International Civil Aviation Organization
South American Regional Office
Thirteenth Meeting of Civil Aviation Authorities of the South American Region (RAAC/13)
(Bogota, Colombia, 4 to 6 December 2013)

Agenda Item 2: Global and regional civil aviation requirements and challenges

a) Forecasts of global and regional air traffic growth and human resource and training requirements; and
b) Global Air Navigation Plan (GANP), Global Aviation Safety Plan (GASP), and regional planning and implementation mechanisms

Follow-up on activities of regional planning and implementation groups concerning air navigation (GREPECAS) and safety (RASGPA)

(Presented by the Secretariat)

SUMMARY

This working paper presents the activities conducted by regional planning and implementation groups with respect to air navigation (GREPECAS) and safety (RASGPA) since the Twelfth Meeting of Civil Aviation Authorities.

References:

- Workshop on the Global Aviation Safety Roadmap (GASR) (Bogota, Colombia, 19-23 May 2008);
- Report of the First Meeting of the Regional Aviation Safety Group – Pan America (RASG-PA/01) (Puntarenas, Costa Rica, 10-14 November 2008);
- GREPECAS/16 meeting report (Punta Cana, Dominican Republic, 28 March to 1 April 2011);
- CRPP/1 meeting report (Mexico City, Mexico, 25-27 April 2012); and
- CRRP/2 meeting report (Lima, Peru, 16-18 July 2013).

ICAO Strategic Objectives:	*A – Safety* *C – Environmental protection and sustainable development of air transport*

1. Introduction

1.1 The Global Air Navigation Plan (GANP) and the Global Aviation Safety Plan (GASP) have regional implementation and monitoring mechanisms. In the case of air navigation, the ICAO Council has created regional planning and implementation groups (PIRGs) and in the case of safety, regional aviation safety groups (RASGs) were created. The SAM Region is part of GREPECAS, which is the PIRG for the ICAO CAR and SAM Regions. Regarding the RASG, the SAM Region is part of the RASG-PA, which includes the NAM, CAR, and SAM Regions. The Secretariat of both regional groups rotates between the two Regional Directors of the NACC and SAM Offices. In the case of GREPECAS, the Director of the SAM Office is currently acting as Secretary, and in the case of the RASG-PA, the Secretary is the Director of the NACC Office.

GREPECAS

1.2 The RAAC/12 meeting took note of the new GREPECAS organisation adopted through Decision 16/45 – *New GREPECAS organisation*, whereby it was agreed that the GREPECAS AERMET, AGA/AOP, AIM, and CNS/ATM Subgroups and their respective Task Forces, as applicable, would be transformed into programmes and projects (Decision 16/47 – *Transformation of GREPECAS subgroups).*

1.3 The meeting was also informed that the ICAO NACC and SAM Regional Offices would coordinate the programmes, and experts designated by GREPECAS member States would coordinate the projects, and that the administration and coordination of programmes and projects would be under the responsibility of the Programmes and Projects Review Committee (PPRC). The **Appendix** lists the programmes and projects, indicating the name of the respective coordinators.

1.4 GREPECAS programmes and projects respond to implementation priorities in the SAM Region, and their implementation is supported by technical cooperation projects, such as RLA/06/901 – *Assistance in the implementation of a regional ATM system, taking into account the ATM operational concept and the corresponding communication, navigation, and surveillance (CNS) technological support*, RLA/03/901 – *REDDIG management system and satellite segment administration*, and RLA/99/901 - *Regional safety oversight system (SRVSOP).*

RASG-PA

1.5 RASGs were created to take leadership in the safety area and address the need to understand situations, accept responsibilities, and commit to concrete actions, as well as to have clear strategies and objectives.

1.6 For governments and States, leadership in the safety area means taking action so that it will no longer be a marginal issue and giving it a more central role, so as to help guide policy and action. As to the industry, it means going beyond the design and technology and participating in aviation management and culture. The main priority in aviation is the development of a safe system. The moral imperative of taking action to further reduce the accident rate is quite apparent; the operational benefits are enormous, and the business case is extremely enticing.

1.7 To address this requirement, the Industry Safety Strategy Group (ISSG) was created in 2005 at the Seventh Air Navigation Commission (ANC) Meeting with Industry, inspired by the International Civil Aviation Organization (ICAO). ICAO called upon those industry partners that were in position to do so to work together to develop a common roadmap for safety. This Global Safety Roadmap, Part 1 – A Strategic Action Plan for Future Safety, was developed by the ISSG under the coordination of IATA with the participation of Airbus, Boeing, the Airports Council International (ACI), the Civil Air Navigation Services Organization (CANSO), the International Federation of Air Line Pilots' Associations (IFALPA), and the Flight Safety Foundation (FSF).

1.8 The roadmap sought to attain safety benefits in the near to medium term through a phased approach. It contained a high-level, conceptual analysis using "broad strokes", and invited early involvement by ICAO to help pave the way for the development of a document that would focus on more specific action.

1.9 All this is aimed at achieving a partnership that will result in a reduction of the global accident risk in commercial aviation.

1.10 Once the roadmap was ready, ICAO created the Global Aviation Safety Plan (GASP). The ICAO plan became an umbrella for the roadmap.

1.11 Once the roadmap and the Global Plan were ready, the challenge was the implementation. The South American Region faced this challenge and a workshop on the Global Aviation Safety Roadmap (GASR) was held in May 2008 with the cooperation of Colombia, with a view to starting the implementation of the Plan. At that meeting, it became clear that a regional implementation mechanism was needed, just like the PIRGs existed for the Global Air Navigation Plan (GANP). That is how our Region agreed to create what would become to be known as the RASG-PA.

1.12 In order to formalise its creation, the First Meeting of the Regional Aviation Safety Group – Pan America (RASG-PA/01) (Puntarenas, Costa Rica, November 2008) was convened, where the RASG-PA as we know it today was finally born.

1.13 Subsequently, it was deemed necessary to formalise the existence of the RASG-PA with ICAO, and based on the initial idea of the RASG-PA, the RASG concept was created worldwide to support GASP implementation in all the Regions of the world.

1.14 The RASG-PA has pioneered this effort and may be seen as a massive regional safety management process, equivalent to the State Safety Programmes (SSPs) at national level and the Safety Management Systems (SMS) at the service provider level.

2. Discussion

Follow-up on GREPECAS activities

2.1 Under the new GREPECAS organisation, two meetings of the Programmes and Projects Review Committee (PPRC) were held, the first in Mexico City on 25-27 April 2012, and the second in Lima, Peru, on 16-18 July 2013. In order to follow up project activities, web teleconferences and face-to-face meetings have been scheduled within the framework of the SAM Implementation Group (SAM/IG) meetings.

2.2 Since the beginning of the new GREPECAS organisation, progress has been made in project activities, but also difficulties have been encountered, as summarised below for the various air navigation areas.

Developments in project activities under the GREPECAS programmes

Projects under the PBN Programme

2.3 The implementation of route optimisation version 1 has been completed, with the incorporation of 15 new RNAV routes, the realignment of 19 routes, and the elimination of 18 routes, both conventional and RNAV, that were not being used, thus reducing fuel consumption and CO2 emissions into the atmosphere, and providing for the design of route optimisation version 2, aimed at a full restructuring of SAM airspace. Courses to support PBN implementation were provided, as well as courses on procedure design within the framework of the PBN concept.

2.4 The study of DME/DME coverage to support PBN-based en-route navigation, as well as the development of technical specifications and bidding process for the implementation of a receiver autonomous integrity monitoring (RAIM) availability prediction service to support PBN-based air navigation procedures, have been completed.

Projects under the ATFM Programme

2.5 The necessary material for the effective implementation of the flexible use of airspace has been developed. Likewise, guidance material to support ATFM implementation has been drafted, together with an action plan for its implementation in the Region.

Projects under the Automation and Situational Awareness Programme

2.6 The implementation of the new flight plan format (Amendment 1 to the 15th edition of ICAO Doc 4444) was successfully completed, guides to support the implementation and interconnection of automated systems were developed, and the operational interconnection of automated systems between the Maiquetía (Venezuela) and Amazónico (Manaus, Brazil) ACCs was also completed.

Projects under the Ground-Ground/Air-Ground Communications Infrastructure Programme

2.7 Technical specifications and the bidding process for the implementation of the new REDDIG II digital network were completed, AMHS system interconnections were implemented, and guides to support implementation were developed, such as the *Guidelines on AIDC implementation in the SAM Region*, the *IP network security guide*, and a *IP (Internet protocol) routing policy guide.*

Projects under the Aerodromes Programme

2.8 A set of Latin American Aeronautical Regulations on Aerodromes (AGA LARs) was developed under the umbrella of the SRVSOP to provide States with regulations suited to the regional reality; training on the AGA LARs was provided to aerodrome inspectors; and an Aerodrome Inspector Manual (MIAGA) was developed.

Projects under the AIM Programme

2.9 A guide document on the objectives of the e-TOD (electronic terrain and obstacle data) project was drafted, together with the technical specifications of the e-TOD project. Products have been developed to assist SAM States in the implementation of e-TOD provision. Regarding the implementation of the automated AIM management system, two systems were implemented in 2012, and 4 additional systems have been implemented so far in 2013. Likewise, the quality management system has been implemented in several States of the SAM Region.

Projects under the Aeronautical Meteorology Programme

2.10 The transition from the international satellite communications system (ISCS) to the WAFS Internet File Service (WIFS) was successfully completed. Likewise, the implementation of quality management in meteorological services (MET/QMS) has been fully completed in the SAM Region.

Difficulties encountered in the implementation of GREPECAS projects

2.11 Regarding the difficulties encountered, special mention must be made of the lack of compliance by civil aviation authorities (AAC) of their commitment to support the projects under the GREPECAS programmes with the provision of the human resources needed for timely completion of activities, in accordance with project timelines.

2.12 Likewise, those States that have designated project coordinators and experts should give them the necessary facilities for the completion of the assigned activities, in accordance with GREPECAS Conclusion 16/49 – *Contribution from States to GREPECAS resources* and Conclusion RAAC/6-16 – *Personnel and financial limitations*.

Other aspects related to GREPECAS

2.13 In addition to reviewing the status of implementation of the projects, an analysis was made of "U"-priority air navigation deficiencies, the follow-up to the recommendations of the Twelfth Air Navigation Conference, and the revision of the terms of reference and work programme of the PPRC.

Status of "U"-priority air navigation deficiencies

2.14 In order to improve the processing of "U" (urgent) air navigation deficiencies, a series of improvements to the revised methodology for processing U-priority deficiencies were defined involving hazard identification and risk assessment (HIRA) and GANDD (GREPECAS air navigation deficiencies database) management. In this regard, the meeting formulated Draft Conclusion 2/1 – *Improvements to the revised air navigation deficiencies methodology and the GREPECAS air navigation deficiencies database (GANDD).* In this sense, ICAO will analyse and make the necessary modifications to improve the air navigation deficiencies methodology and the GANDD, which will be submitted to the GREPECAS/17 meeting (July 2014).

Follow-up to the recommendations of the Twelfth Air Navigation Conference

2.15 The meeting analysed the need to establish regional air navigation priorities and objectives consistent with the new version of the *Global air navigation plan* (GANP) and the *Aviation System Block Upgrades* (ASBU) within the framework of, and in accordance with, Recommendations 6/1 and 6/12 of the Twelfth Air Navigation Conference (AN-Conf/12). In this regard, the meeting approved Draft Decision 2/2 – *Regional priorities and targets for air navigation*, for the establishment of regional air navigation priorities and targets by March 2014 and, ultimately, by May 2014.

2.16 In this regard, RAAC/13-WP/07 – *Analysis of implementation priorities and related goals and metrics for the implementation of air navigation efficiency and capacity improvements*, is being submitted to the consideration and approval of the Meeting.

2.17 In order to enable States to measure progress in the implementation of air navigation priorities, a Regional Performance Dashboard will be created and posted on the website of the SAM Regional Office (see RAAC/13-WP/12). Progress made in the implementation of priorities will also be reflected in the annual global air navigation report, to be published in May 2014.

2.18 In this regard, it was agreed that the PPRC would be responsible for collecting, monitoring, and reporting on the progress made in the implementation of operational improvements in the CAR/SAM Regions, based on the information provided by the projects and the States. Likewise, it would submit an annual report that will contribute to the annual global air navigation report. In this regard, the meeting formulated draft conclusion PPRC/2-3 – *Regional and global air navigation reporting*. In this sense, the States of the Region should provide the necessary information to the SAM Regional Office on an annual basis.

2.19 The meeting felt that the States should follow up on the applicable recommendations formulated by the AN-Conf/12 and that these should be reflected in GREPECAS projects. Accordingly, it formulated Draft Conclusion PPRC/2-4 – *Follow-up to AN-Conf/12 recommendations by States and international organisations.*

2.20 The meeting reviewed the terms of reference and work programme of the PPRC, with the inclusion of two additional tasks in its work programme: the collection, monitoring, and reporting on implementation performance measurements, to be presented in a regional performance dashboard to be posted on the website of the ICAO CAR and SAM Regional Offices; and ensuring that programmes and projects are aligned with ASBU modules. To this end, the meeting formulated Draft Decision PPRC/2-7 – *Revised terms of reference and work programme of the Programmes and Projects Review Committee (PPRC).*

2.21 In order to inform the ICAO Air Navigation Bureau (ANB) and Air Navigation Commission (ANC), the meeting agreed that GREPECAS should submit an annual report consisting of the GREPECAS meeting report in years when a GREPECAS meeting is held and a PPRC meeting report in other years. Accordingly, it formulated Decision PPRC/2-8 – *GREPECAS annual report*.

Next GREPECAS meeting

2.22 The next GREPECAS/17 meeting will be held in the SAM Region, in July 2014. This will be the first GREPECAS meeting under the new organisation.

2.23 This meeting will be presented, *inter alia*, with the status of implementation of programmes and projects and regional air navigation implementation priorities, the status of deficiencies, a follow-up on the recommendations of AN-Conf/12 and of the 38th Session of the ICAO Assembly (A38), and the revised terms of reference and work programme.

2.24 In order to hold the meeting, a State of the Region would need to offer hosting it and covering the relevant expenses so that the GREPECAS Secretariat may conduct the meeting with the limited budget assigned for that purpose.

Follow-up to RASG PA activities

2.25 In its years of operation, the RASG-PA has met its objective of coordinating the different safety activities of the various stakeholders in the civil aviation system so that they may all aim at the same objective. This is possible through the exchange of safety information, which is then compiled in an Annual Safety Report and reflected in the mitigation actions that are agreed upon.

2.26 RASG-PA is a forum in which regulators and the industry can work together for the benefit of our industry.

2.27 The information processed by the RASG-PA to generate the Annual Safety Report is supplemented with predictive information sources shared by the United States CAST ASIAS programme and other information from the industry. All this information is analysed by an information analysis team called IAT, which identifies areas that require mitigation strategies. Subsequently, the team known as PA-RAST develops risk mitigation actions to be implemented by the industry and/or the regulators.

3. **Suggested action**

3.1 The Meeting is invited to:

a) take note of the information contained herein;
b) analyse the results of GREPECAS and RASGPA activities presented in section 2 of this working paper;
c) present offers for a State of the Region to hold the GREPECAS/17 meeting and help cover the expenses of the Secretariat; and
d) discuss other matters it may deem necessary to support the GREPECAS Secretariat.

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APPENDIX

GREPECAS PROJECT LIST IN THE SAM REGION

PROJECT		PROJECT COORDINATOR		ASSOCIATED PROGRAMME		PROGRAMME COORDINATOR
Key	**Title**	**Name**	**State/ Intl. Org.**	**Key**	**Name**	
A	Airspace Optimization	Alexandre Luiz Dutra Bastos	Brazil	A	Performance Based Navigation (PBN)	Roberto Arca ATM/SAR/AIM Officer
B	Improve the Balance Between Demand and Capacity	José Mondragón	Perú	B	Air Traffic Flow Management (ATFM)	Roberto Arca ATM/SAR/AIM Officer
C1	Automation	Murillo	Brazil	C	Automation and ATM Situational Awareness	Onofrio Smarrelli CNS Officer
C2	Improve ATM Situational Awareness	Paulo Vila	Peru	C	Automation and ATM Situational Awareness	Onofrio Smarrelli CNS Officer
D1	CAR/SAM ATN Architecture	Francisco Almeida	Brazil	D	Ground-Ground and Ground-Air Communications Infrastructure	Onofrio Smarrelli CNS Officer
D2	ATN Ground-Ground and Ground-Air Applications	Gustavo Chiri	Argentina	D	Ground-Ground and Ground-Air Communications Infrastructure	Onofrio Smarrelli CNS Officer
F1	Aerodrome Certification	Vicente Uribe	Colombia	F	Aerodromes and runway	Lia Ricalde AGA Officer Office
F2	Improve Runway Safety	Augusto Díaz Albuja	Ecuador	F	Aerodromes and runway	Lia Ricalde AGA Officer
G1	Developments for the supply of electronic terrain and obstacle data (e-TOD) in CAR and SAM States	Juan José González	Uruguay	G	Aeronautical Information Management (AIM)	Roberto Arca ATM/SAR/AIM Officer
G2	Aeronautical Information/ Data Management	--------	--------	G	Aeronautical Information Management (AIM)	Roberto Arca ATM/SAR/AIM Officer
G3	Assessment and development of the QMS in the AIM environment in SAM States	Oscar Dioses	Perú	G	Aeronautical Information Management (AIM)	Roberto Arca ATM/SAR/AIM Officer
H1	Implementation of the international airways volcano watch (IAVW)	Jorge Oscar Leguizamón	Argentina	H	Aeronautical Meteorology (MET)	Nohora Arias MET Officer

PROJECT		PROJECT COORDINATOR		ASSOCIATED PROGRAMME		PROGRAMME COORDINATOR
Key	**Title**	**Name**	**State/ Intl. Org.**	**Key**	**Name**	
H2	Implementation of the QMS/MET	Ricardo Reyes	Peru	H	Aeronautical Meteorology (MET)	Nohora Arias MET Officer

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