International Civil Aviation Organization

"NAM/CAR/SAM Civil/Military Cooperation Seminar/Workshop"

Presented by
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ICAO South American (SAM) Regional Office, Lima

Lima, 16-19 August 2011

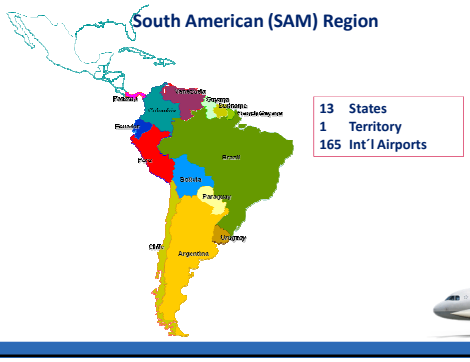
1

Contents

- SAM Region
- Special Use Airspaces (SUA)
- Flexible Use of Airspace (FUA)
- ICAO Initiatives
- Civil / Military coordination aspects
- FUA requirements

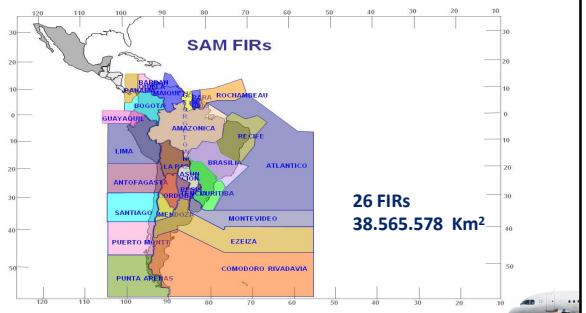
2

South American States



3

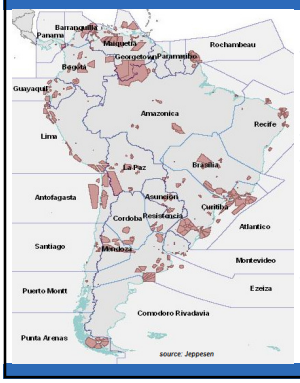
SAM FIRs



26 FIRs
38.565.578 Km²

4

SAM special use airspaces



- Prohibited, restricted and danger areas in ICAO South American Region
- 628 special use airspaces.
- 683 in total including special zones as volcano areas, training and others.
- 2.121.753 Km2 in total, defined as special use areas:
- ≈11.9% of the continental area.

5

Flexible Use of Airspace

- The main objective of Airspace Organization & Management (**AOM**), component of the ATM Operational Concept, is to **maximise the Flexible Use of Airspace** (FUA).
- With the application of this concept, **airspace** is no longer designated as "civil" or "military" airspace, but **considered as one continuum and allocated according to user requirements**.

6

Global Planning Initiatives (GPIs)

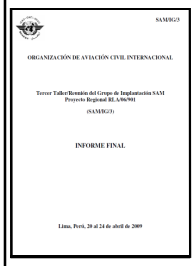
The incorporation allowed the planning and implementation of new innovated methods.

GPI 1 – Flexible Use of Airspace

7

Current activities

- **SAM ATS Routes Network Optimisation**



SAM/IG/3

ORGANIZACIÓN DE AVIACIÓN CIVIL INTERNACIONAL

Tercer Taller/Reunión del Grupo de Implantación SAM
Proyecto Regional RLA/06/901
(SAM/IG/3)

INFORME FINAL

Lima, Perú, 20 al 24 de abril de 2009

2-4 Report on Agenda Item 2 SAM/IG/3

Conclusion SAM/IG/3-1 ATS Route Network Optimising in the South American Region

That the ICAO SAM States take relevant action to follow the guidelines and meet the target dates established in the ATS Route Network Optimising Programme in the South American Region that appears in **Appendix B** to this part of the report.

Action supported by
Third Workshop/Meeting of the SAM Implementation Group
Regional Project RLA/06/901
(SAM/IG/3)

8

Benefits with ATS Route Optimization

- **This programme was planned to be implemented in three phases:**

– **Phase 1**: RNAV5 Implementation; (The implementation will be on October 20, 2011)
– **Phase 2**: Implementation of the Version 01 of the ATS Route Network in SAM Region, and
– **Phase 3**: Implementation of the Version 02 of the ATS Route Network in SAM Region

- **Phase 2, Version 01 was successfully implemented in Mars 2011.**

– 15 new RNAV routes
– 19 routes realigned and 18 routes suppressed (RNAV and conventional), and
– With this implementation, and according to IATA methodology and in a 13 AIRAC cycle, **fuel savings** over **USD 7,600,000** are expected, as well as a **reduction of CO_2 emissions** in more than **22,600,00 Kg** (Gallon = USD 1,06)

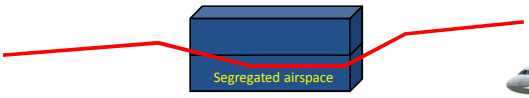
9

Civil Military Cooperation

- In the SAM Region these benefits could be achieved with the tentative to introduce the Flexible Use of Airspace Concept, which is based on the fundamental principle that airspace is one continuum to be allocated for use on a day-to-day basis to accommodate user requirements.
- The FUA Concept will allow the maximum joint use of airspace by appropriate civil/military co-ordination to achieve the required separation between civil and military flights, hence reducing airspace segregation needs.

Example of Civil/Military Cooperation

Reevaluation of the airspace according the aircraft performance



10

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11

Civil / Military Coordination aspects

- To avoid **interference problems** in the frequency band assigned to aeronautical service (VHF 117.975 – 137 MHz) – GND/Air, Air/Air and NAVAIDS, military authorities should coordinate with the national aeronautical authorities.
- The Civil Aviation and Military authorities should be informed about the **implementation of surveillance systems** and its technical features (Primary / Secondary radar (SSR, SSR-M, SSR-S), ADS, Multilateration, site position, frequency of operation).

12

Basic FUA Requirements. **Are we ready?**

Civil Military Coordination Committee • Cooperation and coordination between Civil and Military authorities	☑
Transition Civil – Military • Balance point between existing activities	☑
Automated ATM systems (To avoid unexpected situations) • Data Interoperability • Electronic coordination (AIDC, OLDI) • Safety Nets • Monitoring Aids	☑
ATFM • Balance in the airspace between Military and Civil operations	☑

13

Gracias por vuestra atención

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14