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**SATELLITE DISTRIBUTION SYSTEM OPERATIONS GROUP (SADISOPSG)**

**EIGHTEENTH MEETING**

**Dakar, Senegal, 29 to 31 May 2013**

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| **Agenda Item** | **5:** | **Content of the SADIS broadcast** |
|  | **5.1:** | **OPMET information** |
|  | **5.2:** | **WAFS forecasts** |

DRAFT REPORT

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| **Agenda Item** | **5:** | **Content of the SADIS broadcast** |
|  | **5.1:** | **OPMET information** |

**METAR, SPECI and TAF**

***General considerations concerning the requirements and actual content of the SADIS broadcast***

The group recalled that the requirements by States and users for METAR/SPECI and TAF to be broadcast on the SADIS are given in Annex 1 to the SADIS User Guide (SUG) which is extracted from a global OPMET database maintained by the ICAO Secretariat. Annex 1 of the SUG includes OPMET information from both AOP (i.e. aerodromes included in the aerodrome operational planning (AOP) tables of the regional air navigation plans) and non-AOP aerodromes.

In response to Conclusion 8/6, OPMET information from all the AOP aerodromes is included in Annex 1 of the SUG. All AOP aerodromes issue METAR and SPECI, as a minimum, while the requirements for TAF are subject to formal regional air navigation (RAN) agreement, which is reflected in Table MET 1A of all the facilities and services implementation documents (FASID) of the regional air navigation plans.

The group recalled that that, since February 2008, similar to Annex 1 of the SUG, all FASID Tables MET 1A were extracted from the global OPMET database thus ensuring the consistency of information between the FASID Tables MET 1A and Annex 1 of the SUG. This arrangement results in Annex 1 of the SUG reflecting, at all times, the formal requirements displayed in FASID Tables MET 1A from AOP aerodromes. Furthermore, the group had previously agreed that any proposals for amendments related to OPMET information from AOP aerodromes should be addressed directly to the ICAO Regional Office concerned (Decision 13/8 refers). This approach had eliminated the need for a lengthy procedure (i.e. formulation by the SADISOPSG of draft conclusions for endorsement by the PIRGs concerned) and substantially expedited the implementation of new requirements.

With regard to non-AOP aerodromes, the group was aware of the fact that OPMET information from these aerodromes can be included in Annex 1 of the SUG *only* if the State concerned has no objection to its distribution on the SADIS and with the understanding that States do not have any obligation of providing such data for non-international aerodromes. The group may amend OPMET requirements from these aerodromes annually, subject to an agreement by the State concerned.

It was further recalled that the actual OPMET information that is currently broadcast on SADIS is indicated in Annex 2 (listing the aerodromes included in the bulletins) and Annex 3 (listing the bulletin headers) to the SUG. These annexes are updated bi-annually, with the assistance of the European OPMET Data Management Group (DMG)[[1]](#footnote-1).

***Non-implementation of requirements for OPMET information by States***

The variability of reception of OPMET information (METAR/SPECI and TAF) from some aerodromes has been cause for adverse comments from users in the past. However, where such comments concern aerodromes *not* *listed* as a requirement in Annex 1 of the SUG, the SADIS Provider State was *not obliged* to ensure that these aerodromes are available on the SADIS broadcast. The non-availability of OPMET information from aerodromes listed in Annex 1 of the SUG was a different matter however and, when notified by users, had been systematically brought to the attention of the States concerned by the appropriate ICAO Regional Office which had monitored such deficiencies until their resolution. The group concurred that such a real-time approach had turned out to be efficient and had led, in most cases, to the timely resolution of the deficiencies identified.

Notwithstanding the foregoing, the group noted that as follow-up to Conclusion 8/7 b), based on the routine OPMET monitoring conducted by the SADIS Gateway between 4 and 17 February 2013, the SADIS Provider State had identified that METAR/SPECI was not available from over 90 aerodromes (AOP and non-AOP) in more than 40 States listed in Annex 1 of the SUG, and that TAF was not available from over 30 aerodromes (AOP and non-AOP) in more than 20 States listed in Annex 1 of the SUG. This analysis had been included as an addendum to the SADIS management report for 2012-2013.

Recognizing the importance of this OPMET information for users, and that States are required to provide, or have agreed to provide, the OPMET information from the AOP aerodromes or non‑AOP aerodromes respectively listed in Annex 1 of the SUG, the group concurred that regional OPMET bulletin exchange schemes that exist in all ICAO Regions (to a greater or lesser degree of maturity) should be aligned with the OPMET information requirements contained in Annex 1 of the SADIS User Guide and that, to this end, the regional OPMET bulletin/data management groups should ensure the availability of up-to-date regional processes and procedures to support implementation, including routing tables, monitoring, validation and documentation.

In view of the foregoing, the group formulated the following conclusion accordingly:

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|  | **Conclusion 18/xx —** | **Improving the availability of OPMET information on SADIS** |
| That, ICAO:1. invite the States listed at **Appendix F** to this report to ensure that the OPMET information identified as “not available” on SADIS be produced and disseminated through the regional OPMET bulletin exchange schemes in view of ensuring their onward availability at ~~to~~ the SADIS uplink station as a matter of urgency;

 *Note 1. ― OPMET information (METAR/SPECI and TAF) was identified as being “not available” during routine monitoring conducted by the SADIS Gateway from 4 to 17 February 2013.* *Note 2. ― States are required to provide or have agreed to provide OPMET information from AOP and non-AOP aerodromes respectively as per Annex 1 of the SADIS User Guide.* and,1. through the Regional Offices, request regional OPMET bulletin/data management groups to ensure that the regional bulletin exchange schemes applied in the ICAO Regions are consistent with the OPMET information requirements contained in Annex 1 of the SADIS User Guide, including up-to-date processes and procedures to support implementation such as routing tables, monitoring, validation and documentation.
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***Amendments to Annex 1 to the SUG concerning OPMET information from non-AOP aerodromes***

The group recalled that it had formulated Decision 16/6 concerning the monitoring of concurrence by States to provide OPMET information from non-AOP aerodromes. Based on requests by the International Air Transport Association (IATA), long lists of additional requirements for OPMET information from non-AOP aerodromes had been included in State letters year after year and that, as a result, normally only a small number of States had formally concurred with such requirements. The group had felt that repetitive State letters sent annually to the same States with an identical request could be counterproductive, in particular if the State had already clearly indicated their reluctance to provide OPMET information from the non-AOP aerodromes concerned. Under these circumstances, the group had agreed that the Secretariat should keep track on the requests made and to ensure that a State that had *refused* the provision of OPMET information from their non-AOP aerodromes *not be approached* before three years had elapsed. The group recalled that the Secretariat maintained a master list on the SADISOPSG website related to States’ willingness to provide OPMET information from non-AOP aerodromes.

The group further recalled that it had formulated Conclusion 17/9 calling for the Secretariat to seek agreement from the States concerned to provide OPMET information (METAR/SPECI and/or TAF) from approximately 260 non-AOP aerodromes in thirty-two (32) States, in response to a request formulated by IATA, and to amend Annex 1 to the SUG accordingly by 31 December 2012. Additionally, OPMET information from 11 non-AOP aerodromes that was no longer required (by IATA) was to be deleted from Annex 1 of the SUG.

As a consequence of Conclusion 17/9, and taking into account Decision 16/6, the group noted that, by 31 December 2012, the deletions were undertaken by the Secretariat without the need for consulting with the States concerned, whilst seven (7) States had agreed to make the OPMET information available. By 25 March 2013, the number of States that had agreed to provide the OPMET information had increased to eight (8).

The group reviewed a revision of the OPMET information required from non-AOP aerodromes based on a proposal made by IATA. It was noted that, in part, the proposal attempted to render the requirements in line with OPMET information that was actually made available by States. In this regard, the group again concurred that any proposed deletions could be undertaken by the Secretariat without the need for consulting the States concerned while any proposed amendments or additions would have to be endorsed by them. It was noted that only those aerodromes with location indicators included in the *Location Indicators* (Doc 7910) could be included in Annex 1 to the SUG.

Moreover, the group concurred that in order to render Annex 1 of the SUG as a true reflection of the OPMET information to be provided from non-AOP aerodromes, it was necessary to ascertain the *availability* of the OPMET information at the point of the State consultation – where F (Full) indicates that the OPMET information as listed in Annex 1 of the SUG is issued for the aerodrome all through the 24-hour period and P (Partial) indicates that the OPMET information as listed in Annex 1 of the SUG is not issued for the aerodrome for the entire 24-hour period. The group agreed that this was information that the State should be in a position to provide at the consultation stage in instances where they have agreed to make the requested OPMET information available.

Having reviewed and discussed the (IATA) proposal, considered such new requirements in light of Decision 16/6, and noting the need to ascertain the availability of the OPMET information to be provided, the group formulated the following conclusion accordingly:

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|  | **Conclusion 18/.. —** | **Revision to Annex 1 to the SADIS User Guide (SUG) concerning OPMET information from non-AOP aerodromes** |
| That, the ICAO Secretariat:1. seek agreement from the States concerned to provide OPMET information (METAR/SPECI and/or TAF) from the non-AOP aerodromes as presented in **Tables G.1 and G.2 of Appendix G** to this report;

 *Note 1.― States should indicate the availability (full or partial) of the OPMET information to be provided.* *Note 2.― States that have been consulted on additional requirements for OPMET information from non-AOP aerodromes, and have indicated their reluctance to provide such information, will not be re‑consulted during a three-year period following their refusal, in accordance with SADISOPSG Decision 16/6.* *Note 3.― Only non-AOP aerodromes for which location indicators are listed in Doc 7910, Location Indicators, will be considered in this context.*  *Note 4.― States have the prerogative of not providing any OPMET information from non-AOP aerodromes, if considered not appropriate or desirable by them.*1. upon completion of a) above where agreement from the States concerned has been obtained, amend Annex 1 to the SADIS User Guide (SUG) accordingly by 31 December 2013; and
2. undertake the deletion of the non-AOP aerodromes depicted in **Table G.3 of Appendix G** to this report in Annex 1 of the SUG in accordance with the SADISOPSG established procedure by 31 August 2013.
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***Alignment of the OPMET content in SADIS and WIFS to Annex 1 to the SUG***

Since Annex 1 of the SUG reflects the global requirements by States and users (e.g. airlines) for OPMET information (specifically METAR/SPECI and TAF), the group had previously affirmed that such requirements should be applicable to both the SADIS and the ISCS broadcast (SADISOPSG/15 report refers). Recognizing that the ISCS satellite broadcast had been withdrawn by the ISCS Provider State (the United States) on 5 July 2012, in view of the availability of its replacement Internet-based service called the WAFS Internet File Service (WIFS), the group agreed that global requirements by States and users for OPMET information reflected in Annex 1 of the SUG should be applicable to both SADIS and WIFS. Their validity for the WIFS had been confirmed by the fact that Annex 1 to the SUG has been included, without any changes, in the WIFS User Guide maintained by the WIFS (formerly ISCS) Provider State (available at <http://aviationweather.gov/wifs/> under Documents)

Until SADISOPSG/17, the SADIS Provider State and ISCS/WIFS Provider State had strived to harmonize the OPMET content of the SADIS and ISCS/WIFS broadcasts with each other, with the desired aim of achieving at least 95 per cent availability. However, through the formulation of Conclusion 17/10, the group had agreed that the SADIS and WIFS Provider States should instead concentrate respective efforts to *align the availability of the OPMET information on SADIS and WIFS to the requirements as specified in Annex 1 of the SUG*. To this end, the SADIS Provider State had agreed to indicate the level of alignment (of SADIS and WIFS) to the group on an annual basis.

The group was pleased to learn that as follow-up to Conclusion 17/10 a), based on monitoring conducted by the SADIS Gateway between 4 and 17 February 2013, the SADIS Provider State has achieved the following level of alignment of OPMET information with Annex 1 of the SUG:

1. METAR/SPECI: 95.78 per cent;
2. Short TAF: 96.77 per cent; and
3. Long TAF: 98.27 per cent.

The group was very pleased to note that the level of alignment of the OPMET information required on SADIS (per Annex 1 of the SUG) and actually available on SADIS (per routine monitoring) had attained a level of at least 95 per cent for METAR/SPECI and TAF (short and long).

As follow-up to Conclusion 17/10 b) concerning the alignment of the OPMET information available on WIFS with Annex 1 of the SUG, the group was informed that the WIFS Provider State continued to work on the aforementioned alignment, and that the SADIS Provider State would undertake necessary coordination with the WIFS Provider State with a view to obtaining a statistical analysis on the level of alignment of WIFS with Annex 1 of the SUG similar to that presented at 5.1.18 above.

In terms of where OPMET information was required but persistently not available on SADIS (and WIFS), the group discussed some of the underlying reasons, which were considered to include production problems associated with the origination of the OPMET information by the meteorological offices concerned and transmission problems such as those associated with mishandling or misrouting of the OPMET information by or through the regional OPMET bulletin exchange schemes, as alluded to above. The availability of OPMET information that was not compliant with Annex 3 – *Meteorological Service for International Air Navigation* provisions, such as an incorrect format used (say, for SIGMET), was another underlying reason noted by the group since this could, in some instances, lead to the rejection of the messages downstream of the originator.

Complementary to the foregoing discussion concerning alignment of OPMET information on SADIS and WIFS, the group reviewed an analysis of the OPMET content of SADIS and WIFS undertaken by IATA during a 9-week monitoring period commencing 2 January 2013. In this regard, the analysis indicated that, insofar as IATA was concerned, the *scheduled* OPMET information on SADIS and WIFS (specifically METAR and TAF) was aligned to a satisfactory level, but that the *non-scheduled* OPMET information (such as SIGMET, AIRMET and special air-reports) required efforts to align SADIS and WIFS to a greater degree.

The group, taking into account discussions at the last meeting concerning the availability of special air-reports on SADIS (SADISOPSG/17 Report, 5.1.24 to 5.1.26 refers) noted that in an Annex 3 context special air-reports were not, as present, required to be transmitted to the centres designated by regional air navigation agreement of the operation of the aeronautical fixed service satellite distribution systems – and would not become a requirement until Amendment 77 (November 2016) at the earliest. Furthermore, insofar as AIRMETs were concerned, such exchange was an Annex 3 recommended practice and determined by regional air navigation agreement (Annex 3, Appendix 6, 2.2 refers), and that the only region where such as requirement currently existed was the EUR Region – i.e. no ICAO regional air navigation plans require States to provide AIRMET information apart from in the EUR Region. The group therefore recognized that seeking the SADIS and WIFS Provider States to fully align the availability of *non-scheduled* OPMET information on SADIS and WIFS could prove challenging due to the lack of availability of the OPMET information itself from the States or mishandling through the regional OPMET bulletin exchange schemes. The group concurred that until such time as the exchange provisions for such OPMET information were addressed within Annex 3 (e.g. as called for by SADISOPSG Conclusion 17/14 for the exchange of special air-reports) and regional OPMET bulletin exchange was at a sufficient degree of maturity worlwide, the SADIS and WIFS Provider States would only be in a position to align non-scheduled OPMET information between SADIS and WIFS *to the extent possible*. The group noted that matters relating to the availability of non-scheduled OPMET information were to be further considered by the group later under this agenda item (paragraph 5.1.27 onwards below refers).

Taking the foregoing into account, the group formulated the following conclusion accordingly:

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|  | **Conclusion 18/.. —** | **Alignment of the OPMET content of SADIS and WIFS** |
| That, the SADIS Provider State and the WIFS Provider State, in coordination with the European OPMET Data Management Group, be invited to:1. continue efforts to align the OPMET content of SADIS and WIFS for *scheduled* OPMET information and, to the extent possible, for *non-scheduled* OPMET information;
2. report on progress in respect of a) above to the SADISOPSG/19 meeting.

*Note 1. ― IATA monitoring concerning the availability of scheduled OPMET information from non-AOP aerodromes, presented in the Appendix to SADISOPSG/18-WP/18 may assist in a) above.* *Note 2. ― The European OPMET Data Management Group is an ex-officio member of the SADISOPSG.* |

***Notification process for updates to Annex 1 of the SUG***

The group recalled that at SADISOPSG/17 it had discussed the establishment of a notification process to inform the SADIS and ISCS/WIFS Gateway Providers and Regional OPMET Databanks (RODBs) that specifies updates to Annex 1 of the SUG (FASID Table MET 2A) as soon as they have taken place (Conclusion 17/11 refers). Historically, the lack of a notification process had been problematic for the gateway providers (and RODBs) since changes to Annex 1 of the SUG occurred on a non-scheduled basis and could result in delays in implementing appropriate sourcing of data and changes to routing tables.

The group was pleased to learn that, following consultation and coordination with the gateway providers and the RODBs, a simple notification process had been introduced by the Secretariat on 13 December 2012 in keeping with Conclusion 17/11 (SADISOPSG Memo-87 refers), as presented at **Appendix H** to this report. The group took note that, due to a recent necessary change of server used to host the global OPMET database maintained by ICAO headquarters, the server address has changed from <http://192.206.28.84/MET/> to <http://cfapp.icao.int/MET/>. This change was in any case noted to be transparent to users, since the original address would redirect users automatically to the new address.

**Non-scheduled OPMET information**

In view of the importance of *non-scheduled* OPMET information for international air navigation (e.g. SIGMET, AIRMET, tropical cyclone and volcanic ash advisories), the group recalled that it had agreed that the reception of these messages should be monitored by the SADIS Provider State, which should compile annual statistics showing the number of all types of non-scheduled OPMET information received at the SADIS uplink station and present these results to the SADISOPSG as part of the annual SADIS management report (Conclusion 8/8 refers). The group was pleased to note that this information, which was considered to be highly relevant, had been included by the SADIS Provider State in the 2012-2013 SADIS management report which was available on the SADISOPSG website.

***Tropical cyclone advisories in graphical format***

The group recalled that SADISOPSG/16 and SADISOPSG/17 had discussed the availability (lack thereof) on SADIS of tropical cyclone advisories in graphical format (TCG) – in World Meteorological Organization (WMO) BUFR code form or PNG chart form – by tropical cyclone advisory centres (TCACs). Further to the earlier considerations, where it had been noted that only two of the seven TCACs was issuing TCG and that, of these, only one TCAC was making the TCG in PNG chart form available to the SADIS Provider State on a bilateral basis for uplink to SADIS, the Secretariat had brought these implementation issues to the attention of the World Meteorological Organization’s 7th Tropical Cyclone RSMCs/TCWCs Technical Coordination (TCM-7) meeting held in Citeko, West Java, Indonesia from 12 to 15 November 2012. The TCM-7 meeting had been attended by representatives from all of the TCAC Provider States. The ICAO provisions relating to tropical cyclone advisories, including graphics, were presented to TCM-7, together with details of the lack of implementation of the graphical products by a majority of TCACs. Several of the TCACs yet to implement the tropical cyclone advisory in graphical format outlined their latest implementation plans – which essentially reiterated the information reported to SADISOPSG/17 that 2013 or 2014 were the probable implementation timescales.

In addition to the TCM-7, the group was informed that the Secretariat at concerned ICAO Regional Offices had, as appropriate, brought such implementation issues to the attention of the TCACs through the WMO regional tropical cyclone meetings/committees, including those held in WMO RAI and RA IV during the past 12 months.

Given the continued lack of suitable BUFR code tables within WMO to support TCG in a BUFR code form, the TCACs were advised to consider urgently implementing the PNG chart form for the graphical tropical cyclone advisories as an interim solution, and to ensure their availability at the uplink station for SADIS (under a bilateral arrangement between the TCAC Provider State concerned and the SADIS Provider State).

In view of the foregoing, the group agreed that the availability of tropical cyclone advisories in graphical format be monitored by the SADIS Provider State as part of its routine monitoring of non-scheduled OPMET information on SADIS (included in the annual SADIS management report). In the event of a continued, prolonged absence of the graphical products from a majority of the TCACs, the matter could be further addressed at an appropriate time with the TCAC Provider States concerned. The group was informed that the next meeting of WMO’s TCM was expected to take place in late 2015.

***Special air-reports***

Complementary to deliberations at 5.1.22 and 5.1.23 above, the group recalled that SADISOPSG/17 had discussed the requirement for the distribution of special air-reports over SADIS, where it had been recognized that there had been a disparity between Annex 3 – *Meteorological Service for International Air Navigation* provisions and a number of SADIS-related documents. The group, including IATA, had concluded that there was a requirement for special air-reports to be on the SADIS broadcast, since such information was considered to be an essential component of all available meteorological information that can assist users/operators in fulfilling their safety management system obligations. Decision 17/12 and Conclusions 17/13 and 17/14 were formulated accordingly in this respect, together with a complementary conclusion (Conclusion 17/15) requesting the development of an inventory of WMO abbreviated header lines (AHLs) used by States to promulgate special air-reports.

In respect of Decision 17/12, the group had simply reaffirmed that special air-reports should be disseminated on the SADIS broadcast. In respect of Conclusion 17/13, the group was pleased to note that the SADIS Provider State had provided a necessary progress report on the routing of special air-reports received at the SADIS Gateway for dissemination on SADIS, including the latest routing table (correct at 8 March 2013). The group considered this further in the context of the follow-up to Conclusion 17/15, referred below. In respect of Conclusion 17/14, the group noted that the fifth meeting of the Meteorological Warnings Study Group (METWSG/5 scheduled for 20 to 21 June 2013, Montréal) would be considering a draft amendment proposal to Annex 3, developed by the Secretariat, intended to enable the dissemination of special air‑reports to the centres designated by regional air navigation agreement for the operation of aeronautical fixed service satellite distributions systems. In respect of Conclusion 17/15, the group was pleased to learn that, following a request to States through the ICAO Regional Offices, an inventory of WMO abbreviated header lines (AHLs) used by States to promulgate special air-reports has been compiled based on the replies received, as presented at **Appendix I** to this report. The group appreciated that not all States had responded to the request; therefore, the information presented was considered as the best available. It was to be expected that the SADIS Gateway would be able to use the information presented in the inventory to complement the follow-up to Conclusion 17/13 (referred to above), including a necessary update to a special air-report routing table as described.

***Provision of non-quality controlled OPMET information on SADIS during periods of service disruption***

As the group was aware, quality controlled OPMET information was made available on the SADIS 2G satellite broadcast and the Secure SADIS FTP service, and that the quality control of the information was undertaken by the SADIS Gateway (United Kingdom National Air Traffic Services, NATS) in accordance with the SADIS Gateway Operations Handbook available on the SADISOPSG website. The group agreed that the provision of OPMET information, necessarily quality controlled by the SADIS Gateway, was one of the most important aspects of SADIS.

The group was also aware that the SADIS Provider (United Kingdom Met Office) collected OPMET information. Whilst such information was not subject to quality control by the SADIS Provider, in the event that there were problems with the distribution of the quality controlled OPMET information from the SADIS Gateway, the SADIS Provider had the ability to distribute non-quality controlled OPMET information to SADIS.

In this regard, the group considered the protocols applied by the SADIS Provider State with regards to the provision of non-quality controlled OPMET information on SADIS in the event of a disruption to the quality-controlled data feed to either the SADIS 2G satellite broadcast or the Secure SADIS FTP service. In the event that it was not possible for the SADIS Provider State to make quality-controlled OPMET information available on both SADIS services, the group noted of course that the provision of a non-quality controlled data feed to both services would take effect (until such time as quality controlled OPMET information was reinstated).

Having considered the contingency options when the supply of quality controlled OPMET to SADIS 2G or Secure SADIS FTP was disrupted, the group formulated the following decision accordingly:

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|  | **Decision 18/xx —** | **Provision of non-quality controlled OPMET data on SADIS during periods of service disruption** |
| That, in the event of service disruption to one of the SADIS services (SADIS 2G or Secure SADIS FTP) rendering the SADIS Provider State being unable to make quality controlled OPMET data available, the provision of non-quality controlled OPMET data on the affected SADIS service be endorsed.  *Note 1. – The SADIS Provider will inform SADIS users, via SADIS administrative message(s) (NOUK10 EGRR), of the status of the OPMET feeds under such circumstances – i.e. which feed is receiving quality controlled OPMET data and which is receiving non-quality controlled OPMET data.* *Note 2. – Users should be aware that under such circumstances, there will be differences in the OPMET data made available on the SADIS services.* *Note 3. – The SADIS Provider State will ensure that quality controlled OPMET data will continue to be made available on the unaffected SADIS service, and will restore quality controlled OPMET data on the affected SADIS service as soon as possible.* |

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| **Agenda Item** | **5:** | **Content of the SADIS broadcast** |
|  | **5.2:** | **WAFS forecasts** |

The group recalled that the list of WAFS forecasts disseminated on SADIS was included in Annex 4 to the SADIS User Guide (SUG), and that there had been no substantive changes introduced last year (2012) *except for* the transference of non-WAFS related material from Annex 4 to a new annex (Annex 5) of the SUG. The group had endorsed these changes as part of its customary review of the SUG (Decision 17/25 refers).

This year (2013), the group noted that there had been, or there was expected to be, several significant changes to WAFS forecasts disseminated on SADIS, as follows:

1. ***cessation of WAFS upper-air gridded global forecasts in WMO GRIB Edition 1 (GRIB1) code form*** produced by the WAFC Provider States, effective 14 November 2013, in view of the availability of WAFS forecasts in WMO GRIB Edition 2 (GRIB2) code form which provide higher temporal and spatial resolution compared to the legacy WAFS forecasts in GRIB1 code form;
2. ***dissemination of WAFS upper-air gridded global forecasts in WMO GRIB2 code form for flight level (FL) 410*** produced by the WAFC Provider States, effective 14 November 2013, in addition to existing FLs; and
3. ***dissemination of WAFS upper-air gridded global forecasts in WMO GRIB2 code form for icing, turbulence and cumulonimbus (Cb) cloud*** produced by the WAFC Provider States, which are already available for trial and evaluation purposes on Secure SADIS FTP but can be used for operational purposes as of 14 November 2013.

The group noted that all of the above aspects concerning the WAFS forecasts available on SADIS had been as a direct consequence of the recent decisions/conclusions of the World Area Forecast System Operations Group (WAFSOPSG) and the applicability of Amendment 76 to Annex 3 – *Meteorological Service for International Air Navigation* on 14 November 2013. Indeed, as follow-up to WAFSOPSG Conclusion 7/10, the Chair of the SADISOPSG had received a Memorandum from the Chair of the WAFSOPSG dated 6 March 2013 providing a necessary reference that the WAFS forecasts in WMO GRIB 1 code form would be withdrawn and that WAFS forecasts in WMO GRIB 2 code form would continue to be produced by the WAFC Provider States.

The group considered the cessation of the WAFS forecasts in WMO GRIB1 code form, the availability of WAFS forecasts in WMO GRIB2 code form for FL410, and the operational availability of WAFS forecasts in WMO GRIB2 code form for icing, turbulence and Cb cloud in the context of SADIS service provision, including the switching costs associated with the removal or addition, as appropriate, of the WAFS forecasts on SADIS (SADIS 2G and/or Secure SADIS FTP).

Recognizing that the WAFS forecasts for icing, turbulence and CB clouds were expected to be available on SADIS between approximately 1 and 2 hours *after* the availability of the WAFS forecasts for wind, temperature, humidity etc., the group was informed (by IATA) that this delay could prove problematic for some users (airlines) who would, in some instances, be able to utilize the latest issue of WAFS forecasts for wind, temperature, humidity, etc. but would have to use the previous issue of WAFS forecasts for icing, turbulence and CB clouds, which cloud lead to inconsistencies. Appreciating that the delay in the availability of WAFS forecasts for icing, turbulence and CB clouds on SADIS was principally associated with WAFC production times of the global gridded data rather than associated with SADIS transmission of the data, the group noted that any concerns of users in this regard should be brought to the attention of the WAFSOPSG, as appropriate, in the first instance.

Having given due consideration to these matters, including the determination of whether the referred WAFS forecasts should be made available on the SADIS 2G satellite broadcast, the Secure SADIS FTP service or both, the group formulate the following conclusions accordingly:

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|  | **Conclusion 18/xx —** | **Cessation of WAFS upper-air gridded global forecasts in the WMO GRIB1 code form on SADIS** |
| That, 1. the SADIS Provider State be invited to cease the distribution of WAFS upper-air gridded global forecasts in the WMO GRIB Edition 1 (GRIB1) code form on SADIS (SADIS 2G and Secure SADIS FTP) effective 0000 UTC on 14 November 2013;
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|  |  *Note 1. — This conclusion is in accordance with WAFSOPSG Decision 7/9 and associated WAFSOPSG Conclusions 7/10 and 7/11. WAFS upper-air gridded global forecasts in the WMO GRIB Edition 2 (GRIB2) code form will continue to be made available on SADIS.* *Note 2. — The SADIS Provider will keep users informed by way of SADIS administrative messages as necessary.* *Note 3. — SADIS Provider State switching costs will reduce by an estimated GBP 1,500.00 per annum accordingly.* and, 1. the Chair of the SADISOPSG be invited to inform the Chair of the SCRAG of the reduction in SADIS Provider State switching cost associated with a) above.
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|  | **Conclusion 18/xx —** | **Provision of WAFS upper-air gridded global forecasts in WMO GRIB2 code form for FL410 (175 hPa) on SADIS** |
| That, 1. effective 0000 UTC data time on 14 November 2013, the SADIS Provider State be invited to make WAFS upper-air gridded global forecasts in WMO GRIB2 code form for FL410 (175 hPa) produced by:
	1. WAFC London available on the SADIS 2G satellite broadcast and Secure SADIS FTP service; and
	2. WAFS Washington available on the Secure SADIS FTP service only.
 |
|  |  *Note 1. — This conclusion is in accordance with the applicability of Amendment 76 to Annex 3* – Meteorological Service for International Air Navigation*.*  *Note 2. — Additional SADIS Provider State switching costs associated with a) are estimated at less than GBP 50.00 per annum.*and, 1. the Chair of the SADISOPSG be invited to inform the Chair of the SCRAG of the additional SADIS Provider State switching costs associated with a) above.
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| **Conclusion 18/xx —** | **Availability of operational WAFS upper-air gridded global forecasts for icing, turbulence and Cb cloud on SADIS 2G** |
| That, 1. effective 0000 UTC data time on 14 November 2013, the SADIS Provider State be invited to make WAFS upper‑air gridded global forecasts in the WMO GRIB Edition 2 (GRIB2) code form for icing, turbulence and cumulonimbus (Cb) cloud produced by WAFC London available on the SADIS 2G satellite broadcast;

 *Note 1. — This conclusion is accordance with the applicability of Amendment 76 to Annex 3 –* Meteorological Service for International Air Navigation*.*  *Note 2. — There is no requirement at present to make these WAFS forecasts produced by WAFC Washington available on SADIS 2G.* *Note 3. — Additional SADIS Provider State switching costs associated with a) are estimated at GBP 89.00 per annum.* and,1. the Chair of the SADISOPSG be invited to inform the Chair of the SCRAG of the additional SADIS Provider State switching costs associated with a) above.
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In addition to the foregoing, noting in particular the referred *operational* availability on SADIS of the WAFS forecasts in the WMO GRIB2 code form for icing, turbulence and Cb cloud in place of *trial and evaluation* availability, the group agreed that there was a need to modify the Secure SADIS FTP folder structure, in a controlled and phased manner, to ensure appropriate data handling and use of the data before and after the change in status on 14 November 2013. Accordingly, the group formulated the following conclusion:

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|  | **Conclusion 18/xx —** | **Changes to the Secure SADIS FTP service folder structure to accommodate operational WAFS upper-air gridded global forecasts for icing, turbulence and Cb cloud** |
| That, the SADIS Provider State be invited to:1. modify the Secure SADIS FTP service folder structure in accordance with the proposal presented at **Appendix J** to this report; and
2. populate the new folders referred to at a) with WAFS upper-air gridded global forecasts in WMO GRIB Edition 2 (GRIB2) code form for icing, turbulence and Cb cloud produced by WAFC London and WAFC Washington with effect 0000 UTC data time on 14November 2013.

 *Note. — SADIS users and SADIS workstation software providers will be notified of these to changes through the issuance of SADIS administrative messages and the WAFS Change Implementation Notice Board (available on the WAFSOPSG website under* ‘Operational Information’ *at:*[*www.icao.int/safety/meteorology/wafsopsg/*](http://www.icao.int/safety/meteorology/wafsopsg)*).* |

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1. The European OPMET Data Management Group (EUR OPMET DMG) is an *ex-officio* Member of the SADISOPSG. [↑](#footnote-ref-1)