



**STUDY NOTE**

**MEETING OF THE METEOROLOGY PANEL (METP)  
WORKING GROUP MOG**

**SEVENTH MEETING**

**Offenbach, Germany, 11 to 13 April 2018**

**Agenda Item 3 Matters relating to WAFS  
3.4 Review of Job Cards relating to WAFS**

**REVIEW OF METP JOB CARD 10**

(Presented by WAFS Provider States)

**SUMMARY**

This Study Note provides the opportunity for the group to review a proposed update to METP Job Card 10.

Action by the METP-WG/MOG is in paragraph 4.

**1. INTRODUCTION**

1.1 This paper provides the opportunity for the group to review the METP Job Cards relating to the developments of the World Area Forecast System. The WAFCs would like to adjust the remit of this Job Card to concentrate on solely on developments that relate to changes in the data provided by both WAFCs.

**2. DISCUSSION**

2.1 The proposed changes to Job Card 10 are shown in Appendix A. The following key changes are proposed:

2.1.1 The descriptions relating to Annex 3 Amendment 79 and 80 updates have been adjusted.

2.1.2 Key actions have been added that relate to the planned increases in WAFS data resolution, and next generation of SIGWX data, in line with the WAFS 10 year strategy.

2.1.3 The SADIS and WIFS User guide updates have been transferred to Job Card 8. Changes proposed to Job Card 8 are presented in full in METP-WG/MOG6 SN/13, and are included in Appendix C for reference.

2.2 A draft of the final Job Card with the proposed changes taken into account is shown in Appendix B.

### 3. **CONCLUSION**

3.1 Having considered the revisions to Job Cards 10 presented in Appendix A, the WAFCS invite the meeting to consider whether to propose these changes to METP. Accordingly, the group is invited to formulate the following draft action:

#### **Action 7/xx — Job Card 10**

That,

- a) That the METP-WG/MOG meeting accepts the proposed updates to Job Card 10 as shown in Appendix A; and
- b) That the METP-WG/MOG recommend these changes to METP/4.

### 4. **ACTION BY THE METP-WG/MOG**

4.1 The METP-WG/MOG is invited to:

- a) note the information contained in this paper; and
- b) consider the draft action presented in 3.1.

## APPENDIX A – Proposed changes to Job Card 10

New text is shaded in grey

Deleted text is shown with red ~~strikeout~~.

METP.010.02	Further development of the World Area Forecast System (WAFS)
Source	MET Divisional Meeting 2014 (Recommendations 2/1, 2/4 b i), 2/5 and 2/12), METP/1, METP/2
Problem Statement	The world area forecast system (WAFS) is a worldwide system established to provide aeronautical meteorological en-route forecasts in uniform standardized formats. The WAFS needs to be maintained and further developed, including the integration of the information provided into the future system wide information management (SWIM), in support of the aviation system block upgrade (ASBU) methodology.
Specific Details	<p>The WAFS <del>consists of the provision of</del> provides global aeronautical meteorological en-route WAFS forecasts in digital form to meteorological authorities and other users on a global basis by two Provider States. The WAFS information is made available via <del>one satellite distribution system for information relating to air navigation</del> the Secure Aviation Distribution Service (SADIS) <del>and two Internet-based services (the Secure SADIS FTP Service and the WAFS Internet File Service (WIFS))</del>.</p> <p>Following the recommendation <del>it was recommended</del> by the MET Divisional Meeting (Recommendations 2/5, 2/5 and 2.12), the METP, <del>that an appropriate ICAO expert group</del>, in close coordination with WMO, continue to further develop the requirements for the WAFS consistent with the Global Air Navigation Plan (Doc 9750), including the integration of the information produced by the system into the future system wide information management (SWIM) environment.</p> <p><del>Further development should take into consideration the main legacy tasks from the world area forecast system operations group (WAFSOPSG) such the provision of guidance concerning the operation of the WAFS and its effectiveness in meeting current and future operational requirements.</del>It was further recommended by the MET Divisional meeting (recommendation 2/4 b iv)) that this includes the development of guidance for States concerning how their ICAO obligations may be met in the context of local, sub-regional, regional, multi-regional and global MET, including cost recovery and governance considerations.</p>
Expected Benefits	<p><del>Keep the system operational and integrate the information produced by WAFCS into the SWIM environment in line with the GANP maintaining and increasing flight efficiency and safety.</del> The resolution of WAFS gridded data sets will be increased vertically, horizontally and temporally, and SIGWX data will be provided for multiple time-steps in IWXXM format. This will assist aviation users in accurate flight planning, and will be delivered in a way which meets GANP and SWIM objectives. SIGWX forecast provision will be extended to cover multiple time-steps.</p>
Reference Documents	Annex 3 — Meteorological Service for International Air Navigation, Global Air Navigation Plan (Doc 9750), Manual of Aeronautical Meteorological Practice (DOC 8896), Manual on Coordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services (Doc 9377), Meteorology (MET) Divisional Meeting Report (Doc 10045) Agenda Item 2, Appendices A, B and F, Meteorology Panel (METP) deliverables (through its Working Groups), SADIS User Guide (Part 1 and Part 2), WIFS User Guide and guidance material available at the WAFSOPSG Website.

Deliverable Expert Group		Meteorology Panel (METP)						
ID	Document Affected	Description of Amendment proposal or Action	Supporting Expert Group	Status	Expected Dates Delivery Date	Effective	Applicability	
<del>1700</del>	<del>Annex 3</del>	<del>Proposals for inclusion in Amendment 78 to Annex 3 to meet operational requirements in line with the GANP and to integrate WAFS information into the ATMRPP SWIM environment.</del>	<del>FLTOPSP ATMRPP</del>	<del>On-schedule</del>	<del>Q3 2018</del>	<del>Jul 2020</del>	<del>Nov 2020</del>	
	Annex 3	Develop proposals for inclusion in Amendment 79 to Annex 3 to meet operational requirements in preparation for the operational implementation of the next generation of WAFC services.	FLTOPSP ATMRPP	On-schedule	Q3 2018	Jul 2020	Nov 2020	
	Annex 3	Develop proposals for inclusion in Amendment 80 to Annex 3 to meet operational requirements in preparation for the operational implementation of the next generation of WAFC services.	FLTOPSP ATMRPP	In Planning	Q3 2020	Jul 2022	Nov 2022	
	Actions	Increase the horizontal, temporal and vertical resolution of WAFC gridded data in line with the GANP requirements. Deliver scientific improvements to the algorithms used into the production of hazard data sets.		In planning	2022	Nov 2022	Nov 2022	
	Actions	Develop the WAFC SIGWX data provision to provide multiple time-steps of data in SWIM compliant format		In planning	2022	Nov 2022	Nov 2022	
<del>1704</del>	<del>WIFS User Guide</del>	<del>Update related guidance material to support the implementation of Annex 3 Amendment.</del>	-	<del>On-schedule</del>	<del>Q3 2018</del>	<del>Nov 2020</del>	<del>Nov 2020</del>	
1708	Actions	Assist ICAO in the coordination of the arrangements between the Provider States comprising the WAFS and in ensuring that the global requirements for WAFS information are met.	-	On-schedule			Nov 2020	
9594	Electronic Navigation Plans (eANP)	Air Plans Based on Annex 3 amendment, update of the eANPs as necessary.		On-schedule	Q3 2018	Nov 2020	Nov 2020	
9595	GANP (Doc 9750)	Review latest version of GANP to ensure that WAFC deliverables are on schedule	-	On-schedule	Q3 2018	Nov 2020	Nov 2020	

9596	Manual of Aeronautical Meteorological Practice (Doc 8896)	of	Update guidance material to support the implementation of Annex amendment	-	On-schedule	Q3 2018	Nov 2020	Nov 2020
9597	Manual on Coordination between ATS, AIS and AMS (Doc 9377)	on	Update guidance material to support the implementation of Annex 3 amendment	-	On-schedule	Q3 2018	Nov 2020	Nov 2020
9598	SADIS User Guide		<del>Update guidance material to support the implementation of Annex 3 amendment</del>	-	<del>On-schedule</del>	<del>Q3 2018</del>	<del>Nov 2020</del>	<del>Nov 2020</del>
<b>Status:</b> Approved		<b>Priority:</b>	<b>Initial Issue Date:</b> 17 Jun 2015	<b>Date Approved by ANC:</b> 07 Jun 2017		<b>Session / Meeting:</b> 205-4		

**APPENDIX B – Proposed Job Card 10 once changes detailed in Appendix A have been taken into account.**

METP.010.02	Further development of the World Area Forecast System (WAFS)
<b>Source</b>	MET Divisional Meeting 2014 (Recommendations 2/1, 2/4 b i), 2/5 and 2/12), METP/1, METP/2
<b>Problem Statement</b>	The world area forecast system (WAFS) is a worldwide system established to provide aeronautical meteorological en-route forecasts in uniform standardized formats. The WAFS needs to be maintained and further developed, including the integration of the information provided into the future system wide information management (SWIM), in support of the aviation system block upgrade (ASBU) methodology.
<b>Specific Details</b>	<p>The WAFS provides global aeronautical meteorological en-route WAFS forecasts in digital form to meteorological authorities and other users on a global basis by two Provider States. The WAFS information is made available via the Secure Aviation Distribution Service (SADIS) and the WAFS Internet File Service (WIFS).</p> <p>Following the recommendation by the MET Divisional Meeting (Recommendations 2/5, 2/5 and 2.12), the METP, , in close coordination with WMO, continue to further develop the requirements for the WAFS consistent with the Global Air Navigation Plan (Doc 9750), including the integration of the information produced by the system into the future system wide information management (SWIM) environment.</p> <p>It was further recommended by the MET Divisional meeting (recommendation 2/4 b iv)) that this includes the development of guidance for States concerning how their ICAO obligations may be met in the context of local, sub-regional, regional, multi-regional and global MET, including cost recovery and governance considerations.</p>
<b>Expected Benefits</b>	The resolution of WAFS gridded data sets will be increased vertically, horizontally and temporally, and SIGWX data will be provided for multiple time-steps in IWXXM format. This will assist aviation users in accurate flight planning, and will be delivered in a way which meets GANP and SWIM objectives. SIGWX forecast provision will be extended to cover multiple time-steps.
<b>Reference Documents</b>	Annex 3 — Meteorological Service for International Air Navigation, Global Air Navigation Plan (Doc 9750), Manual of Aeronautical Meteorological Practice (DOC 8896), Manual on Coordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services (Doc 9377), Meteorology (MET) Divisional Meeting Report (Doc 10045) Agenda Item 2, Appendices A, B and F, Meteorology Panel (METP) deliverables (through its Working Groups), SADIS User Guide (Part 1 and Part 2), WIFS User Guide and guidance material available at the WAFSOPSG Website.
<b>Deliverable Expert Group</b>	Meteorology Panel (METP)

ID	Document Affected	Description of Amendment proposal or Action	Supporting Expert Group	Status	Expected Dates		
					Delivery Date	Effective	Applicability
	Annex 3	Develop proposals for inclusion in Amendment 79 to Annex 3 to meet operational requirements in preparation for the operational implementation of the next generation of WAFC services.	FLTOPSP ATMRPP	On-schedule	Q3 2018	Jul 2020	Nov 2020
	Annex 3	Develop proposals for inclusion in Amendment 80 to Annex 3 to meet operational requirements in preparation for the operational implementation of the next generation of WAFC services.	FLTOPSP ATMRPP	In Planning	Q3 2020	Jul 2022	Nov 2022
	Actions	Increase the horizontal, temporal and vertical resolution of WAFC gridded data in line with the GANP requirements. Deliver scientific improvements to the algorithms used into the production of hazard data sets.		In planning	2022	Nov 2022	Nov 2022
	Actions	Develop the WAFC SIGWX data provision to provide multiple time-steps of data in SWIM compliant format		In planning	2022	Nov 2022	Nov 2022
1708	Actions	Assist ICAO in the coordination of the arrangements between the Provider States comprising the WAFS and in ensuring that the global requirements for WAFS information are met.	-	On-schedule			Nov 2020
9594	Electronic Air Navigation Plans (eANP)	Based on Annex 3 amendment, update of the eANPs as necessary.		On-schedule	Q3 2018	Nov 2020	Nov 2020
9595	GANP (Doc 9750)	Review latest version of GANP to ensure that WAFC deliverables are on schedule	-	On-schedule	Q3 2018	Nov 2020	Nov 2020
9596	Manual of Aeronautical Meteorological Practice (Doc 8896)	Update guidance material to support the implementation of Annex amendment	-	On-schedule	Q3 2018	Nov 2020	Nov 2020
9597	Manual on Coordination between ATS, AIS and AMS (Doc 9377)	Update guidance material to support the implementation of Annex 3 amendment	-	On-schedule	Q3 2018	Nov 2020	Nov 2020
<b>Status:</b>		<b>Priority:</b>	<b>Initial Issue Date:</b>	<b>Date Approved by ANC:</b>		<b>Session / Meeting:</b>	
Approved			17 Jun 2015	07 Jun 2017		205-4	

## APPENDIX C – Proposed Job Card 8 (from METP-WG/MOG6 SN/13)

METP.008.02	Further development of the Secure Aviation Data Information Service (SADIS) and WAFS Internet File Service (WIFS).
Source	MET Divisional Meeting 2014 (Recommendations 2/2 and 2/3 a) and b)), METP/2
Problem Statement	<p>The Secure Aviation Data Information Service (SADIS) and WAFS Internet File Service (WIFS) providing meteorological information for air navigation needs to be managed to ensure that it meets the requirements of States and users <del>through the necessary transition from a satellite-based system to one supported through an Internet-based system</del> for the provision of global OPMET and WAFS information. These systems must be developed to meet the objectives of the Aviation System Block Upgrades (ASBU) within the Fifth Edition of the Global Air Navigation Plan 2016-2030 (Doc 9750).</p>
Specific Details	<p><del>The</del> SADIS and WIFS provides global OPMET and WAFS information to States and users via a secure FTP system. It was recommended by the MET Divisional Meeting (Recommendation 2/2) that an appropriate ICAO expert group be tasked to ensure that the SADIS and the WIFS continue to meet user expectations and further develop in a manner consistent with the Global Air Navigation Plan (Doc 9750). The Met Panel <del>and its associated WGs</del> will work on the future improvements to deliver data in a way that is suitable for the system-wide information management (SWIM) environment. Planned activities are detailed below</p> <p><del>Furthermore Recommendation 2/3 a) and b) call for ICAO to undertake a transition from the satellite-based service to the Internet-based services available (now completed) and. this is to include consideration of the role of SADIS and WIFS within the future system-wide information management (SWIM) environment underpinning the globally interoperable air traffic management system; and alignment with future activities to be undertaken by ICAO in the information management domain.</del></p> <p><del>Further development should take into consideration the main legacy tasks from the Satellite Distribution System Operations Group (SADISOPSG)</del></p>
Expected Benefits	<p><del>Continues provision</del> Provision of global OPMET and WAFS information as specified in Annex 3 through an Internet-based system via a SWIM compliant Application Processing Interface (API) based delivery system that can deliver higher resolution WAFS data sets to the aviation community.</p>
Reference Documents	SADIS User Guide, WIFS User Guide, ICAO Annex 3
Deliverable Expert Group	Meteorology Panel (METP)



ID	Document Affected	Description of Amendment proposal or Action	Supporting Expert Group	Status	Expected Dates		
					Delivery Date	Effective	Applicability
1701	SADIS User Guide	Update SADIS guidance material in line with Annex 3 Amendment 78 , when Space Weather advisories become available, and when IWXXM OPMET data becomes available. <del>Update related guidance material to support the implementation of Annex 3</del>	IMP	On-schedule	Q3 2018 to Q3 2020	Jul 2018	Nov 2018 to Nov 2020
1702	WIFS User Guide	Update WIFS guidance material in line with Annex3 Amendment 78.	IMP	On-schedule	Q3 2018 to Q3 2020	Jul 2018	Nov 2018 to Nov 2020
1703	SADIS User Guide	Update SADIS guidance material in line with Annex 3 Amendment 79.	IMP	On-schedule	Q3 2020	Jul 2020	Nov 2022
1704	WIFS User Guide	Update SADIS guidance material in line with Annex 3 Amendment 79.	IMP	On-schedule	Q3 2020	Jul 2020	Nov 2022
1716	Action	Assist ICAO in the coordination of the arrangements by the SADIS Provider State in ensuring that the global requirements for the dissemination of global OPMET and WAFS information are met.	IMP	On-schedule			Nov 2018
	Action	Update of SADIS and WIFS systems to deliver OPMET data in IWXXM format and WAFS data in a SWIM compliant manner		In planning		Nov 2022	Nov 2022
	Action	Development of SWIM compliant, API enabled, systems to replace SADIS and WIFS.		In planning		Nov 2022	Nov 2022
Status:		Priority:	Initial Issue Date:	Date Approved by ANC:		Session / Meeting:	
Approved			17 Jun 2015	07 Jun 2017		205-4	