



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

REGIONAL PROJECTS MANAGED BY THE ICAO SAM REGIONAL OFFICE

(Presented by the Secretariat)

SUMMARY	
This working paper presents information on the activities carried out and the progress made in the three regional technical cooperation projects managed by the SAM Regional Office, which are regional tools for the implementation of air navigation and safety improvements.	
REFERENCES	
<ul style="list-style-type: none">- RLA/99/901 Project document - <i>Regional Safety Oversight Cooperation System (SRVSOP)</i>;- RLA/03/901 Project document - <i>REDDIG Management System and Administration of the Satellite Segment</i>;- RLA/06/901 Project document - <i>Assistance in the implementation of an ATM regional system according to the ATM operational concept and the corresponding CNS technological support</i>;- Report of the fourteenth meeting of the Civil Aviation Authorities of the SAM Region (RAAC/14) (Santiago, Chile, 27, 28 and 30 October 2015).	
ICAO strategic objectives:	<i>A: Safety</i> <i>B: Air navigation capacity and efficiency</i> <i>E: Environmental protection</i>

1. Introducción

1.1 ICAO Assembly Resolution A38-2 acknowledged that the best way to further improve safety, capacity and efficiency of civil aviation worldwide was through cooperative, collaborative, and coordinated partnership among all stakeholders, under the leadership of ICAO. In this sense, member States were urged to think of sustainable solutions in order to fully fulfil their safety and air navigation oversight responsibilities. This objective can be achieved by sharing resources, using internal and/or external resources, such as regional and sub-regional organisations, and the knowledge of other States.

1.2 As it may be recalled, since the 90's, South American States have been working in collaboration, helping each other to improve the safety, capacity and efficiency of civil aviation in the Region. To this end, three regional technical cooperation projects managed by the ICAO Regional Office have been used as tools, namely:

- RLA/99/901 - Regional Safety Oversight Cooperation System (SRVSOP);
- RLA/03/901 - REDDIG management system and administration of the satellite segment; and
- 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).

2. **RLA/99/901 – SRVSOP**

2.1 The Fifth Meeting of Civil Aviation Authorities (RAAC/5), held in Cusco, Peru, in 1996, requested ICAO to study the feasibility of creating an agile, dynamic and supranational multinational or regional safety oversight body to assist States in their responsibilities concerning the application of ICAO standards and recommended practices, which should operate under direct coordination of the International Civil Aviation Organization (ICAO) through its Regional Office.

2.2 Accordingly, on 1 October 1998, a memorandum of understanding (MOU) was signed in Montreal, Canada, between ICAO and the Latin American Civil Aviation Commission (LACAC) for the establishment of the Regional Safety Oversight Cooperation System (SRVSOP). The States that join the SRVSOP must deposit an accession agreement before LACAC. Upon signing this agreement, they acknowledge the Memorandum of Understanding between ICAO and LACAC and its regulations, while acquiring certain rights and international commitments.

2.3 Within this framework, in order to manage SRVSOP activities and funds, use is made of a Regional Technical Cooperation Project called RLA/99/901 *Regional Safety Oversight Cooperation System (SRVSOP)*.

2.4 The mission of the SRVSOP is to optimise civil aviation safety levels in the Region, providing advice and assistance to resolve issues in those States that have difficulties meeting their safety oversight responsibilities, and to contribute, in close coordination with ICAO, to the harmonisation and updating of civil aviation safety regulations and procedures among the participating States.

2.5 From the beginning, member States recognised that the key to the establishment of a Regional Safety Oversight System was, as a first step, the establishment of Latin American Aeronautical Regulations to serve as a basis for the harmonisation of aeronautical regulations in the Region, so that the certification and oversight requirements for operators certified in the different States will be the same, ensuring compliance with ICAO Annexes. In this sense, SRVSOP activities have focused on the harmonisation of LARs and collaborative work among State experts.

2.6 To date, the SRVSOP has developed 37 LAR sets corresponding to Annexes 1, 2, 6, 7, 8, 11, 14, 16, 18 and 19; 4 LAR sets corresponding to Annexes 3, 4, 10 and 15 and more than 87 support documents are in the process of approval. Since 2002, 203 training activities and about 95 work meetings have been conducted; furthermore, various assistance activities have been carried out for States, as well as multinational activities, including multinational certification for maintenance organisations, training centres and intermediate centres.

2.7 The ANS LAR set started with a separate fund from the SRVSOP, with the participation of the following States: Argentina, Bolivia, Chile, Colombia, Ecuador, Peru and Uruguay. Regular project funds will be available for these activities as of 2018.

2.8 During the Twentieth Ordinary Meeting of the General Board, held on 18 November 2016 in Ibagué, Colombia, the SRVSOP member States agreed to increase the RLA/99/901 project fee in order to widen its support activities to include the areas of dangerous goods, aerodromes and air

navigation, thus completing its support in all safety-related areas.

2.9 In summary, 82% of the budget was implemented in 2016; and activities carried out in 2015, 2016 and 2017 are shown in the **Appendix**.

2.10 Finally, as part of project monitoring, the States perform an annual evaluation of project performance on a yearly basis. According to the last survey, an average of 4 over a maximum of 5 was obtained, which, based on the evaluation scale, means that project objectives were achieved in all cases.

3. **RLA/03/901 - REDDIG**

3.1 In 2003, the South American Digital Network was implemented through Technical Cooperation Project RLA/98/019 to meet aeronautical fixed service requirements in the medium term and to support aeronautical mobile service requirements. In REDDIG, the satellite segment and network resources are shared by users for the establishment of a network management and control system. Currently, this network has 16 nodes.

3.2 Accordingly, for the administration and maintenance of this network, project RLA/03/901 *REDDIG management system and administration of the satellite segment* was created for the establishment of a multinational mechanism for managing the South American Digital Network (REDDIG), and the implementation of CNS/ATM applications in accordance with the requirements of the CAR/SAM FASID and the SAM performance-based air navigation implementation plan. It will be in charge of hiring the satellite segment and adopting the required action to modernise the network infrastructure in accordance with operational requirements and available technological developments.

3.3 In order to update REDDIG equipment, the Twelfth Meeting of Civil Aviation Authorities of the South American Region (RAAC/12) approved the beginning of the REDDIG II bidding process by formulating Conclusion RAAC/12-6 – *Approval to start the bidding process for the implementation of the new REDDIG II digital network*, whereby civil aviation authorities of the SAM Region agreed to start the bidding process through the ICAO technical cooperation section.

3.4 REDDIG II implementation started in early February 2015, with a view to updating REDDIG equipment. REDDIG II is a mixed satellite-ground network fully based on IP technology. The ground network acts as backup in order to have a high level of availability. REDDIG II is in a position of supporting current services in addition to the new ones foreseen in the *SAM Performance-Based Air Navigation Implementation Plan (PBIP)*. The new services will be part of the requirements foreseen for the corresponding ASBU (Aviation System Block Upgrades) Block 0 and 1 modules, mainly global interoperability of data and systems through system-wide information management (Performance improvement area 2 - PIA 2).

3.5 In summary, 83% of the budget was implemented in 2016. The table of activities conducted in 2015, 2016 and 2017 appears in the Appendix.

3.6 According to the annual evaluation of project performance conducted by the States, an average of 4.4 over a maximum of 5 was assigned, which, according to the evaluation scale, means that project objectives were attained in all cases.

4. **RLA/06/901 - Assistance in the implementation of an ATM regional system according to the ATM operational concept and the corresponding technological CNS support**

4.1 The Ninth Meeting of Civil Aviation Authorities RAAC/9 (Santiago, 18-20 April 2005) deemed it necessary to have a support tool, similar to Project RLA/98/003, to support the implementation of the ATM operational concept. In this sense, Conclusion RAAC/9-8 instructs ICAO to draft a technical cooperation project document to guide SAM States in the implementation of a regional ATM system, taking into account the global ATM operational concept and the corresponding CNS support.

4.2 Accordingly, Project RLA/06/901 was created with the purpose of providing assistance to civil aviation authorities of participating States for the development of the initiatives of the global air navigation plan that will contribute to the implementation of a regional air traffic management system, taking into account the global ATM operational concept and the corresponding CNS technological support, including the required AGA, AIS and MET elements, the exchange of experiences in the processes, and training of personnel on the topics involved.

4.3 In this regard, this project has been able to support the activities required by the SAM Implementation Group (SAM-IG), including the structuring of regional airspace, in addition to PBN implementation; support to automation; support to the implementation of AIM and MET quality systems; among others. Since 2007, 61 training activities and 37 work meetings have been conducted with a total of 850 fellowships and approximately 3,490 participants, in addition to several assistance missions.

4.4 Through Project RLA/06/901, it has been possible to implement a web-based RAIM availability prediction service to support PBN-based air navigation operations. The service was commissioned in September 2014.

4.5 With this Project, support has been provided to the air navigation objectives set forth in the Declaration of Bogota, especially concerning training for PBN implementation, the implementation and improvement of a regional route network, in addition to the development of guides to support the implementation of CNS systems, and has supported the implementation of automated system interconnections such as AIDC, providing support for testing and training. Several training events (courses, seminars, and workshops) were conducted for the implementation of CNS improvements.

4.6 The Project also supported the drafting of the SAM performance-based air navigation implementation plan (PBIP) and the conduction of activities in the area of aeronautical information management, meteorology and airports.

4.7 In summary, 106% of the budget was implemented in 2016. The table of activities carried out in 2015, 2016 and 2017 is shown in the Appendix.

4.8 According to the annual evaluation of project performance conducted by States, an average of 4 over a maximum of 5 was assigned, which, according to the evaluation scale, means that project objectives were achieved in all cases.

5. **Conclusion**

5.1 Budget implementation of the three regional projects will reach 90% in 2016 and 2017, expecting over 90% implementation of activities. Under the three projects, as of 30 September 2017, 148 assistance missions were organised, training was provided to 1,892 participants, 680 delegates participated in work meetings, and a total of 236 fellowships were granted.

5.2 According to the evaluation made, the level of satisfaction in these three projects reached an average of 4 out of a maximum of 5, which means that the Region is satisfied with these projects.

5.3 In summary, these projects are useful tools to support air navigation and safety improvement activities. Consequently, they are fundamental to achieve the objectives and goals of the

Declaration of Bogota.

6. **Suggested action**

6.1 Based on the foregoing, the Meeting is requested to:

- a) Take note of the information provided in this working paper;
- b) support the work of regional projects; and
- c) make comments or suggestions as it may deem appropriate.

Appendix

Application of Budgets and Total Missions - 2015								
Projects	Scheduled by JG/RCC	Scheduled + Additional Activities Financed by States	Current Expenses	%	Missions Carried Out	Participants to Courses	Participants to Meetings	Fellowships granted
RLA/99/901	\$ 642,389	\$ 864,874	\$ 714,617	83	54	371	156	1
RLA/06/901	\$ 405,190	\$ 443,450	\$ 471,557	106	36	259	173	117
RLA/037901	\$ 1,416,982	\$ 3,955,119	\$ 3,067,054	78	9	37	21	20
TOTAL	\$ 2,464,561	\$ 5,263,443	\$ 4,253,228	89	99	667	350	138
Application of Budgets and Total Missions - 2016								
Projects	Scheduled by JG/RCC	Scheduled + Additional Activities Financed by States	Current Expenses	%	Missions Carried Out	Participants to Courses	Participants to Meetings	Fellowships granted
RLA/99/901	\$ 656,227	\$ 764,738	\$ 629,958	82	92	603	152	3
RLA/06/901	\$ 335,631	\$ 333,809	\$ 354,875	106	24	356	176	94
RLA/037901	\$ 1,741,586	\$ 1,741,586	\$ 1,452,864	83	7	55	25	21
TOTAL	\$ 2,733,444	\$ 2,840,133	\$ 2,437,697	91	123	1,014	353	118
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Application of Budgets and Total Missions - 2016								
Projects	Scheduled by JG/RCC	Scheduled + Additional Activities Financed by States	Current Expenses	%	Missions Carried Out	Participants to Courses	Participants to Meetings	Fellowships granted
RLA/99/901	\$ 652,893	\$ 1,285,847	\$ 1,126,832	88	84	671	121	2
RLA/06/901	\$ 347,431	\$ 347,431	\$ 288,724	83	6	174	182	91
RLA/037901	\$ 1,663,901	\$ 1,663,901	\$ 554,955	33	4	33	24	25
TOTAL	\$2,664,224.72	\$ 3,297,179	\$ 1,979,511	68	94	878	327	118

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