

**INTERNATIONAL CIVIL AVIATION ORGANIZATION
NORTH AMERICAN CENTRAL AMERICAN AND CARIBBEAN OFFICE**

**FOURTH MEETING OF DIRECTORS OF CIVIL AVIATION
OF CENTRAL CARIBBEAN (C/CAR/DCA/4)**

(Grand Cayman, Cayman Islands from 17 to 20 May 2000)

**Agenda Item 8: Report on the RLA/98/003 Regional Project activities
“Transition to the CNS/ATM systems in the CAR and SAM Regions”**

(Presented by the Secretary)

Summary

This Working Paper presents to the Meeting a summary of the activities of the Regional Project UNDP/ICAO/RLA/98/003 – “Transition to the CNS/ATM Systems in the CAR and SAM Regions”.

1. Introduction

1.1 The Regional Project UNDP/ICAO/RLA/98/003 “Transition to the CNS/ATM Systems CNS/ATM in the CAR and SAM Regions”, was created in 1998 for a three year period, with financing from the UNDP and cost sharing contributions from several States and International Organizations of the CAR/SAM Regions.

1.2 Objectives of the Project

1.2.1 The main objective of the project is assisting the States of these Regions in the initiation of the transition to the new systems of communications, air navigation, surveillance and air traffic management (CNS/ATM), in accordance with the CAR/SAM regional implementation plan and the standards and recommended practices internationally promulgated by ICAO on the matter. The general goals that the project proposes include:

a) Guidance and assistance to update the national plans of air navigation, to allow the revision of the commitments assumed by each State for the provision of the facilities and services described in the regional plan, as well as the situation of the facilities and exclusive used services or partially for national purposes.

b) Information and the necessary orientation for the forecast of the air traffic with an appropriate horizon for the planning of the new CNS/ATM systems.

- c) Studies to help the States to establish the relationship cost-benefit in the installation of the new systems, according to their requirements.
- d) The civil aviation training centers of the CAR and SAM Regions that require it, will receive orientation to establish the training programs that the changes of technology demand.
- e) Necessary training of managerial level to confront the aspects of institutional, administrative, and financial character related with the transition to the new systems CNS/ATM, according to their necessities.
- f) Guidance for the installation of the world geodesic system 1984 (WGS-84) to improve their services of aeronautical information. Personnel training.
- g) Guidance on the strategic planning of the systems of information for the civil aviation, so they lead to a more efficient, profitable, and economic administration of the infrastructure, facilities and aeronautical services.

2 **Prospective benefits of the CNS/ATM systems in the CAR/SAM Regions**

2.1 The initial phase of the project RLA 98/003 indicate that economic benefits and for the environment can be achieved in an immediate and significant form. The operational costs associated with the installation of routes based on area navigation (RNAV) and the air navigation performance (RNP), specifically RNP 10, will be significant. It is expected that the savings projected for the life of the phase of the CNS/ATM systems implementation, be around the order of 20.5 millions and 28.2 million kilograms of fuel for the year 2015 when the systems are completely implemented.

2.2 Due that most immediate benefits are derived from pre-established traffic flows, the ICAO is analyzing 18 traffic flows identified in the Air Navigation Regional Plan for the implementation of CNS/ATM systems. The purpose of this analysis is the elimination of certain deficiencies as in the case of the lack of surveillance and covering of communications in remote areas; to identify future operational requirements and to perform the study of cost benefit to justify the evolution of the set in practice of the CNS/ATM systems.

2.3 From the technical and operational point of view, this ICAO project that includes in its first phase the analysis of air traffic flows, has the purpose of eliminating the congestion and to improve the efficiencies allowing that the aircraft follows a preferred flight trajectory and more direct routes, as well as to establish the bases from which the transition to the CNS/ATM systems can be achieved including its implementation and transition.

2.4 The following phases of the program have operational, financial and administrative purposes. To assure the precision of the analysis, verification points established in the routes registering the movement. The registered information includes the origin and destination of the flight the time on the verification point, the aircraft type (of itinerary, passengers load etc.); as well as an indication of if the assigned altitude was the one requested. Starting from this information, the statistical projections of traffic are made until the year 2015 making possible the identification of the requirements to a short or long term as well as the solutions with their economic potential benefits and of the environment.

2.5 The last phase of the project includes the consolidation of the CNS/ATM systems with all its elements, since although immediate benefits can be achieved with the establishment of RNAV routes implementing some of the elements of the system, the biggest transition toward the CNS/ATM systems will be possible only with the integration of all their elements, that is to say, when the conventional aids can be replaced. This phase will assure the solidification of the ATM requirements and its related CNS services in regional or sub-regional form.

3. **RLA 98/003 project activities in the C/CAR area**

3.1 To inform the meeting on the activities that have been carried out in the Regional Project in question as Attachment A of this working paper, are the activities in which the CAR Region has participated.

4. **Contribution of States**

4.1 As it was indicated in the paragraph 1.1, the financing of the RLA/98/003 Project are the UNDP and the participants States in it. The Meeting may note the cost of the project and contribution by its participants.

Dates of payment	Total Sum in dollars USA	Annual contribution of each State
June 1998	591,910	53,810
January 1999	847,000	77,000
January 2000	630,850	57,350
January 2001	135,850	12,350
Total	<u>2,205,610</u>	<u>200,510</u>

Participant countries:

Argentina, Brasil, Bolivia, Chile, Colombia, Ecuador, Panamá, Paraguay COCESNA, Perú, Uruguay, United States and Venezuela.

5 **Action**

5.1 Based on the above-mentioned, DCAs are invited:

- a) To take note of the information presented regarding the Project UNDP/ICAO/RLA/98/003.
- b) To consider participating in this important project for the CNS/ATM systems implementation in the Region.

ATTACHMENT A

RLA/98/003 “Transition to the CNS/ATM Systems in the CAR/SAM Regions”**LIST OF SEMINARS/WORKSHOPS/COURSES**

	Title of the Seminar	Date	Number of participants Country	Participates in the Project
1	Seminar/Workshop on the Planning Methodology and Study of Business Cases for the Transition to the CNS/ATM Systems. (Lima Peru, Office SAM)	31 May to 4 June 1999	3 - DOM.REP. 3 - PANAMA	NO YES
2	Second Seminar/Workshop on the Planning Methodology and Study of Business Cases for the Transition to the CNS/ATM Systems. (IPV, Sao José Dos Campos, Brazil)	26 to 30 July 1999	3 - HAITI 3 - COCESNA 3 - CURACAO 3 - CUBA 3 - MEXICO	NO YES NO NO NO
3	Seminar/Workshop on AIS/MAP Management Systems. (Sao José Dos Campos, Brazil)	13-17 March 2000	1 - COCESNA 1 - CUBA 2 - PANAMA 1 - MÉXICO	YES NO YES NO
4	Seminar/Workshop on Airspace Planning for the implementation of the New CNS/ATM Systems (SAM Office, Lima)	27-31 March 2000	3 - COCESNA 1 - USA 2 - HAITI 1 - MÉXICO 2 - DOM.REP. 2 - TRINIDAD	YES YES NO NO NO NO

Note: In the Seminar/Workshops number 1 and 2 fellowship awards were issued to States even though they do not participate in the project.