

**REPORT OF THE PRESIDENT OF CAeM**

*(Submitted by Chi-Ming Shun, President of CAeM)*

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**Summary and Purpose of Document**

This document provides an executive summary of the report of the President of CAeM.

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**ACTION PROPOSED**

The Management Group (MG) is invited to review the report and, as necessary, to formulate actions accordingly.

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## 1. EXECUTIVE SUMMARY

1.1. The MG noted that this president's report covered the period since the last meeting of the CAeM Management Group held during 8 to 10 November 2016 in Hall (Innsbruck), Austria. It was recalled that during this period, four teleconferences of the MG had been conducted and a 'mini-MG' meeting had been arranged when the opportunity arose (i.e. upon the conclusion of AeroMetSci-2017). To alleviate the heavy workload of Dr Herbert Puempel in chairing the ET-ASC, P/CAeM in consultation with the MG had established an additional co-chair for ET-ASC (Matt Strahan, USA) such that all CAeM ETs now had two co-chairs. A joint meeting of the ET-ASC and ET-ISA was held on 22-24 May 2017.

1.2. Mr Shun highlighted the following developments:

- a) Successful organization of the **Special Dialogue on the Future of Aeronautical Meteorological Services** at EC-69 engaging national and private aeronautical meteorological service providers and aviation industry representing airlines and pilots with Decision 6.2(2)/1 calling for the development of a methodology and conducting sensitivity analysis of various scenarios of future meteorological service delivery for aviation, including different degrees of engagement of private sector providers, to assess possible impacts both on the NMHSs as aeronautical meteorological service providers, and on the resulting service quality levels; such analytical information to inform WMO planning of aviation-related activities in the future, with first results of such analytics expected to be available in time for Cg-18 in 2019.
- b) A summary of the outcomes of the **CAeM Global Survey on Aeronautical Meteorology Service Provision** was presented to EC-69 by P/CAeM in the Special Dialogue. A new publication containing the outcomes of the CAeM Global Survey on Aeronautical Meteorology Service Provision has been posted on the WMO website ([here](#)). CAeM Expert Teams ET-GOV and ET-CCP under the leadership of Mr Jan Sondij, Co-chair of ET-GOV, contributed to this milestone achievement of the Commission. Special thanks also goes to WDS/AEM Division internee Mr Yi Wang for the preparation of the online survey and processing of the results.
- c) EC-69 endorsed the **draft Long-Term Plan for the WMO Aeronautical Meteorology Programme (LTP-AeMP)** methodology and requested that the LTP-AeMP be finalized by EC-70.
- d) Highly successful organization of the **WMO Aeronautical Meteorology Scientific Conference 2017 (AeroMetSci-2017)** held in Toulouse, France ([Météo-France website](#) and [WMO AeMP website](#)), with excellent feedback received from around 230 participants, which is only the second such event dedicated on aeronautical meteorology in the history of WMO, the last one being held in London, UK, in March 1968. This conference opened new and promising ways of a fruitful information exchange between scientists, operational actors and end-user communities going forward. AeroMetSci-2017 also highlighted the need for a mechanism for enhancing the sharing and use of aircraft data, in particular turbulence data, for the improvement of science and operations.
- e) EC-69 approved the amendment to the **WMO Technical Regulations (WMO-No. 49), Volume II**, ensuring its necessary alignment with Amendment 77 to ICAO Annex 3. The updated version was subsequently published albeit with some delay.
- f) Participation of P/CAeM in PTC-2017 (9 Jan 2017), Joint PRA/PTC-2017 (9-11 Jan 2017), second 2017 session of EC WG/SOP (16-17 Oct 2017), Joint PRA/PTC 2018 (17-19 Jan 2018) during which **WMO restructuring** was discussed. P/CAeM presented a SWOT analysis for CAeM and provided his views on various restructuring options at PTC-2017. While various options of reducing the number of

TCs had been discussed, notably from eight TCs to two TCs (e.g. Commission for Basic Infrastructure and Commission for Applications and Services) or to four TCs (e.g. Commission for Basic Infrastructure, Commission for Applications and Services, Commission on Climate, and Commission on Water), with the existing service-oriented TCs such as CAeM continuing in the form of Standing Committees under the Commission for Applications and Services, there is not yet a consensus as of today. It is expected that a consolidated proposal will be further deliberated by the next meeting of EC WG/SOP and EC-70 prior to approval by Congress in 2019.

- g) P/CAeM was involved on the approval of adoption of **Release 2.1 of IWXXM** by EC-69 and to start a "Fast Track" procedure for approval of adoption of sub-release 2.1.1 of IWXXM, with a proposed date of implementation of 15 May 2018. 2017 also saw the start of IWXXM implementation by some Members supported by training events, e.g. international workshop on "Implementation of the IWXXM for the Exchange of OPMET Data" organized by the Hong Kong Observatory in collaboration with the WMO VCP and ICAO Asia/Pacific Office during 10 - 12 October 2017.
- h) 2017 also saw the publication of a new version of the **WMO Guide to the Implementation of Quality Management Systems for National Meteorological and Hydrological Services and Other Relevant Service Providers (WMO No. 1100)** which is one of the main deliverables agreed at EC-68 for furthering the WMO quality management framework, especially the provision of guidance to assist Members to successfully transition existing QMSs based on the 2008 ISO standard to the 2015 standard. In cooperation with the ETR Office, ET-ETC developed a **WMO Guide on Competency**, under the expert leadership of Andrea Henderson of the Australian Bureau of Meteorology. The Guide is expected to be published very soon. Apart from providing guidance on implementing competency frameworks, it provides guidance on competency-based training which is the recommended way to go in updating training programmes of Members. ET/ETC has also upgraded the **CAeM moodle website** into a more contemporary version with content enhancements and revamps in the pipeline.
- i) Workload continued to be heavy for CAeM expert team members and WMO secretariat to attend and contributed to the various working group meetings of the **ICAO Meteorology Panel (METP)** as well as the periodic teleconferences during the respective intersession periods. In particular, WMO (supported by the Ad Hoc Task Team on Aviation (TT-AVI) of IPT-SWeISS and WMO secretariat) contributed actively to the coordination, preparation, site assessment and auditing for the imminent designation of the provider states of **Space Weather Centres** by ICAO. CAeM expert team members are also actively contributing to the work of the **Regional Hazardous Weather Advisory Centre (RHWAC)** work stream including developing draft guidance material on improving SIGMET provision and coordination for inclusion in Doc 8896, developing the functional and performance requirements for hazardous weather information in the enroute phase of flight for ASBU Block 1, and maturing the concept of a globally-harmonized, multi-hazard information service to integrate into the future SWIM environment and to support development of draft provisions for inclusion in Amendment 79 to Annex 3. It is also noted that the **SIGMET coordination** project initiated by WMO for three Members in SE Asia (Singapore, Malaysia and Indonesia) had become operational in mid-2017 and efforts are being made to extend the coordination to other neighbouring Members.
- j) After launching the inaugural **CAeM Newsletter** in September 2016, two more issues have been published in 2017 and the first issue of 2018 is in the pipeline. P/CAeM notes with appreciation the proactive contributions by expert team

members to the newsletters and expects that this will become a matter of routine supported by the WMO secretariat.

- k) Discussion was made between P/CAeM and Dr Jitze van der Meulen, CAeM representative on ICG-WIGOS, regarding further **consultation between CAeM and CIMO on methods of observation**, in particular automation issues, at the aerodrome and (increasingly) in the terminal area, and how the documentation under the respective responsibility of CAeM, CIMO and ICAO should be managed in the future.
- l) P/CAeM noted with concern that the organization of the **African Conference on Meteorology for Aviation (ACMA)** for increasing the awareness of Members in RA I to the changes in aeronautical meteorological services arising from ICAO GANP and ASBU has yet to be firmed up. For RA II, while a side event on aeronautical meteorology was organized at the RECO preceding the 16<sup>th</sup> Session of RA II on 11 February 2017, a full-fledged awareness event for RA II may still need to be pursued.

### ***Restructuring of WMO constituent bodies***

1.3 P/CAeM noted that one of the possible options for restructuring the TCs will be to consolidate the application- and service-oriented TCs to come under one Commission for Applications and Services, with CAeM re-positioning as one of its Standing Committees. It was envisaged that should stronger ties be established between the Standing Committee on Aeronautical Meteorological Services (SC-AeM) (under the WMO Commission for Applications and Services) and the ICAO MET Panel (under the ICAO Air Navigation Commission), e.g. SC-AeM becoming an Inter-Agency Standing Committee (IASC), international coordination and cooperation on aeronautical meteorological matters between WMO and ICAO will be further enhanced and the restructuring would see benefits. AeMP was also expected to continue to play a pivotal role in WMO as demonstrated in its leadership in promoting QMS, competency framework, compliance culture, public-private partnership (PPP), etc. within the Organization. On the other hand, P/CAeM also noted with some concern that in the midst of the restructuring and change in focus of the Organization, e.g. to accord higher priorities to PPP engagement, the availability of adequate staff resources supporting the AeMP is becoming an issue, especially in the imminent preparation of the next CAeM session to be held in July 2018 and deliverables for EC-70 and Cg-18.

### ***Aircraft observation***

1.4 P/CAeM recalled that MG-2016 questioned whether there was a need to reinstate aircraft-based observations in the work programme of the CAeM given, not least, the recognition in ICAO's GANP that aircraft based meteorological observations are an enabler to enhanced operational decisions through integrated meteorological information, and the increasing importance of their availability to the wider MET community in view of their benefits in improving forecasting for TMA and airports. In this regard, the MG-2016 had agreed to determine the need and feasibility of reinstating aircraft-based observations in the work programme of the CAeM. This subject was again highlighted in AeroMetSci-2017 (see 1.2d) above), recognizing that the enhanced availability of automated aircraft observations from both WMO and non-WMO sources will be useful not only for operational forecasting but also for validation and fine-tuning of hazardous weather detection and prediction algorithms. It was also noted that discussion was ongoing to enhance the collaboration between WMO and IATA on AMDAR programme operation, especially in the context of collection and provision of automated turbulence reports from aircraft, and thus CAeM should play a proactive role in this discussion with a view to promoting enhanced sharing of all available aircraft observation data from both WMO and non-WMO sources benefiting both the meteorological and aviation communities. This collaboration may be considered as one of the low-hanging fruits in the PPP development initiative.

### ***Finalization of LTP-AeMP and beyond***

1.5 P/CAeM appealed for the support of the CAeM MG and ETs to finalize the LTP-AeMP based on the template drawn up by the secretariat ([INF.1](#)) for consideration by EC-70. Given the time constraint and the rather substantial outstanding work, the MG was requested to consider if there is scope for simplifying the LTP structure (e.g. to focus on Block 0 and Block 1 initially) and if a drafting team should be formed to carry out the work as a matter of priority. The MG was also invited to discuss if the methodology would need to be fine-tuned, e.g. to reflect not just the scientific/meteorological aspects but also the technological aspects such as (i) deployment of electronic flight bag (EFB) applications supported by onboard wifi, (ii) IWXXM implementation, and (iii) 'Big Data' analytics and artificial intelligence (AI) developments.

1.6 Similarly, the actions called for by Decision 6.2(2)/1 (EC-69) would also need the attention by the present MG and the incoming MG (after CAeM-16) to make sure that the deliverables, viz. development of a methodology and conducting sensitivity analysis of various scenarios of future meteorological service delivery for aviation to assess possible impacts both on the NMHSs as aeronautical meteorological service providers, and on the resulting service quality levels, will be available for consideration by Cg-18. It was noted that a PPP landscape survey being planned to be conducted in early 2018 may provide timely and pertinent inputs to this work.

### ***Concluding remarks***

1.7 As this would be the last MG meeting that the current P/CAeM chairs, Mr Shun expressed heartfelt appreciation for the excellent support by all members of the MG including the secretariat members of both WMO and ICAO. The significant progress made by the Commission during the past eight years would not have been possible without this support. Even though uncertainties on the future restructuring will still exist for some time, P/CAeM was hopeful that the core values of strong scientific expertise, professionalism, close user engagement and partnership, agility, pro-activeness and inclusiveness would be able to guide this Commission (or its successor) and aeronautical meteorological services worldwide to reach new heights in the decades to come.

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