to improve customer satisfaction by reducing major non-conformities identified in internal and external audits, and further reducing the cost of working with poor-quality data. This will result in compliance with data quality requirements (*e.g.*, ICAO or WMM), a

reduction of incidents related to the use of wrong data, a reduction of formatting errors, and increased efficiency.

2.10 States must recognise that, in order to meet this objective, they must measure the real quality of their products. High quality performance should be achieved by:

- ✓ raising awareness of quality and QMS requirements within the organisation;
- ✓ discussing and defining assessment criteria for the organisation;
- ✓ identifying and assessing quality management principles;
- ✓ analysing and assessing its processes;
- ✓ assessing its organisation;
- ✓ discussing the results obtained within the organisation; and
- ✓ discussing with, or benchmarking against, other organisations;

2.11 The quality standards applied only confirm the high level of the system, but do not guarantee its efficacy and success. All efforts must be made to guarantee the practical rather than formal operation of the management system. The measurement of MET/QMS effectiveness will contribute to the development of an AIM organisation. The objective should be to provide reliable aeronautical information services/aeronautical information management.

3. Conclusion

3.1 States should make the effort to implement a real rather than formal QMS. The objective must be the provision of data and services with real quality assurance.

3.2 States, especially MET service providers, should be able to measure quality in data, information/data collection processes, and information/data processing. They should be able to measure data quality throughout the data chain, through the implementation of indicators with real and quantifiable metrics.

3.3 Finally, the commitment of the entire system and its identification with the service should give an image of a reliable MET service resulting based on the application of a real QMS.

4. Suggested action

4.1 The Meeting is invited to:

a) review the information provided in this working paper;

b) consider quality measurements, with tangible and quantifiable metrics, that could be used on the implemented QMS;

c) take any other steps it may deem advisable;

d) review and, if deemed appropriate, update the Guide for the implementation of QMS in the SAM Region; and

e) agree on any actions it may deem appropriate.