



## General Assembly

Distr.  
LIMITED

A/AC.105/C.1/L.211\*  
18 February 1997

ORIGINAL: ENGLISH

---

COMMITTEE ON THE PEACEFUL  
USES OF OUTER SPACE  
Scientific and Technical Subcommittee  
Thirty-fourth session  
Vienna, 17-28 February 1997  
Agenda items 5 and 16 (a)

### **UNITED NATIONS THIRD UNISPACE CONFERENCE**

#### **Working paper submitted by the United States of America**

##### **Proposed agenda**

The agenda of the conference could be organized with the following central themes:

- (a) What is the current state of scientific knowledge of the Earth?
- (b) What programs, capabilities and campaigns exist to provide useful information about the Earth, and what are some of the recent accomplishments in this area?
- (c) What are potential applications of space science and technology?
- (d) What are the information and applications needs of developing nations for this information?
- (e) How can we promote international cooperation and involvement in these efforts?
- (f) How can we increase the economic and social benefits from space activities?

---

\* This document has not been formally edited.

*Draft detailed agenda using these themes*

**Plenary 1: State of scientific knowledge of the Earth**

1.1 Report of the Intergovernmental Panel on Climate Change (IPCC)

Discuss the latest scientific understanding of the nature and characteristics of climate change, highlighting information from the IPCC Second Assessment of Climate Change (1995).

1.2 Report of the United Nations Environment Programme (UNEP)

Discuss the state of the environment, with emphasis on broad-scale land-use and land-cover changes, atmospheric pollution and issues (including the latest understanding of ozone, updating 1994 Scientific Assessment of Ozone Depletion), surface water availability and changes, and related topics.

1.3 Report of the World Meteorological Organization (WMO)

Discussion of the state of knowledge on weather forecasting, atmospheric dynamics, and severe storms.

**Plenary 2: Review of recent developments and capabilities**

2.1 Reports from international organizations/programs/initiatives

- Committee on Earth Observation Satellites (CEOS)
- Global Climate Observing System (GCOS)
- Global Ocean Observing System (GOOS)
- Global Terrestrial Observing System (GTOS)
- World Climate Research Program (WCRP)
- International Geosphere-Biosphere Programme (IGBP)
- Integrated Global Observing Strategy (IGOS)

2.2 Reports on significant Earth observation programs of countries

**Plenary 3: Applications of space science and technology**

3.1 Environmental and remote sensing applications

- *3.1.1 Agricultural enhancements:* Discussion on how remote sensing observations can increasingly be used to help improve agricultural planning, including areas such as pesticide application, crop rotation, growth rates, infestation, and precision farming. Also updates on uses of remote sensing to measure and forecast drought and desertification.
- *3.1.2 Global health, including disease vectors, mitigation, and prevention and telemedicine:* Discussion on the uses of remote sensing for the detection of disease vectors and infestations and the means by which that information can be used for preventing the spread of disease and/or identification of environmental factors that could prevent the occurrence of disease (e.g. Ames Research Center's training in the use of remote sensing to monitor vector-borne diseases). Discussion on the uses of space technology for telemedicine, such as consultation, training, and real-time assistance with medical procedures.

- *3.1.3 Seasonal-to-annual climate prediction:* Discussion of how scientific prediction of climate events (such as El Nino-Southern Oscillation) can affect agricultural, fishery, and disaster management planning. Update on the state of understanding and means by which information can best be shared. Could include update on international activities in climate prediction.
- *3.1.4 Disaster preparation, warning, and mitigation:* Discussion on the state of knowledge on use of remote sensing for disaster planning, including the ability to predict hurricanes, other severe weather events, floods, volcanic eruptions, and earthquakes and the means by which this information can help to measure damage from natural disasters and assist local officials in planning response and mitigation. Discussion on the use of remote sensing techniques for assessing the condition of fire fuels and monitoring/fighting fires..
- *3.1.5 Resource management and planning:* Discussion of the use of remote sensing for managing natural resources such as forests, grazing lands, wildlife, and fisheries, as well as for urban planning and land-use decisions.
- *3.1.6 Environmental hazards detection and mitigation:* Use of remote sensing for detection and tracking of pollution (both atmospheric and surface), including latest applications for hazardous waste cleanup. Could include discussion of ozone depletion and development of UV monitoring and warning systems.
- *3.1.7 Freshwater management:* Use of remote sensing for the management of freshwater resources and detection of contamination, depletion, etc.
- *3.1.8 Coastal degradation/management:* Use of remote sensing for the monitoring of marsh and coastal health and possible degradation. May feature discussion of the use of “ocean color” information for coastal management.
- *3.1.9 Other subjects to be identified:* Additional areas of interest as identified by the participants in the planning conference.

### 3.2 Navigation and precise location systems

- *3.2.1 Availability of services:* Discussion of improved methods to ensure continuity in the availability of satellite-based position-location/navigational services.
- *3.2.2 Enhanced capability:* Enhancing international cooperation in satellite-based search and rescue systems, including the development of common standards for ship and aircraft locator beacons. Also, discussion of the use of microwave systems for geophysical studies and oceanographic research.

### 3.3 Communications

- *3.3.1 Mobile satellite telecommunications development in rural areas*
- *3.3.2 Building indigenous communications capability*

### 3.4 Secondary applications of space technology

- *3.4.1 Potential uses of space for manufacturing, specialized/unique products, and materials.*
- *3.4.2 Industrial and commercial applications of spin-offs from space technologies.*

## **Plenary 4: Defining useful information needs**

### 4.1 Research needs

Discussion of what research information and capabilities are required to address critical questions. Examination of the need for a global approach to this research, with special focus on the needs of developing countries (i.e., scientific collaboration, data exchange, infrastructure issues).

### 4.2 Applications needs

Discussion of the type of information and capabilities needed to address applications issues and assessment of how current systems are meeting those needs. Special focus on the types of information needed by developing nations to address pressing issues and the means by which that information could be acquired.

### 4.3 Integration of geographic information systems (GIS) with satellite information

Discussion of the critical intersection between GIS products and the use of satellite information, including presentations on innovative projects that are demonstrating this capability. Updates on latest efforts to incorporate GIS into local and regional planning.

## **Plenary 5: Promoting international cooperation**

### Discussion of cooperative efforts under way today

Review of existing mechanisms for international cooperation in space activities, with an emphasis on remote sensing and environmental observations. Consideration of ways and means of enhancing coordination/cooperation among Member States, the United Nations and its organizations, and other existing international programmatic and scientific organizations. Could include a panel discussion among major international organizations (IGBP, WMO, UNEP, CEOS) on how they might act to facilitate increased cooperation, as well as a discussion of the merits of multilateral vs. bilateral cooperation.

## **Plenary 6: Economic and societal benefits**

### 6.1 Ways and means of increasing the economic efficiency of space technology and its applications

Discussion on means by which space technology could be “spun off” to more directly benefit people’s lives and well-being. Could include a discussion of the perceived barriers to greater efficiency.

## 6.2 Promoting the commercial benefits of space activities

Discussion of the means by which space technology and observations can best be turned to commercial applications. Update on the state of development of the commercial remote sensing industry and on the development of markets and providers for value-added products. Status on efforts to design/develop smaller satellites and instruments and lower launch costs.

## 6.3 Education and training

Discussion of the current efforts under way to use space information and knowledge to advance the state and quality of education. Areas of emphasis could include teacher training, development of current materials, use of distance learning and mass literacy, and means for greater international cooperation in education efforts. Update on the Global Learning and Observations to Benefit the Environment (GLOBE) program and report from IGARSS special session on environmental education, as well as comments from UNESCO.