



International Civil Aviation Organization
SAT/16 Meeting
[Brazil, Recife 04–06 May 2011]

Agenda Item 1.5: Air Traffic Management-Any other business

Support to SAIRE (South-Atlantic Interoperability to Reduce Emission)

(Presented by Brazil)

SUMMARY

This paper presents Brazil and SESAR Joint Undertaking interest to establish a South-Atlantic Interoperability initiative to Reduce Emission.

1. Introduction

1.1 During CAEP/8, February 2010, Spain, on behalf the European CAEP members and the EU already presented the European interest in expanding the experience and benefits from ongoing initiative such as AIRE to other regions such as the Europe – South America oceanic areas. The initiative was supported and CAEP acknowledged the need for collaboration and establishment of synergies between different countries and authorities to improve aviation efficiency and reduce fuel burn hence CO₂ emissions.

2. Discussion

2.1 In May 2010, initial discussions took place between the EC and Brazil to improve the mutual technical and operational cooperation on ATM matters. In August 2010, a letter of Understanding was signed by Brazil ATM Authority and the SESAR Joint Undertaking, agreeing in particular on the relevance of implementing an AIRE-like partnership focusing on optimizing traffic between the Europe – South America (EUR-SAM).

In 2009 under the frame work of the European part of AIRE (Atlantic Interoperability Initiative to Reduce Emission - NAT), approximately 1,150 demonstration trials for ‘green’ surface, terminal and oceanic procedures took place in five locations, involving 18 partners. Additionally, two full ‘green’ gate-to-gate flights, from Paris to Miami, took place in April 2010, which resulted in substantial gains.

The project was focusing on:

- a) Lateral, vertical and longitudinal oceanic optimizations;
- b) Shorter flight trajectories through “free-route” airspace;
- c) Implementation of reduced longitudinal separation minimum;
- d) Enhance surface management systems (pre departure sequencing system / departure manager);

Commercial aviation in the south Atlantic (EUR-SAM) airspace is characterized primarily by modern jet passenger and freight aircraft flying distances on average longer than 4000 nautical miles and with durations of eight hours or more.

Data from AENA show that traffic is expected to increase by over 60% in the next 5 years (2011-2015).

So, in this way, the SAIRE project, as similar to AIRE, aims to improve energy efficiency and lower aircraft noise through the development of environmentally friendly procedures for all phases of flight.

Potential benefits of improving enhancements in the surface management, terminal area and en-route/oceanic could deliver results in the short/medium period. Projects could be proposed in relation to the following improvement areas/solutions:

- a) Oceanic trajectory optimization (horizontal, vertical, longitudinal);
- b) Reduced separations for RNP-4 equipped aircrafts;
- c) Optimized oceanic entry/exit transition;
- d) Better use of meteorological information;
- e) Continuous descent approaches procedures;
- f) continues climb procedures;
- g) optimized departure routings;
- h) Collaborative decision support systems that increase aircraft taxi time predictability allowing airlines to capitalize on use of fuel saving procedures such as reduced engine taxi out.

3. Conclusion

3.1 The meeting is invited to:

3.2 As the same as Brazil, support the SAIRE project providing all the help and interoperability needed during the flight tests trough the EUR-SAM corridor used to provide data;

3.3 Acknowledge the need for collaboration and establishment of synergies between different countries and authorities to improve aviation efficiency;

3.4 Continue to consider environmental issues in the planning and implementation of regional air navigation systems including the development of new routes, design of terminal procedures and ground movements.

END