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Item 8 of the provisional agenda*

**Means and mechanisms for strengthening
inter-agency cooperation and increasing the
use of space applications and services within
and among entities of the United Nations system**

Means and mechanisms for strengthening inter-agency cooperation and increasing the use of space applications and services within and among entities of the United Nations system

Note by the Secretariat**

Addendum

I. Introduction

1. At its forty-third session, held in Vienna from 7 to 16 June 2000, the Committee on the Peaceful Uses of Outer Space agreed¹ that the item entitled “Means and mechanisms for strengthening inter-agency cooperation and increasing the use of space applications and services within and among entities of the United Nations system” should be considered by the Committee’s Scientific and Technical Subcommittee beginning from its thirty-eighth session in accordance with the following work plan:

2001 An analysis of the current levels of usage of space applications and services within the United Nations system, including one day for presentations by appropriate United Nations entities and Member States

* A/AC.105/C.1/L.240.

** The present document contains information received since 1 January 2001.

that undertake cooperative activities with those entities; and an examination of the utility of space applications and services for increasing, with regard to space activities, the effectiveness, efficiency and coordination of the operations of United Nations entities

- 2002 An identification of the barriers to greater use of space applications and services within the United Nations system and an examination of specific means and mechanisms to eliminate those barriers
- 2003 The development of specific and concrete proposals and, as appropriate, action plans for strengthening inter-agency cooperation in the use of space within the United Nations system and for increasing the use of space applications and services within the system in general and among particular United Nations entities

At the same session, in connection with the above work plan, the Committee approved the list of questions contained in the note by the Secretariat of 26 April 2000 (A/AC.105/L.223) for circulation to the organizations of the United Nations system.

2. The organizations of the United Nations system were subsequently invited by the Office for Outer Space Affairs to provide information in response to the questions. In its resolution 55/122 of 8 December 2000, the General Assembly encouraged all the organs, organizations and programmes of the United Nations system to contribute to the work of the Subcommittee by providing it with appropriate information in response to the list of questions.

3. The overview of the replies received by 31 December 2000 is contained in the note by the Secretariat of 12 January 2001 (A/AC.105/C.1/L.241 and Corr.1). The present document contains additional information received after that date.

II. Additional information provided in response to the questions contained in document A/AC.105/L.223*

B. Status of the use of space science and technology

4. In addition to the information contained in the note by the Secretariat (A/AC.105/C.1/L.241 and Corr.1), the Office of the United Nations High Commissioner for Refugees (UNHCR) has provided information on the areas for expanded use of space applications and potential obstacles (see table 1). UNHCR also indicated that it used satellite remote sensing imagery for environmental assessment of refugee camp hosting areas and to complement the management of its operations. The Economic Commission for Africa (ECA), United Nations Environment Programme (UNEP) and the United Nations Educational, Scientific and Cultural Organization (UNESCO), which already carry out space-related activities (see A/AC.105/726 for detailed information on their space-related activities), also plan to expand the use of space science and technology in some

* The numbering of the sections below corresponds to the groups of questions contained in document A/AC.105/L.223.

areas of activity. They also indicated potential obstacles to those plans and their replies are summarized in table 1.

Table 1

Areas for expanded use of space applications and potential obstacles

<i>Organization</i>	<i>Areas in which the use of space applications could be expanded</i>	<i>Potential obstacles</i>
ECA	Use of information and communication technologies and in the areas relating to geographic information.	[Not indicated.]
UNEP	Early warning of emerging environmental problems and threats; monitoring of environmental change and degradation; GIS applications.	High cost of and/or limited access to satellite imagery in some cases.
UNHCR	Use of the Global Positioning System and remote sensing images in operational planning and emergency response; use of very high resolution data (1-m panchromatic, 4-m multispectral) (e.g. Ikonos) and Shuttle Radar Topography Mission (SRTM) digital elevation data as an integral part of a geographic information system (GIS) for refugee camp planning.	High cost of data and limited access to up-to-date remote sensing images; restricted copyrights that do not allow for sharing of information.
UNESCO	Scientific research, training and capacity-building activities on the different use of remote sensing and GIS technologies for the protection of the Earth and the Earth's resources and for human (educational, economic, social and cultural) security; the use of satellite communication technology in promoting universal access to information and distance learning and educational activities with a view to narrowing the knowledge gap.	Limited funds resulting in insufficient partnerships with relevant institutions, agencies and bodies.

5. In order to improve their working methods and cost-efficiency in their operations, both UNEP and UNESCO have joined many other organizations in using space-related technologies, such as remote interpretation/translation and tele-conferencing. UNESCO indicated that closer cooperation with relevant bodies would increase the cost-efficiency of its operation through the use of space-related technologies.

C. Capacity-building in promoting sustainable development

6. ECA, UNEP and UNESCO carry out activities to strengthen capacities of their member States, in particular developing countries, to promote sustainable development. They have joined many other organizations in addressing the use of space science and technology in their capacity-building activities. ECA, in particular, indicated that in the areas relating to space applications, its major objective to be achieved within the next five years was to strengthen national capacities of countries in the utilization of information and communication technologies, including the development and use of spatial databases as decision support tools for socio-economic development.

D. Promoting international cooperation through development of an international legal regime

7. ECA contributes to the promotion of deregulations to facilitate the use of information and communication technologies and to the promotion of international standards to facilitate the use of remote sensing and GIS, both of which involve space applications. UNEP contributes to the development and promotion of environmental legislations and standards, in particular those relating to chemicals, trans-boundary movement of hazardous wastes, climate change, desertification, endangered species, forests and ozone, which, in the view of UNEP, would not cover space-related activities. UNESCO contributes to the development and promotion of the international legal regime and/or international standards and recommended practices in the areas of education, natural and social sciences, culture and communication, which, in its view, would enhance international cooperation and partnership, as well as the availability of funding, and would facilitate the implementation of space-related projects. In addition to the information already reflected in table 4 of the note by the Secretariat (A/AC.105/C.1/L.241 and Corr.1), UNHCR contributes to the development and promotion of standards for applications of remote sensing and GIS in refugee operations.

E. Coordination of space-related activities within the United Nations system

8. ECA, UNEP and UNESCO have been participating in the work of the Inter-Agency Meeting on Outer Space Activities on a regular basis. They indicated areas of activity in which inter-agency coordination could be enhanced (table 2) and identified potential obstacles (table 3). (The annex to the present document consolidates the information provided in table 2 below and in table 6 of document A/AC.105/C.1/L.241/Corr.1.)

Table 2

Areas of activity for enhancement of inter-agency coordination

<i>Area of activity</i>	<i>ECA</i>	<i>UNEP</i>	<i>UNESCO^a</i>
Education and training activities			
Remote sensing and geographic information systems (GIS)	X	X	X
Satellite communications			X
Disaster management	X	X	X
Other			X
Operational activities (including research and studies)			
Remote sensing and GIS	X	X	X
Earth observation		X	X
Climate research		X	X

<i>Area of activity</i>	<i>ECA</i>	<i>UNEP</i>	<i>UNESCO^a</i>
Meteorology and operational hydrology			X
Environment management (including environment assessment, environment information systems, environment decision support systems)	X	X	X
Management of natural resources		X	X
Development of information infrastructure	X	X	X
Distance learning/education and telemedicine	X		X
Navigation satellite systems			X
Disaster management (including prevention, mitigation, early warning, relief and rehabilitation)	X	X	X
Other			X
Dissemination of information			
Remote sensing and GIS	X	X	X
Climate research	X	X	X
Disaster management	X	X	X
Space science and technology (general information)	X	X	X
Other	X		X

^a UNESCO indicated that inter-agency coordination could also be enhanced in research activities in the field of oceanography and in the ethical and legal aspects of the peaceful uses of outer space.

Table 3

Potential obstacles to the enhancement of inter-agency coordination

<i>Organization</i>	<i>Potential obstacles</i>
ECA	Insufficient financial resources and lack of good will.
UNEP	Lack of time for consultation in day-to-day jobs and functions; different mandates and timing for different agencies in their execution of certain activities.
UNESCO	Lack of sufficient flow of information; low/passive/non-participation and/or non-representation of United Nations entities at meetings.

F. Opportunities for the future

9. Concerning the proposals made by the Secretary-General in his report entitled "We the peoples: the role of the United Nations in the twenty-first century" (A/54/2000), ECA, UNEP and UNESCO indicated their interest in participating in activities to implement his proposals with the use of space applications. UNEP is one of the lead partners in the implementation of the Millennium Ecosystem Assessment.

10. With regard to ways and means to strengthen inter-agency efforts to expand the use of space science and technology, the replies of UNEP and UNESCO are

summarized in table 4. UNEP indicated that the availability of adequate staff time and resources would determine whether inter-agency coordination could be enhanced in the ways and by the means that it had suggested.

Table 4

Ways and means to strengthen inter-agency efforts to expand the use of space science and technology

<i>Organization</i>	<i>Suggestions made</i>
ECA	Support for and greater participation of some of the regional, subregional and national institutions involved in space technology applications.
UNEP	Joint capacity-building activities, such as conferences, training courses and workshops, in applying the relevant tools and technologies; promotion of relevant scientific techniques for and studies of environmental change and degradation; joint efforts to publicize results of the studies of environmental change and degradation for action by decision makers.
UNESCO	Dissemination by the Office for Outer Space Affairs of the annual report of the Secretary-General on the coordination of outer space activities outside the United Nations system, to Member States, technical and funding agencies and space agencies in order to enhance the visibility of space activities and thereby attract funding and partnership; use of a Web site on space activities linked to the home page of the Office for Outer Space Affairs for closer coordination; rotation of the venue of the Inter-Agency Meeting on Outer Space Activities.

G. Additional remarks

11. With regard to the possible need to conduct cost-benefit comparisons between the use of space technologies and conventional methods, UNHCR indicated that such comparisons would be difficult, as in many cases satellite imagery served as the only source of information and the possibility of using conventional methods simply did not exist. In many humanitarian operations, satellite images or information derived from satellite images were essential in decision-making.

Notes

¹ See *Official Records of the General Assembly, Fifty-fifth session, Supplement No. 20 (A/55/20)*.

Annex

Areas of activity for enhancement of inter-agency coordination^a

Area of activity	Regional Centre for Peace, Disarmament and Development in Latin America and the Caribbean	Office for the Coordination of Humanitarian Affairs	Division for Sustainable Development	Office of the Special Coordinator for Africa and the Least Developed Countries	International Strategy for Disaster Reduction	ECA	ECE	ECLAC	ESCAP	UNEP	UNHCR	UNDCP	FAO	UNESCO ^b	ICAO	WMO	WIPO
Education and training activities																	
Remote sensing and geographic information systems (GIS)		X	X	X	X	X	X	X		X	X	X	X	X			X
Satellite communications		X	X	X			X	X					X	X	X		X
Disaster management		X	X		X	X	X	X		X	X		X	X			X
Other	X ^c	X	X					X					X	X			X
Operational activities (including research and studies)																	
Remote sensing and GIS		X	X	X		X	X			X	X ^d	X	X	X			X
Earth observation		X	X							X	X ^d		X	X		X ^e	X
Climate research		X	X							X			X	X		X ^e	X
Meteorology and operational hydrology		X	X				X						X	X	X	X ^e	X
Environment management (including environment assessment, environment information systems, environment decision support systems)		X	X	X		X			X	X	X ^d	X	X	X	X		X
Management of natural resources		X	X	X					X	X	X	X	X	X			X
Development of information infrastructure		X	X	X		X	X		X	X		X	X	X			X
Distance learning/education and telemedicine		X	X	X		X			X				X	X		X ^e	X
Navigation satellite systems		X	X				X				X		X	X	X		X
Disaster management (including prevention, mitigation, early warning, relief and rehabilitation)		X	X		X	X			X	X	X		X	X	X		X
Other		X	X				X ^f		X ^g				X	X			X

<i>Area of activity</i>	<i>Regional Centre for Peace, Disarmament and Development in Latin America and the Caribbean</i>	<i>Office for the Coordination of Humanitarian Affairs</i>	<i>Division for Sustainable Development</i>	<i>Office of the Special Coordinator for Africa and the Least Developed Countries</i>	<i>International Strategy for Disaster Reduction</i>	<i>ECA</i>	<i>ECE</i>	<i>ECLAC</i>	<i>ESCAP</i>	<i>UNEP</i>	<i>UNHCR</i>	<i>UNDCP</i>	<i>FAO</i>	<i>UNESCO^b</i>	<i>ICAO</i>	<i>WMO</i>	<i>WIPO</i>
Dissemination of information																	
Remote sensing and GIS		X	X	X		X	X	X		X	X ^d	X	X	X			X
Climate research		X	X			X		X		X			X	X			X
Disaster management		X	X		X	X		X		X	X ^d		X	X			X
Space science and technology (general information)		X	X			X	X	X		X	X	X	X	X			X
Other		X	X			X		X	X ^b				X	X			X

^aThe present annex combines the information provided in table 6 of the note by the Secretariat of 12 January 2001 (A/AC.105/C.1/L.241 and Corr.1) with the additional information provided in table 2 of the present addendum.

^bUNESCO indicated that inter-agency coordination could also be enhanced in research activities in the field of oceanography and in the ethical and legal aspects of the peaceful uses of outer space.

^cKnowledge of the dual-use nature of launch rockets, satellites and tracking stations.

^dStudy of cost versus copyright issues for United Nations use, especially during emergencies, could benefit inter-agency coordination through the Inter-Agency Meeting on Outer Space Activities.

^eInter-agency coordination in the area is already an example of effective cooperation.

^fInfrastructure planning.

^gPoverty alleviation.

^hBest practices in specific areas of space applications; cooperation opportunities; and education and training opportunities and fellowships.