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Agenda Item 2: Air Navigation Services
2.1 Air Navigation Matters

**SPECIAL IMPLEMENTATION PROJECT (SIP) FOR THE ENHANCEMENT OF
AERONAUTICAL METEOROLOGICAL SERVICES IN THE CARIBBEAN (CAR) REGION**

(Presented by the Secretariat)

SUMMARY

This document addresses a SIP to enhance aeronautical meteorological services in the CAR Region.

References:

- Annex 3 – *Meteorological Service for International Air Navigation*
- Doc 8733 – *Air Navigation Plan – Caribbean and South American Regions*, Volume I, Basic Part VI – MET and Volume II, FASID.
- Guidelines for the education and training of personnel in meteorological and operational hydrology, Supplement No. 1, WMO No. 258.

1. Introduction

1.1 The Meeting is informed that aeronautical technology has delivered great achievements; notwithstanding, aircraft operations are still vulnerable to adverse meteorological conditions and volcanic ash clouds, which continue to cause accidents, incidents and delays. Meteorological (MET) service for aviation in the Caribbean (CAR) Region is of crucial importance for the safety of air transport operations, particularly with the noted frequency of regional occurrence of convective thunderstorm clouds, reduced visibility, tropical cyclones and active volcanoes. However, the Meeting should note with concern that MET deficiencies have persisted over a long period of time in the CAR States/Territories. Although these deficiencies have been drawn to the attention of the States/Territories from time to time, it appears difficult for States/Territories to eliminate them, possibly due to a lack of expertise. In recent years, frequent reports have been received from the users (IATA) regarding shortfalls, errors and discrepancies related to operational meteorological (OPMET) data of the CAR States/Territories, which is to say, METAR meteorological reports and terminal aerodrome forecasts (TAF) that have created safety issues for the users.

1.2 Due to budgetary constraints, providing assistance to CAR States/Territories through Regional Programme missions is practically impossible. Because of distances involved, representatives from MET authorities/providers are usually unable to attend regional MET meetings held in the different regions, such as the annual GREPECAS Aeronautical Meteorology Subgroup (AERMET/SG) Meetings due to the associated travel costs. As a result, the liaison with MET authorities of the CAR States/Territories is particularly difficult.

1.3 The provision of MET services in the CAR Region is occasionally subject to bilateral and multilateral agreements among CAR States/Territories. Nevertheless, information on such agreements is not always forwarded to the ICAO NACC Regional Office. These agreements need to be reviewed and the Air Navigation Plan - CAR/SAM Regions needs to be updated as appropriate.

2. **Special Implementation Project**

2.1 The main objectives of the Special Implementation Project (SIP) are the following:

Provide assistance to MET authorities of CAR States/Territories to eliminate any deficiencies in the provision of meteorological services used for international air navigation and, enhance the level of implementation of Annex 3 Standards and Recommended Practices (SARPs) in the regional facilities and services specified in the CAR/SAM ANP. Special attention will be given to standardization of the formats of meteorological messages and bulletins by strictly following the formats set up by ICAO and the World Meteorological Organization (WMO).

2.2 Current arrangements for the provision of meteorological services by CAR States/Territories will be reviewed and a proposal for their enhancement and harmonization will be developed as necessary. Specific advice will be provided on improvement of coordination between the MET authority/provider and the corresponding civil aviation administration, air traffic services (ATS) providers and communication (COM) operators.

2.3 Deficiencies related to the use of World Area Forecast System (WAFS) products, the provision of SIGMET services on tropical cyclones, convective activity and volcanic ash cloud advisories, and the content and quality of flight documentation will also be addressed. Specific problems related to means of communication will be studied to provide recommendations for suitable technical solutions and alternatives.

2.4 Special interest will be given to the review of available human resources in order to detect training needs to ensure aviation meteorological service quality, particularly considering that as of 1 January 2005, WMO and ICAO determined that meteorological forecasters should be meteorologists with at least a 4-year university degree.

2.5 Advantage will also be taken to explore tsunami warning systems to determine whether such a system could be useful for aerodrome warnings.

2.6 The SIP would consist of:

- a) visits by the Aeronautical Meteorology Regional Officer to Antigua, Bahamas, Belize, Guatemala, Nicaragua and Trinidad and Tobago;
- b) two seminars on Aeronautical Meteorology Services, one in English and one in Spanish, to be held during one week of the first quarter of 2009 (hosted by a Spanish-speaking Central American State (Nicaragua), and an English-speaking Caribbean State/Territory); and
- c) attention to aeronautical meteorology service matters, mainly those concerning OPMET data exchange, dissemination of SIGMET messages and use of WAFS products.

2.7 The proposed goal is to improve the provision of meteorological services for CAR Region aviation by at least 75%.

3. **Required Actions**

3.1 The Meeting is invited to:

- a) note the contents of this working paper;
- b) consider the proposal(s) to host Aeronautical Meteorology Services seminars; and
- c) other actions as appropriate.