Workshop on Capacity Building
Group on Earth Observations
São José dos Campos, SP, Brazil, May 29 – 31, 2006

The CRECTEALC/ UN Programme

José Marques da Costa
Secretary-General (CRECTEALC)
The capabilities of developing countries to effectively contribute to the solution of global, regional and national environmental and resource management problems could only be acquired through long-term intensive education.
The United Nations General Assembly, in its resolution 45/72 of 11 December 1990 endorsed the recommendation of the Committee on the Peaceful Uses of Outer Space that:

"... the United Nations should lead, with the active support of its specialized agencies and other international organizations, an international effort to establish regional Centres for Space Science and Technology Education in existing national/regional educational institutions in the developing countries."
The principal objective of the Centres is the development of skills and knowledge of university educators and research and application scientists, in those aspects of space science and technology that can enhance social and economic development in countries of the region.
SPECIFIC OBJECTIVES

- Improvement of skills and knowledge of university educators, environmental research scientists and project personnel in the design, development and application of remote sensing, satellite meteorology and related technologies for subsequent use in national and regional development and environment management programmes including bio-diversity protection.
UNITED NATIONS CENTRES FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION

SPECIFIC OBJECTIVES

- Development of skills on satellite communications including those associated with rural development, long distance education, delivery of health services, disaster mitigation, air and maritime navigation, and network/linkage of the region’s professionals and scientists, government establishments and industries in order to facilitate the exchange of new ideas, data and experiences.
UNITED NATIONS
CENTRES FOR SPACE SCIENCE AND TECHNOLOGY
EDUCATION

INITIAL PROGRAMMES

- Remote sensing and geographic information systems
- Meteorological satellite applications
- Satellite communications and global-positioning systems
- Space and atmospheric sciences
UNITED NATIONS
CENTRES FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION


✦ SEPTEMBER 3-7, 2001: UN Expert Meeting on the Regional Centres for Space Science and Technology Education: Status and Future Developments, Frascati, Italy.
UNITED NATIONS
CENTRES FOR SPACE SCIENCE AND
TECHNOLOGY EDUCATION

 CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION IN WESTERN ASIA

Al al-Bayt University
Jubayha, Ammman

NETWORK OF SPACE SCIENCE AND TECHNOLOGY EDUCATION AND RESEARCH INSTITUTIONS OF CENTRAL - EASTERN AND SOUTHEASTERN EUROPE

Bulgaria and Poland
CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION IN ASIA AND THE PACIFIC (CSSTEAP) – INDIA
(Affiliated to the United Nations)

- Established in 1995 with headquarters in Dehradun.
- Access to the facilities, infrastructure and expertise of the Indian Institute of Remote Sensing (IIRS) in Dehradun, the Space Applications Centre (SAC) and the Physical Research Laboratory (PRL), both at Ahmedabad.
- Governing Board comprises 14 members from 14 countries and 2 observers.
- Conducted 22 long-term postgraduate courses and 17 short-term programmes.
- Has benefited 30 countries and 650 scholars.
- Since 1999 has achieved the status of an institution of excellence.
AFRICAN CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION IN FRENCH LANGUAGE (CRASTE-LF) – MOROCCO (Affiliated to the United Nations)

- Established in 1998 based at the Mohammadia School of Engineers of University Mohammed V in Rabat-Agdal.
- Access to the facilities, infrastructure and expertise of the Royal Centre of Space Remote Sensing (CRTS), Scientific Institute (IS), Agronomic Institute and Veterinary Hassan II (IAV), National Institute of Telecommunications (INPT) and Directorate of National Meteorology (DMN).
- Governing Board composed of 16 members from 13 countries in the region and one observer from UN-OOSA.
- Carried out 6 long-term postgraduate courses and 10 short-term programmes.
- The long-term programmes were attended by more than 70 scholars from 16 countries in the region.
AFRICAN REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION IN ENGLISH (ARCSSTE-E) – NIGERIA (Affiliated to the United Nations)

- Established in 1998 at Obafemi Awolowo University (OAU), Ile-Ife.
- Operates under the auspices of the National Space Research and Development Agency (NSRDA).
- Uses facilities provided by the OAU and the Regional Centre for Training in Aerospace Surveys (RECTAS).
- Has already offered 6 postgraduate courses and eight short-term programmes.
- 30 scholars from 9 countries in the region attended the long-term courses.
REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION FOR LATIN AMERICAN AND THE CARIBBEAN CRECTEALC
(Affiliated to the United Nations)

National Space Research Institute - INPE
São José dos Campos, São Paulo, Brazil

National Institute for Astrophysics, Optics and Electronics – INAOE
Tonantzintla, Puebla, Mexico
MARCH 1997: Brazil and Mexico signed the “Agreement to establish the Centre for Space Science and Technology Education for Latin America and the Caribbean”.

SEPTEMBER 2000: Agreement of Headquarters firmed by CRECTEALC with the Government of Brazil.

OCTOBER 2002: Operational Agreement firmed by CRECTEALC with the Government of Mexico.

JUNE 2003: Affiliation Agreement firmed by CRECTEALC with UN OOSA.
REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION FOR LATIN AMERICAN AND THE CARIBBEAN
CRECTEALC
(Affiliated to the United Nations)

STRUCTURE
GOVERNING BOARD
ADVISORY COMMITTEE
SECRETARIAT
CAMPI
REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION FOR LATIN AMERICAN AND THE CARIBBEAN
CRECTEALC
(Affiliated to the United Nations)

GOVERNING BOARD

- Principal policy-making organ of the Centre.

- 01 representative of Brazil, 01 representative of Mexico and 01 representative of each country of the region, or from other interested country which have signed an Agreement of Cooperation with the Centre.

- Established in October 1999.
REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION
FOR LATIN AMERICAN AND THE CARIBBEAN
CRECTEALC
(Affiliated to the United Nations)

SECRETARIAT

- Main executive organ of the Centre
- Coordinate the activities of the Campi
- Represent the Centre at national and international institutions
- Headed by the Secretary-General, who is the first administrative authority of the Centre.
REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY
EDUCATION FOR LATIN AMERICAN AND THE CARIBBEAN
CRECTEALC
(Affiliated to the United Nations)

ADVISORY COMMITTEE

- Composed by prominent representatives of the national Governments, private industry and academic and research communities.
The Campi are responsible for the planning, the organization, the implementation and the administration of education programmes in the areas concerning the competence of the Centre.

- Campus Brazil
- Campus Mexico
REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION FOR LATIN AMERICAN AND THE CARIBBEAN CRECTEALC (Affiliated to the United Nations)

CAMPUS BRAZIL
Director: Dr. Tania Maria Sausen
Host: INPE
São José dos Campos, São Paulo, Brazil
tania@ltid.inpe.br

- Specialization courses (nine months long)
- Graduate courses (pilot project developed in the student country)
- Short and middle term courses
- Seminars and Workshops
REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION
FOR LATIN AMERICAN AND THE CARIBBEAN
CRECTEALC
(Affiliated to the United Nations)

CAMPUS MEXICO
Director: Dr. José Guichard Romero
Host: INAOE
Tonantzintla, Puebla, Mexico

- Specialization courses (nine months long)
- Graduate courses (pilot project developed in the student country)
- Short and middle term courses
- Seminars and Workshops
REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION FOR
LATIN AMERICAN AND THE CARIBBEAN
CRECTEALC
(Affiliated to the United Nations)

• INTERNATIONAL COURSE ON REMOTE SENSING AND GIS
  Campus Brazil
  – Fundamental on Remote Sensing and GIS 400 hours
  – Remote Sensing and GIS Applications 260
  – Complementary Activities 260
  – Pilot Project and Monograph 400
  Total: 1320
REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION FOR LATIN AMERICAN AND THE CARIBBEAN (CRECTEALC) (Affiliated to the United Nations)

INTERNATIONAL COURSE ON REMOTE SENSING AND GIS
2003-2006

COUNTRIES

STUDENTS

ARGENTINA  BOLIVIA  BRAZIL  COLOMBIA  CHILE  CUBA  ECUADOR  MEXICO  PARAGUAY  PERU  URUGUAY  VENEZUELA
REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION FOR LATIN AMERICA AND THE CARIBBEAN

INTERNATIONAL COURSE ON REMOTE SENSING AND GIS
1985 to 2006

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International Course on Remote Sensing and GIS

- From 1985 to 2002 the Course had 7-month duration and was promoted under the responsibility of the National Institute for Space Research - INPE of the Ministry of Science and Technology-MCT of Brazil.

- From 2003 to 2005, 36 students have already been graduated on this course under the coordination of the CRECTEALC/Campus Brazil. This year 7 students should be graduated and the total will reach 43 students.

- Up to December 2006 the Course will be formed 189 specialists from Algeria, Argentine, Bolivia, Brazil, Burkina Faso, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Ethiopia, Ghana, Honduras, Kenya, Mexico, Panama, Paraguay, Peru, Nigeria, Senegal, Uruguay and Venezuela.
REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION FOR LATIN AMERICAN AND THE CARIBBEAN
CRECTEALC
(Affiliated to the United Nations)

Support

- National Institute for Space Research – INPE/MCT
- National Council for Scientific and Technological Development – CNPq/MCT
- University of the United Nations – UNU
- Office of Outer Space Affairs of the United Nations – UN OOSA
- Organization of the American States – OAS
First Seminar for Information and Dissemination of CRECTEALC

**Mexico City, Mexico**, from 16 to 17 December 2003

Representatives from Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama and Venezuela.

Seventh Latin American Conference on Space Geophysics - 7th COLAGE

**Atibaia, São Paulo, Brazil**, March 28 to April 2, 2004

165 participants from Argentine, Bolivia, Chile, Costa Rica, Cuba, England, France, Germany, Greece, Israel, Italy, Mexico, Peru, Switzerland, United States, Uruguay and Taiwan.
First Seminar on Education and Environment in Latin America: emphasis on the use of remote sensing to study global and regional climate changes, **Cordoba, Argentina**, 26-29 October 2004.
29 participants from Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, Spain, Guatemala, Mexico, Panama, Dominican Republic, Uruguay and Venezuela.

First Seminar on Meteorological Satellite Applications and Global Climate in Latin America, **Cachoeira Paulista, Sao Paulo, Brazil**, 14-16 December 2004.
25 participants from Argentina, Brazil, Colombia, Costa Rica, Cuba, Panama, Dominican Republic, Venezuela and Uruguay.

First Seminar on the Application of Remote Sensing for Coastal Ecosystems Studies, Belém, Pará, Brazil, April 2006.
REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION FOR LATIN AMERICAN AND THE CARIBBEAN (CRECETEALC) (Affiliated to the United Nations)

FUTURE

- Increase of number of Members.
- VII Governing Boarding Meeting.
- First meeting of the Advisory Committee.
- Promotion of capacity building on space science and technology education through training courses, seminars, workshops and research networks, as well as open and distance learning activities taking the advantage of the rapid development of internet-based technologies.
- Promotion of educational programs for high school students on relevant topics of space science and technology.
Memorandum of Understanding - MOU
IAI x CRECTEALC
April, 2003

Priority Areas for Collaboration

- Education, research, and development of applications of remote sensing, satellite meteorology and space atmospheric sciences related to global change.
REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION FOR LATIN AMERICAN AND THE CARIBBEAN CRECTEALC (Affiliated to the United Nations)

COOPERATION

DISTANCE EDUCATION

- Latin American Institute of Educational Communication - ILCE
- Latin American Cooperation of Advanced Networks - CLARA
- Organization of the American States - OAS
REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION FOR LATIN AMERICAN AND THE CARIBBEAN CRECTEALC (Affiliated to the United Nations)
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LATIN AMERICAN AND THE CARIBBEAN
CRECTEALC
(Affiliated to the United Nations)
REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION FOR LATIN AMERICAN AND THE CARIBBEAN (CRECTEALC) (Affiliated to the United Nations)
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REGIONAL CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION FOR LATIN AMERICAN AND THE CARIBBEAN (CRECTEALC)
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Thank you.

http://www.crectealc.org/

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