



International Civil Aviation Organization

CAR/SAM Regional Planning and Implementation Group (GREPECAS)

**Eighth Meeting of the GREPECAS Aeronautical Meteorology Subgroup  
(AERMETSG/8)**

Santiago, Chile, 9 to 13 October 2006

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**Agenda Item 8: MET Training**

**DISTANCE LEARNING**

(Presented by Chile)

**SUMMARY**

The objective of this Working Paper is to highlight the role of training in all areas of knowledge. In particular this must be a relevant and outstanding subject in Aviation Meteorology, considering the direct link it has with air navigation. The above subject has not obtained global results that might be considered important for personnel working in this area in the CAR/SAM Region. Bearing in mind this and being aware of how hard it is to access to studies or training both locally and regionally and, considering the high costs involved, Chile proposes “distance learning” or e-learning as a valid alternative to discuss.

**1. Introduction**

1.1 The availability of highly qualified and permanently current human resource is the most important and critical factor for success at any institution. In this sense teaching and professional training play a significant role. This constitutes a key objective inherent to Meteorological Services of each State and the International Civil Aviation Organization. In fact, one of the objectives of ICAO, as set forth in the Chicago Convention, is to promote and strengthen professional training in meteorology and related areas , as well as assist in the coordination of international aspects of said training. From its inception, ICAO has been contributing significantly to the promotion of relevant activities in professional teaching and training.

1.2 These activities are carried out as a response to evolving trends, developments and requirements, originated by changing socio-economical circumstances such as globalization and rapid technological improvements, including those of communications technology and information. They also respond to the need of greater efficiency and efficacy in the management of National Meteorological Services and in the provision of related services.

1.3 The above notwithstanding, it is important to note that carrying out this task implies the investment of large amounts of economic , human and logistic resources . This is why the States have had

to look for viable alternatives for developing training plans, and it is in this context that distance learning presents itself as a possible solution to a growing problem.

## 2. **Distant Learning in the Meteorological Service of Chile**

2.1 The Chilean Meteorological Service (DMC), a department of the Directorate General of Civil Aviation (DGAC), in order to meet the lack of training, has initiated as a first stage the exploration of the modality of workshops conducted by professionals or technicians best qualified in various subjects, intended for less knowledgeable personnel.

2.2 The above mentioned modality allows to provide training, mainly in the Central Zone of the country, since due to its geographical characteristics, it is very costly to move personnel from the regions to Santiago, the capital city, for training purposes.

2.3 The alternative of having the personnel attend a Training Center was also considered. However bearing in mind that financial resources are usually scarce, there was always the possibility that part of the staff did not receive necessary training.

2.4 Considering that the DGAC began some time ago to explore distance learning, via e-learning, it was programmed to provide training to all personnel performing meteorological observations in the country, i.e., Communications Specialists, AIS Personnel, Meteorological Observers, Flight Services Technicians, so as to solve the problems in this field resulting in significant and beneficial changes during the last time.

2.5 This experience is just being applied to 30 students and covers from Arica to Antarctica, including Easter Island. For this, the TALENTUS-DGAC virtual platform is used, with an on-line and off-line interactive tutorial system, with discussion forums, virtual scenarios and chat. The methodological model incorporates case studies and preparation of training videos, which are in the web site, in order to reinforce understanding by the students.

2.6 Considering that this experience began only a month ago, you can already see important benefits across the country regarding training of personnel who previously could not access to advanced courses and training due to costs involved in the transportation of said personnel to the Training Center.

## 3. **E-learning training for meteorological staff of CAR/SAM regions.**

3.1 The purpose of this Working Paper is to promote this training modality in the CAR/SAM regions since it is the most economical and accessible form for all specialists. Additionally, subjects may be updated easily, being it possible to exchange knowledge in all States of the Regions in order to achieve a multiplying effect.

3.2 It is feasible to develop and improve matters of interest at regional level, aiming at putting technological innovations at the service of education, from which new methodological and evaluation strategies will undoubtedly result, as well as new forms of communication and interaction, where the student **discovers knowledge through its own learning and with his peers collaboratively and with the mediating action of teaching staff or e-learning tutor.**

3.3 Considering the low costs of this system, it is necessary to encourage the Administrations to assign resources required for training of professionals of the area and for technological development, in order to standardize Aviation Meteorological Services of the CAR/SAM Regions.

3.4 In coordination with the States, it is possible to prepare Syllabi and updating lectures on distance learning which contribute to a better exchange of information among Aviation Meteorological Services.

3.5 In order to materialize the proposal, it is necessary that the States study the feasibility of providing the means to prepare Curriculums of the various subjects to teach, in coordination with ICAO, in order to avoid duplication of subjects which have been already developed by other States.

3.6 On the other hand, the Administrations should study the possibility of having an e-learning Training Center to implement this system, where the courses would be taught, in addition to giving personnel that will prepare the Curriculums the facilities to perform subsequently as an e-learning tutor.

#### 4. **Suggested Action**

The meeting is invited to:

- a) discuss the information presented in this Working Paper;
- b) define relevant subjects which require greater attention in the field of Aviation Meteorology;
- c) urge Civil Aviation Administrations to study the possibility of implementing distance learning in the States of the CAR/SAM Region;
- d) study the feasibility of having an e-learning Training Center for the CAR/SAM Regions.