



Agenda Item 8: Other business

(Presented by the United States)

SUMMARY

This paper solicits feedback from the GREPECAS SAM Met Project on an upcoming Regional Hazardous Weather Advisory demonstration project for the Caribbean.

1. INTRODUCTION

1.1 The 2014 ICAO/WMO Meteorological Divisional Meeting (MET/14) recommended ICAO to implement Regional Hazardous Weather Advisory Centres. These Centres will improve the process of warning aviation users about immediate weather hazards. The desired improvements are that advisories will be more consistent between issuing centres, both in time and space as well as in the methodology for issuance of the warnings.

2. DISCUSSION

2.1 In 2011, the former ICAO Meteorological Warning Study Group conducted a project in Africa and Asia to see if guidance from an advanced regional centre could help Meteorological Watch Offices (MWOs) improve their SIGMET services. The guidance consisted of what was called a SIGMET Advisory, which was supposed to be used by the MWOs as guidance for their SIGMETs, much like MWOs use a Volcanic Ash Advisory to issue SIGMETs.

2.2 The demonstrations showed that MWOs with capacity to issue SIGMET did use the Advisories to issue higher quality SIGMETs that were somewhat more consistent with those of neighbouring MWOs. However, there were many MWOs that simply lacked sufficient capacity to reliably issue SIGMETs.

2.3 As a result, IATA and IFALPA asked for direct access to the Advisories, in hopes of using them in place of SIGMET. However, there were no satisfactory use cases that could explain what to do when the both the advisory and SIGMET were issued, especially if they were not in agreement with each other. The users asked ICAO and WMO to resolve this issue.

2.4 Mindful of the potential for conflict between Advisory and SIGMET, new RHWAC projects are ongoing. These projects, being conducted in Europe and Asia, focus on providing MWOs with a combination of web based coordination and data sharing tools. These tools allow the MWOs to view and discuss common data fields, including polygons that represent recommended SIGMET areas. They can even create recommended SIGMET text to use for issuing a SIGMET.



(Lima, Peru, from 17 to 20 June 2019)

2.5 The data sharing aspect of these projects is helping MWOs with lesser capacity, but only those MWOs that have the necessary ability to issue SIGMETs. It does not resolve the issue of what to do when an MWO cannot reliably issue SIGMET. A further drawback was that the ongoing demonstrations do not include an actual Advisory product that can be used if SIGMET service is unavailable.

2.6 Meanwhile, user requirements for hazard warning service are evolving well beyond the capabilities of the current SIGMET. The users' new systems need rapidly updating information, with IATA even requesting high precision updates as fast as every 15 minutes. The users are clearly requesting a new warning service.

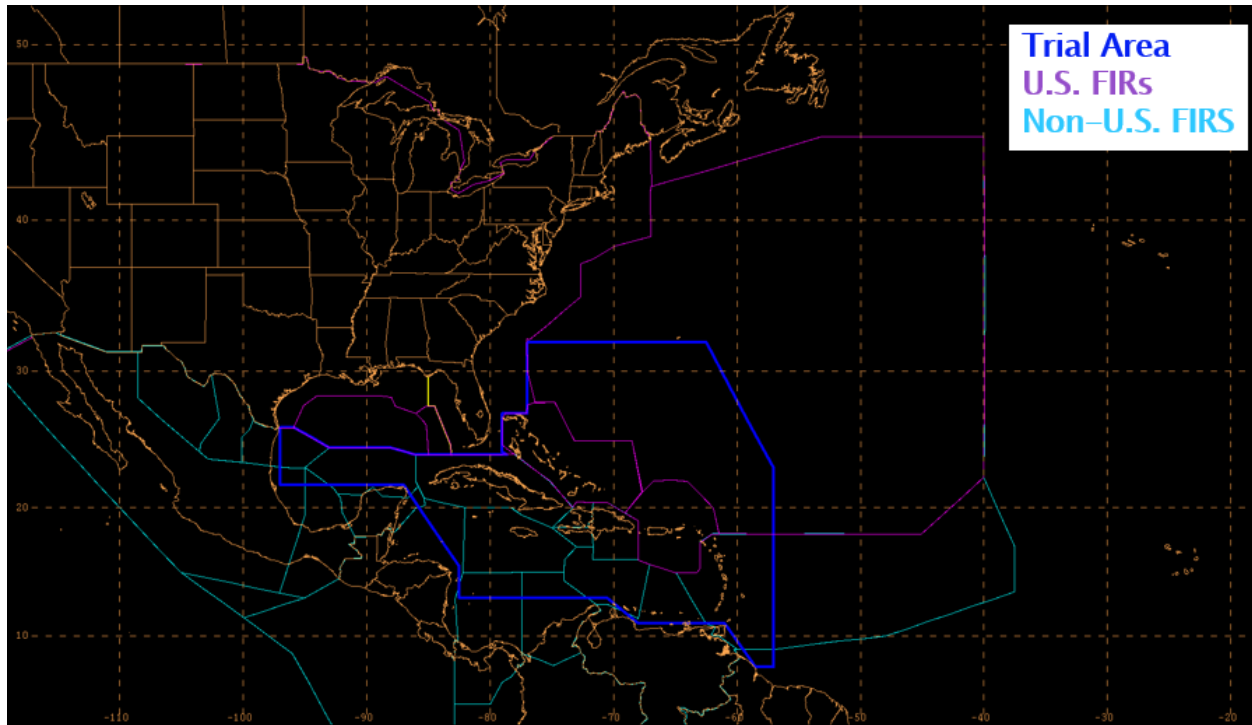
The basic requirements for this new service were presented at and supported by the fifth meeting of the ICAO Meteorology Panel's (METP) Working Group on Meteorological Information and Services Development (WG-MISD/5) in Melbourne, Australia (February 2019). That meeting considered the following basic requirements for the new product. The product name has not been decided, but it is typically referred to as a Regional Hazardous Weather Advisory (RHWA).

- 1) Issued when the hazards reach, or are expected to reach current SIGMET thresholds.
- 2) Updated every hour.
- 3) An initial position of the hazard, plus one and two hour forecast positions will be provided.
- 4) Where appropriate, Advisories will contain information about the top, base and movement of the hazard.
- 5) Issued in graphical and IWXMM formats only.
- 6) Local MWO input will be considered.

2.7 The WG-MISD/5 created an ad hoc group to develop use cases for the advisories and finalize the requirements. The meeting also invited demonstration projects. Accordingly, the United States plans to demonstrate Advisories with the above criteria in 2020. The demonstration area will be the area currently covered by the Area Forecast provided by the United States for Caribbean FIRs. The area is shown in the map below.



(Lima, Peru, from 17 to 20 June 2019)



2.8 It should be noted that the rapidly updating, shorter valid time Advisory containing hourly forecast positions is quite different than the four hour SIGMET. However, the two products complement each other, and can be used as input to each other.

2.9 Considering the requirements in paragraph 2.6. one possible scenario is that, following web based coordination with the MWOs, an RHWA is issued that covers multiple FIRs. The affected MWOs issue SIGMETs that show the area affected from T+0 to T+4 hours, while the RHWA shows precise positions of the hazard at T+0, T+1 and T+2 hours. This RHWA product is updated every hour until no longer needed, using input from the MWOs. The inputs will include the area covered by the SIGMETs, as well as direct coordination via Internet chat rooms with graphical coordination capability. The MWOs may or may not update their SIGMETs during the four hour period.

2.10 The users should consider the SIGMET to be the definition of the general area of the hazard for the next four hours, while they use the higher resolution RHWA as the definition of precise locations of the hazard for each of the next two hours.

2.11 The United States is seeking feedback on the proposed demonstration. It is also seeking feedback from meteorological and air navigation service providers, as well as airlines during the trial. The contact point for feedback will be Mr. Matt Strahan, at Matt.Strahan@noaa.gov.

3.0 ACTION BY THE GREPECAS MET PROJECT

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

