



Agenda Item 5: ICAO regional technical cooperation tools for the implementation of air navigation and safety improvements

FOLLOW-UP TO THE IMPLEMENTATION OF PROJECT RLA/06/901

(Presented by the Secretariat)

SUMMARY	
This working paper presents information on the relevant activities carried out and foreseen for 2014 in Project RLA/06/90 implementation programmes.	
References:	
<ul style="list-style-type: none">• Project RLA/06/901, <i>Assistance for the implementation of a regional ATM system, taking into account the ATM operational concept and the corresponding communication, navigation, and surveillance (CNS) technological support</i> Version J (2013);• Report of the Ninth Meeting of Civil Aviation Authorities of the South American Region (RAAC/9) (Santiago, Chile, 18-20 April 2005);• Report of the Tenth Meeting of Civil Aviation Authorities of the South American Region (RAAC/10) (Caracas, Venezuela, 13–15 June 2007);• Report of the Fourth Meeting of the Coordination Committee of Project RLA/06/901 (Lima, Peru, 1-3 December 2010);• Report of the Twelfth Meeting of Civil Aviation Authorities of the South American Region (Lima, Peru, 3-6 October 2011);• Report of the Sixth Meeting of the Coordination Committee of Regional Project RLA/06/901 (Lima, Peru, 21-23 November 2012); and• Twelfth workshop/meeting of the SAM Implementation Group (SAM/IG/12) (Lima, Peru, 14-18 October 2013).	
ICAO Strategic Objectives:	<i>A – Safety C- Environmental protection and sustainable development of air transport</i>

1. Introduction

1.1 The purpose of Project RLA/06/901 is to support the implementation of the ICAO ATM operational concept in the SAM Region, through the implementation of the following implementation programmes: performance-based navigation (PBN), air traffic flow management (ATFM), improvement of CNS capabilities for en-route and terminal operations, integration of automated air traffic management systems in the SAM Region, and activities concerning airport, meteorological, and aeronautical information aspects.

1.2 The RAAC/9 meeting formulated Conclusion 9/8 – *Regional technical cooperation project to guide the implementation of a regional ATM system, taking into account the ATM operational concept and the corresponding CNS support*, requesting ICAO to prepare and circulate a technical cooperation project document to assist in the implementation of CNS/ATM systems and in the evolution towards the global ATM.

1.3 The RAAC/10 meeting formulated Conclusion 10/10 – *Start-up of activities of Project RLA/06/901*, urging the States of the Region to consider their participation in the project.

1.4 Project RLA/06/901 started its operations in early 2008 with the participation of the following States: Argentina, Bolivia, Brazil, Chile, Panama, Paraguay, Peru, Uruguay, and Venezuela. In May 2012, Ecuador joined the project, and Colombia did the same in December 2012.

1.5 The fourth meeting of the coordination committee (RCC/4) of Project RLA/06/901, through Conclusion RCC/4-2, approved the extension of the project (5 extendable years) starting in July 2012. This extension was requested so that the project could support the implementation of the activities contemplated in the *Performance-based air navigation implementation plan for the SAM Region (PBIP)*, which covers the period 2012-2018.

1.6 For the purpose of planning and following up the aforementioned implementation programmes, Project RLA/06/901 has an implementation tool, the SAM Implementation Group (SAM/IG). To date, 12 meetings have been held. These meetings are held twice a year, basically with the participation of ATM and CNS experts and airspace users.

1.7 In order to review the objectives and expected results of the project document, analyse the status of annual contributions, approve the activities to be performed, and approve the budget for executing the activities, meetings of the Coordination Committee (RCC) of the Project are established. To date, 6 meetings of the RCC have been held. These meetings are held on the last quarter of each year.

2. Discussion

2.1 To date, the project has carried out many activities, of which the following achievements in the following implementation programmes are worth mentioning:

Implementation of performance-based navigation (PBN)

2.2 In this programme of the project, it is worth mentioning the implementation of phases 1 and 2 of route optimisation, in which 92 new routes were implemented, 77 routes were optimised, 25 routes were eliminated, and a third optimisation phase was started, in which 3 new routes were implemented, 11 routes were optimised, and 4 route segments have been eliminated to date. A comprehensive maintenance programme was implemented, which included, *inter alia*, a course on RNP AR approach procedure design, a course on RNAV RNP procedure design, and a course on PBN-based terminal design. A study on DME/DME coverage was conducted to support PBN en-route operations. Technical specifications were developed and the bidding process for the implementation of a RAIM availability prediction service was completed via web to support PBN en-route, terminal area, and approach procedures. Advisory circulars and the corresponding job aids for the approval of aircraft and operators were drafted for almost all PBN en-route, terminal area, and approach procedures. Regarding the optimisation of en-route operations, it is worth noting the implementation and start-up of RNAV 5 (20 October 2011).

Air traffic flow management (ATFM)

2.3 This programme includes, *inter alia*, the drafting of the manual on ATFM procedures; the establishment of courses on ATS sector and airport capacity calculation, air traffic flow management (ATFM), collaborative decision-making (CDM), and a seminar on civil/military coordination; the development of guidance material for the application of the flexible use of airspace concept; and the drafting of an action plan for regional ATFM implementation.

Implementation of CNS capacity improvements for en-route and terminal area operations

2.4 Guides were developed for: the improvement of CNS systems in the SAM Region, the implementation of national digital networks using the IP protocol to support current and future aeronautical applications, AIDC implementation, routing policies, IP network security, the interconnection of AMHS systems, the implementation of the GBAS system, the implementation of ground-air data link, and the analysis of radar coverage in the SAM Region. Furthermore, courses and seminars were conducted: a course on ADS B technology and the results of ADS B trials conducted by the project; a course on the implementation of ASTERIX, a course on AIDC implementation, courses on the implementation of AMHS systems and their interconnection, seminars on data link implementation. Likewise, an action plan was developed for the interconnection of AMHS systems and support was given for AMHS interconnection through the REDDIG between Argentina-Paraguay, Ecuador-Peru, Colombia-Peru, and Guyana-Suriname.

Integration of automated air traffic management systems in the SAM Region

2.5 In this programme, it is worth mentioning the support given by the project for the successful implementation of the new flight plan format, the drafting of guides on ATS unit automation requirements, a model memorandum of understanding (MoU) for the interconnection of automated systems, the establishment of a seminar/workshop on automation, the implementation of the new flight plan format, the drafting of a regional action plan for the interconnection of automated systems, and visits to the States to support the interconnection of automated systems, support to the implementation of tests for the interconnection of automated systems, and the interconnection of radar data using the IP protocol between Argentina-Uruguay, and the interconnection of automated systems between Brazil-Venezuela.

Activities foreseen for 2014

2.6 The activities foreseen for 2014 include the alignment of project activities with the SAM performance-based air navigation implementation plan (*PBIP*) aligned with ASBU Block 0 modules, the development of plans for terminal area optimisation, the development of guides for the design, evaluation, and selection of navigation specifications to be applied at the TMAs as necessary, a regional strategy and work programmes for the implementation of the flexible use of airspace through a phased approach, starting with a more dynamic sharing of reserved airspace, the implementation of a workshop on PBN airspace design, an e-TOD and AIXM seminar, a seminar on ATM automation for controllers, a detailed study of the SAM ATS route network, with a view to preparing Version 3 of the route network, an IATA A-CDM course, and a CGNA ATFM operational course.

Review of Project RLA/06/901

2.7 The sixth meeting of the Coordination Committee (RCC/6) of Project RLA/06/901 analysed the proposal of revision of the RLA/06/901 project document, which incorporated activities related to the acquisition of the RAIM service and the estimated costs, amounting to USD 104,760 the first year, and USD 87,370 each subsequent year, subject to confirmation based on the results of the international tender for the provision of the service. In this regard, estimated cost sharing among the ten States participating in the project would represent, for each State, an additional expenditure of USD 10,476 on the first year, and USD 8,737 on each subsequent year.

2.8 Accordingly, the meeting formulated RCC/06-4 – *Approval of the procurement and implementation of the regional RAIM availability prediction service and revision of Project RLA/06/901*, whereby it approved the revision of the document and urged the Secretariat to circulate the revised document to project member States that had not participated in the RCC/6 meeting for comments and response by 15 January 2013. No comments were received and, consequently, the revision was deemed approved.

2.9 The ICAO TCB started the bidding process for the implementation of the RAIM prediction services on 23 August 2013. The ICAO TCB in Montreal assessed the bids on 1-3 October 2013. Three firms submitted their bids and, following the technical and commercial evaluation, one firm was proposed as awardee.

2.10 The SAM/IG/12 meeting endorsed the results of the evaluation of the tender for the implementation of the RAIM availability prediction service via web, and formulated Conclusion SAM/IG/12-4 – *Approval of the evaluation of the RAIM availability prediction service via web*.

2.11 It should be noted that the cost offered by the winning firm is USD 328,789, which corresponds to five years of RAIM prediction service, and is lower than the estimated amount (USD 45,424) shown in paragraph 2.7.

2.12 Other States of the Region not participating in Project RLA/06/901 expressed their interest in obtaining the RAIM availability prediction service. In this regard, the RCC/6 meeting agreed on the possibility for other SAM States that were not participating in Project RLA/06/901 to access the service, in which case ICAO would establish bilateral arrangements with each of them through the Civil Aviation Procurement Service (CAPS) so that they could participate in the bidding process and in the funding, making arrangements for the transfer of the corresponding annual contributions to the account of Project RLA/06/901. As a result of this participation, the contribution of the project member States might be significantly reduced.

2.13 On 27 September 2013, the Regional Office sent a letter (LN 3/24-SA5666) with revision “J” of the document of project RLA/06/901 – *Assistance for the implementation of a regional ATM system, taking into account the ATM operational concept and the corresponding technological support in communications, navigation, and surveillance (CNS)*, duly signed by the Secretary General of ICAO, to be signed by member States, stating that the ICAO Technical Cooperation Bureau required two originals signed by each State as a requirement for signing the contract with the firm that had won the bidding process for the implementation of the RAIM availability prediction service. Accordingly, they were urged to send the documents by courier to this Office, if possible no later than 16 October 2013.

2.14 To date, the following States have sent the signed version J of the project document: Bolivia, Brazil, Colombia, Ecuador, and Uruguay. In this regard, it is required that the other States do this as soon as possible, so that ICAO may sign the contract with the winning firm for the implementation of the service.

3. **Suggested action**

3.1 The Meeting is invited to:

- a) take note of the information presented herein;
- b) analyse the activities performed for the implementation of Project RLA/06/901, as well as the activities scheduled for 2014;
- c) review aspects related to the revision of Project RLA/06/901 so as to complete the remaining actions, such as accession to the RAIM availability prediction service by States not participating in Project RLA/06/901 and the signing of the project document by those member States of Project RLA/06/901 that have not done so yet;
- d) continue supporting the project and participate actively in all the activities scheduled by the project; and
- e) discuss any other related matter it may deem appropriate.

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