

## THE SPACE CONFERENCE OF THE AMERICAS

15th United Nations/International Astronautical Federation Workshop on  
"Space Education and Capacity Building for Sustainable Development"  
Kitakyushu City, Japan  
In conjunction with the 56th International Astronautical Congress

*The Space Conference of the Americas:  
A regional framework to enhance space  
education and economic development*

*A presentation held by  
Mr. Ciro Arévalo*

*Deputy Ambassador of Colombia to the United Nations Office in Vienna and  
Representative of the Pro-Tempore Secretariat of the  
IV Space Conference of the Americas*

Dr. Ciro Arévalo, Vicepresident of COPUOS

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## CHARACTERISTICS

- Technological asymmetries
- Diversity of economical levels
- Position of space matters in. domestic agendas
- Challenges faced by the region
- Innovative approaches to regional expectations

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*United Nations General Assembly resolution 55/122 expresses a clear recognition of the importance of the Space Conferences of the Americas for the region. The Space Conferences of the Americas aim to increase the space capacity and development in the region and reaffirms the commitment of the States of the American region in the exploration and peaceful uses of outer space.*

- Costa Rica (San José 1990). I Space Conference of the Americas
- Chile (Santiago 1993). II Space Conference of the Americas
- Uruguay (Punta del Este 1996). III Space Conference of the Americas
- Colombia (Cartagena, 2002). IV Space Conference of the Americas

#### Declarations/Meetings that support the work of the Space Conferences of the Americas

- Vienna Declaration - 1996
- Declaration of Concepción (preparatory for the III SCA) – 1998
- Regional Conference for Latin America and the Caribbean, in preparation for the Global Summit on Sustainable Development (Rio de Janeiro, 2001)
- Millenium Declaration of the UN Secretary General

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### ***DECLARATION OF CARTAGENA DE INDIAS IV Space Conference of the Americas 2002***

- Relevance of the Conference as a favourable setting for reaffirming the commitment of the countries of the region to promoting the development of space activities;
- Recognition of the contribution made by UNISPACE III;
- Emphasis of the importance of the SCAs held in 1990, 1993 and 1996, which permitted an improved scientific and technical understanding of space affairs;
- Took up the recommendations of UNISPACE III and emphasized urgency of promoting education in space science and technology as a fundamental tool for exploiting its potential benefits;
- Recommend that new financial resources be sought through multilateral, regional and interregional mechanisms and from the private sector for the implementation of development activities;
- Welcomed the progress made by Brazil and Mexico, with the support of OOSA, towards establishing the Regional Centre for Space Science and Technology Education in Latin America and the Caribbean;

**Deputy Ambassador Ciro Arévalo, Vicepresident of COPUOS**

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***DECLARATION OF CARTAGENA DE INDIAS***  
***IV Space Conference of the Americas 2002***  
***Cont.***

- Urge countries to implement the recommendations of UNISPACE III;
- Encourage the countries of the region to continue to identify and implement projects that could make use of space technologies;
- Urge countries, government agencies and the private sector within and beyond the American continent to strengthen cooperation and coordination to improve the management of disaster prevention;
- Reiterate the importance of international cooperation as a mechanism for strengthening peace;
- Urged those countries which participated in the Fourth Space Conference of the Americas to increase their support for the strengthening of institutions that promote national projects and programmes based on space science and technology;
- Adopt the Plan of Action which forms an integral part of this Declaration;

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### *PLAN OF ACTION*

- Promote cooperation and coordination of programmes or projects proposed or under way, at the regional level, through the agreed mechanisms;
- Adopt measures to implement the recommendations drawn up during the Fourth Space Conference of the Americas and ensure follow-up;
- Ensure that universities and scientific, technical and legal associations, within and beyond the region, as well as space agencies and the specialized agencies of the United Nations actively participate in international cooperation projects;
- Promote the dissemination and publicizing of information about space issues so as to raise public awareness of their importance;
- Take appropriate action in the areas pursuant to paragraph 17 of the Declaration of Cartagena de Indias;
- Obtain increased support by convening an international support group to help implement the recommendations and tasks.

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### *The United Nations and its support for the Space Conference of the Americas*

- GA Resolution 57/116 of 11 December 2002, recognized the agreement reached at the Space Conferences of the Americas for the Latin American countries as a mechanism to promote cooperation and coordination in space activities in the region, and noted with satisfaction the success of the Fourth Space Conference of the Americas.
- The COPUOS report at the forty-fifth session to the General Assembly discussed mechanisms for cooperation and coordination between countries in the region in various areas of space science and technology.

#### Areas of cooperation:

- Disaster management,
- tele-education
- telemedicine and public health
- environmental protection



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### *Operational instruments developed by the Fourth Space Conference of the Americas for the performance of its tasks*

- On 17 April 2003, a Memorandum of Understanding on Cooperation between the Office for Outer Space Affairs of the Secretariat and the Pro Tempore Secretariat of the Fourth Space Conference of the Americas was signed between the Foreign Minister of Colombia, Carolina Barco, and the Director-General of the United Nations Office at Vienna.
- The Memorandum has facilitated the performance of the tasks assigned with regard to space technology and its potential benefits for environmental protection and prevention and early warning of natural disasters
- In paragraph 21 of its resolution 59/116 of 10 December 2004, the General Assembly welcomed the memorandum of understanding between the Office for Outer Space Affairs of the Secretariat and the Pro Tempore Secretariat of the Fourth Space Conference of the Americas
- Colombia has reaffirmed its commitment to the decisions adopted during the IV SCA and, has reported, to the members of COPUOS and in particular to the members of the Group of Latin American and Caribbean States, on progress made in the various activities of the Pro Tempore Secretariat.

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### Contribution of the Fourth Space Conference of the Americas to follow-up to the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III)

#### *Recommendations of UNISPACE III*

- The recommendations of UNISPACE III are focused on international cooperation, for which purpose action teams were set up; Colombia has participated actively in these teams both as a country and in its capacity as Pro Tempore Secretariat.

#### *Follow-up by the IV SCA*

Plan of Action of the Fourth Conference: promoting cooperation and coordination of programmes or projects proposed or under way, at the regional level, through the agreed mechanisms and in the following areas, among others:

- (a) Protection of the environment and support for sustainable development;
- (b) Prevention, early warning and rescue and relief operations in the event of natural and manmade disasters;
- (c) Education, research and development in science, technology and space applications;
- (d) Space law.

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### *Recommendations of UNISPACE III*

- Enhancing education and training opportunities and ensuring public awareness of the importance of space activities.
- Colombia has sponsored a draft resolution for adoption by the Committee on the Peaceful Uses of Outer Space, including a three-year workplan for education on space subjects.

### *Follow-up by the IV SCA*

- Ensuring that universities and scientific, technical and legal associations, within and beyond the region, as well as space agencies and the specialized agencies of the United Nations, participate actively in international cooperation projects.
- Urging countries to adopt active policies to improve dissemination and publicizing of information about space issues so as to raise public awareness of the importance of using space technology to achieve sustainable development.

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### *Cooperation resources*

The Pro Tempore Secretariat has encouraged the establishment, in each of the countries of the region, of a national body to be responsible for coordination of space subjects. Those bodies will facilitate the development of a common regional policy and the design and preparation of strategy for cooperation in areas such as:

- Space applications, in order to create awareness of the importance of the use of such technologies, of promoting research and of utilizing existing resources in various fields.
- Prevention and relief of natural disasters,
- tele-education,
- telemedicine,
- protection of the environment.

Entities with which cooperation is sought: **Andean Committee for Disaster Prevention and relief (CAPRADE) and the Regional Centre for Space Science and technology Education in Latin America and the Caribbean**

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### Management of natural disasters

- Identification of a methodology for the utilization of the Charter on Cooperation to Achieve the Coordinated Use of Space Facilities in the Event of Natural or Technological Disasters (the International Charter "Space and Major Disasters").
- Institute of Hydrology, Meteorology and Environmental Studies of Colombia, institution responsible for management of the natural environment.
- Coordination established between the various States and the available space instruments.
- Establishment of an early warning system on the coasts of Latin American countries in order to prevent disasters such as the tsunami that occurred in Southern Asia.
- The region of the Americas is susceptible to disasters because of its particular geographical and natural configuration.

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### *Development of the use of global navigation satellite systems in the Latin American region*

The series of regional workshops sponsored jointly by the United Nations Programme on Space Applications and the Government of the United States of America is focused on specific applications of existing global navigation satellite systems (GNSS) and future developments with the aim of enhancing the global environment and programmes for sustainable development and promoting a thorough knowledge of satellite navigation applications in developing countries.

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*Evaluation of Latin American aerospace experience*  
*Seminar on aerospace activities*  
*Rio Negro, Colombia June 2004*

**Recommendations of the working group**

- Urgent need to have a body representing all the sectors, taking due account of all the interests involved, and to cooperate with the national service to be established in the area and serve as coordinator between the various sectors of the public administration;
- Develop and spread knowledge of the sciences relating to outer space and the undeniable benefits associated with the application of space technology to various areas of national activity;
- Need was stressed in the group for Colombia to continue its efforts to establish a body responsible for space matters;
- Involve the various sectors concerned in the development of space matters, whether governmental, private, civil, military, academic or economic, in the discussion and development of national policies, projects, programmes and other initiatives directed towards that aim;

*Workshop in Colombia  
September 2005*

- Use and application of NGSS in training and education, precision agriculture, transport and remote sensing.
- Establishment of concrete regional and national working groups in their corresponding work schedule for specific projects.
- Definition of regional coordination mechanisms

Contribution to the implementation of the recommendations of the Action  
Tema on GNSS of UNISPACE III.



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### *Participation of the Pro Tempore Secretariat in meetings on space law*

- Workshop on capacity-building in space law organized by the United Nations and the International Institute of Air and Space Law in The Hague from 18 to 21 November 2002;
- Workshop on space law organized by the United Nations and the Republic of Korea for countries of the Asia and the Pacific region in Daejeon, Republic of Korea, from 3 to 6 November 2003.
- In order to implement paragraph 16 of the Declaration of Cartagena de Indias, the Pro Tempore Secretariat has sent a questionnaire to all the countries of the region to obtain information on priorities and areas of interest, as well as on human resources, existing research centres, projects in progress and focal points.

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### *Telemedicine*

- The Pro Tempore Secretariat is supporting the Apaporis telemedicine project of the Colombian National University, which will have a regional impact;

In order to achieve the goals set by the Declaration of Cartagena:

- Organisation of a symposium on satellite data integration in order to allow more accurate prediction of natural disasters in Latin America, as well as a symposium on the integration of various telemedicine projects in the Latin American region to support efforts to establish satisfactory medical service coverage in the Americas.

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### *Tele-education and space*

- Active participation in the work of the Committee on the Peaceful Uses of Outer Space in relation to space and society and to the subject of education and space, and in the latter area, during the fortieth session of the Scientific and Technical Subcommittee, in 2003.
- The United Nations Educational, Scientific and Cultural Organization – UNESCO - and the Office for Outer Space Affairs, work is proceeding on a joint project, to be held in Colombia, that will allow progress in the identification of teaching material existing in the space agencies and its possible translation and dissemination in Latin America and the Caribbean,

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### *Tele-education and space*

#### *Recommendations*

- Support the creation of the Colombian Aerospace Institute or Thematic Aerospace Centre.
- Integrate Universities of the CAR-SAM region, private enterprises and States, in order to create development projects and assimilation of aerospace technology.
- Specify the support offered by the Universities of Torino and Brazil for the high-level training in Aerospace Technology.
- Coordinate the update and extension of courses in aerospace technology offered by the higher-education institutions of CAR-SAM. Support concrete projects.
- Coordinate the student mobility for higher-education with the Ministries of Education of the region.
- Critically evaluate CUEBSAT.
- Achieve the financial support of the European Union.
- Strengthen the academic-industrial integration.
- Design specified projects.
- Integration of aerospace technology knowledge in schools.

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### *Projects*

- Use of space technology as a tool in investigation and university teaching via CUEBSAT It. - Universities of San Buenaventura and Antioquia.
- Creation of a programme of virtual teaching in space sciences and aerospace engineering at a regional level – Universtiy of Antioquia.
- Programme on Europe – Latina America cooperation on GNSS between Polytechnic of Torino and Unviersidad Javeriana.
- Opportunity of high-level education (masters and doctorate) with ITA of Brasil.
- Design and construction of follow-up systems of satellites of the Universidad Autonoma.
- Use of CUBESAT for precision agriculture of the Unviersidad Pedagógica y Tecnología de Colombia.
- Use of CUBESAT for the study and elaboration of a ionospheric model for the CAR-SAM region.

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## CONCLUSIONS

- Regional Space Conferences demonstrate the importance of the priority of the peaceful use of outer space.
- Important forum for discussing the use of space technologies and economical and social progress.
- Promotes interaction of the different capacities of the countries of the region.
- Facilitates exchange of experiences, expertise and the review of the state of the art on space matters.
- The activities and training projects among different institutions, international and regional, are of high priority in order to develop regional strength in space matters.
- The positive experience of the conferences encourage other regions to undertake similar patterns of cooperation.