



International Civil Aviation Organization

CAR/SAM Regional Planning and Implementation Group (GREPECAS)

**Tenth Meeting of the GREPECAS Aeronautical Information Services Subgroup  
(AIS/MAP/SG/10)**

Caracas, Venezuela, 26 February - 02 March 2007

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**Agenda Item 4: Review of Implementation Aspects**

**4.4 Assessment of the actions taken by the CAR/SAM States on the provision of electronic terrain and obstacles data, as a follow-up to AIS/MAP/SG Conclusions 9/7 and 9/9**

**ELECTRONIC TERRAIN AND OBSTACLES DATA**

(Presented by the Secretariat)

**SUMMARY**

The purpose of this Working Paper is to evaluate the actions taken by the States of the CAR/SAM Regions with regard to the future availability of Electronic Terrain and Obstacle Data.

**References:**

- AIS/MAP/SG/9 Meeting (Santo Domingo, Dominican Republic, 13 to 17 June, 2005).
- Report of GREPECAS/13 Meeting (Santiago, Chile, 14 to 18 November, 2005).

**1. Introduction**

1.1 The main objective of this working paper is to present for the AISMAP/SG/10 Meeting's consideration, the aspects concerning technical requirements related to the provision by CAR/SAM States of Electronic Terrain and Obstacle Data corresponding to their respective territories and areas designated for such purposes, in accordance with the international requirements contained in Chapter 10 of ICAO Annex 15.

**2. Background**

2.1 During the AIS/MAP/SG/9 Meeting, and when analyzing the problematic related to aeronautical charts electronic display, the existence of some key elements directly affecting the implementation of the procedures required to satisfy aeronautical charts display in electronic formats was recognized, and one of these key elements would basically consist of the availability of terrain and obstacles electronic data with great levels of integrity and feasibility. In this regard, and for GREPECAS/13 consideration, the AIS/MAP/SG/9 Meeting agreed to approve Draft Conclusion 9/7 (Availability of Electronic Terrain and Obstacle Data in the CAR/SAM Regions).

2.2 In addition to paragraph 2.1 above, and in respect of the issue related to the availability of Terrain and Obstacles Electronic Data in the CAR/SAM Regions, GREPECAS/13 Meeting, after considering the arguments presented on this matter by the AIS/MAP/SG/9 Meeting, agreed to approve the actions of this meeting and formulated Conclusion 13/44, as follows:

**CONCLUSION 13/44**                      **AVAILABILITY OF ELECTRONIC TERRAIN AND OBSTACLE DATA IN THE CAR/SAM REGIONS**

*That, taking into consideration that the SARPs contained in Chapter 10 of ICAO Annex 15 introduce the requirement regarding the availability of electronic terrain and obstacle data between 2008 and 2010, and that the compliance of that requirement is essential to support the electronic aeronautical charts display (Annex 4, Chapter 20), States/Territories/International Organizations of the CAR and SAM Regions should take, individually or collectively, the required actions to ensure:*

- a) the availability, in digital format, of all terrain and obstacle data as well as all other aeronautical, geographical and geodesic information/data, of high quality and integrity, as required by ICAO Annex 15;*
- b) the electronic aeronautical charts display, in direct support to GNSS and WGS-84 compliant, and*
- c) the availability of databases aimed at ensuring the electronic availability of all aeronautical information/data required by civil aviation.*

**3. Discussion**

3.1 Chapter 10 of ICAO Annex 15 specifies that the States should ensure that electronic terrain and obstacle data, corresponding to their entire territory, should be available to satisfy the requirements necessary to adjust air navigation systems and functions related to technical requirements specified in paragraph 10.1 of this Annex, in order that this set of data should also be available to be used in the specified bases, and according to the areas of application as, the whole territory of the State (Area 1), terminal control area (Area 2), aerodrome/heliport area (Area 3) and operations area Category II or III (Area 4).

3.2 Paragraph 10.6 (10.6.1.1 and 10.6.1.2, respectively) of ICAO Annex 15 also specifies that the States, even though complying with the responsibilities indicated in paragraph 3.1 above, should also take into consideration that the technical requirements of Areas 1 and 4 should be satisfied starting 20 November 2008, while the technical requirements of Areas 2 and 3 should be satisfied starting 18 November 2010.

#### 4. **Suggested Action**

4.1 When evaluating the contents of this working paper, with regard to the need to provide appropriate follow-up to the requirements of new Chapter 10 of ICAO Annex 15, concerning the availability by the States of electronic terrain and obstacle data, within the period 2008 and 2010, and with a view to promote the effective compliance of these technical requirements in accordance with that established, the Meeting is invited to adopt Draft Conclusion presented hereunder.

4.2 At the same time, GREPECAS is invited to withdraw Conclusion 13/44 (Availability of Electronic Terrain and Obstacle Data in the CAR/SAM Regions), considering that it could be replaced by the new Draft Conclusion, as follows:

#### **DRAFT**

#### **CONCLUSION 10/X**

#### **COMPLIANCE WITH SARPS CONTAINED IN CHAPTER 10 OF ICAO ANNEX 15 (ELECTRONIC TERRAIN AND OBSTACLE DATA)**

That, the States, Territories and International Organizations of the CAR and SAM Regions, with a view to ensure the provision of Electronic Terrain and Obstacle Data, take immediate actions in order to:

- a) include in their planning, the implementation, as soon as possible, of all the procedures required to ensure that Electronic Terrain and Obstacle Data is available in the period between 20 November 2008 (Annex 15, 10.6.1.1) and 18 November 2010 (Annex 15, 10.6.1.2), respectively, in accordance with that established;
- b) ensure the effective compliance of paragraph a), through the establishment of a specialists team in charge of the development of the corresponding technical studies on this matter;
- c) put into practice an action plan oriented to the collection of sets of electronic terrain and obstacle data, for their classification, storage and availability in digital databases, according to the contents and structure specified in Appendix 8 of ICAO Annex 15; and
- d) ensure the effective availability of electronic terrain and obstacle data of the State's National territory, through the coordination with National Geographic Institutes to have available Aeronautical Visual Flight Charts (VFR), in digital format, at scales between 1:250,000 and 1:1,000,000, respectively.