



Office for Outer Space Affairs
United Nations Office at Vienna



UN Office for Outer Space Affairs

UN Programme on Space Applications

A Brief Overview

UN/BSS Science Organizing Committee Planning Meeting

Goddard Space Flight Center

Greenbelt MD, USA

19-21 October 2004

<http://ihy.gsfc.nasa.gov/events/unbss.shtml>



History of the Programme on Space Applications (PSA)

- × **United Nations Conferences on the Exploration and Peaceful Uses of Outer Space (UNISPACE)**
 - × **UNISPACE I (1968)**
 - × The Programme was established in response to the recommendation of the UNISPACE I Conference.
 - × It became operational in 1971.
 - × **UNISPACE 82 (1982)**
 - × Expanded Mandate of the Programme
 - × **UNISPACE III (1999)**
 - × Strengthening the activities of the Programme including its outreach activities





Mandate of the Programme

- × **Promotion of greater exchange of actual experiences with specific applications**
- × Promotion of greater cooperation in space science and technology between developed and developing countries as well as among developing countries
- × **Development of a fellowship programme for in-depth training**
- × Organization of workshops on advanced space applications and new system developments
- × **Stimulation of the growth of indigenous nuclei and an autonomous technological base**
- × Dissemination of information on new and advanced technologies and applications
- × **Provision or arrangements for provision of technical advisory services on space applications projects, upon request by Member States or any of the specialized agencies**



Participation in the Programme

- × **Since UNISPACE-82 , the Programme organized, in cooperation with with Member States, bodies and specialized agencies of the UN system and relevant national/international organizations, more than 170 training courses, workshops and conferences for researchers, educators, decision makers and application specialists from developing countries on different aspects of space science and technology and its application.**
- × **Close to 8,000 people have participated in these activities.**
- × **More than 250 specialists, selected from among approximately 1,300 applicants, participated in various long-term fellowships programmes.**





Priority Thematic Areas

- x **Space technology for disaster management**
- x **Satellite communications for e-health, e-learning, and disaster management**
- x **Management of natural resources, monitoring and protection of the environment**
- x **Applications of Global Navigation Satellite Systems**
- x **Education and research in basic space science**





Space Technology and Disaster Management

International Charter Space and Major Disasters



× **An International agreement among Space Agencies to support with space-based data and information relief efforts in the event of emergencies caused by major disasters.**

- × **OOSA as a Cooperating Body of the Charter has enabled the UN system to have access and use the Charter three times in 2003.**
- × **OOSA has a 24/7 hotline which UN Focal Points can access.**
- × **In 2004, OOSA expanded the Charter by bringing in non-UN Focal Points and also harness the support from private organisations**





Management of Natural Resources & Monitoring and Protection of the Environment

- × **Follow-up activities:**
 - × **UN/ESA Follow-up Programme on the Use of Remote Sensing Technology in Sustainable Development.**
 - × **Asia and the Pacific** - Vietnam, project on application of remote sensing technology for coastal zone management, 2000 - 2001;
 - × **Latin America and the Caribbean** - Argentina, Bolivia, Chile, project on the use of C-band SAR and optical data to monitor glaciers and snow cover for optimization of water supply predictive models, study of climatic changes and natural hazards, 1999 - 2002;
 - × **Africa** - AGRHYMET (Niger) and Burkina Faso, project on the development of an information system for determining, monitoring and assessing flood areas together with establishing an inventory of superficial waters the in the Nakambé river basin of Burkina Faso, on-going.
 - × **Follow-up to the series of the UN/Sweden International Training Courses on Remote Sensing Education for Educators (annually, since 1990).**
 - × Survey of local impact (2001)
 - × Evaluation missions (2004)
 - × Regional workshops (2004-2005)





Satellite Communications Technology

- × **Demonstration at UN COPUOS session in Vienna, June 2003**





Satellite-based Navigation and Positioning Technology

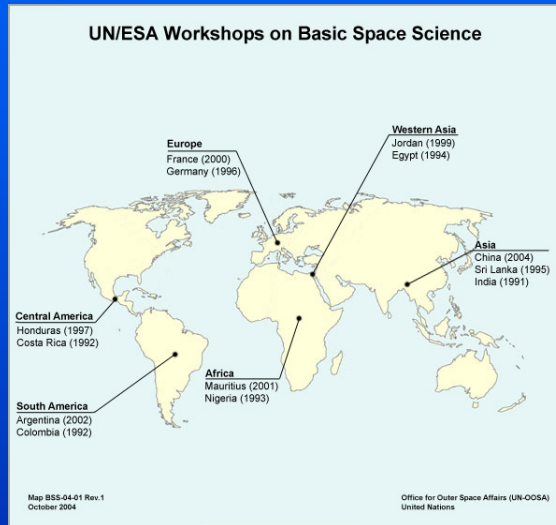
- × **Contribution to UNISPACE III recommendations:**
 - × **UN/USA Regional Workshops + International Expert Meetings (2001-2003)**
 - × Objective 1: Educate in and promote satellite navigation and positioning applications
 - × Objective 2: Facilitate development of a self-sustaining mechanism for promoting regional co-operation on satellite navigation and positioning applications,
- × **Application oriented activities: agriculture, transportation, earth sciences etc**
- × **Partnerships between governments and private sector**
- × **Capacity Building : ad-hoc Action Teams, pilot projects, curricula development, web-based information dissemination, training courses through the UN-affiliated regional Centres for Space Science and Technology Education**
- × **Co-ordination and integration with activities of UN agencies**





Basic Space Sciences

UN/ESA Workshops on Basic Space Science 1991-2002 (observing variable stars and near-Earth objects)



- × **Government of Japan: Japanese Cultural Grant Aid - 45cm reflecting telescope;**
- × **American Association of Variable Star Observers (AAVSO) - Hands-On Astrophysics;**
- × **International Astronomical Union (IAU) - Astrophysics for University Physics Courses**



A.C. Clarke Institute for Modern Technologies
(1996)



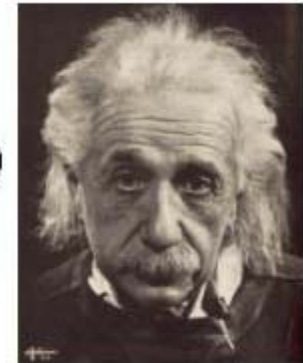
Universidad Nacional de Asuncion (2000)



Regional Centres for Space Science and Technology Education, Affiliated to the United Nations



$$ds^2 = -\left(1 + \frac{2\Phi}{c^2}\right)(c dt)^2 + \left(1 - \frac{2\Phi}{c^2}\right)(dx^2 + dy^2 + dz^2)$$



REGIONAL CENTRES FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION			
<p>Satellite meteorology and global climate <i>Education curriculum</i></p> <p>United Nations</p>	<p>Satellite communications <i>Education curriculum</i></p> <p>United Nations</p>	<p>Remote sensing and the geographic information system <i>Education curriculum</i></p> <p>United Nations</p>	<p>Space and atmospheric science <i>Education curriculum</i></p> <p>United Nations</p>

Meteorology

Communications

Remote Sensing

Space Science

Regional Centre Education Curricula

