



Agenda Item 6: Follow-up to the Conclusions of GREPECAS/18 and the Recommendations of the AN/Conf-13 related to AIM

Follow-up to the Conclusions of GREPECAS/18

(Presented by the Secretariat)

SUMMARY	
This working paper is a follow-up to the conclusions and decisions of GREPECAS/18 in relation to AIM.	
REFERENCES:	
<ul style="list-style-type: none"> • Annex 15 – Aeronautical Information Services • Report of the GREPECAS/18 meeting, Punta Cana, Dominican Republic, 9 to 14 April 2018 	
ICAO strategic objectives:	<i>A - Safety</i> <i>B – Air navigation capacity and efficiency</i> <i>E – Environmental protection</i>

1. Introduction

1.1 The GREPECAS/18 meeting reviewed the implementation of AIM Projects for the CAR/SAM Regions.

1.2 It also took note of mapping issues at the regional level and suggested ways to solve them.

2. Discussion

2.1 The Secretariat reported on AIM projects at the GREPECAS/18 meeting, which expressed its concern regarding the following issues:

- a) Delays in the implementation of quality management systems in AIM processes.
- b) Difficulties to meet the deadlines for e-TOD implementation, mainly for area 2.
- c) Delays in the implementation of standard aeronautical information exchange models, resulting in delays in the implementation of aeronautical information management in an electronic environment.

2.2 Regarding e-TOD, the meeting established an *ad hoc* group to analyse the strategy for complying with this standard. The conclusions of this group are shown in **Appendix A** to this working paper.

2.3 The Meeting will note that the recommendations of the *ad hoc* group contain activities to be implemented by States and that are subject to monitoring, since the results must be reported to the PPRC/5 meeting. The States could report on the activities carried out since the SAM/AIM/11 meeting pursuant to these recommendations. It is important that States consider and define strategies to comply with this requirement of providing the terrain and obstacle dataset in digital format.

2.4 States should submit feasible plans in this regard. Previous SAM/AIM meetings have monitored e-TOD implementation within the context of Project G1 for the SAM Region. It would be important to review the plans thus submitted, as well as information on activities being carried out for the completion of the process.

2.5 **Appendix B** to this working paper shows follow-up activities by the various SAM/AIM meetings. The Meeting will note that progress still needs to be made to complete the implementation. **Appendix C** contains the corrective action plans submitted by States, whose implementation dates are reviewed at each meeting. The Meeting should consider other alternatives to meet the e-TOD implementation goal. The Global AIM implementation strategy has considered, *inter alia*, the possibility of organising “Go-Teams” to complete the implementation. The Meeting could consider formulating recommendations in this regard.

2.6 Regarding AIM/QMS implementation, WP/03 describes the corresponding activities.

2.7 Regarding aeronautical charts, many examples of aeronautical charts that do not meet ICAO provisions have been identified, generating concern among the users. The lack of standardisation can generate confusion among pilots and misinterpretation of requirements. Pilots receiving non-standard aeronautical charts face a variety of options to interpret flight-critical conditions. This is dangerous and makes information very difficult to discover.

2.8 Quality issues have also been observed in aeronautical charts published by the States. Occasionally, relevant operational information is missing, the data contains errors, or the same information is not consistently represented in the various information products. This could have a significant impact on flight safety.

2.9 PBN is the top priority of the aeronautical community worldwide, and erroneous information on PBN procedures may significantly affect its implementation. In fact, erroneous information can result in pilots making approaches for which they are not approved, or PBN procedures not being fully applied.

2.10 The GREPECAS/18 meeting proposed a two-tier approach to the implementation of the strategy: Phase 1 (short term) and Phase 2 (long term). Phase 1 of the implementation strategy would start on the second half of this year (October/November 2018), while Phase 2 would only start when the first phase is considered to be sufficiently sound to serve as the basis for subsequent steps. Likewise, the task forces in charge of GREPECAS Programme G have been requested to develop a regional implementation strategy as a matter of priority.

2.11 The Meeting could create an *ad hoc* group to study and propose a strategy for the task requested by GREPECAS/18.

3. **Suggested action**

3.1 The Meeting is invited to:

- a) take note of the information provided in this working paper;
- b) review the information contained in Appendices A, B and C;
- c) report on the progress made in e-TOD implementation in the States and update the corresponding corrective action plans; and
- d) establish an *ad hoc* group to define strategies related to aeronautical charts.

REPORT OF THE ETOD *AD HOC* GROUP

1. Delegates of participating States:

Brazil, Costa Rica, Panama, Dominican Republic, Trinidad and Tobago, Uruguay and the Secretariat (CAR and SAM AIM ROs). The delegates of Cuba and CANSO also expressed their intention of joining in subsequent activities.
2. Based on the proposals submitted to the meeting in WP/29, the meeting agreed to establish an *ad hoc* working group to address the implementation of eTOD and define the activities. The Secretariat chaired the meeting. Mr. Jorge Armoa acted as rapporteur and made a brief introduction. The group approved the discussions based on the seven points proposed in WP/29, namely:
 - i. Implement suitable regulations to support eTOD data collection and management by the responsible authority: State/government authorities, air navigation service providers (ANSPs), aerodrome operators, military, etc.
 - ii. Define the data collection method, whether surveying (using WGS-84) or other means (drones, satellite imaging /graphical 3D information processing / LIDAR).
 - iii. Define the format in which data will be stored and distributed.
 - iv. Implement the required infrastructure (a database - GIS) capable of managing/hosting eTOD data. (The database must be capable of uploading the required terrain data in the digital surface model (DSM) or digital terrain model (DTM), with the associated metadata traceability).
 - v. Make sure that the State has the necessary resources to manage and maintain the eTOD database in coordination with the military representatives (national security matters).
 - vi. Make sure that State resources are duly trained in terrain and obstacle data management (*i.e.*, that they understand the complexities of terrain data filing formats and the packaging of these terrain data files).
 - vii. Make sure that the State has implemented a quality management system (QMS) with the associated processes and procedures to ensure quality in data processing, from origination to publication (Controlled and harmonised aeronautical information network - CHAIN) in section AIP AD 2.10 (or other IAIP-related documents).
3. The proposals of the Group are:
 - a. Exchange between geodetic and aeronautical charting institutions
 - b. Prioritise Area 3 of eTOD for international airports
 - c. Assess resource allocation for a number of airports in each CAR and SAM State
 - d. Establish a deadline for the development of plans for each project stage
 - e. Use of satellite images and LIDAR data for Areas 1 and 2, and use of drones for Areas 3 and 4
 - f. Cost-sharing among the various State institutions that may derive benefits following a cost-benefit analysis, maintaining the continuity of eTOD projects with adequate resources
 - g. Establish work arrangements among all State institutions and the military for the performance of activities, giving priority to Areas 1 and 3
 - h. Consider the use of 3D data management software to obtain eTOD products
 - i. Request those States that have already begun eTOD to share information and experts to assist other States that may need it

- j. Incorporate universities and mapping/geodetic institutes into the project
 - k. Identify project risks and develop plans to address them
 - l. Create a team to conduct a cost-benefit analysis for each CAR and SAM State
4. The *ad hoc* group will continue monitoring the tasks and activities in both Regions in a coordinated manner. Progress will be reported to the CAR and SAM AIM ROs. Said progress would be reported in a working paper to be submitted to the PPRC/5 meeting.

APPENDIX B

SAM STATES	ACTION PLAN	FOLLOW-UP
<i>Argentina</i>	Estimated date: 27 November 2019	Will revise the action plan and will send corrections with more detailed information.
<i>Bolivia</i>	Start up of corrective action: July 2017	Corrective action started on the indicated date.
<i>Brazil</i>	2017 - 8 AD 2018 - 8 AD 2019 - 8 AD 2020 - 7 AD 2021 - 7 AD 2022 - 7 AD	Brazil modified its action plan as indicated.
<i>Chile</i>	To be completed in 2022. Surveying in Areas 2a, 2b and 2c of the Arturo Merino Benítez airport of Santiago and the Chacalluta airport of Arica already started	Surveying has been completed at the Diego Aracena airport of Iquique.
<i>Colombia</i>	No plan submitted.	
<i>Ecuador</i>	No plan submitted.	
<i>French Guiana</i>	No plan submitted.	
<i>Guyana</i>	Estimated start date: April 2017. The first seven items of the Action Plan should have been completed by now.	Guyana reports that activities are being carried out according to the plan.
<i>Panama</i>	No plan submitted.	
<i>Paraguay</i>	Data collection for Areas 2a, b, c, d, completed. Other e-TOD-related activities foreseen for the period 2016 - 2019.	
<i>Peru</i>	No plan submitted.	Peru will organise a meeting among the civil aviation authority, the service provider (CORPAC) and the aerodrome operators for the drafting of the plan.
<i>Suriname</i>	No plan submitted.	
<i>Uruguay</i>	No plan submitted.	
<i>Venezuela</i>	Will start with terrain and obstacle data on the second half of 2017.	