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North American, Central American and Caribbean Office

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Agenda Item 5: Other Business

**GENERAL INFORMATION ON ACTIVITIES OF THE TECHNICAL
CO-OPERATION PROJECTS IN THE NAM/CAR REGIONS**

(Presented by the Secretariat)

SUMMARY

In this working paper information is provided to the Meeting on activities of Regional and National Technical Co-operation Projects in the NAM/CAR Regions

References:

- Technical Co-operation Project Documents signed by States.
- RCC project reports.

1. Introduction

1.1 ICAO Technical Co-operation Bureau has developed an increasing activity to achieve the safe, protected and sustained development of civil aviation through the provision of a considerable technical co-operation with its member States. For the period 2005-2010 six main strategic objectives have been established:

- a) Safety. Improve safety of the world civil aviation;
- b) Security. Improve airport protection mechanisms for the world civil aviation;
- c) Environmental protection. Minimize harmful effects of the world civil aviation in the environment.
- d) Efficiency. Improve efficiency of aviation operations.
- e) Continuity. Keep continuity of aviation operations; and
- f) Regulation Strengthening. Reinforce the civil aviation governing legislation.

1.2 The ICAO Technical Co-operation Bureau is in charge of developing the Technical Co-operation Projects signed with member States to facilitate achieving the international regulations, reinforce aeronautical authority and its organization, and bring up to date its infrastructure, services and equipments, mainly in the air navigation and airports areas at national as well as regional levels.

1.3 The Technical Co-operation Bureau has a wide experience in the provision of technical assistance and co-operation with States in developing and executing projects in all air transport fields: hiring of experts and advisors, making up training programmes, management of international fellows, preparation of legal regulation, developing requirement studies, draw-up strategic plans and teachers development, acquisition of equipment and services, etc.

1.4 ICAO has developed an audit programme in the Safety, Security and Airport Certification areas, forcing States to perform an important effort adjusting their structures and services to accomplish the new standards. The Technical Co-operation Bureau is performing a relevant role in supporting States prior audits to guarantee their best preparation, as well as subsequently, to work in the solution of deficiencies encountered.

1.5 The funds provision for the projects is obtained mainly from the own States, who use the technical co-operation mechanism to optimize budgets and jointly improve management of objectives and activities supporting the governmental responsibilities. As known, ICAO is not a funding organization, therefore not having its own funds to carry out technical co-operation projects. However, jointly with the States funds, there are eventual contributions of funds from donor States, multilateral organizations and international aeronautical industry, mainly, to support regional projects in areas coinciding with the organization strategic objectives previously described.

1.6 Over the last years, the ICAO Technical Co-operation Bureau has greatly widened its activity level, quintuplicating the projects management budgeting over the media of the nineties. At present, the Technical Co-operation Bureau manages an annual budget over the 200 million dollars, in more than 100 projects with States and some 25 regional projects. It has a staff of 56 employees and keeps an annual average of 360 international experts and more than 2,000 national experts.

2. **Regional Projects**

2.1 States and International Organizations of the region have a more and more active participation in technical co-operation projects substantially increasing their regional co-operation activities.

2.2 We can emphasize the participation in the following projects, whose specifications and present status of activities are presented in **Appendix A** to this working paper.

- | | | |
|----|---------------------------|---|
| a) | Project RLA/98/003 | Transition to the CNS/ATM Systems in the CAR/SAM Regions |
| b) | Project RLA/99/901 | Regional Safety Oversight System, Cooperative Development of Operational Safety and Continuing Airworthiness Programme |
| c) | Project RLA/00/009 | Regional GNSS Augmentation test in the CAR/SAM Regions |
| d) | Project RLA/03/901 | System for the Management of the REDDIG |
| e) | Project RLA/03/902 | Phase II – Transition to GNSS-SBAS in the CAR/SAM Regions |
| f) | Project RLA/05/901 | Subregional Cooperative Aviation Security Structure, Eastern Caribbean States |

3. National Projects

3.1 Specifications and status of activities of the following National Projects are presented in **Appendix B** to this working paper.

- a) **Cuba**
- b) **Guatemala**
- c) **El Salvador**
- d) **Jamaica**
- e) **Mexico**

4. Suggested action

4.1 The Meeting is invited to:

- a) take note of the information presented in this working paper and analyze the activities of the technical co-operation project;
- b) recommend States, Territories and International Organizations, if not already done so, to participate and contribute to the budget of regional projects that could be in their area of responsibility, allowing extension of its objectives and consolidation of development and international implementation policies of the area; and
- c) analyze and recommend States the importance of using the technical co-operation national projects as a governmental tool to expand and facilitate the achievement of management results.

APPENDIX A

Regional Projects

Project RLA/98/003 – Transition to the CNS/ATM Systems in the CAR and SAM Regions

- a) Title: Transition to the CNS/ATM Systems in the CAR and SAM Regions
- b) Duration: Three years
- c) Government executing agencies: Civil Aviation or Airport Authorities
- d) Starting date: November 1998
- e) Government inputs: \$2,265,763
- f) Participating States and Organizations: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Panama, Paraguay, Peru, United States, Venezuela, and COCESNA (Belize, Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua)

Current status of activities

The project has been supporting the plans and regional implementation process:

- a) Implementation of RNAV Routes;
- b) Restructuring of ATS Routes;
- c) Implementation of Pre-operational RNP 10 in the segment Santiago de Chile-Lima, UL302 and UL780 routes;
- d) RVSM implementation in the CAR/SAM Regions

All these plans and programmes have been carried out through Meetings/Workshops of ATM authorities and planners in the CAR/SAM, in order to have Administrations achieve experience in the planning and implementation process of RNAV, RNP and RVSM routes, by these means, the regional coordination process has acquired an important improvement.

On the other hand, the project supports the analysis of the institutional aspects of the CNS/ATM Systems through the Second Meeting on Institutional and Economic Considerations, and options of implementation and familiarization with the CNS/ATM planning tools.

During 2004, the First Seminar on Automation of the future systems in air navigation was carried out from 13-17 September 2004 in Lima, Peru. This Seminar was the first one on this issue in the CAR/SAM Regions, participants included: 5 States from the CAR Region; 9 States from the SAM Region and 14 delegations between International Organizations, private providers of the air navigation services and private institutions of the aeronautical industry, making a total of 92 participants.

As a result of this seminar, the Project RLA/98/003 tasks were orientated towards issues with practical execution for the interconnection of automated systems, in order to interoperate applications common with Phases I, II and III of the GREPECAS Regional strategy.

Project RLA/99/901 – Regional Safety Oversight Cooperative System

- a) Duration: 5 years, expandable by equal terms
- b) Starting date: 1st. November 2005
- c) Government implementing agencies: Civil Aviation Authorities
- d) Total project budget: US\$2,250,000.00
- e) Participating States: Argentina, Bolivia, Brazil, Chile, Cuba, Ecuador, Panama, Paraguay, Peru, Uruguay and Venezuela. Others: Airbus, European Community and Embraer

Short Description: The objective of this project, established on the basis of the Memorandum of Understanding between LACAC and ICAO, and the associated Regulations, signed on 1st. October 1998, is to establish and operate a regional safety oversight system in the American Continent with the required technical, logistic and administrative support, in accordance with the provisions related to operational safety of the Convention on International Civil Aviation and its Annexes, compatible with the ICAO universal safety oversight audit programme (IUSOAP).

Current status of activities

The 2005 year programme strengthens the importance of the establishment of the Regional Safety Oversight Cooperative System, as a definite solution to problems that States are phasing, to comply with their obligations in this issue, as well as the need to keep on working in the harmonization of aeronautical regulations, which has been indicated as immediate objective No. 3 of the RLA/99/901 Project.

It is required to broaden the work in order to formulate de Latin American Aeronautical Regulations (LAR) concerning the approval of recognized training centres (Civil Aviation training centres); requirements and procedures for the approval of the Required Navigation Performance (RNP) operations; preparation of version 2 of the Airworthiness Inspector Manual (AIM); and version 1 of the Operations Inspector Manual (OIM) regarding the certificating process of air services operators with the LAR OPS.

The 2005 year activities programme answers, also, to the implementation strategy of the Latin American Aeronautical Regulations (LARs), through activities for their diffusion up to date, as well as the development of documentation of the System that allows to carry on the necessary trials, once training activities are fulfilled of the technical personnel proposed by Civil Aviation Authorities of participant States, all this, as a previous stages to the whole implementation of harmonized regulations for the Region.

Project RLA/00/009 – Regional GNSS augmentation test

- a) Title: Regional GNSS augmentation test
- b) Starting date: July 2001
- c) Estimated termination date: In force
- d) Participating States: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, United States, Peru, Venezuela and Canada

Short description: Develop a test and evaluation plan on the technical and operational benefits of the US/FAA wide area augmentation system (WAAS/SBAS) in the CAR/SAM Regions, as to assist in the establishment of the satellite navigation operational model being developed by the GREPECAS CNS/ATM implementation coordination subgroup.

Current status of activities

Among the planned activities in the WAAS/SBAS Augmentation test project in the CAR/SAM Regions, were: the determination of augmentation CSTB aprons; the continuous data collection from reference stations, the execution of flight trials to confirm the augmentation; the initial study on the feasibility to extend the WAAS in the CAR/SAM Regions and the final report of the project.

The project has considered that it would be convenient to carry out flight testing once the model of error correction caused in the GPS signals by the ionosphere has been foreseen, and the same has been laden in the CSTB master stations in order that the augmentation system withstands also the operations of the approach vertical guidance (APV).

The termination date of RLA/00/009 Project was programmed for the mid 2004 year; but is has been extended until the necessary studies to solve the ionosphere problems in these regions and their incidence in CSTB augmentation testing system are fulfilled. During that time, the referred stations will remain installed as well as the communications platform.

Project RLA/03/901 – REDDIG Management System

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|----|--------------------------------|---|
| a) | Duration: | 5 years adjustable |
| b) | Starting date: | March 2003 |
| c) | Executing Government Agencies: | Civil Aviation Authorities |
| d) | Total budget of the project: | US\$ 2,089,827 |
| e) | Participating States: | Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, France, Guyana, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay and Venezuela. |

Brief description: The objective of this project, prepared for the continuation of the developed activities through RLA/03/901 REDDIG Project, is to establish a definitive mechanism for an efficient administration, neutral and economical of the SAM REDDIG digital network.

Current status of activities

The REDDIG started officially operating on September 2003, since the beginning the REDDIG Administration is autonomous managing the normal functioning of the network, providing aeronautical telecommunication systems with the higher quality and availability standards.

Among the relevant activities, in addition to operation, support and maintenance of the network under an availability plan 24 x 7 x 365, it was informed on the results of the Final Acceptance Agreement Test (FSAT); repair from SEEE assurance equipment; the recovery of the network; the measurement of the bandwidth satellite real use in each of the networks nodes; GNSS network via REDDIG; software updating; equipments repair out of guarantee; solution for the SAEZ-SUMU radar circuit; backup network and training on operation from NCC.

Trinidad and Tobago is purchasing the necessary technological equipment to be included in the REDDIG and it will be a relevant special node for the MEVA II/REDDIG inter-operability.

Project RLA/03/902 Phase II – Transition to GNSS-SBAS in the CAR/SAM Regions

- | | | |
|----|---|--|
| a) | Financial agency: | Participant States/International Organizations |
| b) | Starting date of Phase I: | 6 March 2003 |
| c) | Ending date of Phase I: | 31 May 2004 |
| d) | Duration of Phase I: | 15 months |
| e) | Starting date of Phase II: | April 2005 |
| f) | Estimated duration of Phase II: | 18 months |
| g) | Approved inputs of Phase I: | \$158,369 |
| h) | Estimated additional inputs of Phase II: | \$1,190,000 |
| i) | Total inputs of the project: | \$3,313,469 |
| j) | Cost of Phase I: | \$123,369 |
| k) | Estimated cost of Phase II: | \$1,215,000 |
| l) | Participating States/Organizations, Phase I: | Colombia, Cuba, Spain, COCESNA, ESA |
| m) | Participating States/Organizations, Phase II: | Colombia, Cuba, Spain, COCESNA, ESA, GJU |

Short description: The purpose of this second phase of the project is to study the development and planning of the technical, financial, operational and institutional aspects of a preoperational SBAS system for the CAR/SAM Regions, taking into account the evolution of the GNSS, the recommendations made by AN-Conf/11 and the conclusions of GREPECAS. The objective of the project is to contribute to the establishment of the preoperational GNSS model for the CAR/SAM Regions, which is being developed by the CNS Committee of the Air Traffic Management, Communications, Navigation and Oversight Subgroup (ATM/CNS/SG) of GREPECAS.

Current status of the activities

The project is developing the activities for the analysis and presentation of results that allow States, Territories and International Organizations of the CAR/SAM Regions, to take the most convenient decision for the implementation of the GNSS system, specifically, the SBAS augmentation, in these regions. For this, it will be kept an active and continuous coordination through the GNSS Task Force, created for such purposes by the ATM/CNS Subgroup of the CNS Committee of GREPECAS.

For the development of Phase II, a working group will be established which, under the ICAO supervision, will integrate industry participants, operators, users, providers and Civil Aviation Administrations, which will carry out the necessary work on the feasibility study of the CAR/SAM Regions that have a SBAS system, allowing to cover their needs and of the airspace users.

Furthermore, the RLA/03/902 Project – SACCSA, will define and elaborate the technical, operational, financing and organizational specifications of a SBAS System for the CAR/SAM Regions. On the other hand, and based on the high cost of a SBAS implementation, it will be carried out a broad analysis of the financing resources and the way for obtaining them, through different sources and available credit means, as well as a benefit assessment.

The project will contribute with valuable information for the constitution of a unique strategy of GNSS implementation in the CAR/SAM Regions capable of harmonizing all performances that in a national or coordinate manner are being developed, for which States and current Organizations are ready to facilitate the integration of new members and to coordinate y reach the participation in activities and organization of the resources.

The new participants States to be incorporated in the Project jointly with current members in the general activities and in the regional guidance, could conduct a series of activities of great importance to consolidate the development of the navigation systems by satellite in their territorial field.

Identifying the particular situation represents significant importance in each airspace and specific needs of the same, as well as the airport distribution, approaches needs APV I and APV II, operational benefits and SBAS procedures design in airports that might take advantage of this system, which will allow to have a first real sight of the short/medium term benefits that can be obtained with the SACCSA implementation.

RLA/05/901 – Sub-regional Cooperative Civil Aviation Security Structure, Eastern Caribbean

- a) Project title: Sub-regional Cooperative Civil Aviation Security Structure for the Eastern Caribbean
- b) Duration: Three years
- c) Government's of the executing agencies: Civil Aviation Authorities or Airports.
- d) Starting date: Not determined
- e) Government's inputs: US\$703,400
- f) Participating States and Territories: Anguilla, Antigua and Barbuda, British Virgin Islands, Commonwealth of Dominica, Grenada, Montserrat, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines.

Short description: The project aims at creating a sub-regional structure for the co-operation and coordination in aviation security matters of civil aviation for the development of the training programmes of AVSEC personnel. The project aims at ensuring compliance with international conventions, ICAO Standards and Recommended Practices and guidance material from participant States and Territories.

Current activities status: The project is being analyzed by States and is pending to be funded in order to start.

APPENDIX B

NATIONAL PROJECTS

Cuba

Project CUB/03/901 – Modernization of the Cuban Aviation Training Centre (CAA) with a budget of US\$ 4,181,900.

Brief description: Modernize and renew the Aviation Training Centre (CAA) infrastructure and technological equipment with the installation of a tower and radar ATC simulator for training of air traffic control personnel and extend their training programmes to include training requirements demanded by the increase of air operations and the new CNS/ATM systems implementation.

Current status of activities – Works for the construction of the Simulator and International Shelter building will start in October 2005, with its operation foreseen for June 2006.

Guatemala

Project GUA/05/801 – Emerging Plan for the remodelling and modernization of La Aurora International Airport in Guatemala City

- a) Duration: 24 months
- b) National executing organization: Directorate General of Civil Aviation (DGAC)
- c) Starting Date: April 2005
- d) National contribution: Equivalent to US\$ 40,000.00 in local currency.

Brief description: To establish the legal, organic and resources framework allowing rehabilitation, modernization and updating of facilities and services provided in La Aurora International Airport in Guatemala City, so as to conform operational and safety requirements stipulated in the national rules and in the international Standard and Recommended Practices of ICAO and fulfil the provision of the air navigation regional plan.

Current status of activities – Proceeding with the technical assistance for the submission of tenders to contract the carrying out of the master plan and design of the new airport, as well as the review of the legal terms for the tender announcement for awarding its operation.

Project MSA/GUA/05/802 – Emerging Plan for remodelling and modernization of the Mundo Maya International Airport.

- a) National executing organization: Directorate General of Civil Aviation (DGAC)
- b) Total budget: Equivalent to US\$ 2,250,000.00 in local currency.
- c) Brief description: Include the works to be carried out for remodelling and modernization of the Mundo Maya International Airport in Peten city.

Current status of activities: Signing the agreement with the INGUAT for the funds transfer in order to start the new airport design contracting.

Project MSA/GUA/05/803/A

- a) National executing organization: Directorate General of Civil Aviation (DGAC)
- b) Total budget: Equivalent to US\$ 3,500,000.00 in local currency.
- c) Brief description: Develop necessary civil works to create, modernize and remodel the following aerodromes in Guatemala: Quetzaltenango, Retalhuleu, Puerto Barrios, Huehuetenango, Coban and Esquipulas.

Current status of activities: Contracting the design plans and carrying out of the work.

El Salvador

Project MSA/ELS/05/801/A – Modernization of El Salvador International Airport

- a) National executing organization: Comisión Ejecutiva Portuaria Autónoma de El Salvador (CEPA)
- b) Total Budget: US\$ 6,672,000
- c) Execution deadline: 12 months

Brief description: Updating the Master Plan, including the Business Plan and the Financial Plan with a fare technical study. Also, the complete international tender process, purchase, installation and management of the guarantee period for a new lighting system and signs for the taxiway of El Salvador International Airport will be carried out.

Current status of activities: Pending the signature of the project document.

Jamaica

Project TRAINAIR JAM/05/901

- a) Duration: 20 months
- b) National executing organization: Jamaica Civil Aviation Authority
- c) Estimated starting date: September 2005
- d) Budget: US\$

Brief description: The objective of this project is to modernize the Jamaican Civil Aviation Authority Training Institute (CAAT) to achieve standards that allow incorporation as ICAO TRAINAIR programme participant, capable of carrying out effective and profitable training programmes to satisfy modern civil aviation technological and operational requirements, by using high quality course material of the TRAINAIR world community, by applying TRAINAIR materials and methodologies and operating in accordance with the TRAINAIR standards.

Current status of activities: Pending the signature of the project document.

Mexico

Project MEX/01/901 – Modernization of the Mexican Aeronautical Training System

- a) Duration: First phase: 5 months; Second phase: 19 months. Total: two years.
- b) Government executing organization: Directorate General of Civil Aviation (DGAC)
- c) Starting date: June 2004
- d) Budget: First phase: US\$ 90,000; Second phase: US\$ 964,400;
Total: US\$ 1,054,400

Brief description: The project will be developed in two phases, in the first phase, covering a period of 5 months, a consultancy for the organic, administrative and functional restructuring of the Mexican aeronautical training system. It has also been considered the creation of the Mexican International Aeronautics Training Centre (CIENAM), integrating all existing public centres and will manage the necessary training programmes to guarantee the most efficient development of the civil aviation personnel. This last objective has not yet been implemented.

In the second phase of the project, covering a period of 19 months, the active participation of the new training centre in the ICAO TRAINAIR programme will be made possible, assuring that the formation and training of personnel be made in the most modern and efficient way. One of the main objectives of the TRAINAIR programme is to share the high quality course material among the civil aviation training centres, optimizing in this way the investments made in preparing educational programmes.

When finalizing the project, the Mexican Aeronautical Administration will have a new training system that will include a modern management structure, new supporting equipments provided with the last technology, an updating plan of the teaching personnel and a fellowship programme for the participation of aeronautical professionals in international announcements of educational content. It will also have a Courses Development Office (ODC), with experts in developing courses trained in the TRAINAIR methodology application for the preparation of standardized training package (STP). The new centre will have completed two STPs through on the job training.

Current status of activities: Preparation and presentation of the CIAAC's Strategic Plan and Business Plan. The starting date of Phase II is January 2006.