



(Lima, Peru, from 18 to 22 September 2017)

Agenda Item 7: Other business

WMO CAeM/AeMP activities of relevance to ICAO

(Presented by WMO)

SUMMARY

This information paper provides the meeting with an overview of some of the recent and upcoming activities of the WMO Commission for Aeronautical Meteorology (CAeM) in support of the Aeronautical Meteorology Programme (AeMP) and support to ICAO.

Other supplementary information of relevance to aeronautical meteorological service provision is also provided, including reference to the (new) ISO 9001:2015 standard for quality management systems.

Action by the meeting is in paragraph 6.

1. Introduction

1.1 Over the past 12 months the WMO Commission for Aeronautical Meteorology (CAeM) has been engaged in a number of activities in support of the Aeronautical Meteorology Programme (AeMP) as well as support to ICAO. This information paper provides an overview of some of these recent activities as well as an outline of some key upcoming events during the next 12 months. In addition, this information paper provides details of a CAeM Newsletter and the WMO website from where further CAeM and AeMP-related information can be obtained and also provides a closing remark in respect of the ISO 9001:2015 quality management systems standard.

2. Recent activities

2.1 CAeM global survey

2.1.1 From November 2016 to February 2017 a global survey on aeronautical meteorological service provision was conducted by the CAeM with all WMO Members. The survey (online questionnaire) sought to establish a comprehensive, consolidated global view on the existing institutional arrangements for the provision of meteorological services to international air navigation, particularly at a national level taking into account the supporting ICAO and WMO regulatory frameworks. A response rate of more than 90 per cent was achieved.

2.1.2 The scope of the survey, response to the survey per region, initial findings to emerge from the survey and further information is provided in a separate information paper to the meeting.

2.2 AMF qualification

2.2.1 With effect 1 December 2016, through WMO-No. 49, Technical Regulations, Volume I – *General Meteorological Standards and Recommended Practices*, WMO has required that its Members [shall] ensure that an aeronautical meteorological forecaster (AMF) has successfully completed a Basic Instruction Package for Meteorologists (BIP-M). The BIP-M is defined at Appendix A to [WMO-No. 49, Volume I](#) and covers general conditions plus specific components (foundation topics, physical and dynamic meteorology, synoptic and mesoscale meteorology as well as climatology).

2.2.2 The introduction in 2016 of the WMO requirement for an AMF to have completed a BIP-M followed the introduction on 1 December 2013 of a requirement that WMO Members [shall] ensure an aeronautical meteorological observer (AMO) and an AMF fulfil respective competency requirements. To assist implementation, a new WMO guide on competency is undergoing final preparations and is expected to be published by WMO soon.

2.2.3 A CAeM Expert Team on Education, Training and Competency (ET-ETC) has made flowcharts and other support materials available via a [Moodle website](#) to assist implementation of the qualification and competency requirements.

2.3 WMO and ICAO secretary generals bilateral meeting

2.3.1 On 28 April 2017, the Secretary-General of WMO, Professor Taalas, and the Secretary General of ICAO, Dr Liu, convened a bilateral meeting in Geneva to discuss cooperation between the two organizations in the field of aeronautical meteorology. The meeting was an opportunity to further strengthen the partnership between the two organizations, particularly in the context of contributing to the UN sustainable development goals, and to formulate agreements on how the organizations can work together more efficiently and more effectively going forwards.

2.3.2 In this context and to realize the potential of this partnership, the key roles played by NMHSs and national civil aviation administrations in the provision of meteorological service for international air navigation was emphasized. Immediately following the meeting, joint circular letters were issued by WMO and ICAO to their respective Members/States in this connection. Copies of these letters and further information on the bilateral meeting is [available here](#).

2.4 EC-69 Special Dialogue

2.4.1 On 11 May 2017, the 69th Session of the WMO Executive Council (EC-69) conducted a one-day *Special Dialogue on the Future of Aeronautical Meteorological Services*. Building on the success of a similar event at EC-68 the year before on public-private partnership, this year's special dialogue sought to discuss the evolving requirements for the provision of meteorological services to international air navigation and to consider the impacts of the envisaged changes on NMHSs and other aeronautical meteorological service providers (AMSPs).

2.4.2 Following a keynote address by the President of the CAeM, Mr Chi-Ming Shun, a series of equally informative presentations were given by invited experts from NMHSs and other AMSPs (including private sector) as well as international organizations and industry (including ICAO and IATA). The special dialogue concluded by way of a panel discussion/Q&A session with EC members. As a consequence of the special dialogue, the Executive Council formulated Decision 42 (EC-69). Further information on the EC-69 Special Dialogue, including its summary, is [available here](#).

2.5 WMO contribution to ICAO activities

2.5.1 WMO has continued to contribute to the global and regional activities of ICAO over the past 12 months, including but not limited to engagement in the following:

- EANPG METG/26 meeting (20 to 23 September 2016, Paris);
- METP/2 meeting (17 to 21 October 2016, Montreal);
- APIRG IIM/SG establishment meeting (28 to 30 November 2016, Dakar);
- METP WG-MOG/4 (SADIS/WIFS and WAFS) meeting (4 to 7 April 2017, Exeter);
- EUR/NAT IWXXM implementation workshop (17 to 18 May 2017, Paris);
- APAC MET SG/21 meeting (29 May to 1 June 2017, Bangkok);
- METP WG-MOG/5 (IAVW) and WG-MISD/3 (VA SO₂) meeting (12 to 14 June 2017, Tokyo);
- EANPG METG PT/EAST/17 meeting (14 to 16 June 2017, Minsk); and
- METP WG-MIE, WG-MRI, WG-MISD, MCRGG and MG meetings (10 to 20 July 2017, Montreal).

2.5.2 These contributions, amongst others, have involved in-person attendance at meetings as well as involvement in periodic (typically quarterly) teleconferences by certain groups to progress the work during the intersession period.

2.6 Other relevant recent activities

2.6.1 Further to the foregoing, WMO has led or contributed to the following (non-exhaustive list):

- WMO RA III (South America) SIGMET workshop (16 to 18 August 2016, Lima);
- WMO/United Kingdom Met Office Aviation Seminar (26 to 30 September 2016, Jakarta);
- WMO RA II (Asia) International Training Course on Aeronautical Meteorological Services (24 October to 4 November 2016, Beijing)
- WMO/Qatar Aeronautical College Workshop on Aviation Meteorology (6 to 10 November 2016, Doha)
- WMO RA V (South-West Pacific) SIGMET Coordination Pilot Project (4 October 2016 to 3 March 2017);
- WMO CAeM Management Group 2016 (7 to 9 November 2016, Innsbruck);
- WMO RA II (Asia) Regional Conference on Management of NMHSs (10 to 11 February 2017, Abu Dhabi);
- Joint meeting of WMO CAeM Expert Team on Aviation, Science and Climate (ET-ASC) and Expert Team on Information and Services for Aviation (ET-ISA) (22 to 24 May 2017, Geneva);
- WMO Volcanic Ash Advisory Centre “Best Practice” (VAAC BP) workshop (7 to 9 June 2017, Tokyo);
- WMO Inter-Programme Expert Team on Space Weather Information Systems and Services (IPT-SWeISS) meeting (21 to 23 June 2017, Geneva); and
- WMO-IUGG Volcanic Ash Scientific Advisory Group (VASAG) meeting (21 to 23 August 2017, Vancouver, WA).

2.6.2 Further information on these activities and others is available via the WMO website and/or the bi-annual CAeM newsletters (paragraph 4 below refers).

3. Key upcoming events

3.1 AeroMetSci-2017

3.1.1 From 6 to 10 November 2017, a WMO Aeronautical Meteorology Scientific Conference will be held at Météo-France in Toulouse, France. With the theme “*Aviation, weather and climate: Scientific research and development for future aeronautical meteorological services in a changing atmospheric environment*” the objective of this international conference is to provide an overview of the current state-

of-the-art and foreseen advances in meteorological science and technology needed to underpin the changing global aviation industry, in line with the ICAO Global Air Navigation Plan (GANP) and its Aviation System Block Upgrades (ASBU) methodology.

3.1.2 It is expected that this unique event will stimulate special research focus on high impact weather affecting aviation safety and efficiency and will foster the rapid transition from research into operations. In addition, the event is intended to raise the awareness of the potential impacts of climate change and variability on aviation operations now and into the future.

3.1.3 The intended audience of the conference includes scientists and researchers working in aeronautical meteorological observations, forecasts and warnings, service providers and users of aeronautical meteorological services, relevant international organizations, national and regional ATM modernization programmes and industry partners.

3.1.4 Further information on the conference is [available here](#).

3.2 CAeM-16 and TECO

3.2.1 The sixteenth session of the WMO Commission for Aeronautical Meteorology (CAeM-16) and a Technical Conference (TECO) will (subject to confirmation) take place from 23 to 27 July 2017 in Exeter, United Kingdom. Taking inspiration from the outcomes of the referred CAeM global survey, EC-69 Special Dialogue and AeroMetSci-2017 conference as well as due regard to the organization's strategic direction given in the WMO Strategic Plan plus the ongoing strategy for air transport modernization conveyed in the ICAO GANP, the session will seek to establish the necessary and appropriate arrangements for the Commission over the coming four years.

3.2.2 Further information on the CAeM-16/TECO arrangements will be made available by WMO in due course.

4. Additional information

4.1 CAeM Newsletter

4.1.1 The CAeM now routinely issues a newsletter on the activities of the Commission as well as other developments considered relevant to the aeronautical meteorology community. The newsletters are usually issued in the first and third quarters of each year.

4.1.2 CAeM Newsletter 1/2017 was issued in February 2017 and the next issue (2/2017) will be issued in September 2017. The newsletters can be accessed via the AeMP news feed [available here](#). Anyone wishing to subscribe to the email distribution list is kindly invited to contact the WMO secretariat (aviation@wmo.int) for assistance.

4.2 WMO website

4.2.1 In addition to the referred CAeM newsletter, a wealth of other information pertaining to the CAeM and the AeMP is available on the WMO website at URL: <https://www.wmo.int/aemp/>

4.2.2 The website is regularly updated with latest news, final reports of meetings/events, working documentation for meetings and so on.

5. Supplementary remark

5.1 As a final, supplementary remark, WMO wishes to remind aeronautical meteorological service providers of the 2015 revision made by the International Organization for Standardization (ISO) to the ISO 9001 quality management systems (QMS) standards. The latest ISO 9001:2015 standards, published in September 2015, are generic and are intended to be applicable to any organization, regardless of its size or the products and services it provides. It is important to note that ISO is affording a 3-year transition phase for the new QMS standard, meaning that a certificate to ISO 9001:2008 *will no longer be valid* after September 2018.

5.2 Acknowledging that ICAO Annex 3/WMO-No. 49, Technical Regulations, Volume II – *Meteorological Service for International Air Navigation*, 2.2.3 recommends that the quality system established [for the quality management of the meteorological information supplied to users] should be in conformity with the ISO 9000-series of quality assurance standards and should be certified by an approved organization, aeronautical meteorological service providers fulfilling this recommendation while still conforming to the ISO 9001:2008 standard should, if not already doing so, be undertaking efforts to transition to the ISO 9001:2015 standard.

5.3 In this connection, it is worthwhile to note that one of the global findings of the CAeM global survey (paragraph 2.1 above refers) was that of those aeronautical meteorological service providers that have a QMS in place, only a small fraction (about 1 in 8) are certified to the ISO 9001:2015 standard. Considerable effort is therefore required to transition from the old to the new ISO standard.

5.4 To assist implementation, an update to WMO-No. 1100, *Guide to the implementation of a quality management system for national meteorological and hydrological services*, that encapsulates the ISO 9001:2015 standard is undergoing final preparations and is expected to be published by WMO soon.

5.5 Further information, by ISO, on the ISO 9001:2015 standard is [available here](#) and an ISO guide outlining the move from the 2008 to 2015 standards is [available here](#).

6. Action by the meeting

6.1 The meeting is invited to note the contents of this information paper.