



Agenda Item 1A: Current situation and regional priorities

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 on the Fifteenth Meeting of Civil Aviation Authorities of the SAM Region (RAAC/15) (Asunción, Paraguay, 4 al 6 December 2017).	
ICAO strategic objectives:	<ul style="list-style-type: none">• Safety• Air navigation capacity and efficiency

1. Introduction

1.1 ICAO Assembly Resolution A41-6 has reiterated the recognition that the best way to further enhance global civil aviation safety, capacity and efficiency is through the cooperative, collaborative and coordinated partnership of all stakeholders under the leadership of ICAO. In this regard, Member States were urged to devise sustainable solutions to fully exercise their safety and air navigation oversight responsibilities, which can be achieved through the sharing of resources, utilizing internal and/or external resources such as regional and sub-regional organizations and the expertise of other States.

1.2 The South American States, together with neighboring States, have been working collaboratively since the 1990s to help each other improve the safety, capacity and efficiency of civil aviation in their States and, thus, in the Region. To this end, they have used three regional technical cooperation projects administered by the ICAO Regional Office as tools to help them:

- 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 a streamlined, dynamic, multinational or regional safety oversight body with supranational authority, to assist States in their responsibilities with respect to the implementation of ICAO Standards and Recommended Practices, which should operate under the direct coordination of the International Civil Aviation Organization (ICAO) through its Regional Office.

2.2 As a result, 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). States joining the SRVSOP must deposit an accession agreement with LACAC; by signing this agreement, they acknowledge the MOU between ICAO and LACAC and its regulations, while acquiring certain international rights and commitments.

2.3 In order to manage the activities and funds of the SRVSOP, a Regional Technical Cooperation Project called RLA/99/901 *Regional Cooperation System for the Oversight of Operational Safety* was created.

2.4 The SRVSOP's mission is to optimize civil aviation safety levels in the Region by providing advice and assistance with a view to overcoming the problems of States with difficulties in fulfilling their safety oversight responsibilities, as well as contributing, in close coordination with ICAO, to the harmonization and updating of civil aviation safety regulations and procedures among its participating States.

2.5 From the beginning, the SRVSOP has been focused on regional integration through the harmonization of aeronautical regulations and associated procedures, allowing the sharing of resources using economy of scales. To this end, the first step was the establishment of the Latin American Aeronautical Regulations (LAR), so that the certification and surveillance requirements for air service providers in the different States are the same and compliance with the ICAO Annexes is guaranteed. In this sense, the activities of the SRVSOP have focused on the harmonization of LARs and collaborative work among the specialists of its 12 States.

2.6 Currently, the SRVSOP has developed 50 LAR regulations corresponding to Annexes 1, 2, 3, 4, 6, 7, 8, 10, 11, 12, 14, 14, 15, 16, 18 and 19 and more than 87 supporting documents. Since 2002, 356 training activities have been implemented, and around 356 working meetings have been held; it has also developed several assistance activities for States and multinational activities, including multinational certifications for maintenance organizations, the initiation of instruction and training centers, as well as aeronautical medical centers, assistance activities for the certification of aerodromes and the initiation of tests for surveillance inspections at ANSPs. The SRVSOP has also been contributing to achieving ICAO's objectives of implementing risk-based surveillance (RBS) in its States through training workshops and tools developed for this purpose.

2.7 In addition, during the pandemic years 2020 to 2021, the SRVSOP served as a regional tool deploying more than 26 activities and developed, and made available to States documentation, procedures, requirements, a regional health protocol, advice and assistance to address COVID-19. In

summary, the effective implementation level of the SRVSOP averages 84%, the third highest worldwide according to ICAO's published table "Basic information about RSOOs 2021". On the other hand, 92% of the budget was implemented in 2022, reaching pre-pandemic implementation levels. The table of the activities carried out during 2019, 2020, 2021 and 2022 can be found in the **Appendix** of this working paper.

2.8 Finally, as part of the monitoring of the States, annual evaluations of the project's progress have continued to be carried out and, in the last survey conducted, the average score was 4 out of a maximum of 5, which, in accordance with the evaluation scale, means that the project's objectives were achieved in all cases.

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

3.1 In 2003, the South American Digital Network was implemented through the Technical Cooperation Project RLA/98/019 to satisfy in the medium term the requirements of the aeronautical fixed service and to support the requirements of the aeronautical mobile service. REDDIG is based on the sharing by its users of the satellite segment and network resources to establish a network management and control system; this network currently has 28 operational nodes.

3.2 For the administration and maintenance of this network, Project RLA/03/901 *REDDIG Management System and Administration of the Satellite Segment* was created; its mission was to manage REDDIG for an initial period of 5 years, until the participating States established a multinational mechanism for the Administration of the South American Digital Network (REDDIG). Thus, the SAM Office was entrusted with managing the administration of the REDDIG and conducting the implementation of applications in the CNS/ATM area in accordance with the requirements of the FASID CAR/SAM and the Implementation Plan for the Performance Based Air Navigation System in the SAM Region. "To this end, it would be in charge of leasing the satellite segment and, subsequently, the ground segment, taking the necessary actions to modernize the network infrastructure in accordance with operational needs and available technological advances.

3.3 It should be recalled that the Twelfth Meeting of Civil Aviation Authorities of the South American Region (RAAC/12) in its Conclusion RAAC/12-6 approved the initiation of the REDDIG II bidding process, which included the updating of equipment and the implementation of the ground segment. Thus, in February 2015 the new REDDIG II digital network came into operation.

3.4 REDDIG II is a mixed satellite and terrestrial network, fully meshed and based on IP technology. The terrestrial network initially acted as a backup network to ensure high availability, but is gradually being used as the primary network. REDDIG II is capable of supporting the current services plus the new services envisaged in the *Performance-Based Air Navigation Implementation Plan for the SAM Region* (PBIP). REDDIG has actively supported the implementation of AMHS interconnections in the region, helping to achieve the goals set forth in the Bogotá Declaration.

3.5 Additionally, it is prepared to support the requirements foreseen for the ASBU Block 0 and 1 modules (Aviation System Block Upgrades) corresponding mainly to the global interoperability of data and systems through a system-wide information management with global interoperability (Efficiency Improvement Area 2 - PIA 2).

3.6 On the other hand, new nodes were implemented in Madrid, Panama and Johannesburg to provide a better service to the Region. In summary, in 2022 and the beginning of 2023, 100% of the contracted nodes were implemented, and in 2022 the network availability has maintained at 99.9895%. The summary table of the activities carried out during 2019, 2020, 2021 and 2022 can be found in **Appendix**.

3.7 Soon, the Twenty-ninth Meeting of the Coordination Committee (RCC/29), to be held in Lima from March 13 to 17, 2023, will review and approve the technical specifications for the new network configuration. Then, the cost will be established and submitted to the States for approval by mid-year. With these actions, it is expected that, in the first two months of 2024, the necessary funds will be available to begin the REDDIG III acquisition and implementation process, so that by the beginning of 2025, REDDIG III will be operational.

3.8 In line with this new network design, the RCC will initiate deliberations on the convenience of strengthening the management of the Technical Cooperation Project RLA/03/901 for REDDIG III, once the Regional Multinational Organisation (RMO) to manage REDDIG was not created. To this end, the analysis includes the possibility of having a Project Manager dedicated exclusively to the management and administration activities of the regional digital network.

3.9 Finally, according to the annual progress evaluation carried out by the States, the project was awarded an average of 4.6 out of a maximum of 5, which, in accordance with the evaluation scale, means that the project's requirements were exceeded.

4. **RLA/06/901 Implementation of a regional ATM system considering the World ATM operational concept and the corresponding CNS support**

4.1 During the Ninth Meeting of Civil Aviation Authorities RAAC/9 (Santiago, 18-20 April 2005), it was deemed necessary to have a support tool similar to the RLA/98/003 project to support the implementation of the ATM operational concept. In that sense, in its Conclusion RAAC/9-8, ICAO was instructed to prepare a technical cooperation project document to guide the SAM States in the implementation of a regional ATM system considering the Global ATM operational concept and the corresponding CNS support.

4.2 Thus, the RLA/06/901 project was created with the objective of providing assistance to the civil aviation authorities of the participating States for the development of initiatives of the global air navigation plan that contribute to the implementation of a regional air traffic management system, considering the global ATM operational concept and the corresponding CNS technology support, including the necessary AGA, AIS and MET elements, the exchange of experiences in the processes, and the training of personnel in the matters involved.

4.3 This Project has supported the activities required by the SAM Implementation Group (SAM-IG), which include, among others, the structuring of the Region's airspace, in addition to the implementation of the PBN; support in automation; support in the implementation of quality systems for AIM and MET, among others. Since 2007, 61 training activities and 37 working meetings have been held, with a total of 850 fellowships and around 3,490 participants, in addition to several assistance missions.

4.4 Through RLA/06/901, it has been possible to implement a receiver autonomous integrity monitoring (RAIM) availability prediction service via WEB to support performance-based air navigation (PBN) operations. The service became operational in September 2014.

4.5 This Project has supported the air navigation objectives of the CAR/SAM Regional Air Navigation Plan (R-ANP), especially in terms of training and specialization of airspace planners and PANSOPS designers for the implementation of the PBN, the implementation and improvement of the regional route network, as well as the preparation of support guides for the implementation of CNS systems and support for the implementation of the interconnection of automated systems such as the AIDC, assisting with testing and training. Several training events (courses, seminars and workshops) required for the implementation of CNS system improvements were held.

4.6 At the same time, activities were enabled to strengthen the ATFM service in the Region, preparing a regional operational demand dashboard, as well as plans and technical guidelines for the implementation of ATFM at airports and ATC/airspace sectors that may be affected by demand-capacity imbalances (congestion). In this way, the Region will be prepared to adequately manage its air flows when pre-pandemic demand rates are reached and/or exceeded.

4.7 The project also supported the preparation of Volume III of the CAR/SAM R-ANP, which deploys the performance-based planning adopted from the Global Air Navigation Plan (GANP), as well as activities in the area of Aeronautical Information Management, Meteorology and Aerodromes and Ground Aids.

4.8 In summary, 57% of the budget was implemented in 2022, given that the project's training and face-to-face activities were only deployed in the middle of the year due to existing travel restrictions. However, several activities were implemented virtually, reaching 81% of the activities implemented by November 2022. A summary of the activities implemented during 2019, 2020, 2021 and 2022 can be found in the **Appendix** to this working paper.

4.9 According to the annual progress evaluation carried out by the States, the Project was awarded an average of 4 out of a maximum of 5, which, in accordance with the evaluation scale, means that the Project's objectives were achieved in all case.

5. **Conclusion**

5.1 Although during the years 2019 to 2021 the three regional technical cooperation projects achieved a budget implementation of around 60%, given the impact of travel restrictions during the years 2020 to 2022, note should be taken that, as of 2023, the previous levels of implementation are gradually returning. In 2022, the 3 projects achieved a level of implementation of activities of around 80%; through them, 116 assistance missions were organized; 1,190 CAD staff participated in training activities; 1,145 attended meetings/seminars/workshops; and a total of 86 fellowships were issued.

5.2 According to the evaluation carried out, the average satisfaction level of the three projects remains at an average of 4 out of a maximum of 5, which indicates that the Region is satisfied with these projects.

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 the technical cooperation regional projects; and
- c) make any comments or suggestions it may deem appropriate.

Appendix

Implementation of budgets and missions of 2019								
Projects	Programmed JG/RCC	Projected + additional activities financed by States (A)	Current expenses (B)	% (B/A)	Missions executed	Participants in course	Participants in meetings	Fellowships issued
RLA/99/901	\$ 1,189,525	\$ 1,239,478	\$ 1,194,450	96%	113	428	97	4
RLA/06/901	\$ 432,835	\$ 490,835	\$ 416,280	85%	15	92	288	105
RLA/03/901	\$ 2,256,748	\$ 2,256,748	\$ 1,087,534	48%	6	16	27	25
Total	3,879,108.33	\$ 3,987,061	\$ 2,698,264	76%	134	536	412	134

Implementation of budgets and missions of 2020								
Projects	Programmed JG/RCC	Projected + additional activities financed by States (A)	Current expenses (B)	% (B/A)	Missions executed	Participants in course	Participants in meetings	Fellowships issued
RLA99901	\$ 868,546	\$ 877,233	\$ 748,620	85%	7	772	196	3
RLA06901	\$ 522,353	\$ 522,353	\$ 89,443	17%	2	295	248	0
RLA03901	\$ 2,096,258	\$ 2,096,258	\$ 1,097,230	52%	1	0	43	0
Total	3,487,156.56	\$ 3,495,844	\$ 1,935,293	52%	10	1,067	487	3

Implementation of budgets and missions of 2021								
Projects	Programmed JG/RCC	Projected + additional activities financed by States (A)	Current expenses (B)	% (B/A)	Missions executed	Participants in course	Participants in meetings	Fellowships issued
RLA99901	\$ 957,264	\$ 957,264	\$ 757,900	79%	1	320	0	0
RLA06901	\$ 667,676	\$ 667,676	\$ 189,145	28%	0	165	221	0
RLA03901	\$ 1,460,606	\$ 1,460,606	\$ 299,379	20%	0	0	0	0
Total	3,085,545.67	\$ 3,085,546	\$ 1,246,424	43%	1	485	221	0

Implementation of budgets and missions of 2022								
Projects	Programmed JG/RCC	Projected + additional activities financed by States (A)	Current expenses (B)	% (B/A)	Missions executed	Participants in course	Participants in meetings	Fellowships issued
RLA99901	\$ 1,084,152	\$ 1,245,884	\$ 1,150,323	92%	88	477	140	0
RLA06901	\$ 632,069	\$ 628,411	\$ 355,911	57%	23	700	893	81
RLA03901	\$ 1,015,882	\$ 1,015,882	\$ 1,072,138	106%	5	13	112	5
Total	2,732,102.72	\$ 2,890,177	\$ 2,578,372	85%	116	1,190	1,145	86