International Civil Aviation Organization

WORKING PAPER

Eighteenth Meeting of the Meteorological Information Exchange Working Group (MET/IE WG/18)
and
Tenth Meeting of the Meteorological Services Working Group (MET/S WG/10)

Web-conference, 27 – 31 July 2020

Agenda Item 5: Future work programme and terms of reference of MET/IE WG

INTRODUCTION OF THE FOURTH GLOBAL SPACE WEATHER INFORMATION PROVIDER

(Presented by China)

SUMMARY

The ICAO Council, at its Seventh Meeting of its 219th Session, agreed that the China/Russian Federation consortium (CRC) serve as a global space weather information service provider. This paper describes a number of changes required to RODBs/IROGs, describes how CRC will operate and advise to update the guidance documents to support the international exchange of these new advisories.

1. INTRODUCTION

1.1 The ICAO Council, at its Seventh Meeting of its 219th Session, agreed that the China/Russian Federation consortium (CRC) serve as a global space weather information service provider, and mentioned that the integration of the consortium into the global network of service providers should be undertaken as seamlessly and efficiently as possible.

1.2 This paper describes the plan and preparation of CRC and the required updates to ROBEX Handbook.

2. DISCUSSION

Operational Overview of CRC

2.1 The space weather service and the obligations of CRC will be implemented in accordance with ICAO Annex3.

2.2 CRC will have the capability of generating test advisory messages in abbreviated plain language at the end of August 2020, and will be ready to disseminate advisory information in IWXXM GML format before November 2020. But any advisories will not be disseminated on the ICAO network until the CRC message headers are officially declared. ZBBB will just send the test advisories to the other three SWXCs by means of e-mail before that.

2.3 Both China and Russia could issue advisories, and CRC will maintain a 24-hour watch.

2.4 In case of single point failure of the operation of CRC, China and Russia will work as primary-secondary mode.

2.5 CRC is fully coordinating its operations with the global network of service providers.

Space Weather Advisory Headers

2.6 According to what we've leant so far, ICAO SWXC Coordination Group had been preferable to align the introduction of new headers, which were agreed upon according to the concept of **one header per effect**, with the Amendment 79, ICAO Annex 3, which is probably applicable on 5 November 2020.

2.7 It has been proposed that the introduction of headers for advisories issued by the CRC could apply to the new principles mentioned in 2.6. The message headers of CRC which are suggested to use are shown in the following table.

	SWX Message WMO Header (TTAAii CCCC)				
	TAC Advisory		IWXXM Advisory		Administration Message
China	FNXX01 ZBBB	GNSS	LNXX01 ZBBB	GNSS	NOXX39 ZBBB
	FNXX02 ZBBB	HF COM	LNXX02 ZBBB	HF COM	NOXX39 ZBBB
	FNXX03 ZBBB	RADIATION	LNXX03 ZBBB	RADIATION	NOXX39 ZBBB
	FNXX04 ZBBB	SATCOM	LNXX04 ZBBB	SATCOM	NOXX39 ZBBB
Russia	FNXX01 RUPG	GNSS	LNXX01 RUPG	GNSS	NOXX39 RUPG
	FNXX02 RUPG	HF COM	LNXX02 RUPG	HF COM	NOXX39 RUPG
	FNXX03 RUPG	RADIATION	LNXX03 RUPG	RADIATION	NOXX39 RUPG
	FNXX04 RUPG	SATCOM	LNXX04 RUPG	SATCOM	NOXX39 RUPG

Issuance of METNO

2.8 The APAC ROBEX Handbook defines the procedures associated with the management of the ROBEX scheme. In particular, changes of ROBEX bulletins should be disseminated to all ROBEX centres (ROC) and national OPMET centres (NOC) concerned to allow the centres to introduce the necessary changes to their message handling systems. This is achieved via a procedure known as METNO as defined in Appendix G of the ROBEX Handbook.

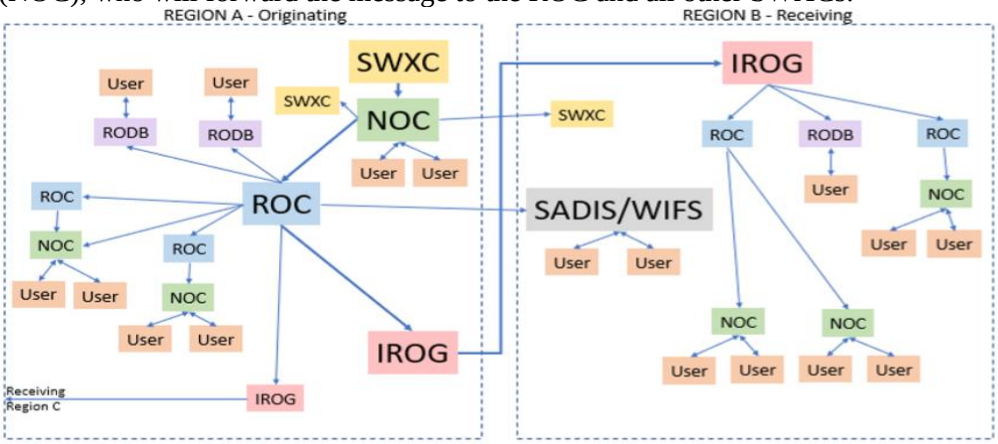
2.9 Two months (or two AIRAC cycles) prior to the implementation date, the ICAO Regional Office should send a notification by e-mail to all regional OPMET bulletin exchange Focal Points. The notification should include detailed information about the new space weather advisory information bulletins and the proposed time schedule.

NEWBUL FNXX01 ZBBB	NEWBUL FNXX01 RUFG
NEWBUL FNXX02 ZBBB	NEWBUL FNXX02 RUFG
NEWBUL FNXX03 ZBBB	NEWBUL FNXX03 RUFG
NEWBUL FNXX04 ZBBB	NEWBUL FNXX04 RUFG

2.10 Two weeks prior to the implementation date, the originating ROC, ZBBB, should send a notification by means of a METNO message via AFTN/AMHS to all other ROCs and the respective IROGs in the other ICAO regions.

Dissemination of Space Weather Advisories

2.11 As the following picture shown in file DISSEMINATION OF SPACE WEATHER ADVISORIES (Version: 23/08/2019), the advisories will be disseminate to their National OPMET Centre (NOC), who will forward the message to the ROC and all other SWXCs.



2.12 Moreover, SWXA will be distributed via the ROBEX distribution mechanisms rather than directly to end users via AFTN/AMHS.

2.13 It means that ZBBB, as SWXC, NOC and ROC, will send the advisories to ZMUB, all other SWXCs, the RODBs in APAC (which are also the IROGs), SADIS and WIFS.

2.14 Users will access Space Weather Advisories through their normal national aviation briefing service but it should be noted that airlines may request their NOCs deliver SWXAs directly to the airline, via AFTN/AMHS, like other OPMET.

Updates to other Regional Documentation

2.15 The introduction of CRC will require an update to ROBEX Handbook to list the new Space Weather messages exchanged and their corresponding WMO headers as defined in 2.6.

3. ACTION BY THE MEETING

3.1 The meeting is invited to :

a. note the information in this paper; and

b. updates to ROBEX Handbook to include appropriate references to Space Weather Advisories and their corresponding WMO headers.

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