UNITED NATIONS
Office for Outer Space Affairs

Activities and Status of the Regional Centres

Meeting of the Directors of the Regional Centres for Space Science and Technology Education

Amman, Jordan
30 May 2012

Presentation Overview

- Origin and History
- Objectives
- Selection of Host Institutions and Status
- UNOOSA and the Regional Centres
- Education Curricula
- Programme on Space Applications
- UN-SPIDER Regional Support Offices
- ICG Information Centres

United Nations Programme on Space Applications

- Established in 1971, following recommendation at UNISPACE
- World-wide activities (Workshops, Training Courses, Fellowship Programmes)
- Priority Areas
  - Basic Space Sciences
  - Basic Space Technology
  - Human Space Technology
  - Natural resources management and environmental monitoring
  - Positioning, Navigation, Timing
  - Satellite-aided Search and Rescue
  - Space Law

http://www.unoosa.org/oosa/en/sapidx.html

United Nations Programme on Space Applications

- >11,000 people participated in more than 200 activities (workshops, seminars, training courses…)
- ~300 specialists, selected from among ~1500 applicants, participated in various long-term fellowships programmes
- Establishment of four Regional Centres for Space Science and Technology Education, following recommendation at UNISPACE'82:

http://www.unoosa.org/oosa/en/SAP/accompl.html

Origin of the Regional Centres

- Following UNISPACE'82, the United Nations Programme on Space Applications organized three regional meetings and one international meeting to discuss the development of indigenous capability in space science and technology at the local level
- The meetings held in India (1985), Mexico (1986), Nigeria (1987), United Kingdom (1989) concluded, that:
  - To effectively contribute to the solution of global, regional and national environmental and resource management problems, there was an urgent need for a higher level of knowledge and expertise in the relevant disciplines by educators as well as by research and application scientists in the developing countries.
  - These capabilities could only be acquired through long-term intensive education.

United Nations General Assembly Mandate (1990)

- 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. "

Affiliation with the United Nations (1995)

- The United Nations General Assembly further endorsed the regional centres initiative and, in its resolution 50/27 of 6 December 1995, recommended that
- "... these centres be established on the basis of affiliation to the United Nations as early as possible and that such affiliation would provide the centres with the necessary recognition and would strengthen the possibilities of attracting donors and of establishing academic relationships with national and international space-related institutions."

Objectives of the Regional Centres

- Each Centre should offer the best possible education, research and applications programmes, opportunities and experience to the participants in all of its programmes.
- The goal of the Centres is to develop, through in-depth education, an indigenous capability for research and applications in the core disciplines:
  - Remote Sensing and Geographical Information Systems,
  - Satellite Communications,
  - Satellite Meteorology and Global Climate, and
  - Space and Atmospheric Sciences as well as Data Management
- Two phased approach:
  - Phase 1: 9-month courses based on education curricula
  - Phase 2: one-year pilot projects conducted in the countries of the participants

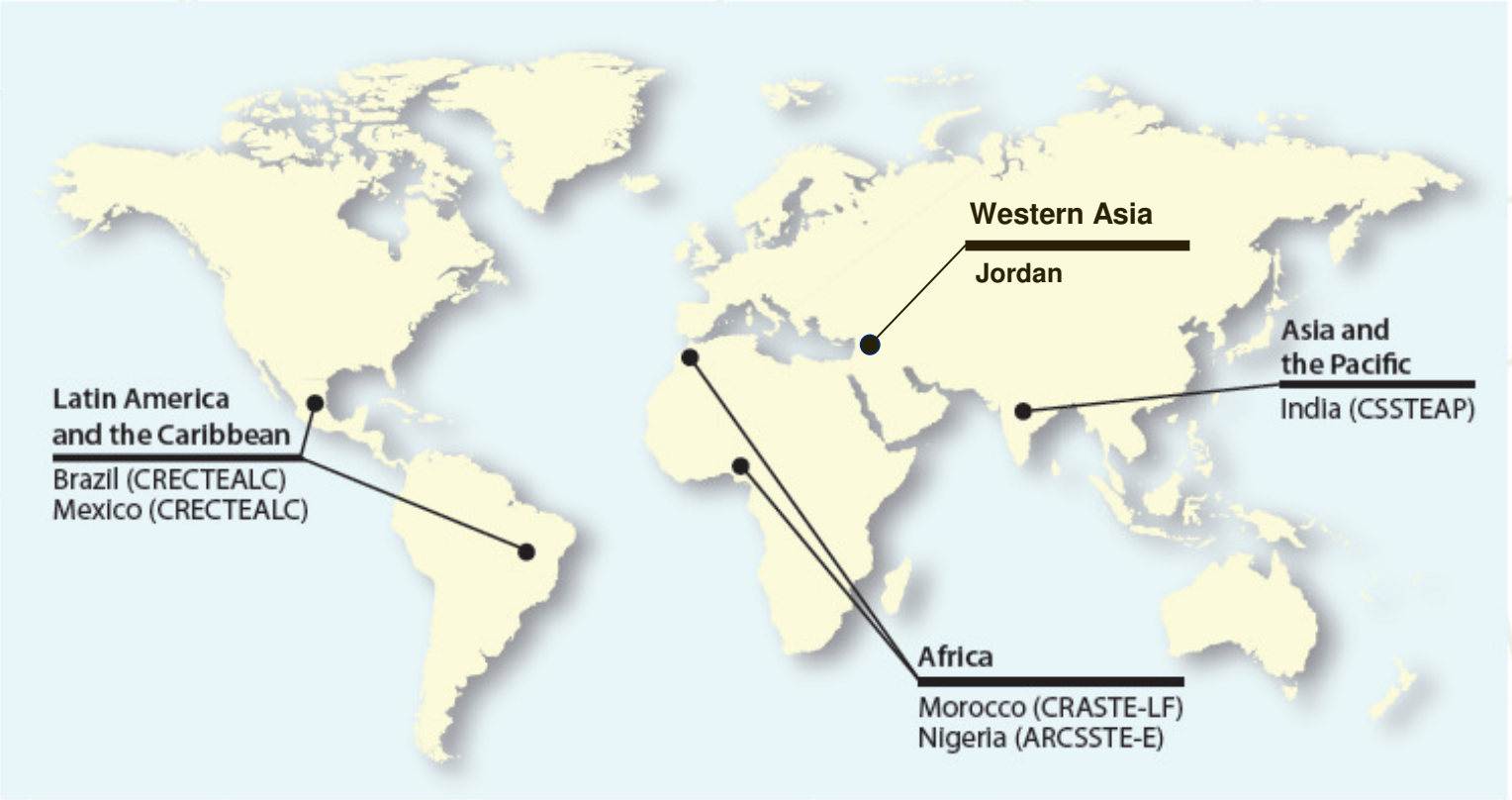
Selection of Host Institutions

- The Programme on Space Applications initiated a project to establish regional centres at existing research and higher education institutions in each region covered by the United Nations Economic Commissions: Africa, Asia and the Pacific, Europe, Latin America and the Caribbean, and Western Asia.
- Between 1992 and 1998 the Programme on Space Application undertook a series of evaluation missions to the countries that offered to host a centre in their respective regions in order to asses the viability of the potential host institutions and to conduct detailed analyses of these offers.

Status of the Regional Centres

- Five regional Centres for Space Science and Technology Education, affiliated to the United Nations:
  - India (inaugurated in 1995)
  - Morocco, Nigeria (inaugurated in 1998);
  - Mexico and Brazil (inaugurated in 2003);
  - Jordan (inaugurated 29 May 2012)
- In 2005, the United Nations General Assembly, in its resolution 60/99:
  - "Agreed that the regional centres … should continue to report to the Committee on their activities on an annual basis;
  - Notes with satisfaction that the centre … in Asia and the Pacific celebrated its tenth anniversary in 2005."
- Reports available from http://www.unoosa.org/oosa/en/SAP/centres/index.html

Location of the Regional Centres



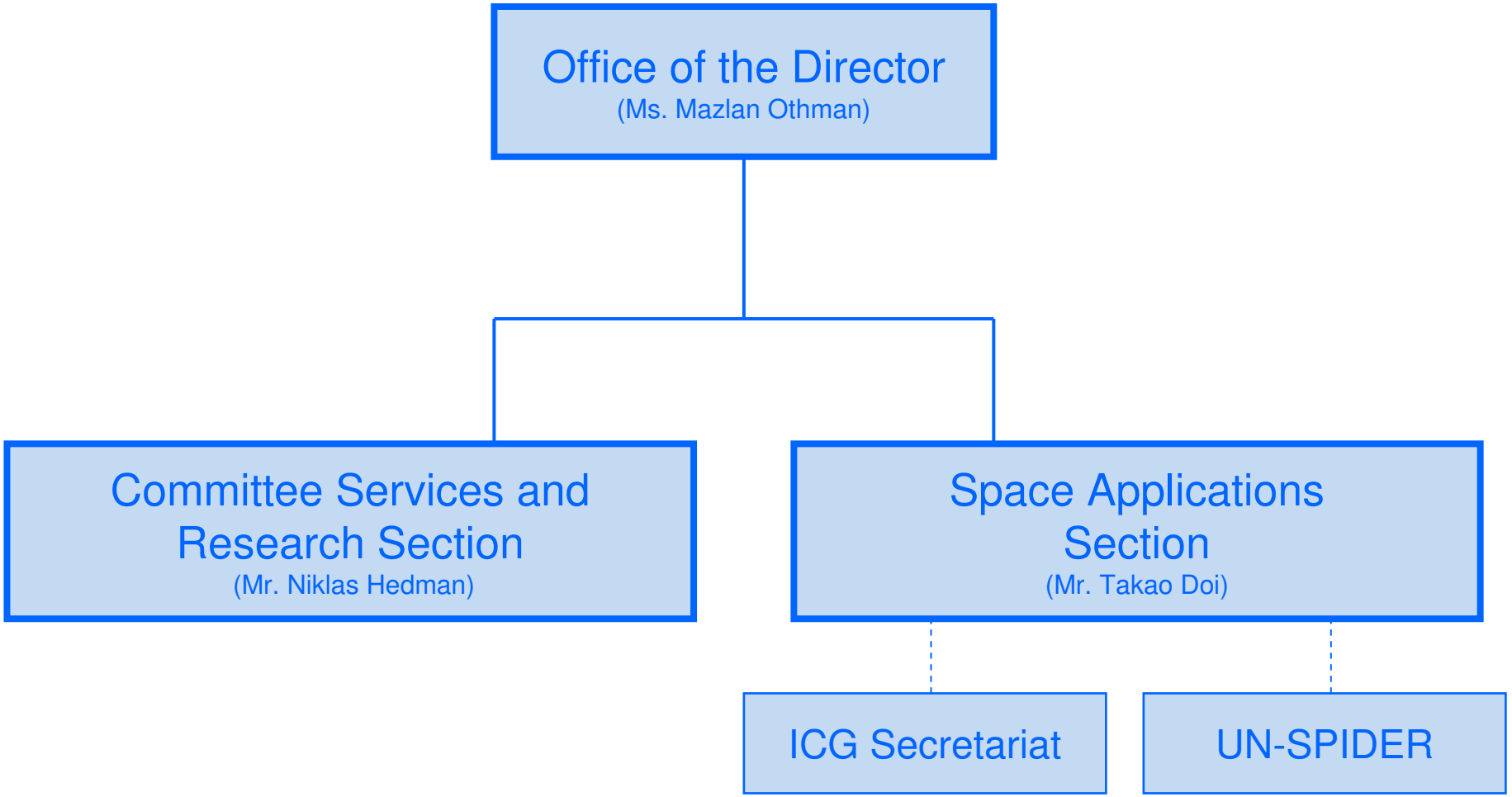
Main Administrative Bodies

- **Governing Board** - is the overall policymaking body of each Centre and consists of Member States (within the region where the centre is located) which have agreed, through their endorsement of the Centre's agreement, to the goals and objectives of the Centre and are fully committed to work, in cooperation with the Member States of the region, to ensure the success of the Centre.
- **Advisory Committee** - functions in an advisory capacity to the Governing Board and the Centre Director in scientific, technological and educational issues. The members of the AC should be prominent individuals in government, academic and scientific communities and private industry and they would be nominated and voted for by the GB for a mandate determined also by the GB.

The Centres and the Office for Outer Space Affairs

- Originated as a small expert unit in the UN Secretariat to service the Ad Hoc COPUOS meeting in 1958
- Relocated from New York to the UN Office at Vienna in 1993
- 25 staff members (scientists, lawyers, political scientists), plus seconded staff and interns
- Offices in Bonn and Beijing
- Two sections:
  - Committee Services and Research Section
  - Space Applications Section

Office for Outer Space Affairs



Programme on Space Applications

- Annual activities schedule see http://www.unoosa.org/oosa/en/SAP/sched/index.html
- Programme on Space Applications Initiatives
  - International Space Weather Initiative (ISWI)
  - Basic Space Technology Initiative (BSTI)
  - Human Space Technology Initiative (HSTI)
- Fellowship Programmes
  - United Nations/Italy Long-term Fellowship Programme on GNSS and Related Applications (Torino, Italy, 1-year programme)
  - United Nations/Japan Long-term Fellowship Programme on Nano-Satellite Technologies (Kitakyushu, Japan, 3-year programme)
- Support to Regional Centres
  - Regional Centre Webpages (http://www.unoosa.org/oosa/en/SAP/centres/index.html)
  - Education Curricula

United Nations Education Curricula

- Education curricula for
  - Remote Sensing and Geographical Information Systems
  - Satellite Communications
  - Satellite Meteorology and Global Climate
  - Space and Atmospheric Sciences and data management
- Several Curricula/Modules under development
- See http://www.unoosa.org/oosa/en/SAP/centres/education-curriculum.html

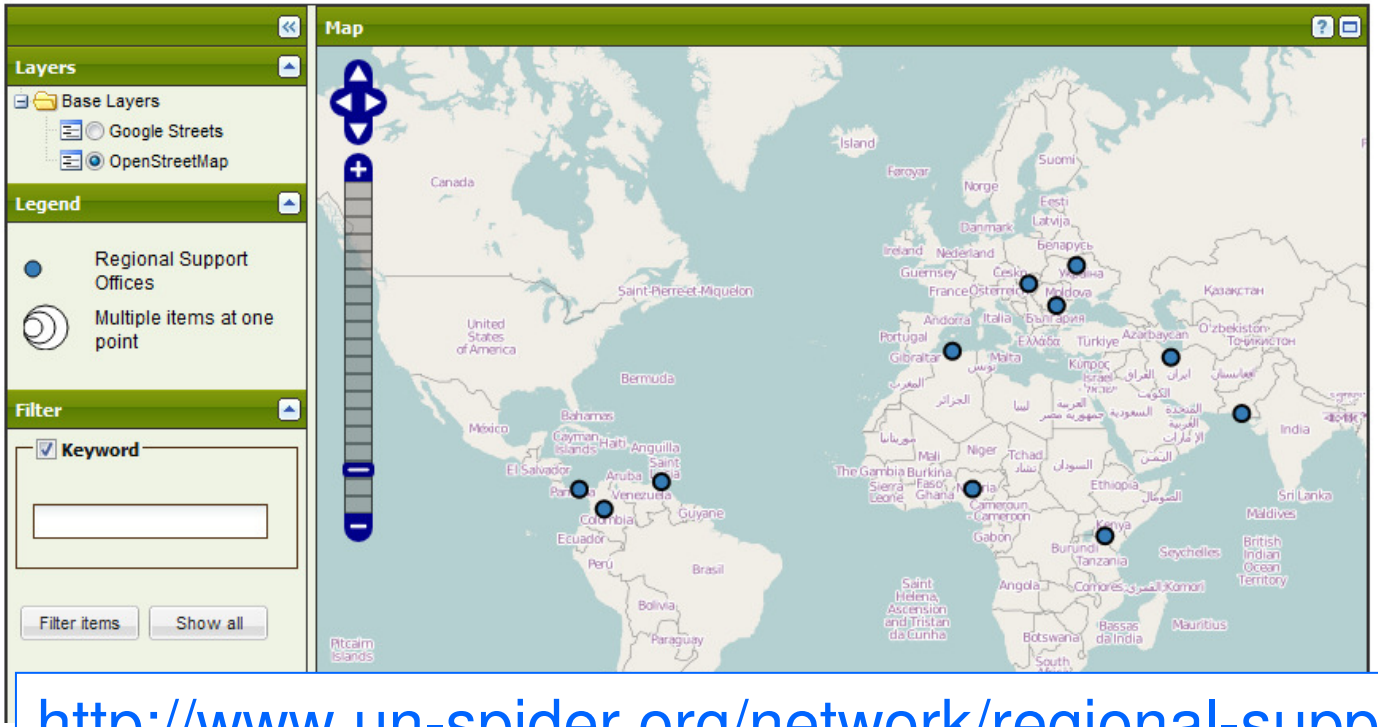
UN-SPIDER Regional Support Offices

Regional Support Offices

A **Regional Support Office (RSO)** is a regional or national centre of expertise that is set up within an existing entity by a Member State or group of Member States that have put forward an offer to set up and fund the proposed RSO. An RSO can be hosted by a space agency, a reserach center, a university, or a disaster management institution, to name some examples. These offices communicate and coordinate with UN-SPIDER on a regular basis, covering the realms of Outreach and Capacity building, as well as Horizontal Cooperation and Technical Advisory Support.

The RSO section comprises a list with the UN-SPIDER RSOs as well as a brief description of each Office, and an overview of its facilities, expertise, and infrastructure.

Please choose from the map below the Regional Support Office you're interested in.

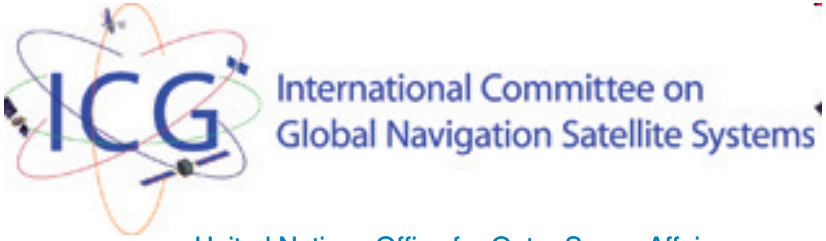


- Algeria
- Pakistan
- Japan
- Kenya
- Colombia
- Romania
- Hungary
- Ukraine
- Iran
- West Indies
- Nigeria
- Panama

http://www.un-spider.org/network/regional-support-offices

International Committee on GNSS

- Global Navigation Satellite Systems (GNSS) and their applications are important, enabling space technologies
- International Committee on GNSS (ICG) was established in 2005
- UNOOSA acting as the ICG Secretariat
- Membership in ICG is open to GNSS providers and users
- Regular ICG meetings
  - Adopted the ICG Work Plan and Terms of Reference
  - Established a Providers Forum
- Regional Centres acting as ICG Information Centres to promote GNSS services and applications



Regional Centres at www.unoosa.org

United Nations Programme on Space Applications: Regional Centres

http://www.unoosa.org/oosa/en/SAP/centres/index.html

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Regional Centres for Space Science and Technology Education (affiliated to the United Nations)

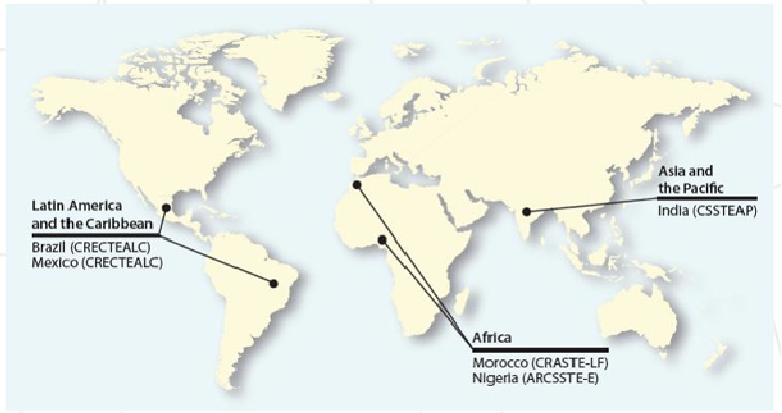


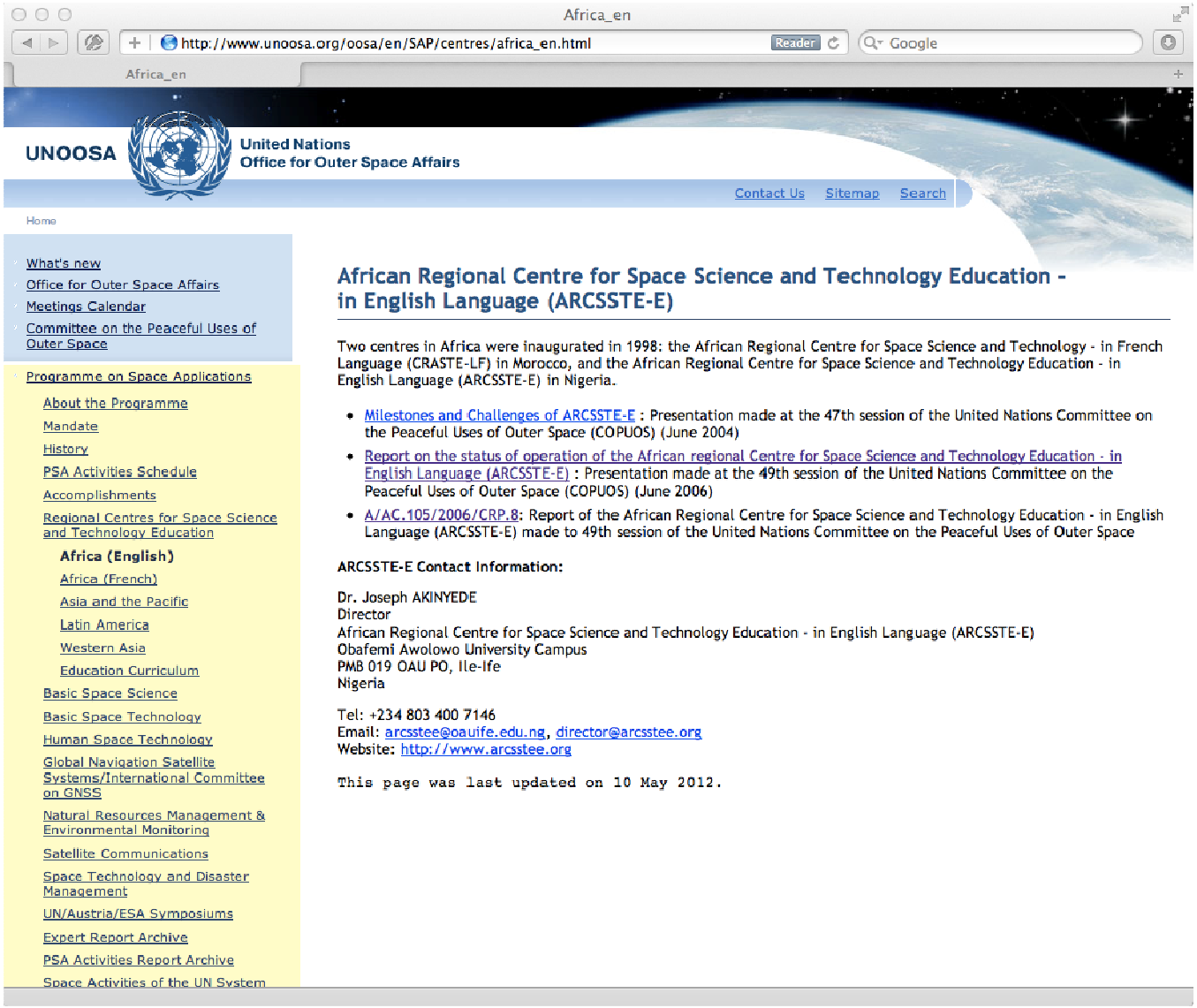
Figure 1: Map of the Regional Centres for Space Science and Technology Education (affiliated to the United Nations)

Between 1985 and 1989, the United Nations, through the Programme on Space Applications, organized three regional meetings and one international meeting on the subject of the development of indigenous capability in space science and technology at the local level. These meetings were held in Ahmedabad, India (1985), Mexico City, Mexico (1986), Lagos, Nigeria (1987) and Dundee, United Kingdom (1989). The participants at these meetings concluded that in order for the developing countries to effectively contribute to the solution of global, regional and national environmental and resource management problems, there was an urgent need for a higher level of knowledge and expertise in the relevant disciplines by educators as well as by research and application scientists in these countries. These capabilities, they further noted, could only be acquired through long-term intensive education.

In support of the above initiative, 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

ARCSSTE-E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African Regional Centre for Space Science and Technology Education - in English Language (ARCSSTE-E)
Two centres in Africa were inaugurated in 1998: the African Regional Centre for Space Science and Technology - in French Language (CRASTE-LF) in Morocco, and the African Regional Centre for Space Science and Technology Education - in English Language (ARCSSTE-E) in Nigeria.
Milestones and Challenges of ARCSSTE-E : Presentation made at the 47th session of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) (June 2004)
Report on the status of operation of the African regional Centre for Space Science and Technology Education - in English Language (ARCSSTE-E) : Presentation made at the 49th session of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) (June 2006)
A/AC.105/2006/CRP.8: Report of the African Regional Centre for Space Science and Technology Education - in English Language (ARCSSTE-E) made to 49th session of the United Nations Committee on the Peaceful Uses of Outer Space
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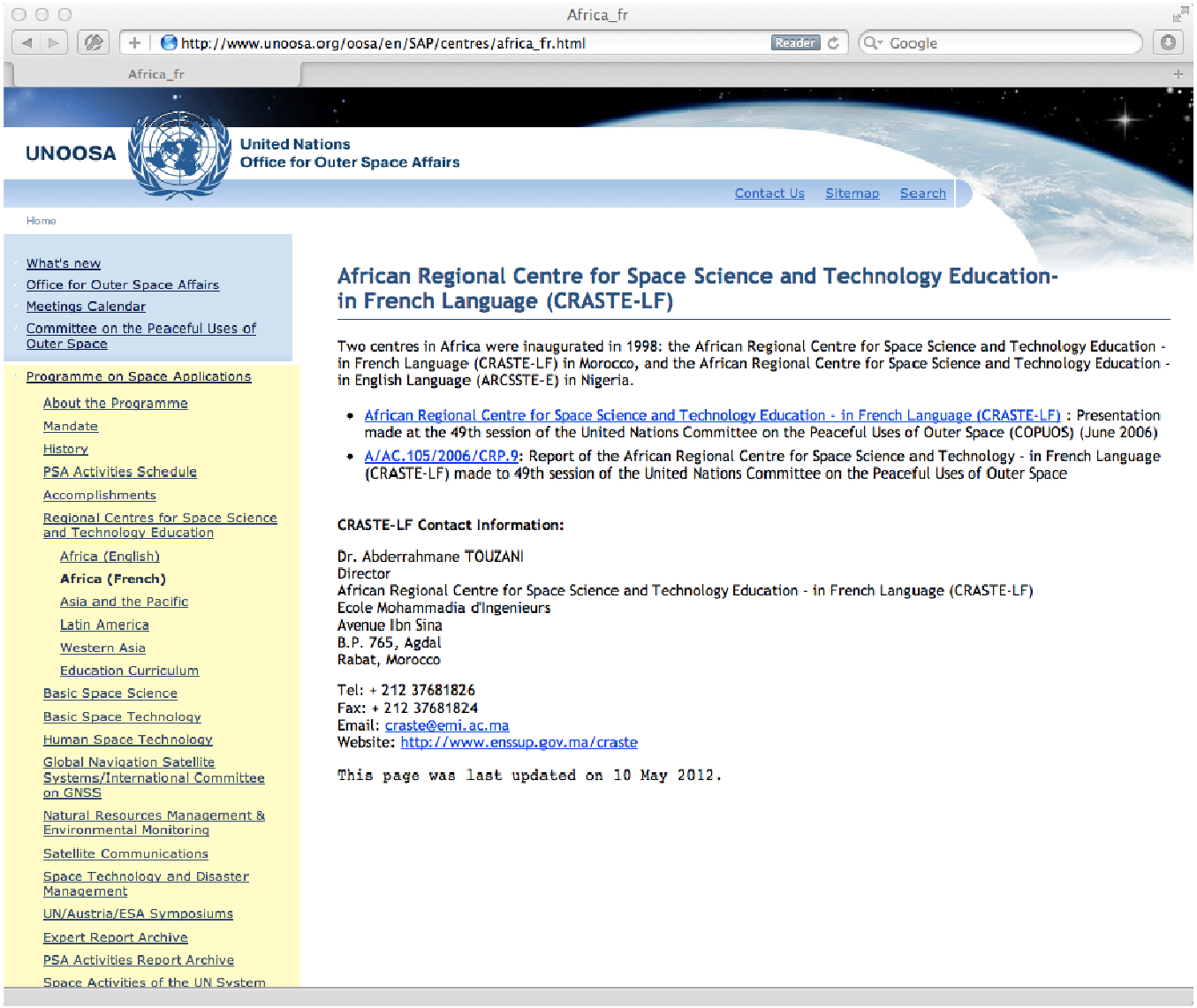
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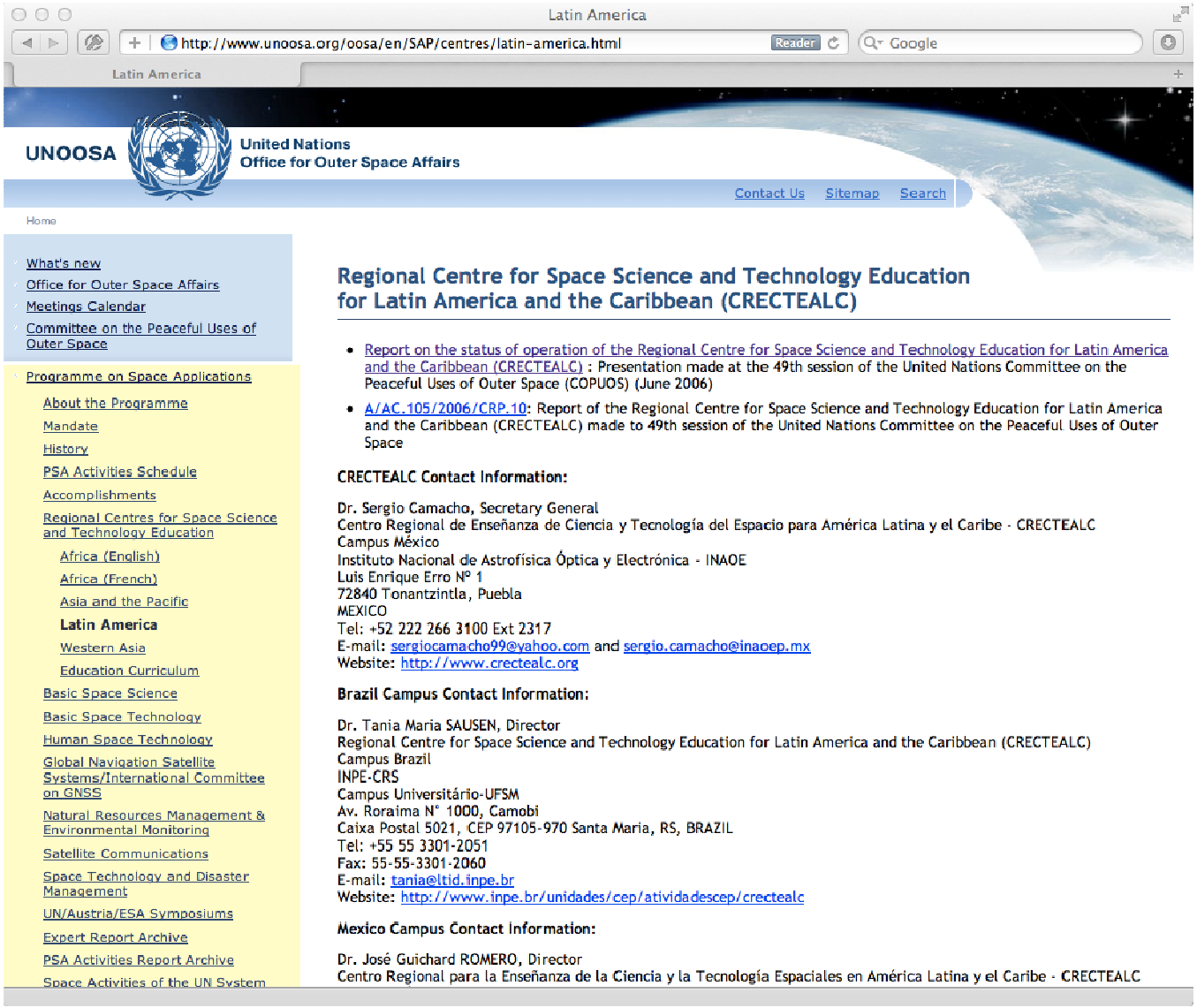
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A/AC.105/2006/CRP.10: Report of the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean (CRECTEALC) made to 49th session of the United Nations Committee on the Peaceful Uses of Outer Space
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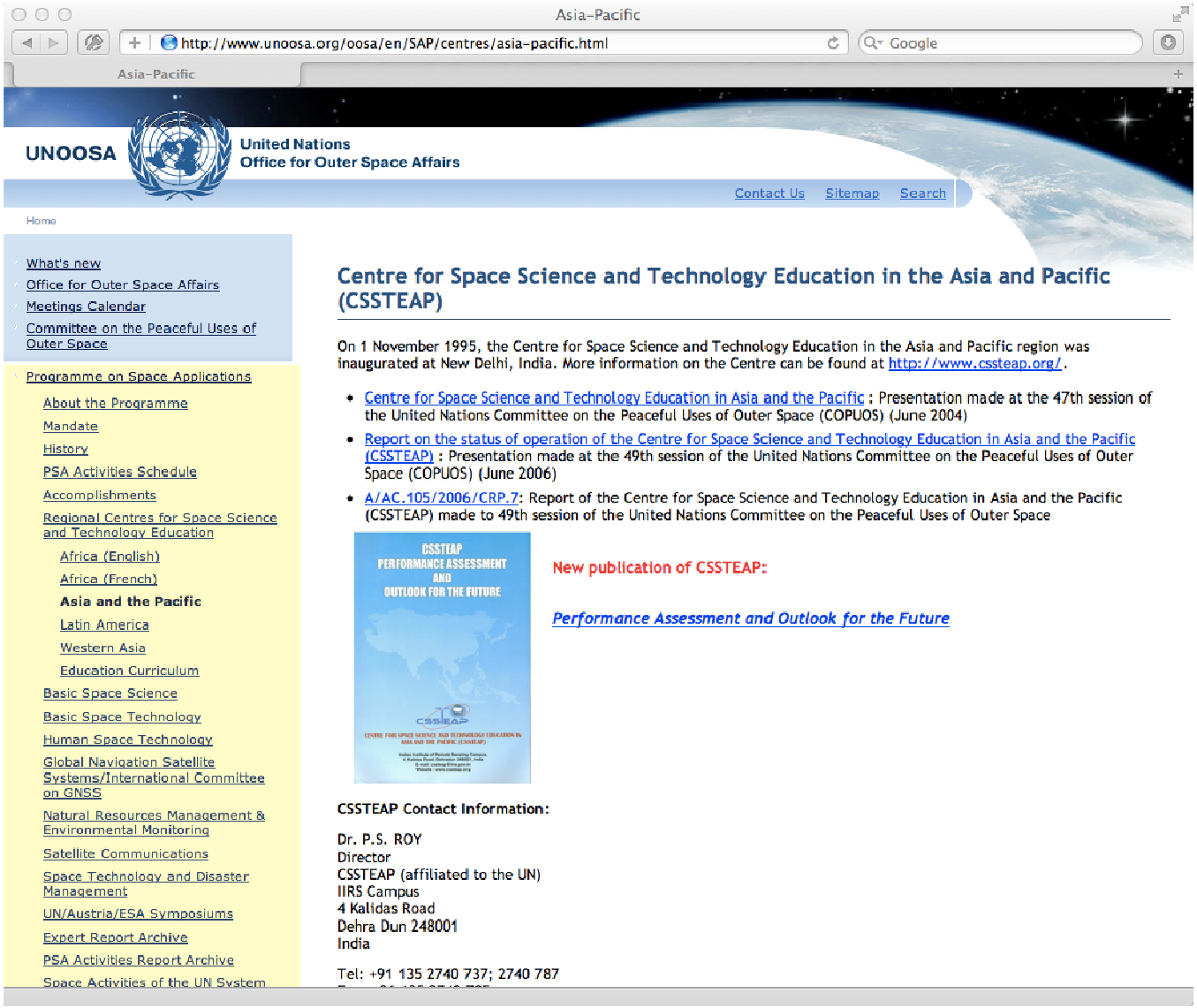
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Centre for Space Science and Technology Education in the Asia and Pacific (CSSTEAP)
On 1 November 1995, the Centre for Space Science and Technology Education in the Asia and Pacific region was inaugurated at New Delhi, India. More information on the Centre can be found at http://www.cssteap.org/.
Centre for Space Science and Technology Education in Asia and the Pacific : Presentation made at the 47th session of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) (June 2004)
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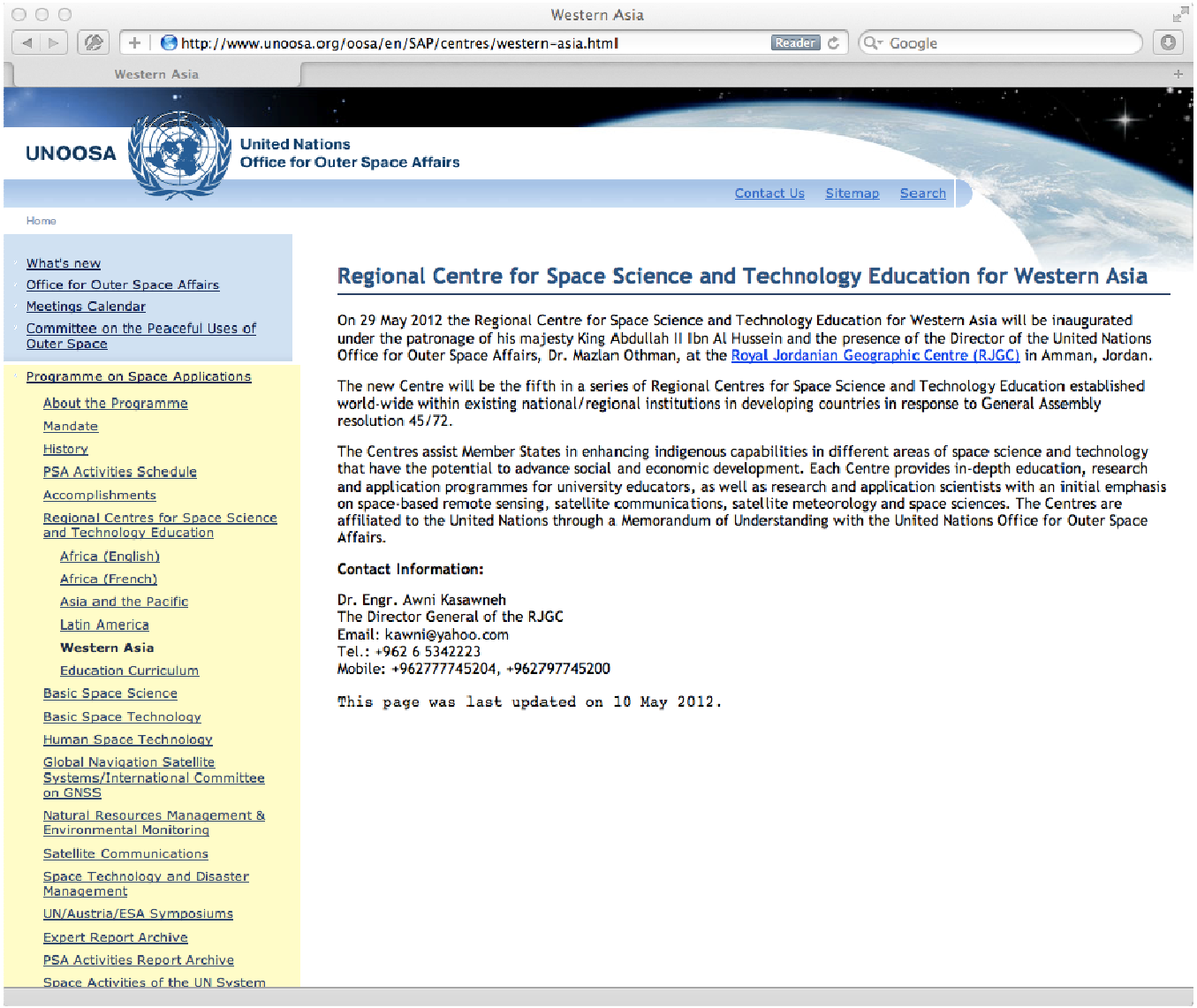
Centre for Western Asia



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