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CAR/SAM Regional Planning and Implementation Group (GREPECAS)

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**Agenda Item 2: Global and inter-regional activities**

**2.2 Implementation of SMS in CAR/SAM States**

**OPERATIONAL SAFETY MANAGEMENT SYSTEM (SMS) IMPLEMENTATION  
IN PARAGUAY ATS SERVICES**

(Presented by Paraguay)

**SUMMARY**

This paper presents the activities that Paraguay is carrying out in the Operational Safety Management System (SMS) planning and implementation in the Air Traffic Services, besides establishing the regulations to the airport services and aircraft operators.

**1. Introduction**

1.1 The operational safety has been always the fundamental consideration in aviation activities. This is reflected in the aims and objectives of the ICAO declared in the Art. 44 of International Civil Aviation Agreement (Doc 7300), commonly known like the Agreement of Chicago, in which it is entrusted to the ICAO to obtain the safe and ordered development international civil aviation around the world .

1.2 When ICAO established the requirements that the States must fulfill for the operational safety management; it makes the distinction between operational safety programs and operational safety management systems (SMS):

- An operational safety program is an integrated set of regulations and directed activities to improve the operational safety.
- An operational safety management system (SMS) is a systematic approach to the operational safety management, which includes the organic structure, the necessary areas of responsibility, policies and procedures for that aim.

1.3 The standards and recommended practices (SARPS) of ICAO Annexes on the International Civil Aviation Agreement: Annex 6 - Operation of aircraft, Part I - international commercial Air Transport - Aeroplanes and Part III - international Operations - Helicopters; Annex 11 - Air traffic services; and Annex 14 - Aerodromes) require that the States establish an operational safety program to obtain an acceptable level of safety in the operations of aviation. The acceptable level of operational safety will establish the interested States. Although the concept of operational safety programs and SMS

at the moment is limited to Annexes 6, 11 and 14 are possible that the concept is extended to include in the future other Annexes related to the operations.

1.4 A program of operational safety will have an ample reach, and will include many activities of operational safety directed to reach the objectives of the program. The program of operational safety of a State includes the regulations and the instructions for the accomplishment of safe operations from the point of view of aircraft operators and with those who provide air traffic services (ATS), aerodromes and aircrafts maintenance. The program of operational safety can include dispositions for diverse activities, such as notification of incidents, investigations of operational safety, audit of the operational safety and promotion of the operational safety. To put in practice the conductive activities to the operational safety of integrated way demands a coherent SMS.

1.5 Therefore, in accordance with the dispositions of Annexes 6, 11 and 14, the States will demand that each operator, organism of maintenance, ATS providers and operator of certified aerodrome put in practice a SMS approved by the State. As minimum, the SMS will have:

- a) to identify the hazards for the operational safety;
- b) to assure that the necessary corrective measures are applied to mitigate the risks and hazards; and
- c) to anticipate a permanent supervision and a periodic evaluation of the obtained level of operational safety.

1.6 The SMS of an organization approved by the State also will have to define clearly the areas of responsibility by the operational safety, and will include a direct responsibility of the superior administrative personnel with respect to the operational safety.

## **2. Activities for SMS implementation in ATS services**

2.1 The Dirección Nacional de Aeronáutica Civil was created by Law N°79/90 as an organization that exerts like authority of civil aviation in Paraguay. At the same time he is responsible by the air traffic services provision and the operation of the airport services.

2.2 DINAC in fulfillment of the dispositions of Annexes 6, 11 and 14 for the implementation of the SMS, by Resolution N°622/2006, of July 19th 2006, initially has created a work group for the implementation of the safety management system in ATS services.

2.3 Later, by Resolution N°1243, December 22nd 2006 was integrated a Permanent Technical Committee for the implementation, supervision and control of the operational safety management system in the air traffic services.

2.4 The first activity made by the Committee is the pertinent recommendation so that the Maximum Authority of the civil aviation of Paraguay establishes the policy and commitment with respect to the operational safety.

2.5 On November 7<sup>th</sup> 2006 by Resolution N°1035, were approved the Declaration of Policy on Operational Safety of the Dirección Nacional de Aeronáutica Civil. In the same document was settled down the institutional commitment with respect to the operational safety whose fundamental principles are:

- a) safety is a basic activity and a personal value;
- b) safety is a source of our advantages to compete;

- c) our institution will be stronger if we do that excellence in the safety is an integral part of all aviation activities;
- d) all accidents and serious incidents can be avoided; and
- e) the managers and supervisors at all levels are responsible for our effectiveness in terms of safety, starting with the President of the Dirección Nacional de Aeronáutica Civil (DINAC).

2.6 Also was established the five basic elements of the safety approach that includes:

- 1) Commitment of the Senior Management;
- 2) Responsibility and accountability of all staff;
- 3) Expectation clearly communicated in having no accident;
- 4) Audits and measuring the effectiveness to improve; and
- 5) Responsibility of all staff.

2.7 The goals set by Dirección Nacional de Aeronáutica Civil of Paraguay for the process of safety are:

- 1) All levels of DINAC Administration shall be clearly dedicated to safety;
- 2) Have clear measures of the officials' operational safety, with clear accountability;
- 3) Have open communications on safety in and with all levels of DINAC;
- 4) Make that all officials concerned participate in the process of making decisions.
- 5) Provide the instruction needed to create and maintain useful knowledge for leadership in operational safety matter.
- 6) Elaborate initiatives that facilitate understanding and appropriation of operational safety.
- 7) The safety of our officials, users and providers will be a strategy question for DINAC.

2.8 After the stage of establishing the policy and objectives for the implementation of SMS, the Permanent Technical Committee was directed to a revision of the air traffic services system situation. For this purpose, was established a data collection program of all reports about deficiencies or hazards that occurred in the period of 12 months considered since July 2006 to June 2007. Subsequently, the sample included statistical traffic data from 1995 to 2007.

2.9 As a result of the assessment of obtained data amendments were made to the reports procedures and established new forms and worksheets to help collecting information to facilitate the incidents or hazards assessment.

2.10 Other factors considered within the Committee's agenda was the need to train personnel to the effects of achieving awareness about the importance of implementing the safety management system (SMS). That is, had to change paradigms of human resources in the concerned area.

2.11 At the same time, also we had started from October 2006 the quality management system implementation phases in ISO 9001: 2000 Standard, which provided on its training program of 110 staff from the following areas: regulations, technical, operational and administrative; with 11 modules in which were included the matter about 7 Managerial Tools and Settlement of Problems.

2.12 The quality management system program implementation helped in large measure to the attitude of the air traffic services area has the understanding on the importance of an ATS safety management system.

2.13 Also was contemplated a review of the organizational structure to detect any need to help achieving without difficulties the SMS implementation. It is so, that a specific unit outside the ATS Unit, had been settled for the responsible to carry out the all data collection originated in the technical and operational areas, to carry out the assessments mainly from the two main international airports of the country. This unit is currently responsible for reporting LHD to CARSAMMA. All staff has training and experience in air traffic control. Also they will be participating in the SMS course to be developed in the INAC projected by September of this year.

2.14 During the year 2007 the main task is focused to reorganize the statistical processes of technical -operational incidents and hazards reports. Make ATCOs mentality to report any type of incident of any nature; as the failure of internal transfers, cutting electric power fleeting, period of interference communications, etc.

2.15 The staff was trained to be responsible for conducting assessments of the statistical data of registered hazards.

2.16 It was analyzed and worked together both sector, regulation and operational air traffic services to set the acceptable level of safety. This phase was completed in February 2008.

2.17 The final phase for the full implementation of the safety management system in the air traffic services of Paraguay is planned for April 2009.

2.18 It is important to mention, that the SMS of ATS is a part of program required, therefore part of the processes that is implemented in the air traffic services will involve processes of airport services, aircrafts, Telecommunications and Meteorology.

2.19 For the Administration of Paraguay, the implementation of quality management system has been preponderant to facilitate the development of the safety management system in ATS services, considering that with it has been achieved the key part that is the willingness and understanding of the entire operational staff on the importance of SMS.

### **3. ICAO SMS concept Training**

3.1 Other activities planned by the Technical Committee was to carry out the SMS course of ICAO, which was originated in base of Montréal communication and offering in its letter AN 12/46-06/52 dated 30 June 2006, in relation to the implementation of the strategic objectives of ICAO, particularly the strategic objective A: Operational Safety-to improve the civil aviation safety in the world, Activity key A8: supporting the implementation of safety management systems in all disciplines related to operational safety in all States.

3.2 Through the Note N°2024 dated 17 October 2006 DINAC began the process of organizing the course in Asunción specifically from 13 to 17 August 2007. At the course attended 30 persons, among who were representatives of airports, air traffic services; of airports certification area; air navigation regulation area; National Institute of Civil Aviation; airlines; the sector of Licensing, Airworthiness and OPS. The course was developed by two ICAO officers: Drazen Gardilic of Montréal and Samuel Cardozo of South America Regional Office.

3.3 It is projected to conduct the second SMS course and it is planned to develop from 16 September to 6 October 2008 in the INAC and provided the participation of the following areas: airport services and meteorological, as well as the AIS.

3.4 The SMS course is planned in a way to cover all the sector of the aviation system of Paraguay to facilitate especially the SMS implementation in the services providers outside DINAC.

#### **4. SMS Regulations and Documents**

4.1 Respect to the standards part of the SMS system requirements in air traffic services regulations has already inserted in accordance with the ICAO Annex 11. In addition, a manual guide for the implementation of an SMS for services providers will be completing and divulgated in November 2008.

4.2 It was established specific procedures on reports treatment between the air traffic services and the unit responsible for the prevention and investigation of aeronautical incidents/accidents. In addition, referring to the Safety Evaluation Unit responsible for the statistical data and assessment of hazards created for the task.

4.3 Respect to the safety supervision by the State, specifically the ATS area has already formed 5 Quality Management System Auditors in ISO standards, with training in the ICAO SMS course developed in Asunción. For this purpose, has defined a unit in the organizational structure of the ATM regulatory and control area to make inspections to the ATS service provider area.

4.4 At the same time, the ATS service provider already has two auditors formed in ISO standards with SMS training which can perform internal audits for monitoring its own system.

#### **5. Suggested Action**

The Meeting is invited to:

- a) Note the action taken by the Administration of Paraguay respect to SMS program.
- b) Note the information provided on this paper about the SMS implementation in ATS services of Paraguay.
- c) Encourage the exchange of experiences among States on programs to implement the SMS in CAR/SAM Regions to facilitate the progressive implementation in a harmonized way.