



International Civil Aviation Organization

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

ICAO Regional Sub-Office, Beijing, China
18 – 21 August 2014

Agenda Item 3: Review outcomes from ICAO global groups

REVIEW OUTCOMES OF WAFSOPSG/8

(Presented by the Secretariat)

SUMMARY

This paper presents a summary of outcomes from the Eighth Meeting of the World Area Forecast System Operations Group, held in Bangkok, Thailand, from 2 to 5 September 2013.

1. Introduction

1.1 The Eighth Meeting of the World Area Forecast System Operations Group (WAFSOPSG/8) was held in Bangkok, Thailand, from 2 to 5 September 2013. The participation of WAFSOPSG members from twelve (12) ICAO Member States, the Agency for Air Navigation Safety in Africa and Madagascar (ASECNA), the International Air Transport Association (IATA), the International Federation of Air Line Pilots' Associations (IFALPA) and the World Meteorological Organization (WMO), provided the group the opportunity to address, as a whole, issues concerning the operation and development of the WAFS and its effectiveness in meeting current and evolving global and regional operational requirements.

1.2 All available documentation pertaining to WAFSOPSG/8 is at the following website: <http://www.icao.int/safety/meteorology/WAFSOPSG/Pages/default.aspx>.

2. Discussion

2.1 The group is reminded that WAFSOPSG meetings have been held once every eighteen months (approx.) since the first meeting (WAFSOPSG/1) in November 2003. They necessarily serve as an integral part of the WAFSOPSG coordination and work programme where conclusions and decisions related to the operation and development of the WAFS are adopted and progress on the WAFSOPSG deliverables is monitored and reported.

2.2 With reference to the WAFSOPSG/8 discussions, agenda items 1 to 3 addressed meeting organizational matters and follow-up to previous meetings; agenda item 4 principally addressed WAFS-related provisions contained in the air navigation plan/facilities and services implementation document (ANP/FASID) and those proposed in draft Amendment 77 to Annex 3 to the Convention on International Civil Aviation; agenda items 5 and 6 principally addressed issues related to the operation of the WAFS and its effectiveness in meeting the operational requirements and the development of the WAFS in order to ensure that it continues to meet the operational requirements; and agenda items 7 and 8 principally addressed the long-term (five-year) plan of WAFS implementation and the regular review and update of the WAFSOPSG work programme.

2.3 Outcomes from WAFSOPSG/8 included the adoption of 8 decisions and 11 conclusions related to the operation and development of the WAFS. The group is reminded that follow-up action to WAFSOPSG/8 Conclusion 8/2 – *Amendment to WAFS-related procedures in the ANP/FASID* included approved amendments to the ASIA/PAC Air Navigation Plan, Volume I, Basic ANP and Volume II, FASID (Doc 9673) with editorial improvements in the Basic ANP, which rightly referred to the Secure SADIS FTP Internet-based service (Proposal for Amendment, Serial No.: APAC 14/03 – MET refers); and editorial improvements in the FASID Table MET 5 and FASID Table MET 6, which eliminated the reference to “trial forecasts” of cumulonimbus clouds, icing and turbulence and rightly referred to the Secure SADIS FTP Internet-based service and the SADIS 2G and ISCS G2 satellite footprints (Proposal for Amendment, Serial No.: APAC 14/04 – MET refers).

2.4 For ease of reference, a copy of the WAFSOPSG/8 Executive Summary is in **the Attachment** to this paper. The full report on WAFSOPSG/8 discussions is available at the website listed at 1.2, above.

2.5 The group is reminded that a firm decision on the location and date for the next meeting of the WAFSOPSG (or successor expert group) was deferred until the outcomes of the MET Divisional Meeting are known.

3. Action by the Meeting

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

EIGHTH MEETING

WORLD AREA FORECAST SYSTEM OPERATIONS GROUP (Bangkok, Thailand, 2 to 5 September 2013)

EXECUTIVE SUMMARY

(Note.— The full report is available at <http://www.icao.int/safety/meteorology/WAFSOPSG/>)

1. INTRODUCTION

1.1 The eighth meeting of the World Area Forecast System Operations Group (WAFSOPSG/8) was held in the Asia Pacific (ASIA/PAC) Regional Office, Bangkok, from 2 to 5 September 2013. The meeting was attended by twenty-two experts from twelve States and four international organizations (the Agency for Air Navigation Safety in Africa and Madagascar (ASECNA) the International Air Transport Association (IATA), the International Federation of Air Line Pilots' Associations (IFALPA) and the World Meteorological Organization (WMO)).

1.2 The Chairman, Mr. Dorinel Visoiu, presided over the meeting throughout its duration.

2. FOLLOW-UP OF WAFSOPSG/7 CONCLUSIONS

2.1 With regard to the follow-up of WAFSOPSG/7 conclusions, the group noted that action had been completed on all the issues, except for Conclusions 7/5, 7/13 and 7/19 which involved ongoing work (Decision 8/1).

3. REVIEW OF ICAO PROVISIONS RELATED TO WAFS

3.1 Under this agenda item, the group reviewed the regional procedures related to the world area forecast system (WAFS) and proposed amendments regarding, inter alia, the elimination of Note 3 in the FASID Table MET 5 since, as a consequence of Amendment 76 of Annex 3 (applicable in November 2013), WAFS forecasts of cumulonimbus clouds, icing and clear-air and in-cloud turbulence would become operational (Conclusion 8/2).

3.2 With regard to the global provisions related to the WAFS, the group developed a proposal for the amendment of Annex 3 — *Meteorological Service for International Air Navigation*, Chapter 11, 11.1.9, Note 1 to account for the cessation of the international satellite communications system (ISCS) satellite broadcast in July 2012, and to appropriately refer to the one remaining WAFS satellite distribution system and the two existing WAFS Internet-based services provided by the WAFC Provider States (Conclusion 8/3).

4. OPERATION OF THE WAFS

4.1 The group reviewed the WAFS management report which had been prepared by the WAFC Provider States and placed on the World Area Forecast System Operations Group (WAFSOPSG) website. The group noted its content and expressed satisfaction with the scope of information provided which for first time included information about performance indicators.

4.2 The group agreed that the world area forecast centre (WAFC) Provider States include, as routine in the WAFS management reports, additional performance indicators relating to the number of significant weather (SIGWX) forecasts correction messages issued each month and the number of times that the harmonization process of the WAFS GRIB2 CB, icing and turbulence has failed (Decision 8/4).

4.3 To improve the ability of operators to meet the expected waypoint times and air traffic control (ATC) requests for required time of arrival, which was useful in air traffic flow management (ATFM), the group tasked the Secretariat to draft provisions for the inclusion of additional flight levels ((FL) 80 (750 hPa), FL 210 (450 hPa) and FL 480 (125 hPa)) for WAFS forecast as part of the Amendment 77 to Annex 3 (Conclusion 8/5).

4.4 With regard to the possibility of aligning the file structures of the WAFS Internet-based services, the group decided that the current folder structures and filenames of the Secure satellite distribution system for information relating to air navigation (SADIS) file transfer protocol (FTP) and WIFS services should remain as currently specified in their respective user guide documentation (Conclusion 8/6). With regard to the request from the International Air Transport Association (IATA) that consideration be given to updating Secure SADIS FTP data at 1-minute intervals, rather than the current 5-minute intervals, the group invited the Satellite Distribution System Operations Group (SADISOPSG) to consider the enhancement of the Secure SADIS FTP service by the provision of one-minute data updates (Conclusion 8/7).

4.5 With regard to changes proposed by the WAFC Provider States to procedures used during scheduled and unscheduled WAFC backup operations the group agreed on revised issuance times for scheduled backup operations (Decision 8/8).

4.6 To benefit users, the group reviewed the guidance for handling WAFS SIGWX correction messages currently available on the WAFSOPSG website and tasked the Secretary, in coordination with the WAFC Provider States, to proceed with its update (Conclusion 8/9).

5. DEVELOPMENT OF THE WAFS

5.1 The group reviewed a proposed timeline with milestones for the development of the verification of WAFS gridded global forecasts for cumulonimbus clouds, icing and turbulence which demonstrated that the WAFCs had identified a number of new data sources, the group invited the WAFC Provider States to proceed with the implementation of enhanced verification statistics of such WAFS gridded global forecasts (Conclusion 8/10).

5.2 To enhance the verification of WAFS gridded global forecasts for cumulonimbus clouds, icing and turbulence, the group reviewed a proposal to expand its geographic extent and agreed to investigate the acquisition and use of additional data sources, taking into consideration the data acquisition costs, quality, spatial and temporal resolution, as well as licensing, copyright and other restrictions on the sharing of data (Conclusion 8/11).

5.3 With regard to further development of WAFS gridded global forecasts for cumulonimbus clouds, icing and turbulence, the group, after a review of proposals for improvement including their spatial and temporal resolution together with a suggested roadmap, agreed to invite the WAFC Provider States in coordination with IATA to proceed with the further development of higher resolution WAFS gridded global forecasts for all the elements concerned (Conclusion 8/12).

5.4 To assist operators in the pre-flight planning of fuel uplift, the group noted that there was a need to minimize the occasions that non-harmonized WAFS gridded global forecasts were issued, striking the balance between this need and the time of the availability of the data. Therefore, the group agreed to invite the WAFC Provider States to look at improvements to the timeliness of the harmonized gridded forecasts of icing, turbulence and CB clouds (Conclusion 8/13).

5.5 Regarding the consideration of the need for the development of a digital format for dissemination of WAFS forecasts, the group reviewed three different options for WAFS SIGWX forecasts, i.e. continue using WMO BUFR Edition 3; migrate to BUFR Edition 4; or migrate from BUFR Edition 3 to a digital form using XML/GML. In view of the importance of this issue, the group agreed that an ad-hoc group be tasked to determine the impacts of the WMO CBS-XIII decision to withdraw BUFR Edition 3 from the Manual of Codes on the continued provision of WAFS SIGWX forecasts in BUFR, and to consider the potential benefits and impacts of migrating the format of WAFS SIGWX to XML/GML (Conclusion 8/14).

5.6 Regarding the development of the concept of operations for the WAFS and in light of the views from the WAFS Provider States, the group agreed that that the development of such a concept of operations would no longer be as relevant as originally envisioned. The group therefore agreed to discontinue work on its development and to update the long-term plan of the WAFS accordingly (Decision 8/15). Instead, the group agreed on the development of a roadmap for meteorological information and integration in the context of the WAFS, in coordination with the Meteorological Aeronautical Requirements and Information Exchange Project Team (MARIE-PT) and the Air Traffic Management Requirements and Performance Panel (ATMRPP), in support of the Aviation System Block Upgrades (Conclusion 8/16).

6. LONG-TERM PLANNING OF THE WAFS IMPLEMENTATION

6.1 The group reviewed the WAFS five-year plan to take into account recent developments and to add expected milestones up to the year 2017 (Decision 8/17).

7. FUTURE WORK PROGRAMME

7.1 Regarding the terms of reference, the group agreed to delete, in the composition of the group, reference to members from the former regional area forecast centres (RAFCs) Provider States and endorsed its update (Conclusion 8/18).

7.2 The group, based on updated information provided by the Secretariat to better reflect and document the progression of the work and on discussions under Agenda Items 3, 4, 5, 6 and 7, updated and endorsed its work programme. (Decision 8/19).