

6 February 2010

ENGLISH ONLY

**Committee on the Peaceful Uses
of Outer Space**
Scientific and Technical Subcommittee
Forty-seventh session
Vienna, 8-19 February 2010
Agenda item 6
**Implementation of the recommendations
of UNISPACE III**

**Status of the implementation of the recommendations of
UNISPACE III**

Note by the Secretariat

1. The recommendations of UNISPACE III contained in the Vienna Declaration (A/CONF.184/6, Chap. I, resolution 1) were endorsed by the General Assembly in its resolution 54/68, of 6 December 1999. An assessment of the implementation process and the progress made in the implementation of the UNISPACE III recommendations was completed by the Committee on the Peaceful Uses of Outer Space in preparation for the UNISPACE III+5 review conducted by the General Assembly in 2004 and is contained in the report of the Committee to the General Assembly (A/59/174). In its resolution 59/2, of 20 October 2004, the General Assembly endorsed the Plan of Action proposed by the Committee in that report (A/59/174, paras. 228-316). Documents A/CONF.184/6 and A/59/174 are available in all official languages of the United Nations at the website of the Office for Outer Space Affairs (www.unoosa.org/oosa/en/unisp-3/index.html).

2. Based on information received in 2006 and 2007, the Secretariat had prepared a note containing a table on the status of the implementation of recommendations of UNISPACE III for consideration by the Working Group of the Whole during the forty-fifth session of the Scientific and Technical Subcommittee in 2008 (A/AC.105/C.1/2008/CRP.3). At that session the Working Group of the Whole agreed that a number of actions/recommendations could be considered implemented in accordance with the following criteria (A/AC.105/911, annex I, para. 8):

- (1) The action/recommendation is being considered and implemented by all practical means by another intergovernmental body and reporting lines have

been established with COPUOS to keep it informed about the ongoing implementation progress;

(2) The action/recommendation has been considered by a UNISPACE III Action Team which has concluded its work and/or the action/recommendation has been or is being considered by the Committee and/or its Subcommittees; and

(3) The action/recommendation has been fully implemented.

3. As agreed by the Working Group of the Whole at its meeting in 2009 (A/AC.105/933, annex I, para. 7), the Secretariat requested member States of the Committee, entities of the United Nations system and other organizations having permanent observer status with the Committee to report on their activities in the implementation of the recommendations of UNISPACE III, focusing on those recommendations considered not yet implemented.

4. The table in the annex to this document includes information received by the Secretariat in response to Note Verbale CU 2009/114 from Japan and Thailand; as well as the information received from entities of the United Nations system and other organizations having permanent observer status with the Committee, namely: FAO, WMO, and INTERSPUTNIK.

5. The table retains the information assessed by the Working Group of the Whole in 2007, 2008 and 2009.

6. The columns containing the actions/recommendations assessed to be considered implemented, have been shaded in grey to facilitate their identification.

7. The following recommendations are assessed as being covered by on-going activities by the primary actors (Member States, organizations, COPUOS):

Part I: Recommendation **5** (p3), **19** (p4), **30** (p8)

Part II: Paragraphs **233** (p10), **237** (p12), **238** (p17), **244** (p24), **247** (p26), **273** (p46), **302** (p64), **307** (p74), **309** (78), **314** (p81), **315** (p82)

Part III : Operative paragraphs **5** (p83), **6** (p83), **12** (p86), **13** (p87), **17** (p88), **18** (p89)

8. The Working Group of the Whole at its meeting in 2009 agreed that on the basis of the present report it would consider in 2010 the way forward in its consideration of the implementation of the recommendations of UNISPACE III.

ANNEX

STATUS OF IMPLEMENTATION OF THE RECOMMENDATIONS OF UNISPACE III (as contained in resolution 54/68) AND THE COMMITTEE’S PLAN OF ACTION TO FURTHER IMPLEMENT THE RECOMMENDATIONS (as endorsed in resolution 59/2)

I. Recommendations of UNISPACE III that still remain to be implemented (see A/59/174, paragraph 179) (United Nations General Assembly Resolution 54/68, “The Space Millennium: Vienna Declaration on Space and Human Development”)

<i>No.</i>	<i>Recommendation</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
5	Minimize the harmful effects of space activities on the local and global environments	<p>2010 INTERSPUTNIK: Intersputnik seeks to compensate for the shortage of the frequency and orbit resource in the geostationary orbit (GSO) resulting from the growing number of spacecraft in the GSO and, consequently, more pressure on the orbit.. To this end, Intersputnik decided to use jointly with interested government and private partners a number of satellite networks, which were earlier filed by Intersputnik in several orbital positions for the deployment of its own satellite fleet but which are not used for this pupose for objective reasons.</p> <p>Also, Intersputnik is working to solve the problem of ‘paper satellites’, which block the GSO orbit and frequency resource and prevent new satellite communications systems from being brought into use. In this situation, the only way out for states and operators planning to launch new satellites is to perform a compatibility analysis based on the actual parameters of adjacent satellite systems rather than on ‘paper’ ones. In this context, Intersputnik elaborated methods of evaluating the compatibility of satellite networks and, later, developed proprietary software for the use of these methods.</p> <p>2009 China: China gives a great deal of attention to the mitigation of space debris, and has actively participated in the work of the Inter-Agency Debris Committee. As her efforts to reduce the generation of space debris, China has also adopted domestic regulations to strictly regulate the de-orbiting of end-of-life satellites and the passivation of the upper</p>	

No.	Recommendation	Status of Implementation <i>(Replies received by member States and international organizations)</i>	Partners
		<p>stages of rockets. Over the past two years, China carried out the orbit switch for 2 GEO satellites and the passivation of the upper stages of six rockets.</p> <p>Nigeria: Nigeria has ratified relevant treaties governing space activities and organized in 2007 a Space Law conference to create awareness and sensitize stakeholders on the need to refrain from or mitigate harmful effects of space activities.</p> <p>2008 Chile: In 2007, Chile officially joined the International Charter “Space and Major Disasters” as the Authorized User. In March, the National Emergencies Office of the Ministry of the Interior signed a letter of commitment with the Charter. The installation of the Earth station with direct reception of satellite images in Santiago, operated by the Aerial Mapping Service of the Chilean Air Force, has been completed. The National Territorial Information Coordination System (SNIT) has been established under the management of a ministerial council.</p> <p>Turkey: Turkish space activities are for peaceful purposes and do not contain harmful effects for global environments.</p> <p>ASSESSMENT On-going activities by the primary actors.</p>	
19	Establish/strengthen national mechanisms for the coordination of space activities	<p>2010 Thailand: The National Space Policy Commission was established as the central body for the cooperation on space activities with related offices in the country. In addition, space policies, strategies and projects will be formulated in order to enhance the forceful management on national space affairs.</p> <p>In order to enhance the global cooperation on the full disaster management cycle, Thailand nominated its agencies to be National Focal Point of UN-SPIDER.</p>	<p>GISTDA</p> <p>Department of Disaster Prevention and Mitigation</p>

<i>No.</i>	<i>Recommendation</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
		<p>FAO: Through the Global Land Cover Network (GLCN), Global Terrestrial Observing System (GTOS).</p> <p>INTERSPUTNIK: As an international intergovernmental organization Intersputnik actively works to deepen and develop constructive cooperation in the field of satellite communications with its member states, other international and regional organizations. Intersputnik cooperates with the International Center of Space Law under the V.M.Koretsky Institute of State and Law of the National Academy of Sciences of Ukraine to jointly promote research in the field of space law, harmonize and popularize space law, and solve fundamental and applied problems related to the development and application of the national space laws of the CIS countries for improved efficiency of space activities.</p> <p>2009</p> <p>Austria: The seventh call of ASAP, the “Austrian Space Programme”, is planned to take place in 2009. ASAP specifically aims at positioning Austrian players on the commercial market, supporting specialisation and networking, creating technological content, and improving scientific excellence. Space applications in remote sensing, navigation and telecommunications have been playing an increasing role in ASAP since the last years. Furthermore, specific projects in the Austrian Space Programme address areas relevant to the UN Space Applications programme and UN-SPIDER. The cooperation with international partners is based on non-exchange-of-funds.</p> <p>Iran (Islamic Republic of): The establishment of the Iranian Space Agency and the Supreme Space Council on 2004 was a great and successful space to coordinate all civil space activities nationally and internationally.</p> <p>Nigeria: Nigeria has put in place (since 2000) a space Policy and Programme to serve as a road map for space activities. In 2008, a bill</p>	<p>(DDPM)</p> <p>UNEP, WMO, UNESCO, national agencies</p> <p>International Center of Space Law under the V.M.Koretsky Institute of State and Law of the National Academy of Sciences of Ukraine</p>

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		<p>was placed before the National Assembly to give legal backing to the establishment of the National Space Research and Development Agency which will give the Agency the force of law as the government Agency to coordinate all space activities</p> <p>2008 Algeria: Taken care by the mission of the Algerian Space Agency (ASAL).</p> <p>Chile: The Government is currently finalizing the establishment of the Chilean Space Agency as an interministerial council, chaired by the Finance Ministry and administered by an executive director. A draft supreme decree is undergoing legal scrutiny in the Finance Department of the Office of the Public Prosecutor.</p> <p>Turkey: Legislation for the establishment of Turkish Space Agency is at Turkish Parliament and waiting for approval. The National Space Research Programme of Turkey was launched by TÜBİTAK in March 2005. National and International workshop and conferences were organized under this programme. R&TD space research projects have been granted by TÜBİTAK since 2005.</p> <p>FAO: Through the Global Land Cover Network (GLCN), Global Terrestrial Observing System (GTOS).</p> <p>ASSESSMENT On-going activities by the primary actors.</p>	<p>Turkish Research Area, Turkish Institutions</p> <p>UNEP, WMO, UNESCO, national agencies</p>
23	Create awards to recognize outstanding contributions in space activity	<p>2009 COSPAR:</p> <ul style="list-style-type: none"> • COSPAR SPACE SCIENCE AWARD The COSPAR Award honors a scientist who has made outstanding contributions to space science. All scientists working in any field covered by COSPAR are eligible for this award. • COSPAR INTERNATIONAL COOPERATION MEDAL This medal is awarded to a scientist who has made distinguished contributions to space science and whose work has contributed significantly to the promotion of international scientific cooperation. 	

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		<p>All scientists working in any field covered by COSPAR are eligible for this medal. This medal may also be awarded to a group of scientists.</p> <ul style="list-style-type: none"> • COSPAR WILLIAM NORDBERG MEDAL This medal commemorates the work of the late William Nordberg and is awarded to a scientist who has made a distinguished contribution to the application of space science in a field covered by COSPAR. • COSPAR DISTINGUISHED SERVICE MEDAL This medal recognizes extraordinary services rendered to COSPAR over many years. • COSPAR/ROYAL SOCIETY MASSEY AWARD The Royal Society of London Massey Award honors the memory of Sir Harrie Massey, FRS, past Physical Secretary of the Society and past member of the COSPAR Bureau. This award recognizes outstanding contributions to the development of space research, interpreted in the widest sense, in which a leadership role is of particular importance. • COSPAR/ISRO VIKRAM SARABHAI MEDAL This medal is awarded by the Indian Space Research Organization (ISRO) in honor of Vikram Sarabhai, considered one of the architects of modern India. The medal is awarded for outstanding contributions to space research in developing countries. For a candidate to be eligible for this award, her or his relevant work must have been carried out mainly in the five year period ending one year before the COSPAR Scientific Assembly at which the medal is to be presented. This award is open to candidates from any country. • COSPAR/RUSSIAN ACADEMY OF SCIENCES ZELDOVICH MEDAL The Zeldovich Medals are conferred by the Russian Academy of Sciences to young scientists, under 36 on the last day of the year in which the Medals are to be presented, to recognize excellence and achievement. They honor the memory of the distinguished astrophysicist Academician Yakov B. Zeldovich. • COSPAR/CHINESE ACADEMY OF SCIENCES JEOUJANG JAW AWARD The Jeoujang Jaw Award, bestowed jointly by the Chinese Academy of Sciences and COSPAR, recognizes scientists who have made distinguished pioneering contributions to promoting space research, establishing new space science research branches and founding new 	

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		<p>exploration programs.</p> <ul style="list-style-type: none"> • COSPAR OUTSTANDING PAPER AWARD FOR YOUNG SCIENTISTS <p>All scientists under the age of thirty-one publishing in Advances in Space Research are eligible for consideration.</p> <p><u>2008</u> Chile: None.</p> <p><u>ASSESSMENT</u> In Note Verbale CU 2008/117 and CU 2008/118 the Secretariat requested member States of the Committee, entities of the United Nations system and other organizations having permanent observer status with the Committee to provide, in particular, input on this recommendation, with the aim of creating a list of existing awards that recognize outstanding contributions in space activity. Input was received from COSPAR and it is known that many other entities provide such awards. Unless the Committee wishes to create a new award, it is proposed that this recommendation could be considered implemented.</p> <p><u>Could be considered implemented.</u></p>	
30	Call upon the international community to consider the recommendations of the regional preparatory conferences for UNISPACE III	<p><u>2009</u> Austria: Since 1994 the United Nations Office for Outer Space Affairs, in the framework of the United Nations Programme on Space Applications, the Government of Austria and the European Space Agency (ESA) in cooperation with other co-sponsors have been organising a series of space-related Symposia in Graz, Austria. In 2008, the theme of the Workshop that took place in September was “Space Tools and Solutions for Monitoring the Atmosphere and Land Cover” to support the Plan of Implementation of the World Summit on Sustainable Development held in Johannesburg, South Africa, in 2002. Another UN/Austria/ESA Workshop in Graz is planned in 2009, building on the outcome of the previous Symposia.</p> <p><u>2008</u> Chile: Chile is engaged in efforts to establish a regional space</p>	

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		consultation mechanism using the framework of the Space Conference of the Americas and its International Experts Group. <u>ASSESSMENT</u> On-going activities by the primary actors.	

**II. Actions from the Plan of Action of the Committee to further implement the recommendations of UNISPACE III
(Document A/59/174, paras. 228-316)**

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
1. THE USE OF SPACE TO SUPPORT OVERARCHING GLOBAL AGENDAS FOR SUSTAINABLE DEVELOPMENT		
(a) Establishing a closer link with the work of the Commission on Sustainable Development		
<p><i>Paragraph 232</i> <u>Action</u> Synchronize work of COPUOS with CSD by:</p> <p>(a) examining contribution made by space science and technology and their applications to issues selected by Commission as a thematic cluster;</p> <p>(b) providing substantive inputs for consideration by the Commission during the policy year</p> <p><i>See also operative paragraph 7 of General Assembly Resolution 59/2</i></p> <p><u>Primary Actor(s)</u> COPUOS</p>	<p>2007</p> <ul style="list-style-type: none"> • Ecuador: Territorial Landuse Plan of Ecuador – Scale 1:250,000: Studies of the natural (bio-physical) and socio-economic resources of Ecuador will be carried out to determine adequate land use without deteriorating natural resources. The Territorial Landuse Plan will be translated into short-, mid- and long-term plans and projects. • Japan: Asia-Pacific Regional Space Agency Forum (APRSAF), which was established in 1993 in response to the declaration adopted by the Asia-pacific International Space Year Conference (APIC) in 1992, is to enhance the development of each country's space program and to exchange views toward the future cooperation in space activities in the Asia-Pacific region. APRSAF intends to ensure wider participation of space agencies, government officials, regional and international organizations and institutions responsible for applying space technology, as well as space agencies from outside the region and private sectors as observers. Through the activities of the APRSAF, we contribute to the WSSD Plan of Implementation. <p><u>ASSESSMENT</u></p> <p>OOSA, in the framework of the Programme on Space Applications, organizes the annual United Nations/Austria/European Space Agency Symposium (see http://www.unoosa.org/oosa/en/SAP/graz/index.html). The theme of the Symposium is synchronized with the thematic clusters of the CSD. The Committee contributed to the work of the Commission</p>	<p>Ministerio de Agricultura y Ganaderia (MAG) – SIGAGRO</p> <p>JAXA</p>

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	<p>on Sustainable Development during the policy year for the thematic cluster 2006-2007 and 2008-2009 (A/AC.105/872, A/AC.105/892). The Committee has agreed that the Director of the Division for Sustainable Development of DESA should be invited to participate in the sessions of the Committee, and that the Director of the Office for Outer Space Affairs should participate in the sessions of the Commission on Sustainable Development to raise awareness and promote the benefits of the use of space science and technology within the context of the work of the Commission. OOSA has established working relations with the Division for Sustainable Development/CSD Secretariat. Document A/AC.105/892 will be distributed at CSD 16; Inter-Agency Meeting (IAM) agreed at its 28th meeting in January 2008 to contribute to cluster 2010-2011 and to prepare a report on space technology and its applications for sustainable development for Africa, to be presented to the 3rd African Leadership Conference in 2009. Since Africa is a major theme for CSD 16 and a cross-cutting issue for all clusters, that report is also relevant in the context of the CSD process.</p> <p><u>Could be considered implemented.</u></p>	
<p><i>Paragraph 233</i> <u>Action</u> Identify actions in the WSSD Plan of Implementation and establish follow-up programmes to be carried out jointly with multilateral, bilateral development programmes and relevant user institutions, in particular in developing countries. <u>Primary Actor(s)</u> Space Agencies and Space-related entities</p>	<p>2010 Japan: Japan has initiated the Application and Verification Project of ALOS data in cooperation with LAPAN, based on the achievements of the Asia Pacific Earth observation Pilot Project. FAO: The Group on Earth Observations (GEO) is continuing the coordination of international efforts to build a Global Earth Observation System of Systems (GEOSS). This emerging public infrastructure is interconnecting a diverse and growing array of instruments and systems for monitoring and forecasting changes in the global environment. FAO participates and shall continue to contribute to the GEO. The Global Terrestrial Observing System (GTOS) will continue to be hosted by FAO. GTOS will continue collaboration with GEO and ensure that current and new activities being developed are endorsed by GEO and when relevant, are made into official GEOSS tasks. GTOS shall</p>	<p>LAPAN</p> <p>South Africa, Algeria and Kenya</p>

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	<p>continue promoting the development of dynamic operational and global terrestrial observing systems in collaboration with GEO.</p> <p>2009 Nigeria: Nigeria actively promoted and participated in the establishment of the ARM satellites dedicated to deal with aspects of sustainable development challenges such as drought and food security in Africa, with the establishment of an administrative hub (African Space Agency) in view.</p> <p>FAO: The Group on Earth Observations (GEO) is continuing the coordination of international efforts to build a Global Earth Observation System of Systems (GEOSS). This emerging public infrastructure is interconnecting a diverse and growing array of instruments and systems for monitoring and forecasting changes in the global environment. FAO participates and shall continue to contribute to the GEO. The Global Terrestrial Observing System (GTOS) will continue to be hosted by FAO. GTOS will continue collaboration with GEO and ensure that current and new activities being developed are endorsed by GEO and when relevant, are made into official GEOSS tasks. GTOS shall continue promoting the development of dynamic operational and global terrestrial observing systems in collaboration with GEO.</p> <ul style="list-style-type: none"> • 2008 • Chile: The Chilean Space Agency, now undergoing restructuring as an inter-ministerial council based in the Finance Ministry, and the Directorate of Special Policy of the Ministry of Foreign Affairs are being kept informed and will be responsible for the follow-up programme. • • Japan: Jaxa has implemented the Asia Pacific Earth observation Pilot Project as step-2 partnership project in cooperation with GISTDA and LAPAN in order to promote use of satellite data and GIS. <p>Turkey: Establishment of Turkish Space Agency is still on development stage and waiting for approval at the Turkish Parliament</p> <p>FAO: supports a number of WSSD related activities, including coastal ecosystem monitoring and management, environmental management,</p>	<p>South Africa, Algeria and Kenya</p>

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	<p>forestry, environmental observation (such as glaciers, snow cover, land cover, etc, which use space as well as in situ data. In addition, support is provided to activities such as GTOS and the Global Climate Observing System (GCOS) implementation plan which includes a remote sensing component (through CEOS).</p> <ul style="list-style-type: none"> • 2007 Thailand: Thailand has participated in the Regional Space Applications Programme for Sustainable Development (RESAP) by ESCAP. Its goals have evolved from awareness-raising and networking for capacity building to promoting regional cooperative mechanisms supporting practical uses of relevant information and communication tools for achieving internationally agreed objectives. <p>ASSESSMENT On-going activities by the primary actors.</p>	GISTDA, LAPAN
(b) Applying the results of space research to promote sustainable development		
<p><i>Paragraph 237</i></p> <p><u>Action</u></p> <p>Consider</p> <p>(a) developing and committing to a sustainable development agenda that can benefit from space technology, at a level commensurate with its capability and resources; and</p> <p>(b) undertaking measures towards the systematic collection, accurate analysis and proper management of space-acquired and in situ data as a starting point towards sustainable development.</p> <p><u>Primary Actor(s)</u></p> <p>Each Country</p>	<p>2010 Japan: JAXA has been promoting systematic space-based observation through CEOS, IGOS-P and GEO.</p> <p>FAO: FAO is continuing the development and distribution of Dynamic Atlas (DA) national and regional atlases. DA is a package of applications for display, managing and publishing on desktop systems and online of spatial, tabular and document information organized in “atlases” of data.</p> <p>INTERSPUTNIK: Intersputnik successfully implements international projects for the development of the telecommunications infrastructure all across the world including projects aimed at launching, deploying in the GSO and operating telecommunications satellites in the interests of developed and developing countries. Owing to its 38 years’ professional experience Intersputnik acts as an integrator providing consultations or implements international projects on a turn-key basis. Intersputnik’s subsidiary Intersputnik Holding, Ltd. helps Intersputnik to intensify and broaden its cooperation with the CIS countries, where Intersputnik Holding, Ltd. is doing business, specifically Russia, Kyrgyzstan</p>	Space-Communication Ltd. (Israel), Telekomunikasi Indonesia Tbk. (Indonesia), Isatel (Russia), Isatel (Kyrgyzstan), Isatel (Tadjikistan)

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	<p>and Tajikistan. For these countries, Intersputnik is an all-purpose partner offering telecommunications and broadcasting solutions of any scale and providing the whole range of advanced telecommunications services to government authorities, corporations and households.</p> <p>2009</p> <p>Algeria: Renewal of the Doctoral school in a national universities network in space technology and applications. The Doctoral School of space Technology and applications, established by the ASAL in 2007, opened its doors later that same year with 50 candidates selected through competitive examination in the following specialities: Space Instrumentation, Space Telecommunications and Information Technology, Image Processing and Geographic Information Systems, Precision Mechanics and Optics and Space Telecommunications. Renewal of the doctoral school for the first 04 specialities stated above, of which all the competitive examinations took place before 19 November 2008. Forty (40) candidates will be selected to begin the year 2008-2009.</p> <p>Nigeria: Establishment and implementation of space application projects in diverse areas of socio-economic development challenges including:</p> <ul style="list-style-type: none"> - Food security early warning researches in the area of cassava, wetland rice, e-agriculture etc - Integrated environmental management researches in the areas of gully erosion, mangrove ecosystems degradation, floods etc. - Space-based mapping/researches for infrastructural development including determination of DTM covering the whole country and settlement mapping towards the development of rail and road infrastructures - Preparation to launch of a very high resolution satellite, (Nigeriasat-2) in 2009 	<p>Ministries, Researches Centres, universities</p>

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	<p>FAO: FAO has continued the development and distribution of Dynamic Atlas (DA) national and regional atlases. DA is a package of applications for display, managing and publishing on desktop systems and online of spatial, tabular and document information organized in “atlases” of data. Dynamic Atlas has been the core technology for several Information Management Systems (IMS) developed by FAO for improved emergency coordination and overall decision-making. IMSs were developed for Myanmar, Cape Verde, Libya, Sierra Leone, Liberia, Seychelles, Burkina Faso and Burundi and will be further exported in other developing countries with the objective of providing instruments supporting planning of agricultural interventions, monitoring of “who is doing what, where (and when)” and assessing implementing organizations for the effectiveness in carrying on their agriculture-related relief projects. “Atlases” of data and information have also been created for Egypt, Jordan, Oman, Sudan, Somalia, Eritrea and Angola, the SADC region, Tunisia, Afghanistan, Sri Lanka and others. Training sessions on the installation and set-up of software, atlas design and management, and software use, have been organized and conducted locally, for example in Libya, Seychelles and Burkina Faso, as well as in FAO Headquarters.</p> <p>GTOS has also supported the development of numerous land cover products such as GLC2000, Globecover and World Atlas on Mangroves. It also supports and leads a number of international initiatives such as the Global Land Cover Network (GLCN) and the GEO task force on global land cover.</p> <p>WHO: The World Health Organization (WHO) is responding to environmental impacts on public health risks by strengthening surveillance and monitoring systems and by facilitating the integration of health and environmental information systems.</p> <p>As part of these efforts, WHO is collaborating with international partners in the environmental and health informatics domain to develop a suite of interoperable tools which will be supported by a standard-</p>	

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	<p>based 'OpenHealth' platform, to provide support and guidance to countries on the use of standards and tools for data collection, analysis, early warning and forecasting systems.</p> <p>The use of space technologies and increased access to satellite images by the health sector will enhance existing capabilities to monitor environmental changes, population dynamics, and resource capacities in areas which are susceptible to disease outbreaks and risks related to environmental changes. The systematic collection, accurate analysis and proper management of space-acquired and in situ data will facilitate immediate access to current and accurate data by decision-makers and enable rapid risk assessment and response to public health issues as they emerge.</p> <p>2008</p> <p>Algeria: - Algerian Space Agency has elaborated a national space programme (horizon 2020) to consider the requirements of several sectors such as agriculture, land planning, water resources in field of sustainable development.</p> <ul style="list-style-type: none"> - Creation of the graduate school in a national universities network in space technology and applications. - The ASAL plans to launch a project of designing and realizing an Algerian Atlas of solar deposit by using satellite imaging with all the involved national partners. - The project provides in the next 20 years, the production of 12% of renewable electricity, mostly from solar energy. <p>Argentina: (b) The Argentine National Space Program, implemented by CONAE (National Commission on Space Activities), provides for the development of space tools to acquire information that contribute to sustainable development.</p> <p>Chile: Chile has begun the process of acquiring an Earth observation satellite which will be widely used by the Chilean academic and scientific sector, the State administration at every level (ministries,</p>	<p>Ministries, Researches Centres, universities</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>departments, public services, public and private universities and research centres, regional governments, municipalities, etc.) and the whole private enterprise sector. In addition, a next-generation Earth station will go into operation from 2008, which, together with SNIT and other installed capacities, will make it possible to give priority to the utilization of space products such as images to conduct space research in the interests of sustainable national and global development.</p> <p>Japan: JAXA has been promoting systematic space-based observation through CEOS, IGOS-P and GEO.</p> <p>FAO: Has a number of initiatives, for example: GTOS supports national and international networks which undertake environmental observations based on in situ and satellite observations. GTOS also supports activities related to the terrestrial Essential Climate Variables (ECVs) as well as supporting the observational requirements of UNFCCC. GLCN has activities which are supported by methodologies such as the Land Cover Classification system (LCSS) to generate harmonized land cover products from the local to the global scale. Other FAO activities include: the Global Forest Resources Assessment (2010 assessment has a remote sensing component), climate change, bioenergy, vulnerable ecosystems (mountain and coast), disaster relief (eg. tsunami), etc. FAO also supports activities such as GLC2000 and Globecover.</p> <p>WHO: UNESCAP and the Asian Institute of Technology (AIT) have now joined the network of institutions that contribute to the development and update of the Second Administrative Level Boundaries data set (SALB). Through this efforts, the contact information of the National Mapping Agencies for more than 160 countries can now be downloaded from the project web site (http://www3.who.int/whosis/gis/salb/salb_contact.htm). This resource as well as the historic changes tables and GIS format maps also continue to represent an additional support to UN agencies and the international</p>	<p>CEOS, IGOS-P, GEO</p> <p>Numerous, including national government agencies, inter-governmental agencies, networks, etc.</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>community which needs to have access to geographic information in countries.</p> <p>2007</p> <p>Greece: Space technology can greatly contribute to sustainable development. Several institutes and Research Centres in Greece are already involved in the collection, analysis and evaluation on space-acquired and in situ data. These data are used by the public authorities.</p> <p>Pakistan:</p> <p>(a) Considering the requirements of sustainable development in the field of agriculture, coastal resources, water resources, forestry, urbanization and uplift of country, Pakistan has prepared 25 years space program including development of high resolution satellites and is committed to its realization.</p> <p>(b) Effects of space weather disturbances (solar flares, magnetic storm) and various Ionospheric anomalies e.g Spread-F, total blanking due to Es, bite-outs, short wave fadeouts, Travelling Ionospheric Disturbance etc. are monitored on HF communication using Ionospheric Sounders and Geomagnetic Observatory being operated by SUPARCO. The study helps in minimizing their negative effects on HF communication as usable frequencies can be computed for such events.</p> <p>ASSESSMENT</p> <p>On-going activities by the primary actors.</p>	<p>Ministries, Universities, NAGREF, NOA, FORTH, NCSR Demokritos, CRES, HCMR</p> <p>SUPARCO, WAPDA, Forest Department, Central Authority, Agricultural Department</p>
<p><i>Paragraph 238</i></p> <p><u>Action</u></p> <p>Take advantage of capacities of international entities active in environment to provide the intellectual leadership needed for building a strong scientific and technical foundation for the discussion of sustainable development</p>	<p>2010</p> <p>FAO: The United Nations Geographic Information Working Group (UNGIWG), is a network of professionals in cartography and geographic information science, working toward enhancing the United Nations Spatial Data Infrastructure's (UNSDI) capacity to achieve sustainable development. FAO will continue to implement the Open Geospatial Consortium interoperability standards. FAO makes its spatial data available through such standards accessible through the Web Map Service (WMS). WMS, together with the Web Coverage Service (WCS), serve the Advanced Real-Time Environmental Monitoring Information</p>	<p>UN entities involved in UNGIWG</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p>issues. Such international entities include the Office for Outer Space Affairs, UNEP, FAO, UNESCO and WMO, as well as non-governmental organizations such as COSPAR, the International Astronautical Federation and ISPRS <i>See also paras. 299-310.</i> <u>Primary Actor(s)</u> Member States</p>	<p>System (ARTEMIS) image archive. WMS and WCS will continue to be provided through the FAO GeoNetwork.</p> <p>2009 Iran (Islamic Republic of): Iran works closely with all organizations of the United Nations system, in particular UN-OOSA, COPUOS, the Group on Earth Observations (GEO), WMO, the International Civil Aviation Organization, the World Health Organization, UNESCO, UNDP, ITU and FAO. Also there is a wide area of cooperation with ISPRS, APSCC, AP-MCSTA and AARS. Also Iran has been actively cooperating in the establishment and operation of the Asia-Pacific Space Cooperation Organization (APSCO) as one of the founders.</p> <p>FAO: The United Nations Geographic Information Working Group (UNGIWG), is a network of professionals in cartography and geographic information science, working toward enhancing the United Nations Spatial Data Infrastructure's (UNSDI) capacity to achieve sustainable development. It will continue its work through its five task groups (previously six task groups). At the Seventh Plenary meeting in Chile (2006), it was decided to merge the previous Task Group 1 (International and administrative boundaries) and Task Group 2 (Core Geo-Database), which are highly related and complementary at different levels and scales, into one single Task Group named "Core Geo-Database". FAO and WHO are co-chairing the Task Group 1. The framework structure of UNGIWG includes two main areas: DATA and SERVICES, where the activities of the Task Groups will be focused. Both of these areas have a common ground dealing with Standards. FAO will continue to promote the creation of UNSDI through UNGIWG. FAO will continue to implement the Open Geospatial Consortium interoperability standards. FAO makes its spatial data available through such standards with over 100 layers currently accessible through the Web Map Service (WMS). WMS, together with the Web Coverage</p>	<p>UN entities involved in UNGIWG</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>Service (WCS), serve the Advanced Real-Time Environmental Monitoring Information System (ARTEMIS) image archive. WMS and WCS will continue to be provided through the FAO GeoNetwork.</p> <p>UNEP: In 2007, UNEP published the fourth volume of the Global Environment Outlook (GEO) series of assessment reports, “GEO-4, environment for development”, and launched the document at over 40 locations across the planet near-simultaneously. Aside from examining the status and trends of the global and regional environment (air, land, water and biodiversity), GEO-4 provides an in-depth look and analysis of human well-being as linked to the environment, future scenarios of development and policy options for decision-makers and the general public. It can be found on-line at http://www.unep.org/geo/geo4/media/. Furthermore, UNEP also published a series of regional, sub-regional, national as well as thematic environment assessments and early warnings in line with Its mission to “keep the environment under review”. At the regional level these included:</p> <ul style="list-style-type: none"> - The Carpathians Environment Outlook (KEO) assessment report; - Environment Outlook in the Amazonia - GEO Amazonia - Environment on the Edge 2006/07 - Global Glacier Changes: facts and figures - Hydropolitical Vulnerability and Resilience along International Waters: Latin America <p>Thematic assessments included “GEO for Deserts” and “Global Outlook for Ice & Snow”. As well, the 2008 UNEP Yearbook looked at emerging issues and threats to the world’s environment which have trans-boundary significance.</p> <p>2008</p> <p>Algeria: Organization of an international workshop on climate change in Africa with the collaboration of CRASTE (Union Nations) and the Association for climate and environment researches (ARCE). This workshop took place in el Djazair Hotel, Algiers, and it was focused on</p>	<p>CRASTE (UN), OOSA, EUMETSAT, ICG(GNSS), ARCE</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>the role of space technologies to strengthen the African adaptation capacities to the climate change. One of recommendations the workshop was to implement a local or a regional project related to the climate change in association with African entities and also with some data providers like EUMETSAT.</p> <p>Chile: Chile belongs to all the organizations of the United Nations system, in particular COPUOS, the Group on Earth Observations (GEO), WMO, the International Civil Aviation Organization, the World Health Organization, UNESCO and FAO. The new Chilean Space Agency, with its new institutional framework, is providing support to the Chilean academic and scientific community, which is already consulting with the Agency on the proper use of space technology. FAO: works closely with UNEP, UNESCO, WMO, ICSU, and many other agencies.</p> <p>2007</p> <p>Greece: There is a strong collaboration between Greek authorities and international organizations that provide valuable data leading to a scientific and technical foundation of sustainable development issues. Such international entities are UNEP, UNESCO and WMO.</p> <p>Pakistan:</p> <ul style="list-style-type: none"> - Collaboration with FAO in order to develop sustainability in agricultural production, a project carried out for Ministry of Food and Agriculture (MINFAL). - Participation in COSPAR, presenting scientific publications and presentations. - Participation in APMSCA's MS programs and short training courses. <p>Republic of Korea: Korea was chosen as a hosting country to hold the 2009 International Astronautical Conference (IAC) which is annually organized by International Astronautical Federation (IAF).</p>	<p>NOA, MAGREF, National Meteorological Service, Ministry of Culture, HCMR</p> <p>SUPARCO, FAO, MINFAL APMSCTA</p> <p>MOST, KARI, Daejeon City</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>Thailand: FAO organized the Regional Workshop on Information Management and Coordination Mechanisms of the Tsunami Emergency and Rehabilitation Operations on Agriculture, Fisheries and Forestry held during 30 October – 1 November 2006 at Amari Water Gate Hotel, Bangkok. During the workshop FAO arranged the visit to GISTDA programme for 30 participants from Maldives, Sri Lanka, Indonesia and Thailand. GISTDA offered 2 presentations for the visitors: “Activities on Disaster Management” and “Tsunami Disaster and Warning System Along the Andaman Sea (Thailand)”. Thailand will exhibit during the 44th session of Scientific and Technical Subcommittee with the theme of “Thailand’s Contribution to Earth Environment from Its Space-Related Activities”.</p> <p>ASSESSMENT On-going activities by the primary actors.</p>	
(c) Developing a comprehensive, worldwide environmental monitoring strategy		
<p><i>Paragraph 243</i> <u>Action</u> Coordinate implementation of the work plan of Action Team on the Environmental Monitoring Strategy at the global level. (The work plan consists of the following four technical components: (i) networking and knowledge-sharing; (ii) capacity-building of national and regional organizations; (iii) regional systems for collection and distribution of information; and (iv) space technology applications for environmental monitoring. Each of these components will consist of a set of outputs, which will be delivered through specific activities.)</p>	<p>2009 Nigeria: Nigeria is providing Nigériasat-1 data free of charge to government and tertiary institutions for environmental-related research. Nigeria is also providing Nigériasat-1 data for global management of disaster as part of the DMC activities and in line with the overall objectives of the UN-SPIDER.</p> <p>FAO: GTOS is working on the remote sensing survey of the global forest resources assessment (FRA) 2010 of the Food and Agriculture Organization of the United Nations (FAO). GTOS is continuing with the assessment and development of international standards for the 13 terrestrial essential climate variables (which include land cover and biomass) and the development of an international terrestrial framework mechanism, which was specifically requested by UNFCCC SBSTA and COP (www.fao.org/gtos/pubs.html). FAO and UNEP have jointly initiated the Global Land Cover Network (GLCN). GLCN is a global collaboration to develop a fully harmonized approach to make accessible reliable and comparable baseline land cover data required by local, national and international initiatives.</p>	<p>UNEP, UNESCO, WMO and ICSU</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p><u>Primary Actor(s)</u> COPUOS with OOSA</p> <p><u>Action</u> Invite WMO, the Intergovernmental Oceanographic Commission of UNESCO, CEOS and other members of IGOS-P, as well as the entities involved in implementing GMES initiative and the ad hoc Group on Earth Observations to implement the work plan.</p> <p><u>Primary Actor(s)</u> COPUOS (through OOSA)</p>	<p>The Terrestrial Carbon Observations (TCO) Panel of GTOS has undertaken relevant activities, such as participating in CarboAfrica, including the development of improved methodologies and tools to gather data and observations.</p> <p>FAO has financed the development of a number of software programs that currently support its activities: Dynamic Atlas, and in particular its freeware component Dynamic Maps, is used to disseminate data and information, including GIS datasets, in the framework of the GTOS, the GLCN and other FAO activities.</p> <p>These activities are coordinated with GEO.</p> <p>UNEP: UNEP continues to participate in the inter-governmental process Group on Earth Observations (GEO) and Its Global Earth Observation System of Systems (GEOSS), including attending the GEO-IV Plenary and Ministerial meeting held in Cape Town. South Africa, in November 2007. UNEP is also a member of the Capacity Building, User Interface and Science and Technology Committees, and a Task Leader under the Capacity Building Committee. UNEP continues to sponsor, and actively participates in, the Global Terrestrial Observing System (GTOS); the Global Climate Observing System (GCOS), and the Global Oceans Observing System (GOOS).</p> <p>UNEP also participates in the UN Geographic Information Working Group (UNGIWG) meetings and the annual Inter-agency Meeting on Outer Space Activities convened by the UNOOSA Secretariat to better coordinate space-related activities and outputs among UN agencies, organizations and affiliated programmes.</p> <p>2008</p> <p>Algeria: providing ALSAT-1 data to local and foreign centres in order to perform several applications related to the environment.</p> <p>Argentina: Argentina is a member of both CEOS and GEO, and contributes the information provided by the satellite missions of the</p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>National Space Program.</p> <p>Chile: Yes. Chile belongs to GEO. It has formed the GEO Chile Group and is supporting the establishment of the GEO Regional Group.</p> <p>FAO: provides capacity building options to its member countries, including in relevant areas such as geoinformation, remote sensing, mapping and the development of environmental databases and management systems. Geonetwork is an example of data sharing. GLCN and GTOS support a number of environmental observation networks. FAO is also co-Chair of the land theme of IGOS and also supports the IGOS themes (e.g. carbon theme). In addition, FAO is supporting the Group on Earth Observations in the development and implementation of GEOSS and is also supporting the observational requirements of international conventions such as the UNFCCC.</p> <p>2007</p> <p>Pakistan:</p> <ul style="list-style-type: none"> - Global participation of Aerosol Robotic Network program (Aeronet) is being pursued under SUPARCO-IST-NASA collaborative program. Sun photometer is being operated and data is submitted to online data base of Aeronet data base on every day basis. - Arranged training courses for professionals of various organizations involved in environmental research, like IUCN, PFI, and PARD in Pakistan. - Satellite Remote Sensing data is being provided to local and foreign agencies regarding their various space related applications for environmental monitoring activities. <p>ASSESSMENT</p> <p>Final report of the Action Team for the Development of a Comprehensive Worldwide Environmental Monitoring Strategy (Action Team 1) (A/AC.105/C.1/L.275). On-going activities by Action Team 1.</p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>The Group on Earth Observations (GEO), launched in response to calls for action by the 2002 World Summit on Sustainable Development and by the G8 (Group of Eight) leading industrialized countries, is coordinating efforts to build a Global Earth Observation System of Systems (GEOSS). GEOSS addresses nine “Societal Benefit Areas”: disasters, health, energy, climate, water, weather, ecosystems, agriculture and biodiversity. (http://www.earthobservations.org). Membership in GEO is open to all member States of the United Nations and to the European Commission. Current Members of GEO include 72 countries and the European Commission, as well as 52 Participating Organizations, among them all relevant entities of the United Nations system. GEO-related activities of the United Nations entities are also discussed at the Inter-Agency Meeting on Outer Space Activities. In accordance with the agreement reached by COPUOS at its fiftieth session, and endorsed by the General Assembly in its resolution 62/217, the Director of the secretariat of the Group on Earth Observation (GEO) will annually report to the Subcommittee on progress made in the implementation of the ten-year implementation plan for GEOSS.</p> <p><u>Could be considered implemented.</u></p>	
<p><i>Paragraph 244</i> <u>Action</u> Establish first geo-information centre. <u>Primary Actor(s)</u> Member States that chaired the Action Team (Iran, Russian Federation and Syria)</p>	<p><u>2010</u> FAO: www.fao.org/geonetwork</p> <p><u>2009</u> Algeria:</p> <ul style="list-style-type: none"> - Within the framework of the preventive actions related to locust control, Alsat-1 data of 2008 were used for analysis of the geological conditions of the regions of reproduction of desert locust in Tamanrasset city. - National geological cartography at 1:2000000 scale, by using Alsat-1 imagery. - Implementation of a Geographic Information System (GIS) for the monitoring of urban planning instruments and housing programs. - El Bayadh City Cadastre, by space cartography. 	<ul style="list-style-type: none"> - ASAL, Ministry of Agriculture and Rural Development (MADR) / Plant Protection Department (DPVCT) -ASAL, National Agency of Geology and Mining Control (ANGCM). - ASAL, Ministry of Housing and Urban Planning (MHUP). - ASAL, Ministry of Finance

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>- Update of the desertification sensitivity map by using satellite imagery.</p> <p>-Space maps covering: * Zones of Tourist Expansion (ZTE) of East and West of Algiers, and implementation of a GIS for the management of the possibility of extending such places of interest.</p> <p>* Coastal zones of west Algiers for purposes of land bases research for tourism investment.</p> <p>* All of Sonatrach production industrial sites for environmental risk assessment.</p> <p>Nigeria: Nigeria is currently developing a design and architecture for a National Geo-spatial Data Infrastructure</p> <p><u>2008</u> Algeria: A space application centre is currently underway by the ASAL.</p> <p>Chile: Chile has set up an interministerial council named the National Territorial Information Coordination System, which is affiliated to the Global Spatial Data Infrastructure that meets annually in various countries. In 2007, the meeting was held in Santiago de Chile, hosted by the Military Geographical Institute.</p> <p>FAO: Geonetwork: http://geonetwork-opensource.org/</p> <p><u>2007</u> Pakistan: SUPARCO is establishing a National Centre for Remote Sensing and GIS at Karachi.</p> <p><u>ASSESSMENT</u> On-going activities by the primary actors.</p>	<p>(MF) / National Cadastre Agency (ANC).</p> <p>- ASAL, MADR / General Directorate of Forestry (DGF).</p> <p>- ASAL, Ministry of Land Use Planning, Environment and Tourism (MATET)/ National Tourist. Development Agency (ANDT).</p> <p>-ASAL, MATET</p> <p>- ASAL, Sonatrach, Ministry of Energy and Mining (MEM).</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p>(d) Improving the management of the Earth's natural resources</p> <p><i>Paragraph 247</i></p> <p><u>Action</u></p> <p>Articulate, through pilot and demonstration projects, the exact information needs of all stakeholders involved at all levels.</p> <p>Take advantage of existing capacity-building opportunities and the wealth of Earth observation data, interpretation and analysis tools that are available for specialized training to develop the necessary human resources</p> <p><i>See also paras. 299-310.</i></p> <p><u>Primary Actor(s)</u></p> <p>All States using or planning to use Earth observations on an operational basis in the management of natural resources</p>	<p>2009</p> <p>Algeria:</p> <p>- A study day was held in September 2007 at the ASAL headquarters, dedicated to the presentation of a project developed about El Bayadh City on the implementation of the steppe and Saharan Cadastre by space-cartography. This study day was followed in July 2008, by a meeting on the preparation of the cadastre project of steppe and Saharan areas of 21 cities, by space cartography.</p> <p>- Organization of a meeting in November 2007, at the office of the Civil Protection Instruction and Intervention Unit, on the project "Alert Unit of Natural Disasters by Integration of Space Imagery and Geographic Information Systems".</p> <p>- Organization of a meeting in February 2008 at the ASAL headquarters on the use of GPS for the inspection of hydraulic works, the meeting was devoted to the presentation of the contribution of Global Positioning System (GPS) technologies to the dam monitoring and bathymetry as well as to the knowledge on the watersheds environment.</p> <p>- Organization of a meeting ASAL - DGF, at the forest conservation office of Tlemcen, to formalize the beginning of the project on the implementation of the GIS prototype for the characterization of the forest heritage and the prevention of forest fires in February 2008.</p>	<p>ASAL, MF, General Directorate of National Domain (DGDN), MF/National Cadastre Agency (ANC), Institute of Cartography and Remote Sensing (INCT).</p> <p>ASAL, DGF, General Directorate for Civil Protection (DGPC), Centre for Research in Astronomy, Astrophysics and Geophysics (CRAAG), National Agency of Hydraulic Resources (ANRH), National Institute for Plant Protection (INPV), National Meteorological Office (ONM), INCT.</p> <p>ASAL, Water Resources Ministry (MRE), National Agency for Dams and Water Transfers (ANBT).</p> <p>ASAL, MADR/DGF.</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>- Organization in March 2008 at the headquarters of the Ministry of Land Use Planning, Environment and Tourism, a workshop on changes, it was dedicated to vulnerability studies and greenhouse gases.</p> <p>- Organization of a workshop in April 2008 at the headquarters of the National Marine Science and Coastal Management Institute on Remote Sensing Applications in Marine Science.</p> <p>- Organization in May 2008 of a workshop ASAL-OSS, gathering all the partners concerned for setting up the National Environmental Monitoring System (DOSE). The workshop was followed by a training on the monitoring – assessment and its place in the Process of The National Action Plan for the Fight Against Desertification (PAN/LCD) and devices necessary for its implementation.</p> <p>- ASAL and the Ministry of Fishing and Halieutic Resources (MPRH) organized a meeting in 2008, with the aim of defining and dimensioning a project on the contribution of GIS and space imagery to the detection and location of shoals tuna for the exploitation of such halieutic resources.</p> <p>- On the occasion of the space Algerian-French cooperation study days, collectively organized by the ASAL and CNES in Algiers, 10 and 11 June 2008, works permitted to define axes to obtain by the end of 2008 the cooperative teams work plan in the fields of seismic risk and</p>	<p>ASAL, MATET, Sonatrach, Houari Boumediene University of Science and Technology (USTHB), Ministries and Scientific Institutions concerned with Climate Change.</p> <p>ASAL, National Marine Science and Coastal Management Institute (ISMAL), National Universities, Scientific Organizations.</p> <p>National Centre of Space Studies (CNES-France)</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>hyperspectral imagery. As regards the seismic risk study, it will be on identifying a project focused on the Algiers area by analysing the seismic hazard using space technologies. For As for the hyperspectral technology study, it will be about focusing on 3 fields (water, mining and oil resources in Tindouf, coastal zones of the Mediterranean basin and agriculture in Tiaret and Sidi Bel Abbès).</p> <p>- Organization of a meeting ASAL-Ministry of Water Resources, in December 2008, on the contribution of space technology to the sector of water resources.</p> <p>- Participation of the ASAL in a thematic exhibition organized outside the African Conference of Ministers in Charge of Environment on Climate Change, which was held in Algiers on 19 and 20 November 2008, aimed at developing and promoting an African Common Position that enable all African countries to take an active part in the process of negotiations on post-2012 climate change.</p> <p>Austria: Austrian stakeholders play a significant role in the GMES process since the beginning, especially in activities related to land monitoring and emergency response. At the international level, the engagement will continue in the EU 7th Framework Programme activities to include also the atmosphere and services related to security. Within the Austrian Space Programme ASAP, since 2007 special emphasis has placed on the national GMES initiative, focusing on making use of GMES services for applications in Austria, such as land cover and agriculture.</p> <p>China: Data by the China-Brazil Earth Resources Satellite has been provided to public bodies and scientific research institutions under a charge-free policy, resulting in a substantial expansion of scope of application. Over 220, 000 pieces of multi-image data have hitherto been allocated to over 1,500 users, which has yielded marked social and</p>	<p>ASAL, MRE, ANBT, ANRH, MADR, ABH (Hydrographic Basin Agency).</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>economic benefits. On 24 January 2008, the in-orbit hand-over of No 1 China-Brazil 02B Resource Satellite was successfully completed. The images provided by the satellite continue to be used in crop production, environment protection and monitoring, urban planning and survey of state land resources. China and Brazil are continuing their efforts to transmit the application of the resource satellite to Africa.</p> <p>Nigeria: Nigeria has begun the revision of land use/land cover mapping at a scale of 1:100,000 using predominantly data from Nigeriasat-1. This includes the mapping and monitoring of illegal and artisan mining sites in Nigeria</p> <p>2008</p> <p>Argentina: is active in the organization of capacity building activities for the management of natural resources using space information, in the framework of the Gulich Institute for Advanced Space Studies of CONAE, in Cordoba, and in cooperation with OOSA, and other space agencies.</p> <p>Chile: Chile is engaged in acquiring a high-resolution (approx. 2 metres) Earth observation satellite, which, together with the operations of the other Earth station in the Aerial Mapping Service, will manifestly improve the management of the country's natural resources and make it possible to raise the level of international space cooperation.</p> <p>Turkey: TUBITAK Space Technologies Research Institute is Turkish Government entity and developing RASAT optical earth observation satellite for the scientific and civilian purposes. Estimated launch date is 3rd Q of 2009. Satellite is planned to have 7.5m pancromatic, 15m multispectral resolutions.</p> <p>FAO: is undertaking a number of pilot activities to develop products on</p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>bioenergy potentials and risks (such as food security), deforestation, environmental management, carbon sinks and fluxes, ecosystem services, etc.</p> <p><u>2007</u></p> <p>Pakistan:</p> <ol style="list-style-type: none"> 1. Officials from user organizations and students from educational institutions at national as well as international level are being trained to become well versed with the applications of satellite remote sensing. 2. Pilot projects have been conducted addressing the exact requirements of the use. 3. A conference of all stake-holders was organized to compile user requirements of the low earth remote sensing satellite program of Pakistan. 4. Satellite Ground Station at Islamabad, is being used for acquisition, processing and providing data to local and foreign users. 5. Satellite Remote Sensing data products were provided to Sindh Local Authority for exploration and extract of coal sources in the province of Sindh-Pakistan. 6. Taking active part in capacity building in the field of RS/GIS techniques to develop the necessary human resources. <p>Republic of Korea: Korea Aerospace Research Institute (KARI) successfully launched an Earth observation satellite named KOMPSAT-II, funded by the Ministry of Science and Technology (MOST), on July 29, 2006. This satellite will play a pivotal role in the management of the Earth's natural resources.</p> <p><u>ASSESSMENT</u> On-going activities by the primary actors.</p>	<p>SUPARCO, ISNET, local users, Educational institutions, Space Engineering, Italy, Logitech, Pakistan</p> <p>MOST, KARI</p>
<p><i>Paragraph 248</i> <u>Action</u> To promote operational use of Earth</p>	<p><u>2010</u> FAO: FAO and partners will continue to participate in the Global Terrestrial Observing System (GTOS) with the GTOS secretariat, which is hosted by the FAO. (see www.fao.org/gtos). Key activities of GTOS</p>	<p>UNEP, WMO, UNESCO, national agencies</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p>observations and its role in managing natural resources:</p> <p>(a) Maintain and disseminate a compilation of best practices in use of Earth observation data in natural resource management, building on compilation developed by Action Team on Management of Natural Resources and additional information from members of the Committee; and</p> <p>(b) Organize specialized training courses on operational use of Earth observations, in cooperation with regional centres</p> <p><u>Primary Actor(s)</u> OOSA</p>	<p>include the Terrestrial Ecosystem Monitoring Sites (TEMS) database, the Terrestrial Carbon Observation project, the Global Terrestrial Network and the Net Primary Productivity projects. The GTOS Secretariat's primary function is towards standards-setting, communications and networking. By hosting the Secretariat, FAO is enabling and facilitating geospatial information development and monitoring in a variety of domains that rightly belong to its mandate, contributing towards enhancing knowledge, understanding and response to a number of challenges, such as climate change issues as they relate to the food and agriculture sector.</p> <p>The Land Resource Information Management System (LRIMS) is a comprehensive GIS-based software for modeling land-responses to agricultural policies, aimed at supporting land evaluation and land-use planning, using FAO agro-environmental zoning methodology. LRIMS is the land resource information management system toolbox. LRIMS is an extension of ArcGIS 9.x and requires Spatial Analyst extension. The main objective of LRIMS is to provide tools aimed at strengthening the national capacity to manage land resources, implement agricultural planning, strengthen sustainable management practices and improve conservation efforts. LRIMS is a tool that assists land management experts and decision-makers with the formulation of policies, assessment, monitoring and reporting of land resources to plan and enhance sustainable development. LRIMS offers a suite of user-friendly information management and analysis tools, organized into a toolbox, and under one processing environment. It provides access to organizational data and contains query, analysis and map-building capabilities. LRIMS assists decision-makers in the assessment of the physical/socio-economic conditions of the land, and in evaluating benefits and constraints of agricultural development options, through analysis of the multi-disciplinary database information and simulation of alternative scenarios, including climate change adaptation and mitigation strategies. LRIMS includes also a land parcels module integrated into the package. LRIMS application is developed by FAO. It is implemented in</p> <p>2009 Algeria: Project of a constellation of earth observation satellites, for the management of the African resources and the environment 'ARMC'. A Declaration of Intent has been signed by Algerian, Nigerian and South-</p>	<p>South Africa, Nigeria and Kenya</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>African governmental representatives during the UN-COPUOS meeting in Vienna on the 19th June 2008.</p> <p>A Memorandum of Agreement is expected to be signed during the next UN-COPUOS meeting in Vienna in June 2009.</p> <p>The 3rd African Leadership Conference on space technology and its applications for sustainable development for Africa, to be organized at Algiers in November 2009. This biannual conference follows the two previous conference organized in Nigeria and South Africa. The purpose is to deliberate the role of space science and technology in Africa's present and future development with emphasis on knowledge and skills development through capacity building, knowledge sharing, joint participation in mutually beneficial projects, and bilateral and international cooperation.</p> <p>Nigeria: The development of the African Resource and Environmental Management Satellite (ARMS) in collaboration with Algeria, South Africa and Kenya.</p> <p>FAO: FAO, ICSU, UNEP, UNESCO and WMO will continue to participate in the Global Terrestrial Observing System (GTOS) with the GTOS secretariat, which is hosted by the FAO Environment Assessment and Management Unit (NRCE) of FAO (see www.fao.org/gtos). Key activities of GTOS include the Terrestrial Ecosystem Monitoring Sites (TEMS) database, the Terrestrial Carbon Observation project, the Global Terrestrial Network and the Net Primary Productivity projects. The GTOS Secretariat's primary function is towards standards-setting, communications and networking. By hosting the Secretariat, FAO is enabling and facilitating geospatial information development and monitoring in a variety of domains that rightly belong to its mandate, contributing towards enhancing knowledge, understanding and response to a number of challenges, such as climate change issues as they relate to the food and agriculture sector.</p> <p>The Land Resource Information Management System (LRIMS) is a comprehensive GIS-based software for modeling land-responses to agricultural policies, aimed at supporting land evaluation and land-use planning, using FAO agro-environmental zoning methodology. LRIMS is the land resource information management system toolbox. LRIMS is</p>	<p>ICSU, UNEP, UNESCO and WMO</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>an extension of ArcGIS 9.x and requires Spatial Analyst extension. The main objective of LRIMS is to provide tools aimed at strengthening the national capacity to manage land resources, implement agricultural planning, strengthen sustainable management practices and improve conservation efforts. LRIMS is a tool that assists land management experts and decision-makers with the formulation of policies, assessment, monitoring and reporting of land resources to plan and enhance sustainable development. LRIMS offers a suite of user-friendly information management and analysis tools, organized into a toolbox, and under one processing environment. It provides access to organizational data and contains query, analysis and map-building capabilities. LRIMS assists decision-makers in the assessment of the physical/socio-economic conditions of the land, and in evaluating benefits and constraints of agricultural development options, through analysis of the multi-disciplinary database information and simulation of alternative scenarios, including climate change adaptation and mitigation strategies. LRIMS application is developed by FAO. It is implemented in Libya and the Seychelles.</p> <p>UNEP: UNEP continues to apply space technology and remotely-sensed data from a variety of sources to map and monitor the earth's surface, particularly changing land cover patterns and practices. With the publication of the ground-breaking "One Planet, Many People — Atlas of our Changing Environment", and in 2008 the "Africa Atlas of our Changing Environment", UNEP has provided a clear window into the massive scale of environmental change taking place across the planet and in all countries of the African continent, in the process raising awareness and understanding of how and why environmental changes are taking place. Monitoring of such environmental "hot spots" provides the information needed by decision-makers to slow or halt the ongoing degradation of the Earth's air, land, water and biodiversity. In addition, a number of other regions (aside from Africa) and countries have now begun the process of developing such "Atlases of Change", showing that UNEP's work has catalytic value in a wide number of regions/countries around the world.</p> <p>See:</p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p data-bbox="891 193 1653 220">http://www.unep.org/publications/search/pub_details_s.asp?id=3993.</p> <p data-bbox="891 248 949 272">2008</p> <p data-bbox="891 277 1653 357">Algeria: Projects of a constellation of earth observation satellites, for the management of the African resources and the environment ‘ARMS’.</p> <p data-bbox="891 389 1653 612">FAO: Manuals, methodologies, software and training workshops have been organized at the regional and national level (e.g. through GLCN) to promote data acquisition, interpretation, archiving and use and dissemination of the data. FAO undertakes systematic observations and promoting the adoption of standards and common methodologies. For example, FRA 2010. In addition, FAO supports the GEOSS process and contributes to the development of the agricultural monitoring strategy as well as the IGOS land theme.</p> <p data-bbox="891 644 949 668">2007</p> <p data-bbox="891 673 994 697">Pakistan:</p> <ol data-bbox="891 702 1653 1082" style="list-style-type: none"> 1. UN/Pakistan Regional Workshop on “Monitoring and Protection of the Natural Environment” held at Islamabad from 30th August - 4th September 2004. 2. ISNET workshops and seminars and training courses during the period. 3. Training courses conducted on the subject. University PhD students enrolled to conduct research on drought assessment and flood risk assessment. 4. SRS data products are provided to National Highway Authority for alignment monitoring studies of National highways, bridges and underpasses. Utility of these technologies has brought a tremendous change in design of highways. <p data-bbox="891 1114 1653 1248">Republic of Korea: A Remote Sensing Training Course was held at Korea Aerospace Research Institute (KARI) in Daejeon, Korea from October 25th to 27th 2006. The course was organized by Korea Aerospace Research Institute (KARI), Korean Society of Remote Sensing (KSRS), European Space Agency (ESA) and</p>	<p data-bbox="1675 293 1957 349">Afrique du Sud, Nigeria et Kenya</p> <p data-bbox="1675 405 1989 528">Numerous, including universities, government institutions, and international agencies</p> <p data-bbox="1675 708 1935 732">UN, SUPARCO, ISNET</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>Intergovernmental Oceanographic Commission (IOC) of UNESCO. It consisted of 2 main branches: SAR and Remote Sensing Oceanography. About 40 participants from 26 organizations of 15 countries attended the Course.</p> <p><u>ASSESSMENT</u></p> <p>Final Report of the Action Team on the Management of Natural Resources (A/AC.105/C.1/2004/CRP.12).</p> <p>These mandated activities are on-going and a priority area of the United Nations Programme on Space Applications (PSA). Some of the activities organized by PSA in 2008 are:</p> <ul style="list-style-type: none"> - United Nations/UNESCO/Saudi Arabia International Conference on the Use of Space Technology for Water Management, Riyadh, Saudi Arabia, 12-16 April 2008; - United Nations/Indonesia Regional Workshop on Integrated Space Technology Applications to Water Resources Management, Environmental Protection and Disaster Vulnerability Mitigation, Jakarta, Indonesia, 7-11 July 2008; - United Nations/International Astronautical Federation Workshop on Integrated Space Technology Applications – Support to Managing Potentially Hazardous Environmental Events, Glasgow, Scotland, UK, 26-27 September 2008; - United Nations/Kenya/ESA Regional Workshop on Integrated Space Technology Applications for Monitoring Climate Change Impact on Agricultural Development and Food Security, Nairobi, Kenya, 1-5 December 2008 <p>Regarding (a) the regular maintenance of those best practices (collecting, compiling and updating the information for best practices) would require minimal voluntary financial contributions to cover the cost of two to three months of short-term contractual work. Regarding (b), while the Office could cover the expenses of a small number of trainees from its fellowship budget, additional voluntary financial contributions would be required to cover the air travel and living expenses for others. The Office would also need to reach agreement with each of the centres on the cost implications for the centres.</p> <p><u>On-going activities by OOSA. Could therefore be considered implemented.</u></p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
2. DEVELOPING COORDINATED, GLOBAL SPACE CAPABILITIES		
(a) Maximizing the benefits of existing space capabilities for disaster management		
<p><i>Paragraph 256</i></p> <p><u>Action</u></p> <p>Conduct study on possibility of creating an international entity to provide for coordination and means of optimizing effectiveness of space-based services for use in disaster management by fully utilizing existing and planned space- and ground-based assets and infrastructure and covering all phases of disaster management.</p> <p>(The study should (a) define the key functions of a possible disaster management international space coordination entity; (b) describe the benefits that it would provide to the disaster management community; (c) define the scope and nature of the entity (for example, intergovernmental or non-governmental); and (d) propose an implementation plan that would include details of the estimated cost of the establishment and operation of such an entity and possible sources of funding (that is, voluntary or assessed contributions), as well as the intended use of the funds. The study should also examine the options of providing sustainable resources for applying space technology in support of disaster</p>	<p>2009</p> <p>Austria: A strong cooperation exists between OOSA and Austria in setting up UN-SPIDER. The cooperation is of financial and topical nature. Furthermore, specific projects in the Austrian Space Programme address areas relevant UN-SPIDER. The cooperation will continue in 2009 and beyond.</p> <p>Iran (Islamic Republic of):</p> <ul style="list-style-type: none"> - Iranian Space Agency has been actively cooperating in the study for creation of DMISCO which led to initiation of UN-SPIDER - Within the framework of the program SPIDER, Iranian Space Agency established a Regional Support Office. <p>Nigeria: Nigeria has indicated interest in hosting the sub-regional hub for the implementation of the UN-SPIDER initiative. The National Space Research and Development Agency is also collaborating with the National Emergency Management Agency, in the International Charter Programmes and Operations as a member of the International Charter.</p> <p>2008</p> <p>Algeria:</p> <ul style="list-style-type: none"> - Within the framework of the program SPIDER, Algeria proposed to establish a regional entity throughout the sub-region of North Africa. - Implementation of a national alert system of natural disaster based on the GIS and the space technologies with the collaboration of the national Civil Protection and data providers. <p>The implementation of this system was the principal issue of the seminar organized by the Algerian Space Agency in May 2005 with the collaboration of OOSA.</p>	<p>CRTS (Maroc) ARS (Soudan)</p> <ul style="list-style-type: none"> - Ministry of Interior - DGPC, - INCT, - CTS, - INPV, - CRAAG, - INPV

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p>management and for building the capacity of civil protection authorities to use space technology. Final report submitted by Action Team provides basis for conducting such a study.) <i>See also operative paragraph 9 of General Assembly Resolution 59/2</i></p> <p><u>Primary Actor(s)</u> Ad hoc expert group, with experts to be provided by interested member States and relevant international organizations, including United Nations system entities in disaster management (para.257); OOSA to coordinate organization of work involved in preparing study; member States to provide support for study through voluntary contributions (para 257)</p>	<p>A group of expert will be set to lead this project.</p> <p><u>2007</u> Republic of Korea: UN-ESCAP ICC (Intergovernmental Consultative Committee) on Regional Space Applications Programme (RESAP) was held in Korea Aerospace Research Institute (KARI) with representatives from 13 Asia-Pacific countries attending. They exchanged various kinds of views on disaster management and made a draft Declaration of the Third Ministerial Conference 2007.</p> <p><u>ASSESSMENT</u> The study was conducted and considered by the Scientific and Technical Subcommittee, and subsequently by the Committee and resulted in the creation of UN-SPIDER (A/AC.105/C.1/L.285 and Add.1 “Study on the possibility of creating an international entity to provide for coordination and the means of realistically optimizing the effectiveness of space-based services for use in disaster management”).</p> <p><u>Could be considered implemented.</u></p>	<p>MOST, KARI</p>
<p><i>Paragraph 258</i> Action Make cash or in-kind voluntary contributions for preparation of study (Work on study could commence as soon as sufficient voluntary contributions received. OOSA to communicate to member States date of commencement of work and provide information on organization of work, including list of experts, some of whom may work on a full-time basis at facilities provided by Office or by interested United Nations entity (para. 259))</p>	<p><u>ASSESSMENT</u> Interested Governments, Intergovernmental and Non-Governmental Organizations provided the services of experts to prepare the study.</p> <p><u>Could be considered implemented.</u></p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p>See also operative paragraph 10 of General Assembly Resolution 59/2</p> <p><u>Primary Actor(s)</u> Interested Member States to communicate to OOSA</p>		
<p><i>Paragraph 260</i></p> <p><u>Action</u> Report to S&T on status of preparation of study, indicate whether study could be completed in time for submission to Committee at 48th session and level of voluntary contributions received. Submit to S&T for review and approval, draft terms of reference for ad hoc expert group and propose how study might be reviewed by COPUOS and its subsidiary bodies for a decision to be made by COPUOS.</p> <p><u>Primary Actor(s)</u> OOSA</p> <p><u>Action</u> Provide further guidance on preparation of study on basis of OOSA report.</p> <p><u>Primary Actor(s)</u> Scientific and Technical Subcommittee</p>	<p><u>ASSESSMENT</u> See A/AC.105/C.1/2005/CRP.17.</p> <p><u>Could be considered implemented.</u></p>	
<p><i>Paragraph 261</i></p> <p><u>Action</u> Develop case history of benefits of using space technologies for disaster management and establish sample product catalogue.</p>	<p><u>2009</u></p> <p>Austria: Within the Austrian Space Programme ASAP, various projects have been performed that address the use of space technology in support of disaster management. These demonstration projects show case studies involving the participation of rescue teams and local authorities. The projects address the implementation of a remote sensing based centre for</p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p><u>Primary Actor(s)</u> Ad hoc expert group</p> <p><u>Action</u> Also study possibility of establishing pages, with use of voluntary contributions, on web site of OOSA for improved access to Earth observation data archives.</p> <p><u>Primary Actor(s)</u> Ad hoc expert group, with OOSA</p>	<p>crisis data to support crisis management, risk assessment and natural hazard monitoring, and the added value of remote sensing data to assess potential damages and economic losses due to natural disasters.</p> <p>Iran (Islamic Republic of): Designed, implemented and hosted a web site to share the expertise, data and knowledge of the regional expert institutions and individuals.</p> <p>2008</p> <p>Algeria: Establishment of an Atlas of forest fires identified by the Algerian satellite earth observation AISAT-1 over the period of 2003-2007.</p> <p>Turkey: Information and data gathered about this subject should be distributed more effective for the benefits of the member states and also minimize the response time during disasters.</p> <p>WHO: The first volume of the WHO e-atlas of disaster risk for the Eastern Mediterranean Region, Exposure to Natural Hazards, will be available in the coming month under the form of a DVD containing country level and regional maps as well as all the material, data and protocols, used to create them. Copies of this DVD can be requested by sending an email to the Emergency Preparedness & Humanitarian Action (EHA) unit at WHO EMRO (eha@emro.who.int).</p> <p>2007</p> <p>Pakistan: SUPARCO has its own Satellite Ground Station with a team of professionals in remote sensing and GIS. This technology was effectively used in the October 2005 earthquake for relief and rescue operations. Studies on disaster management have been conducted to monitor and make damage assessment in areas affected by flood, Earth quake, etc. A product catalogue has been generated from their findings.</p> <p>ASSESSMENT Covered by the UN-SPIDER programme.</p>	<p>SUPARCO, relevant local user agencies</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	See http://www.unspider.org <u>Could be considered implemented.</u>	
<p><i>Paragraph 262</i> <u>Action</u> Consider (a) allocating a portion of disaster-management-related budget or funds to using space technology for disaster management; and (b) identifying single points of contact to focus their internal disaster management efforts and to provide liaison with external efforts with respect to use of space technology for disaster management. <u>Primary Actor(s)</u> Governments and international organizations</p>	<p>2009 Algeria: - ASAL in collaboration with the General Directorate for Civil Protection (DGPC), has initiated the International Charter «Space and Major Disasters» just after the floods that affected Ghardaïa city. Floods that have affected the region of Ghardaïa, between 29 September and 01 October 2008, caused significant damage: 43 dead and 84 injured persons. Works carried out by the Algerian Space Agency, in association with relevant departments (Interior and Local Government, Agriculture and Rural Development, Town Planning and Housing, Water Resources...) are based on the use of medium- and high-resolution imagery. The works consist in: - A comprehensive analysis of the state of zones affected by the floods, through the analysis of medium-resolution (« SPOT 4 » à 20 m) permitting a conception of the scale of the disaster, and this on the basis of images before and after the floods. - A detailed analysis based on high-resolution images (« Worldview » à 50 cm), before and after the floods. The examined regions affected 09 disaster areas of Ghardaïa City (Ghardaia, Dhayat bendhahoua, Bounoura, El Ateuf, Berriane, Guerrara, Metlili, Sebseb and zelfana). - A danger levels cartography on a scale of 1:5000 and 1:2000 of the disaster areas, based on high-resolution images and on a Digital Terrain Model enhanced by recent data GPS. The cartographic materials have been field validated and are used by the local authority as: - Reference materials for re-housing the stricken families, - Base materials for the future integrated development works of the M'Zab valley.</p>	<p>ESA (ESRIN), SERTIT</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>China: The development of UN-SPIDER, which China has actively promoted, has been completed, and its Beijing Office will be unveiled upon the signing of the host country agreement. Following the major earthquake disaster in May 2008 in Sichuan Province, China, space technology has played a significant role in disaster mitigation. In September 2008, China launched two spacecraft for environment and disaster monitoring and forecasting, to be used for the above purposes and resources survey.</p> <p>2008</p> <p>Algeria: A) The National Spatial Program 2006-2020 provides for the financing of several projects for the prevention and management of natural disasters, based on space technology and the geographic information systems (SIG). B) The focal point is the person in charge in charge of space applications at the ASAL. A single point of contact in the field of monitoring of natural disasters: National Civil Protection (ministry of interior Algeria is member of the International charter “Space and major risks” in 2005.</p> <p>Argentina: Use of satellite information for disaster management and the generation of an early warning system is one of the Space Information Cycles under development and a major goal in the National Space Program. As such, it is one of the two main lines of work of the Gulich Institute for Advanced Space Studies, the other being early warning systems for health. In this sense, CONAE participates in the Charter “Space and Major Disasters”, and contributes to the UN SPIDER program.</p> <p>Chile: Implemented in Chile. Since 2007, the National Emergencies Office of the Chilean Ministry of the Interior is the Authorized User of the International Charter “Space and Major Disasters”. It has actively used the Charter for the disasters at Aysén and the Llaima volcano and</p>	<p>A) FAO for the fight against locusts, PNUE, UNDP, CCC.</p> <p>B) Ministry of Interior DGPC, BNSC, SSTL (Royaume Uni); NASRDA (Nigeria)</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>the earthquake in Tocopilla, northern Chile.</p> <p>2007</p> <p>Greece: It would be quite helpful. There is a single point of contact that deals with all internal disaster management efforts.</p> <p>ASSESSMENT</p> <p>With the establishment of UN-SPIDER through the United Nations General Assembly resolution 61/110 of 14 December 2006, as a programme within the United Nations to provide universal access to all countries and all relevant international and regional organizations to all types of space-based information and services relevant to disaster management to support the full disaster management cycle by being a gateway to space information for disaster management support, serving as a bridge to connect the disaster management and space communities and being a facilitator of capacity-building and institutional strengthening, in particular for developing countries, these suggested actions will be incorporated as part of the UN-SPIDER Programme.</p> <p>Could be considered implemented.</p>	<p>Ministry of Interior, Civil Protection Authority</p>
<p><i>Paragraph 263</i></p> <p><u>Action</u></p> <p>Join and strengthen Disaster Charter (So that remote sensing capabilities and applications can be more effectively used in supporting disaster management activities)</p> <p><u>Primary Actor(s)</u></p> <p>Member States with space agencies having remote sensing satellite capabilities</p>	<p>2009</p> <p>Nigeria: Nigeria has been providing earth observation data for disaster management since becoming a member of the DMC in 2000 as well as the International Charter in December 2005.</p> <p>2008</p> <p>Argentina: is a member of the Charter through CONAE since 2003, and has promoted within the Charter an activity for training of Project Managers in the Latin American region.</p> <p>Chile: Chile joined the Charter in 2007.</p> <ul style="list-style-type: none"> • Japan: JAXA has become a member of the Disaster Charter since February 2005 and provided satellite data for disaster monitoring and management. 	

Action and Primary Actor(s)	Status of Implementation <i>(Replies received by member States and international organizations)</i>	Partners
	<p>• Turkey: TUBITAK Space Technologies Research Institute is Turkish Government entity and developing RASAT optical earth observation satellite for the scientific and civilian purposes. Estimated launch date is 3rd Q of 2009. Satellite is planned to have 7.5m pancromatic, 15m multispectral resolutions.</p> <p>2007 Greece: There are several institutes having remote sensing satellite capabilities.</p> <p>Japan: By taking the opportunity of attending the Earth Observation Summit III held in Brussels, Belgium on February 16, 2005, the Japan Aerospace Exploration Agency (JAXA) has signed the “Charter On Cooperation To Achieve The Coordinated Use Of Space Facilities In The Event Of Natural Or Technological Disasters)” and has acceded to the International Disaster Charter for the purpose of promoting its contribution to disaster management by Earth observation satellites.</p> <p>Pakistan: SUPARCO provided satellite data as well as expertise to all public, private, and other NGOs, in order to use in support of disaster management activities</p> <p>Republic of Korea: Korea recognizes the importance of regional and international cooperation on disaster management and considers active participation in establishing disaster prevention system.</p> <p>Thailand: Thailand is a member of the Sentinel Asia project to use and to pull satellite images of Thailand for disaster data on the server of Sentinel Asia Project.</p> <p><u>ASSESSMENT</u> COPUOS has been receiving regular reports from Member States on their efforts/intention to join and strengthen the Charter. Following the UNISPACE III conference held in Vienna, Austria in July 1999, the European and French space agencies (ESA and CNES) initiated the International Charter “Space and Major Disasters”, with the Canadian Space Agency (CSA) signing the Charter on October 20,</p>	<p>NOA, IGME, NAGREF</p> <p>JAXA</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>2000. In September of 2001, the National Oceanic and Atmospheric Administration (NOAA) and the Indian Space Research Organization (ISRO) also became members of the Charter. The Argentine Space Agency (CONAE) joined in July 2003. The Japan Aerospace Exploration Agency (JAXA) became a member in February 2005. The United States Geological Survey (USGS) has also joined the Charter as part of the U.S. team. BNSC/DMC became a member in November 2005. The China National Space Administration (CNSA) joined in May 2007. (see http://www.disasterscharter.org/).</p> <p><u>Could be considered implemented</u></p>	
(b) Maximizing the benefits of the use and applications of global navigation satellite systems to support sustainable development		
<p><i>Paragraph 267</i></p> <p><u>Action</u></p> <p>Establish international committee on GNSS including appropriate international organizations to:</p> <p>(a) optimize compatibility and interoperability;</p> <p>(b) identify mechanisms for implementing measures to protect the reliability and integrity of signals at the national, regional and global levels;</p> <p>(c) coordinate modernization activities to meet user needs;</p> <p>(d) develop road maps for the introduction of GNSS services; and provide training opportunities in GNSS, in particular in developing countries (See also paras. 299-310)</p> <p><i>See also operative paragraph 11 of General Assembly Resolution 59/2</i></p>	<p><u>2009</u></p> <p>Algeria: Within the framework of the expansion of the ' EGNOS ' project carried out with the European Space Agency, the installation of a station is planned during the 1st quarter 2009 in Tamanrasset. The expansion will permit to improve the Radio Navigation Satellite Service.</p> <p>China: China, as a supplier to the global navigation system, has joined the International Committee on GNSS (ICG) and taken an active part in the relevant work. China has completed the construction of the first phase of the Beidou Navigation System, and is getting ready to start the construction of the global system. In 2007, China launched its first experimental satellite for navigation, and will continue her efforts to complete the system's construction in the near future. In terms of application in navigation, the China National Space Administration also initiated "the Project of Civilian Market Development and Mass Production of the Beidou System", and laid down the plan for several dozens of projects of technology innovation and application demonstration.</p> <p>Nigeria: Embark on the development of National satellite-based Augmentation programme based on the two L bands of the Nigerian communication Satellite (Nigcomsat-1)</p> <p><u>2008</u></p>	<p>ESA</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p><u>Primary Actor(s)</u> GNSS and augmentation providers</p> <p><u>Action</u> Facilitate exchange of information among users and providers of GNSS, without prejudice to roles and functions of GNSS service providers and intergovernmental organizations such as International Civil Aviation Organization, the International Maritime Organization and ITU.</p> <p><u>Primary Actor(s)</u> Proposed international committee on GNSS</p>	<p>Algeria: In collaboration with the ESA, the extension of the system EGNOS in Mediterranean south:</p> <ul style="list-style-type: none"> - The project of installation of a station in the Algerian South is in progress. <p>2007 Pakistan:</p> <ul style="list-style-type: none"> - (e) Opportunities of training on international GNSS program are being availed by SUPARCO. <p>Republic of Korea: Korea decided to join the GALILEO project and concluded the Agreement with European Commission on September 9, 2006, and will play a role on mutual cooperation and development of GNSS system.</p> <p><u>ASSESSMENT</u> The International Committee on GNSS (ICG) was established in December 2005. At its fiftieth session in 2007 the Committee agreed that the Subcommittee should consider issues related to ICG, the latest developments in the field of GNSS and new GNSS applications under the regular agenda item on recent developments in global navigation satellite systems.</p> <p><u>Could be considered implemented.</u></p>	<p>ESA</p> <p>MOST, KARI</p>
<p><i>Paragraph 268</i></p> <p><u>Action</u> Develop and maintain a web site to include information, inter alia, on recent application developments, training opportunities and sources for obtaining assistance in integrating GNSS into national infrastructure and in protecting</p>	<p><u>ASSESSMENT</u> Implemented through the International Committee on GNSS (ICG).</p> <p><u>Could be considered implemented.</u></p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p>signal reliability and integrity at the national and regional levels <i>See also paras. 299-310</i></p> <p><u>Primary Actor(s)</u> OOSA with GNSS and augmentation providers, or international committee on GNSS if established</p>		
3. THE USE OF SPACE TO SUPPORT SPECIFIC AGENDAS TO MEET HUMAN DEVELOPMENT NEEDS AT THE GLOBAL LEVEL		
(a) Enhancing weather and climate forecasting by expanding international cooperation in meteorological satellite applications		
<p><i>Paragraph 273</i></p> <p><u>Action</u> Recognize the significant role of weather and climate forecasting in development and provide support, including necessary financial resources, to implement the WMO Space Programme, initiated by the fourteenth World Meteorological Congress in May 2003. Support implementation of WMO Space Programme Long-term Strategy, which was included in the Sixth WMO Long-term Plan, covering the period 2004-2011. (WMO Long-term Plan aims (a) to make increasing contributions to the development of the Global Observing System of the World Weather Watch Programme and other associated observing systems of WMO; (b) to provide continuously improved data, products and services from both operational and research and development</p>	<p>2010 FAO: Activities include poverty mapping, agro-meteorology, forestry, hydrology, climate change etc.</p> <p>WMO: WMO Members and their Space Agencies are currently maintaining eleven geostationary satellites, six meteorological polar-orbiting satellites and one ocean altimetry satellite in operational mode, complemented by some back-up satellites in storage position. In addition, more than 30 Research and Development satellites contribute to the Global Observing System. Satellite launches over the past year include: SMOS and GOCE (Europe/ESA), Meteor-M1 (Russian Federation), Oceansat-2 (India), FY-2E (China).</p> <p>Important efforts are required to:</p> <ul style="list-style-type: none"> - maintain the operational satellite constellations and prepare their replacement by new generations as planned in the 2015-2018 time frame, - ensure continuity of essential climate observations from space through implementing operational follow-on to several key demonstration or research missions, e.g. Earth radiation budget, ozone concentration, aerosols and greenhouse gases, global precipitation measurements, polar observations. <p>Satellite plans and efforts to enhance global data access should thus be further supported.</p>	<p>Satellite agencies from: Brazil (INPE), China (CMA, CNSA), Europe (EUMETSAT and ESA), France (CNES), Germany (DLR), India (IMD), Japan (JMA), Korean (KMA), Russian Federation (Roshydromet, Roscosmos), United States (NASA, NOAA, USGS).</p> <p>The Coordination Group for Meteorological Satellites (CGMS) and the Committee</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p>satellites; and (c) to facilitate and promote their wider availability and meaningful utilization around the world.) <i>See also operative paragraph 12 of General Assembly Resolution 59/2</i> Support those national and international entities that provide space systems that seek to meet the WMO requirements. <u>Primary Actor(s)</u> Member States</p>	<p>2009 WMO: WMO Members and their Space Agencies are currently (October 2008) maintaining ten geostationary satellites and seven Low-Earth Orbit satellites in operational mode, complemented by nineteen Research and Development satellites contributing to the Global Observing System. One polar-orbiting meteorological satellite and an ocean surface topography satellite (Jason-2) have been launched in 2008 and are undergoing in-orbit commissioning. Seven operational satellites are planned for launch in 2008/2009, to renew and upgrade the current constellation, as well thirteen R&D satellites contributing to the GOS.</p> <p>In spite of these important achievements, the continuity of some climate measurement is not secured in long-term plans, e.g. for sea level altimetry, Earth radiation budget, concentration of ozone, aerosols and greenhouse gases.</p> <p>Satellite plans and efforts to enhance global data access should thus be further supported.</p> <p>2008 Algeria: Algeria through the National Office of Meteorology has made great efforts in improving forecasting systems, based on space technology.</p> <p>Chile: The Chilean Meteorological Office, attached to the Civil Aeronautics Board, provides the country with an extremely efficient integrated system of Earth stations receiving satellite images, located in Antofagasta, Santiago, Puerto Montt, Punta Arenas and Easter Island, with a National Analysis</p>	<p>on Earth Observation Satellites (CEOS).</p> <p>Satellite agencies from: Brazil (INPE), China (CMA, CNSA), Europe (EUMETSAT and ESA), France (CNES), Germany (DLR), India (IMD), Japan (JMA), Russian Federation (Roshydromet, Roscosmos), United States (NASA, NOAA, USGS).</p> <p>The Coordination Group for Meteorological Satellites (CGMS) and the Committee on Earth Observation Satellites (CEOS).</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>Centre in Santiago. The Meteorological Office is a member of WMO and coordinates its work with the Chilean Space Agency. Chile therefore supports all national and international bodies providing space service providers that aim to comply with WMO requirements.</p> <ul style="list-style-type: none"> • Japan: (a) In 1977, Japan launched the first geostationary meteorological satellite (GMS) onto the geostationary orbit (about 36,000 km above the equator at 140 degrees East longitude) as part of a space based segment of the Global Observing System (GOS) of the WMO World Weather Watch (WWW) programme. Since then, continuous efforts have been made to operate and enhance observational capabilities of the following GMS series satellites. <ul style="list-style-type: none"> • The Multi-functional Transport Satellite-1R (MTSAT-1R), successor to GMS, launched on 26 February 2005, has been operated in the geostationary orbit at 140 E since 28 June 2005. MTSAT-2, launched on 18 February 2006, has been on standby in orbit at 145 E since September 2006. • (b) MTSAT-1R is observing 56 images a day (24 full disk, 24 Northern Hemisphere and 8 Southern Hemisphere). The images are disseminated as HRIT to the Medium-scale Data Utilization Stations (MDUSs) and as LRIT to the Small-scale Data Utilization Stations (SDUSs). (c) The observational data allows JMA and other National Meteorological and Hydrological Services (NMHSs) to continuously monitor significant meteorological phenomena such as typhoons, fronts, and low-pressure system in East Asia and the Western Pacific region. It contributes accordingly to the timely issuance of disaster prevention information and weather forecasts from JMA and NMHSs. <p>FAO: Activities include poverty mapping, agro-meteorology, forestry, hydrology, climate change etc. Support provided through the GTOS-GCOS cooperation.</p> <p>WMO: WMO Members and their Space Agencies are currently (January 2008) maintaining nine geostationary satellites and seven Low-Earth Orbit satellites in operational mode, complemented by nineteen Research and Development satellites contributing to the Global</p>	<p>Japan Meteorological Agency (JMA)</p> <p>Satellite agencies from: Brazil (INPE), China (CMA, CNSA), Europe (EUMETSAT and ESA), France (CNES), Germany (DLR), India (IMD),</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>Observing System. Seven operational satellites are planned for launch in 2008, to renew and upgrade the current constellation, as well as a first operational altimetry satellite (Jason-2) and eight R&D satellites contributing to the GOS.</p> <p>In spite of these important achievements, the continuity of some climate measurement is not secured in long-term plans, e.g. for sea level altimetry, Earth radiation budget, concentration of ozone, aerosols and greenhouse gases.</p> <p>Satellite plans and efforts to enhance global data access should thus be further supported.</p> <p><u>2007</u></p> <p>Japan:</p> <ul style="list-style-type: none"> - (a) In 1977, Japan launched the first geostationary meteorological satellite (GMS) onto the geostationary orbit (about 36,000km above the equator at 140 degrees East longitude) as part of a space-based segment of the Global Observing System (GOS) of the WMO World Weather Watch (WWW) programme. Since then, continuous efforts have been made to operate and enhance observational capabilities of the following GMS series satellites: The Multi-functional Transport Satellite-1R (MTSAT-1R), successor to GMS, launched on 26 February 2005, has been operated in the geostationary orbit at 140E since 28 June 2005; and MTSAT-2, launched on 18 February 2006, went through the In-Orbit Test and has been on standby in orbit at 145E since September 2006. - (b) MTSAT-1R is observing 56 images a day (24 full disk, 24 Northern Hemisphere and 8 Southern Hemisphere). The images are disseminated as HRIT/HiRID to the Medium-scale Data Utilization Stations (MDUSs) and as LRIT/WEFAX to the Small-scale Data Utilization Stations (SDUSs). - (c) The observational data received from the spacecraft allows JMA 	<p>Japan (JMA), Russian Federation (Roshydromet, Roscosmos), United States (NASA, NOAA, USGS).</p> <p>The Coordination Group for Meteorological Satellites (CGMS) and the Committee on Earth Observation Satellites (CEOS)</p> <p>Japan Meteorological Agency (JMA)</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>and other National Meteorological and Hydrological Services (NMHSs) to continuously monitor significant meteorological phenomena such as typhoons, fronts, and low-pressure systems in East Asia and the Western Pacific region. It contributes accordingly to the timely issuance of disaster prevention information and weather forecasts from JMA and NMHSs.</p> <p>Pakistan:</p> <ol style="list-style-type: none"> 1. Satellite data are being used for better understanding of the physics and chemistry of atmosphere in other regions. 2. Pakistan Meteorological Department is actively participating in the field of weather and climate forecasting. <p><u>ASSESSMENT</u> On-going activities by the primary actors.</p>	<p>SUPARCO</p> <p>Pakistan Meteorological Department</p>
(b) Improving medical and public health services through the use of space technologies		
<p><i>Paragraph 276</i></p> <p><u>Action</u> Convene international conference on telemedicine for experts and government officials, as well as decision makers, including those from ministries responsible for public health. <i>(With voluntary contributions)</i></p> <p><u>Primary Actor(s)</u> OOSA (under PSA), with WHO and other United Nations entities and international organizations and Member States</p>	<p><u>2009</u></p> <p><u>Algeria:</u></p> <ul style="list-style-type: none"> - Launch of pilot projects in tele-epidemiology with National Centre of Space Studies (CNES -France) and CONAE (Argentina). - In the framework of cooperation between Algeria and Argentina in the space field, a training course was organized at the Mario Gulich Institute of CONAE (Argentina's National Commission on Space Activities) in Cordoba, from 06 to 30 October 2008. This training course brought together besides Algeria, seven countries of Latin America namely: Argentina, Chile, Paraguay, Peru, Ecuador, Cuba and Brazil. Each of these countries is represented by two participants, one in remote sensing and the other Infectious Diseases Specialist. As regards Algeria, it was represented by one remote sensing scientist and one Infectious Diseases Specialist. <p><u>Nigeria:</u> Embark on demonstration projects on tele-medicine, comprising Linkage between two university teaching hospitals and six</p>	<p>CNES, CONAE, CTS (Arzew), Hospitals.</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>medical centres with mobile bus and boats fixed with V-sat and other facilities for tele-consulting and rural healthcare delivery. Embark on mapping of diseases vectors such as malaria epidemiology and tripanosomiasis.</p> <p>WHO: Measures to strengthen Health Information Systems through integrating space technology were presented at the Second United Nations International UN-SPIDER Bonn Workshop, 13 to 15 October 2008. Among the needs identified were 1) primary remote sensing and satellite derived data for initial public health risk assessment to improve the development of operational risk maps for environment dependent diseases, such as Yellow Fever, Dengue, Meningitis, Malaria, Plague, Rift Valley Fever, among others; 2) satellite telecommunications for rapid transfer of data; and 3) core capacity strengthening at national level and local levels for interpretation, use and decision making.</p> <p>2008</p> <p>Algeria: Algeria and France, within the framework of the governmental agreement, signed in February 2006, have implemented a project based on space technology, aiming at sanitary opening up, in partnership the services of the Ministry of Health and the Development Centre of Advanced Technologies (CDTA).</p> <p>Chile: Thanks to the support of OOSA and the National Commission on Space Activities of Argentina (CONAE), Chile has been sending specialists from the Chilean Ministry of Health to installations in Argentina to receive instruction in the use of space technology in the area of epidemiological health.</p> <p>Turkey: Regional Satellite Operator Turksat AS may be considered as contact point for Telemedicine applications.</p> <p>2007</p> <p>Pakistan: Pakistan together with OOSA (under PSA), with WHO and other United Nations entities and international organizations.</p>	<p>National Centre of Space Studies (France). MEDESSAT. MEDIAE, Centre of Space Techniques (Arzew), CDTA, Pasteur Institute, Hospitals</p> <p>SUPARCO, Ministry of Health, Government of Pakistan</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>Iran (Islamic Republic of): Iranian Space Agency with the cooperation of 3 hospitals and 1 medical university, set up a network of VSATs and medical instruments for tele-medicine purposes. Also a tele-medicine research center was established to perform detailed studies in this field.</p> <p><u>ASSESSMENT</u></p> <p>Tele-health related activities are part of the mandated activities and a priority area of the United Nations Programme on Space Applications (PSA). Activities organized by the PSA in the years 2000 to 2008:</p> <ol style="list-style-type: none"> 1. Workshops related to digital divide including telemedicine (Malaysia 2000; Thailand 2003) 2. Live Telemedicine Demonstration project (COPUOS, Vienna, 2003) 3. Conference on Tele-health and Satellites, (EURISY/OOSA, Rabat, Morocco 2004) 4. United Nations/European Space Agency/Argentina Workshop on the Use of Space Technology for Human Health, (Argentina, 2005) 5. UN/ESCAP/China Workshop on Tele-Health Development in Asia and the Pacific Region, (China, 2005) 6. Expert Meeting for UN/India/USA Pilot Project “Telemedicine in the Reconstruction of Afghanistan” (India, 2006) 7. Plenary Session “Space-based Technology Applications to e-Health” (Luxembourg, 2005) 8. Poster Session, “Space Technology as a Tool for Delivery of E-Health”, (Luxemburg, April 2006) 9. OOSA/WHO/NEPAD Panel on “Tele-Health Implementation Approaches For Africa, (South Africa, 2006) 10. UN/INDIA/USA Telemedicine Project for Afghanistan – phase II (India, 2007) 11. OOSA/Mexico/ESA Telemedicine Training Course (Mexico, 2007) 12. OOSA/ESCAP Regional Expert Meeting on Using Space Technology for Avian Influenza Monitoring and Early Warning in Asia (Thailand, 2007) 13. Workshop on Tele-epidemiology (XII SELPER Conference, Colombia, 2006) 	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>14. OOSA/Russia/ESA Workshop on the Use of Micro-Satellite Technologies for Environmental Monitoring and Impact to Human Health (2007, Russia)</p> <p>15. OOSA/WHO/Burkina Faso/ESA/CNES Workshop on Using Space Technologies for Tele- Health to Benefit Africa (2008, Burkina Faso)</p> <p>16. OOSA/India/ESA Regional Workshop on Using Space Technology for Tele-health to Benefit Asia and the Pacific (2008, India)</p> <p>17. XIII Workshop on Tele-epidemiology (XIII SELPER Conference, CUBA, 2008)</p> <p>Planned activities:</p> <p>1. OOSA/Bhutan/India expert meeting on the tele-health for SAARC countries (Bhutan, 2009)</p> <p>2. OOSA Workshop on space technology contribution to infection surveillance and to the Health-related MDG goals in the framework of the 6th European Congress on Tropical Medicine and International Health and 1st Mediterranean Conference on Migration and Travel Health (2009, Italy)</p> <p>Fellowships:</p> <p>1. CONAE (Argentina) - 2007, 2008</p> <p>2. India - 2009</p> <p>3. South Africa - 2008</p> <p>OOSA, in cooperation with the World Health Organization and other relevant entities of the United Nations system, international organizations and Member States, will, upon request and within the overall framework of the United Nations Programme on Space Applications, organize additional international conferences on telemedicine for experts and government officials, as well as decision makers. However, this would require commitments by the co-sponsors to make available the necessary additional human and financial resources.</p> <p><u>Could be considered implemented.</u></p>	
<p><i>Paragraph 277</i></p> <p><u>Action</u></p> <p>Invite WHO to address the issue of telemedicine at its World Health Assembly.</p>	<p><u>2008</u></p> <p>Turkey: Regional Satellite Operator Turksat AS may be considered as contact point for Telemedicine applications.</p> <p><u>ASSESSMENT</u></p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<u>Primary Actor(s)</u> COPUOS	Covered by on-going work of Action Team on Public Health. <u>Could be considered implemented.</u>	
<p><i>Paragraph 278</i></p> <p><u>Action</u> Prepare, preferably before convening conference on telemedicine, a report on status and potential of telemedicine that would (a) examine range of telemedicine initiatives worldwide; (b) identify most promising areas for implementation; (c) examine needs for telemedicine, in particular in developing countries; and (d) make recommendations for decision makers. (Study should take into account results of discussions of Subcommittee during first two years of work plan and should be prepared in cooperation with WHO and any other relevant international organizations.)</p> <p><u>Primary Actor(s)</u> Scientific and Technical Subcommittee, through an enlarged Action Team on Public Health (under work plan)</p>	<p><u>2009</u> Austria: In close cooperation with international partners and organisations, novel satellite communications systems are studied and developed at the Institute of Communication Networks and Satellite Communications at the Technical University of Graz. Special emphasis is laid on network interconnection via satellites and satellite-based multi-media services and their applications in tele-education, tele-medicine and business communications. New transmission, modulation, forward-error correction schemes and access techniques are investigated by simulations and tests via satellite links at Ku- (11/12/14 GHz) and Ka- (20/30 GHz) band.</p> <p><u>2008</u> Algeria: A pilot project in Telemedicine provides for the deployment of a mobile infrastructure to carry out complete diagnostics in the field of maternal and childhood protection.</p> <p>Chile: We have taken note.</p> <p>Turkey: Regional Satellite Operator Turksat AS may be considered as contact point for Telemedicine applications.</p> <p><u>ASSESSMENT</u> Covered by on-going work of Action Team on Public Health.</p> <p><u>Could be considered implemented.</u></p>	Centre National d'Etudes Spatiales (France)
<p><i>Paragraph 279</i></p> <p><u>Action</u> Consider mechanisms to conduct study on feasibility of establishing a possible international cardiovascular-disease</p>	<p><u>2008</u> Algeria: proposes to expand the applications of the space technologies in medicine, in the implementation of system for prevention and treatment of the epidemics in Africa: malaria, leishmaniose, West Nile Fever...</p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p>knowledge-management network or other pilot projects. (Study to serve as clinical decision support tool for medical authorities to assess, monitor, diagnose, prevent and treat cardiovascular disease and to assist developing countries in combating cardiovascular disease. The study should, among other things, identify entities to be involved in establishing network, describe benefits for medical authorities, suggest a timetable, provide cost estimates and identify sources of funding.)</p> <p><u>Primary Actor(s)</u> Scientific and Technical Subcommittee</p>	<p>Chile: We have taken note.</p> <p><u>ASSESSMENT</u> Covered by on-going work of Action Team on Public Health.</p> <p><u>Could be considered implemented.</u></p>	
c) Promoting cooperation in the study of near-Earth objects as threats to society at large		
<p>Paragraph 282</p> <p><u>Action</u> Lead efforts towards better coordination at global level of research, detection, search and follow-up observations of NEOs and other relevant activities by identifying action to be taken at national level or through international cooperation.</p> <p><u>Primary Actor(s)</u> COPUOS</p>	<p><u>ASSESSMENT</u> At its fiftieth session in 2007 the Committee noted with satisfaction the work carried out by the Working Group and the Action Team on Near-Earth Objects and endorsed a new multi-year workplan for 2008-2010. Some member States expect that the work of the Working Group on Near-Earth Objects may result in the proposal of international procedures to mitigate the threat of near-Earth objects for consideration by the Committee in the near future.</p> <p><u>Could be considered implemented.</u></p>	
<p><i>Paragraph 283</i></p> <p><u>Action</u> Consider, and encourage member organizations of International Council for</p>	<p><u>2009</u> SGAC: Member of Action Team 14, involves youth on subject of NEOs within SGAC NEO working group, promoting knowledge dissemination.</p>	SGAC

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p>Science to consider, recommendations contained in various reports on subject of NEOs and help plan necessary multidisciplinary activity.</p> <p><u>Primary Actor(s)</u> International Council for Science</p>	<p>2008 Chile: We have taken note.</p> <p><u>ASSESSMENT</u> Could be considered by Action Team 14 and Working Group on NEO.</p>	
<p>4. OVERARCHING CAPACITY DEVELOPMENT</p>		
<p>(a) Increasing awareness of space benefits to improve the economic and social welfare of humanity</p>		
<p><i>Paragraph 289</i></p> <p><u>Action</u> Include items on future agendas of COPUOS to consider its contributions to work of entities responsible for convening United Nations conferences and/or for implementing their outcomes. <i>See also operative paragraph 8 of General Assembly Resolution 59/2</i></p> <p>Include new item on 48th agenda of COPUOS to consider its contribution to work to be conducted by WSIS second phase, November 2005</p> <p><u>Primary Actor(s)</u> COPUOS (through OOSA and provisional agenda)</p>	<p><u>ASSESSMENT</u> Related to paragraph 288 of A/59/174. OOSA has established working relations with the Division for Sustainable Development/Secretariat of Commission on Sustainable Development (CSD). At its forty-ninth session, the Committee considered an agenda item on the Recommendations of the World Summit on the Information Society (see A/61/20 (Supplement 2)).</p> <p><u>Could be considered implemented.</u></p>	
<p><i>Paragraph 290</i></p> <p><u>Action</u> Invite ECA, ECLAC and ESCWA to consider integrating the use of space science and technology and their applications into their work towards</p>	<p>2008 Chile: We have taken note.</p> <p><u>ASSESSMENT</u> The UN Regional Commissions support national policies aimed at achieving MDGs and promote and monitor MDGs (see http://www.unecce.org/commission/MDGs/). Space related activities of</p>	

Action and Primary Actor(s)	Status of Implementation <i>(Replies received by member States and international organizations)</i>	Partners
<p>achieving the Millennium Development Goals, taking into account the accomplishments of RESAP of ESCAP.</p> <p><u>Primary Actor(s)</u> COPUOS</p>	<p>the UN Regional Commissions, including RESAP of ESCAP, are coordinated at the Inter-Agency Meeting on Outer Space Activities (see http://www.uncosa.unvienna.org/uncosa/index.html). These activities make important contributions to the work of the United Nations, including in the implementation of recommendations of major world conferences and the recommendations of UNISPACE III, in efforts towards sustainable development and in the implementation of the United Nations Millennium Declaration on the development agenda.</p> <p><u>Could be considered implemented.</u></p>	
<p><i>Paragraph 291</i></p> <p><u>Action</u> Promote awareness of role of space science and technology and their applications in support of achieving the internationally agreed development goals. Invite international and national space-related organizations and non-governmental organizations to provide COPUOS with information on their efforts in this regard.</p> <p><u>Primary Actor(s)</u> International and national space-related organizations, non-governmental organizations and COPUOS (through OOSA)</p>	<p>2009</p> <p>FAO: UNEP, FAO and the World Food Programme completed the development of version 3.0 of GeoNetwork, an Internet-based spatial information catalogue. FAO, WFP, UNEP, WHO, OCHA, UNOSAT, ESA, GMEF, SWAHIM, SWALIM, FEWSNet and CGIAR currently implement and operate GeoNetwork. In order to coordinate the development and use of GeoNetwork, FAO hosted the GeoNetwork workshop in 2007, which focused on the evaluation of the Spatial Data Management frameworks as they are set up by different agencies, based on the GeoNetwork opensource software.</p> <p>Regional collaborative networks have and are being established for East Africa, West Africa, Southern Africa, South America, Central America, Middle East, South East Asia and Central Asia. GLCN also contributed to the creation of the GlobCover layer (Published in September 2008). GlobCover is a collaborative project involving ESA, FAO, GOFC-GOLD, GTOS, IGBP, JRC and UNEP, which produced a fine-resolution (300 m) global land cover map from satellite data for 2005/2006, using FAO's Land Cover Classification System (LCCS). GLCN is undertaking a number of Land Cover and Land Cover Change mapping activities to support the implementation of FAO projects such as Land Degradation Assessment in Drylands (LADA), regional land cover mapping of the Himalayas, and national land cover mapping of Libya and Senegal.</p>	<p>FAO, WFP, UNEP, WHO, OCHA, UNOSAT, ESA, GMEF, SWAHIM, SWALIM, FEWSNet and CGIAR</p> <p>ESA, FAO, GOFC-GOLD, GTOS, IGBP, JRC and UNEP</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>GLCN is planning to extend activities on land cover mapping of the Southern African Development Community (SADC) countries and the Mekong river basin for the period 2008-2009, along with capacity building activities related to land cover mapping at national level.</p> <p>UNEP: UNEP continues to conduct extensive and intensive capacity development activities related to a variety of assessment and other processes and methodologies, linked to the six thematic priorities of the organization as adopted by our Governing Council (climate change, disasters and conflicts, ecosystems management, environmental governance, hazardous substances and wastes, and resource efficiency) in 2008.</p> <p>In regard to capacity building activities linked to space applications, during 2007-08 UNEP's Division of Early Warning and Assessment has conducted an entire series of Earth Observation and Environmental Data Networking Workshops at the regional and country levels, to familiarize personnel from national ministries of environment and/or natural resources, and civil society representatives, on the advantages of using space-based (remotely-sensed) data for monitoring and mapping the environment.</p> <p>These EO Data Workshops have led to significantly increased knowledge at the national level on potential uses of remotely-sensed data and the types of information which can be extracted from the same; also, proposals for multi-national mapping exercises are under development for several regions/countries, where UNEP is for example teaming up with FAO to expand previous regional mappings such as Africover and the joint FAO/UNEP Land Cover Classification System (LCCS) to other parts of the globe, if sufficient project financing from donors can be found.</p> <p>2008</p> <p>Chile: Chile is concerned to increase the capacities of the Chilean Space Agency and put in place a strong space infrastructure both in space and</p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>on Earth, promoting the role of space technology in achieving the objectives of global development.</p> <p>Turkey: TUBITAK Space Technologies Research Institute is is Turkish Government entity and will be the contact point as national space related organization.</p> <p>Iran (Islamic Republic of): Iranian Space Agency has been working in this area through the following means: 1- Various books are publish for different age categories, ranging from kids to adults, with general and/or technical contents 2- Different workshops have been conducted: <ul style="list-style-type: none"> • Space law workshop, November 2007 • UN-SPIDER workshop, October 2008 </p> <p>SGAC: SGAC promotes awareness through youth involvement various working groups, which address development goals and space science and technology.</p> <p>FAO: Awareness raising has been undertaken through many international arenas, which include GEO, UNFCCC, CBD, regional and international conferences, etc.</p> <p>2007</p> <p>Greece: There are awareness activities to promote the role of space science and technology and their applications. There are frequent visits of international space related organizations to provide further information.</p> <p>Pakistan: 1. A number of seminars, workshops and conferences have been organized to promote awareness of the role of space science and technology and their applications for the socio-economic development</p>	<p>TUBITAK Space Technologies Research Institute Istanbul Technical University</p> <p>GSRT, NOA</p> <p>SUPARCO, IUCN, local user agencies</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>of the country.</p> <p>2. Projects related to environmental degradation monitoring such as monitoring of mangroves, forests, wetlands etc have been conducted for national user organizations using satellite remote sensing data.</p> <p>3. Short term training courses and seminars are organized to create awareness among respective agencies.</p> <p>4. Helping Govt. & NGOs for HRD in the field of Space Technology and its Applications (SRS & GIS).</p> <p><u>ASSESSMENT</u></p> <p>On-going activities by the primary actors. Covered by on-going work of COPUOS and Scientific and Technical Subcommittee. See also document A/AC.105/C.1/2004/CRP.10 “Correlation between UNISPACE III recommendations and recommendations of UN Millennium Declaration, WSSD and WSIS”.</p> <p><u>Could be considered implemented.</u></p>	
<p><i>Paragraph 292</i></p> <p><u>Action</u> Invite UNESCO to promote awareness of human development benefits of space activities as lead agency for United Nations Decade of Education for Sustainable Development, beginning 2005</p> <p><u>Primary Actor(s)</u> COPUOS (through OOSA)</p>	<p>2008</p> <p>Argentina: In October 2007 CONAE and UNESCO have organized in the Gulich Institute in Cordoba a Seminar for Training of Educators in the use of space information. The seminar was addressed to teachers of the secondary level of all of Latin America.</p> <p>Chile: We have taken note.</p> <p>SGAC: We have taken note and promote the benefits of space activities for sustainable development in a working group.</p> <p><u>ASSESSMENT</u></p> <p>UNESCO is reporting to COPUOS on its activities to promote</p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>awareness of human development benefits of space activities under the agenda item “Space and Society” (A/60/20, paras. 262-263, A/61/20, para. 248, A/62/20, para 238).</p> <p><u>Could be considered implemented.</u></p>	
<p><i>Paragraph 293</i></p> <p><u>Action</u> Disseminate through home page information on efforts to increase awareness of importance of space activities. Continue updating information, building on compilation of results of Internet-based survey conducted by Action Team on Increasing Awareness</p> <p><u>Primary Actor(s)</u> OOSA with UNESCO</p>	<p><u>2009</u> Iran (Islamic Republic of): Iranian Space Agency has implemented two web sites, one for general awareness as the official portal of the agency and another one as an encyclopedia of space technology and applications.</p> <p><u>2008</u> Chile: We have taken note.</p> <p>Turkey: Turkish space activities may be found on TUBITAK Space Technologies Research Institute and Tubitak Head Quarters web page.</p> <p>FAO: as for paragraph 303.</p> <p><u>2007</u> Pakistan: Information about space, and other relevant updates as well as information about SUPARCO is disseminated through its website.</p> <p><u>ASSESSMENT</u> The website of the Office for Outer Space Affairs (http://www.unoosa.org) and the website dedicated to the coordination of outer space activities within the United Nations system (http://www.uncosa.unvienna.org) provide information on efforts to increase awareness of importance of space activities. The Inter-agency Meeting periodically updates and publishes the brochure “Space Solutions for the World's Problems: How the United Nations family is using space technology for sustainable development”.</p>	<p>SUPARCO</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<u>Could be considered implemented.</u>	
b) Improving knowledge-sharing by promoting universal access to space-based communication services		
<p><i>Paragraph 297</i></p> <p><u>Action</u></p> <p>(a) identify existing and planned space-based communication infrastructures committed to universal access;</p> <p>(b) identify the barriers to the implementation of space-based communication systems;</p> <p>(c) promote usage of space-based communication systems to assist in improving knowledge-sharing;</p> <p>(d) identify priority areas and target groups for knowledge-sharing; and start developing pilot programmes for implementation in near future</p> <p><u>Primary Actor(s)</u></p> <p>Action Team on Knowledge-sharing</p>	<p><u>2008</u></p> <p>FAO: mainly through GLCN and GTOS.</p> <p>WHO: intends to strengthen health information management at district level in Africa through The Africa Health Infoway (AHI) initiative. The AHI covers 53 African countries, and is focused on district level health data collection, processing, and evidence-based decision making in health. ICTs appropriate for rural district communities, such as satellite-based communication, long distance Wifi connectivity, and solar-powered computing devices are among technology solutions planned for a roll out in the countries. Integrated district-based health information systems are also planned for deployment in potentially 7000 districts, in close coordination with relevant WHO units and external partners. AHI is a WHO-led effort, and pursued in close partnership with UN-ECA, International Telecommunications Union, the African Union Commission, and a number of IT companies with technologies appropriate for the African environment.</p> <p><u>2007</u></p> <p>Pakistan:</p> <ul style="list-style-type: none"> - (a) SUPARCO has provided two transponders free of charge on board PAKSAT-I satellite for educational purposes to Virtual University of Pakistan. <p>Thailand: The space-based communication services is a social contribution project to:</p> <ul style="list-style-type: none"> - Support national education projects in rural areas, - Encourage equal education by providing education via satellite, - Develop and support education, 	SUPARCO

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<ul style="list-style-type: none"> - Develop communications for education, especially in rural areas, - Support development of teaching, research and seminars, and other academic projects, - Support development of pedagogy suitable for modern society. <p><u>ASSESSMENT</u></p> <p>Action Team 9 on Knowledge-sharing has conducted a survey and received replies (see http://www.unoosa.org/docs/unisp-3/reports/at-09proposalcopuos.doc).</p> <p><u>Could be considered implemented.</u></p>	
(c) Enhancing capacity-building in space-related activities		
<p><i>Paragraph 301</i></p> <p><u>Action</u></p> <p>Support initiatives of Working Group on Education, Training and Capacity-Building of CEOS, to develop an Earth observation education and training Internet web portal and provide Earth observation data free of charge or at lowest possible cost for educational purposes.</p> <p>(To enhance capacity of developing countries in the development and wider use of Earth observation technologies, including satellite remote sensing and GIS)</p> <p><u>Primary Actor(s)</u></p> <p>Member States with OOSA</p>	<p><u>2009</u></p> <p>Iran (Islamic Republic of): Data is being provided on low cost / free of cost for educational purposes. Iranian Space Agency regularly conducts trainings on RS/GIS technologies.</p> <p><u>2008</u></p> <p>Algeria: This portal is not available. Algeria has an education program in the field of space technology, which consists of:</p> <ul style="list-style-type: none"> - the elaboration of an Arabic didactic system. - The organization of open days. <p>Argentina: CONAE participates in the CEOS Working Group on Education. Argentine Space Program sets a data policy that contemplates provision of EO data free of charge or at lowest possible cost for educational purposes.</p> <p>Chile: In Chile, some of the information relating to territorial arrangements is available on www.snit.cl.</p> <p>SGAC: SGAC through the volunteer work of some members are working on an educational portal, which could be used once finished to</p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>support various education initiatives.</p> <p><u>2007</u> Greece: There is an ongoing activity in Greece on education, training and capacity building to develop an Earth education and training scheme as well as a web portal.</p> <p>Pakistan: Data is being provided on low cost / free of cost for educational purposes. SUPARCO regularly conducts trainings on RS/GIS technologies for SRS user community. In this regard SUPARCO provided LandSAT data to NASA for its Global Mapping Project. Similarly SUPARCO provided data to IUCN and UNHIC.</p> <p><u>ASSESSMENT</u> The CEOS Education Portal has been established (http://wgedu.ceos.org). OOSA is contributing to the work of the Working Group on Education, Training and Capacity-Building (WGEdU) of CEOS. This includes linking the WGEdU with the activities of the Regional Centres for Space Science and Technology Education (Affiliated to the United Nations).</p> <p><u>Could be considered implemented.</u></p>	<p>Ministry of Education</p> <p>SUPARCO</p>
<p><i>Paragraph 302</i> <u>Action</u> Support the activities of regional centres, including possible organization of series of capacity-building activities in States of their respective regions, by developing a database of experts from space agencies who could assist regional centres by</p>	<p><u>2010</u> Japan: - Sentinel Asia, which is an international joint project that Japan promoted and serves as Secretariat, and created for the purpose of disaster management and rescue support in large-scale disasters in the Asia-Pacific region, moved on to its second stage, called “STEP2” in January 2008. The STEP2, which includes an increase in the number of satellites providing necessary data, and the high-speed, large-capacity transmission experiment of disaster information using Japanese satellite “KIZUNA”, was initially established among Japan, Thailand and the</p>	<p>JAXA, Thailand, the Philippines</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p>providing specialized training, as well as making space-related education and training materials available for use by the regional centres.</p> <p><u>Primary Actor(s)</u> Member States that have established space agencies</p>	<p>Philippines in July.</p> <ul style="list-style-type: none"> - The initiative called “STAR”, which stands for Satellite Technology for the Asia-Pacific Region Program, was launched at the 15th session of the Asia-Pacific Regional Space Agency Forum (APRSAF) and has started jointly developing small satellites at Sagami-hara Campus of JAXA by space agencies in Asia-Pacific region. - The initiative “Space Application For Environment”, or “SAFE” Project, which observes climate change and its effects on human activities and the environment, was also launched at the APRSAF-15 and has started its pilot projects with Vietnam in the fields of water resources management and land use monitoring. <p>FAO: GLCN is developing a number of temporal spatial databases. The methodology is being promoted through regional and national workshops. A number of resource manuals and tutorials on the implementation of the methodology are accessible through www.glc.org</p> <p>INTERSPUTNIK: Intersputnik cooperates with the International Center of Space Law under the V.M.Koretsky Institute of State and Law of the National Academy of Sciences of Ukraine in arranging and holding conferences, workshops, symposia and congresses dealing with space law.</p> <p><u>2009</u> Algeria:</p> <ul style="list-style-type: none"> - Participation of the Centre of Space Technology (CTS) in the International Workshop which took place from 10 to 12 November 2008, in Rabat, CROASTE, on the theme “Use of space technology for disasters management and emergency response in Africa. Technical, organizational and legal aspects”. - The Workshop is jointly organized with the Islamic Organization for Education, Science and Culture (ISESCO), The Royal Centre for Remote Sensing (CRTS, Morocco), the Mohammedia Engineering School (EMI, Morocco), the Algerian Space Agency (ASAL) and with support of the United Nations Office for Outer Space Affairs (UNOOSA). 	<p>JAXA, LAPAN, GISTDA, ISRO, KARI, ANGKASA STI, VAST</p> <p>International Center of Space Law under the V.M.Koretsky Institute of State and Law of the National Academy of Sciences of Ukraine</p> <p>CROASTE, ASAL, ISESCO, CRTS-EMI (Morocco), UNOOSA</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>- Participation of the ASAL in the technical assistance mission in Burkina Faso, from 17 to 21 November 2008, organized by UNOOSA in the framework of the UN-SPIDER program. The mission is about the capacities of Burkina Faso in the use of space technology for natural disasters management and proposals of space-based solutions to support of such events through the relevant services of Burkina Faso.</p> <p>Iran (Islamic Republic of): Iranian Space Agency has supported UN-SPIDER program and has established a Regional Support Office for this program. Through the web page of this office, list of experts, training opportunities and common projects are accessible.</p> <p>2008</p> <p>Algeria: The ASAL works closely with the CRASTE-LF, through:</p> <ul style="list-style-type: none"> - The provision of experts; - The organization of regional scientific demonstrations (seminar on climate change (in November, 2007 in Algiers). <p>Argentina: The Gulich Institute promotes the realization of capacity building activities in the use of space information. The National Space Program also includes the development of a program for spreading the capacity of using space information among children of ages 8 to 16.</p> <p>Chile: Chile supports all existing regional activities to provide educational outreach on space sciences and technology. It has established regular contact with the Brazilian and Mexican branches of the Regional Centre for Space Science and Technology Education in Latin America and the Caribbean CRECTEALC.</p> <p>Turkey: Establishment of Turkish Space Agency is still on development stage and waiting for approval at the Turkish Parliament.</p> <p>FAO: GLCN is developing a database which contains names and</p>	UNOOSA, CNES (France)

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>contact details of individuals involved in GIS and land cover related activities.</p> <p>In addition, country profiles are being developed to provide an overview of the status of activities and available data for each country.</p> <p>2007</p> <p>Japan: Under the initiative of the APRSAF, Joint Project Team Meeting for establishing a disaster management support system in the Asia-Pacific region was held and the meeting discussed about the implementation plan of the “Sentinel-Asia”. Sentinel Asia is an activity that shares disaster-related information such as images acquired by earth observation satellites through the Internet in order to contribute to disaster management in the Asia-Pacific region. It is jointly promoted by space organizations who are members of the Asia-Pacific Regional Space Agency Forum (APRSAF) and disaster related organizations in Asia such as the Asian Disaster Reduction Centre, as well as Keio University, which provides a geographic information system on the Internet called Web-GIS.</p> <p>JAXA has been operating Asia Pacific Earth Observation Pilot Project jointly with Asian Institute of Technology (AIT) for the wider use of earth observation technology, including satellite remote sensing, global mapping and GIS.</p> <p>Pakistan:</p> <ol style="list-style-type: none"> 1. SUPARCO organizes on regular basis international; seminars, workshops, and symposiums on Remote Sensing and GIS technologies. Experts from SPOT Image, EADS, ESA, SUPARCO, JICA, and participants from the South Asian countries participate in these conferences. 2. SUPARCO has been assisting university students and faculty in carrying out Masters/ PhD research work on topics such as Assessing Flooding Extant of River Indus with MODIS (satellite) data, Drought monitoring using (satellite) data. 3. SUPARCO, in collaboration with ISNET and Islamic Development 	<p>JAXA</p> <p>SUPARCO</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>Bank, organizes short training courses, seminars and workshops for human resource development of OIC countries.</p> <p>Thailand: Capacity building is one of GISTDA's mandates and GISTDA's Institute of Space Knowledge Development (ISKD) is responsible for training in areas of Space Technology and Geo-Informatics. The ISKD is now conducting more than 20 training courses per year and is well equipped with lecture rooms, computer laboratories and archived satellite data. Moreover, GISTDA has linkages with five regional centres in Chiangmai (Chiangmai University in the North), Pitsanuloke (Naresuan University in the Lower North), Khon Kaen (Khon Kaen University in the Northeast), Chonburi (Burapha University in the East) and Songkhla (Prince of Songkhla University in the South).</p> <p><u>ASSESSMENT</u> On-going activities by the primary actors.</p>	
<p><i>Paragraph 303</i></p> <p><u>Action</u> Assist international efforts to coordinate capacity-building activities by disseminating, through web sites, a list of international activities held around the world to strengthen capacity of developing countries, in particular those organized by developing countries seeking assistance.</p> <p><u>Primary Actor(s)</u> OOSA and UNESCO with regional centres</p>	<p><u>2008</u> Argentina: CONAE contributes to the organization of capacity building activities in Latin America by providing the resources available at the Gulich Institute.</p> <p>Chile: We have taken note.</p> <p>Turkey: Turkish space activities may be found on TUBITAK Space Technologies Research Institute and Tubitak Head Quarters web page.</p> <p>WHO: In Zambia, the project initiated by WHO, REACH Trust Malawi and the Southern African network on Equity in Health (EQUINET) has now moved into a capacity building exercise aiming at addressing the needs in terms of geographic information and GIS capacities to support HIV/AIDS monitoring, evaluation and response in Zambia. 17 local and international institutions, including WHO and UNECA, are now part of</p>	

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	<p>the Working Group which has been created in order to fill the exist gaps. The reports of the different meeting that already took place as well as the associated information can be downloaded from: http://www.who.int/whosis/database/gis/EQU/GIS_HIV_ZMB.htm. A similar process is also underway in Malawi, the related material being available from: http://www.who.int/whosis/database/gis/EQU/GIS_HIV_AIDS_MWI.htm.</p> <p><u>ASSESSMENT</u></p> <p>OOSA has been maintaining a list of space-related initiatives and programmes carried out by member States of the Committee on the Peaceful Uses of Outer Space and within the United Nations system that respond to specific recommendations contained in the Johannesburg Plan of Implementation of the World Summit on Sustainable Development (WSSD) (see http://www.uncosa.unvienna.org/uncosa/en/wssd/index.html). OOSA, in the framework of the Programme on Space Applications, organizes the annual United Nations/Austria/European Space Agency Symposium (see http://www.unoosa.org/oosa/en/SAP/graz/index.html). The theme of the Symposium is synchronized with the thematic clusters of the CSD. The Committee contributed to the work of the Commission on Sustainable Development during the policy year for the thematic cluster 2006-2007 and 2008-2009 (A/AC.105/872, A/AC.105/892). See also recommendation under para. 232.</p> <p>International activities that are brought to the attention of the Office are regularly being disseminated to relevant parties, including the regional centres, through the OOSA and Inter-Agency Meeting websites, as well as through relevant mailing lists.</p> <p><u>Could be considered implemented</u></p>	
<p><i>Paragraph 304</i></p> <p><u>Action</u></p>	<p><u>2009</u></p> <p>Austria: Held annually since 1975, the Alpbach Summer School enjoys</p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p>Implement capacity-building activities, focusing particularly on teachers, young professionals and decision makers, to support UNESCO Space Education Programme.</p> <p>(This would be a contribution of COPUOS and OOSA to United Nations Decade of Education for Sustainable Development (2005 to 2014)).</p> <p><u>Primary Actor(s)</u> Member States with OOSA</p>	<p>a long tradition in providing in-depth teaching on aspects of space science and space technology with the aim of advancing the training and working experience of graduates, post-graduate students, young scientists and engineers. Participants are given the opportunity to expand and strengthen their knowledge of selected space issues in workshops which are part of the Summer School programme. Student teams will develop space mission concepts based on the theme of the Summer School. The 2008 Summer School Alpbach, the latest in this long-running series, focused on the theme “Sample Return from the Moon, asteroids and comets”.</p> <p>2008</p> <p>Algeria: contributed in the framework of the seminar held in Paris on May 30 and June 1, 2007 dedicated to the role of earth observation satellites in sustainable development in Africa by the proposal of a strategic plan in the short, medium and long term.</p> <p>Argentina: Activity organized together by CONAE and UNESCO in October 2007, in Argentina, at the Gulich Institute, for participants from Latin America.</p> <p>Japan: JAXA, through its Space Education Center, organised the following activities within the framework of the Asia-Pacific Regional Space Agency Forum (APRSAF) as part of the activities of UNESCO Space Educational Programme:</p> <ol style="list-style-type: none"> 1. APRSAF/UNESCO Space Education Forum (4 March 2006, Ha Noi, Vietnam) for primary and secondary school teachers and students; 2. APRSAF/UNESCO/LAPAN Space Education Seminar (December 2006, Jakarta, Indonesia) schoolteachers. <p>JAXA, through its Space Education Center, supported the following activities of UNESCO Space Education programme by sending experts</p>	<p>CNES; ESA; NOAA; NASA; NOAA; USGS</p> <p>1. Vietnam Academy of Science and Technology (VAST) and UNESCO; 2. National Institute of Aeronautics and Space (LAPAN) and UNESCO</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>and providing education materials and equipment for hands-on sessions on making and launching water rockets:</p> <ol style="list-style-type: none"> 1. UNESCO Space Camps held in Colombia (December 2005); 2. UNESCO Space Workshops held in Vietnam (March 2006); 3. UNESCO Space Camps held in Ecuador (May 2007); 4. Water Rocket Launch events held during the World Space Week in Argentina, Brazil, Colombia, Ecuador, Nigeria, Philippines and Vietnam and coordinated by UNESCO (October 2007); 5. UNESCO Space Workshops held in Tanzania (May 2008); 6. UNESCO Space Camp for Latin America (Ibarra, Ecuador, May 2008). <p>APRSAF Space Education and Awareness Working Group, for which JAXA Space Education Office serves as the Secretariat, has reached agreement that the convening of space education forums and seminars in developing countries for students and teachers of primary and secondary schools should continue within the framework of APRSAF in cooperation with UNESCO.</p> <p>SGAC: helps promote capacity-building activities through various working groups and encourages members to participate in UNESCO Workshops.</p> <p><u>2007</u></p> <p>Greece: There is an ongoing activity in Greece for the implementation of activities related to capacity-building, focusing particularly on teachers, young professionals and decision makers.</p> <p>Pakistan: SUPARCO celebrates World Space Week (WSW) each year with the objective of involving students and teachers in creating awareness about space science, technology and their applications.</p> <p>Thailand: Thailand organized related activities to support Space Education Programme on teachers, young professionals and decision</p>	<p>Ministry of Education, Ministry of Culture</p> <p>SUPARCO</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>makers, as follows:</p> <ul style="list-style-type: none"> - Children's Day 2007: In the year 2007, the children's day was organized on Saturday, 13 January 2007. GISTDA held activities at Ladkrabang Ground Receiving Station and at the parliament. Space related activities games and entertainments were provided at the Ground Receiving Station, while THEOS mascot was be presented at the parliament. - GISTDA Day: The event was organized by the Southern Regional Geo-informatics and Space Technology Center on Friday, 10 November 2006 at BP Simila Beach, Songkhla Province. 422 students and 83 teachers from 32 schools attended the lectures, learned from posters, and participated in many activities. - National Science and Technology Fair 2006: GISTDA arranged its exhibition in the National Science and Technology Fair 2006, organized by the Ministry of Science and Technology during 11-22 August 2006 at BITEC – Bangkok International Trade & Exhibition Centre, Bangna. - THEOS Satellite at The 9th Thailand International Kite Festival: Every two years, Thailand is hosting International Kite Festival. In 2006, over 30 kite teams representing 15 countries came to Rama VI Camp in Chaam, Phetchaburi Province in Thailand to participate in the 9th Thailand International Kite Festival held during 11-12 March 2006. THEOS kite was built in this festival as the first satellite kite in the world. Its size is equally to THEOS satellite that will be launched in mid 2007. <p><u>ASSESSMENT</u></p> <p>Activities held in Nigeria and Colombia by UNESCO with contributions made by OOSA. Activities are also covered by the United Nations Programme on Space Applications. Activities organized by OOSA and other relevant organizations, as part of the annual World Space Week, contribute to the implementation of this recommendation.</p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<u>Could be considered implemented.</u>	
<p><i>Paragraph 305</i></p> <p><u>Action</u></p> <p>Discuss ways and means of coordinating capacity-building activities in space-related areas at policy level.</p> <p><u>Primary Actor(s)</u></p> <p>Inter-Agency entities and COPUOS</p>	<p><u>2007</u></p> <p>Pakistan:</p> <ol style="list-style-type: none"> 1. Arranging OJTs, 2. Consultancy, 3. Short courses and hands on experience,. 4. Seminars and discussions to make capacity building cost effective, 5. Collaborative projects in the relevant fields. <p>Thailand: Thailand plans to offer the training related to the Geo-informatics and Space Technology to relevant agencies and organizations including neighbouring countries such as Vietnam, Laos, Myanmar, Cambodia etc.</p> <p><u>ASSESSMENT</u></p> <p>On-going activities by Inter-Agency Meeting on Outer Space Activities.</p> <p><u>Could be considered implemented.</u></p>	<p>SUPARCO</p>
<p><i>Paragraph 306</i></p> <p><u>Action</u></p> <p>Hold workshops and symposiums on regular basis with participation of youth in order to provide opportunities at regional level for exchange of experiences in capacity-building efforts.</p> <p><u>Primary Actor(s)</u></p> <p>OOSA and relevant organizations</p>	<p><u>2008</u></p> <p>Algeria: Promote the use of space technologies by the organization of meeting and dedicated days to explain the role of space technologies and their application to improve economic and social sectors</p> <p>SGAC: The Space Generation Congress is an annual event, held in conjunction with the IAC, organised by SGAC which brings together youth from all over the world to discuss and work on important projects. It also includes leadership training. SGAC aims to promote space exploration, education and outreach.</p> <p><u>2007</u></p> <p>Pakistan: SUPARCO is regularly organizing seminars, workshops, and symposiums at local and international level in order to exchange the research based knowledge in various fields of space technologies and to</p>	<p>ISNET, National user agencies</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>educate and promote the use of space technology and its applications for national and international users. Undergraduate and graduate level students are invited to participate and attend these seminars/ workshops.</p> <p><u>ASSESSMENT</u></p> <p>OOSA in cooperation with other relevant organizations, such as UNESCO, IAF and the SGAC is continuing to regularly organize events with participation of youth. Activities organized by OOSA and other relevant organizations, as part of the annual World Space Week, contribute to the implementation of this recommendation.</p> <p><u>Could be considered implemented.</u></p>	
<p><i>Paragraph 307</i></p> <p><u>Action</u></p> <p>Develop and distribute educational booklets covering fundamentals of space science that could serve as educational tools for young people in all countries.</p> <p><u>Primary Actor(s)</u></p> <p>Space agencies</p>	<p><u>2010</u></p> <p>Japan: JAXA, through its Space Education Center, has developed and made available in English the set of leaflets entitled “Teaching Guides: Science of Flight” for use by teachers, community leaders carrying out education activities as well as parents to teach children about the science involved in various methods of flying, from that of living creatures to that of rockets, in accordance with their development stage. JAXA distributed the set through members of the Space Education and Awareness Working Group of the Asia-Pacific Regional Space Agency Forum (APRSAF), particularly for use by educators in developing countries in their local languages. The set of leaflets has been translated by Arthur C. Clarke Institute for Modern Technologies into Singhalese and is now available, at least, in Japanese, English and Singhalese. The Space Education Center continues to distribute free of charge, upon request, “Educator’s Manual for Water Rockets” and DVD (see description of the publication provided under “2009” “Japan”).</p> <p><u>2009</u></p> <p>Algeria: Launched in May 2004 by the ASAL, the sensitivity and popularization action of space technologies “Educspace” is annually organized for secondary schools pupils and teachers of geography; it has</p>	<p>Members of APRSAF Space Education and Awareness Working Group</p> <p>ASAL, Ministry of National Education (MEN).</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>concerned nearly two thousand students from pilot schools of different regions of Algeria and scientific associations.</p> <p>In 2007, the program of initiation into space technologies concerned schools of Ain-Temouchent and Algiers (Bouzaréah administrative district secondary schools).</p> <p>In 2008, the Eduspace action, which will take place on 01 December 2008, will be spread to schools of Tamanrasset (in South of Algeria) and East of Algiers.</p> <p>Iran (Islamic Republic of):</p> <ol style="list-style-type: none"> 1. “World Space Week” is held every year and includes distribution of books covering fundamentals of space sciences and applications ranging from kids to adults. Also conduction of quiz competition among students of various age groups for their awareness in the field of space science and technology. 2. A monthly magazine is published containing various scientific papers in the fields of space technology and applications. <p>Japan: JAXA, through its Space Education Center, distributes “Educator’s Manual for Water Rockets”, which contains fundamentals of rocket science and suggestions for teaching scientific principles involved in making and launching water rockets, and the accompanying DVD in English and Spanish, the latter language version of which was developed in cooperation with UNESCO. Education materials for water rocket activities for educational purposes are also being contributed by, and shared among, interested teachers, educators and space experts through an the Internet-based Wiki site established as a result of APRSAF Water Rocket Education Workshop (Melbourne, Australia, 30 June – 3 July 2008).</p> <p>As contributions to the celebration of the International Year of Astronomy in 2009, APRSAF Space Education and Awareness Working Group is soliciting from its members educational materials and information on the teaching methods used in the area of astronomy for</p>	<p>UNESCO and Members of APRSAF Space Education and Awareness Working Group</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>circulation through the web site of the Working Group and that of UNESCO.</p> <p>SGAC: We provide OOSA's educational brochure "Space Solutions for the World's Problems" to our National Points of Contact as a resource to promote space science and education on national and regional levels.</p> <p>2008</p> <p>Algeria: An educational program "Eduspace" initiated by the ASAL, aims to disseminate basic knowledge of space science, in Arabic language.</p> <p>Chile: We have taken note.</p> <p>Japan: through its Space Education Center, developed and distributed the publication entitled "Educator's Manual for Water Rockets", which contains fundamentals of rocket science and suggestions for teaching scientific principles involved in making and launching water rockets, and the accompanying DVD in English language. In cooperation with UNESCO, the above Educator's Manual and DVD are being translated into Spanish for distribution in 2008. At its last meeting, APRSAF Space Education and Awareness Working Group invited its members to submit to the Secretariat the educational materials available and information on the teaching methods used in their countries for circulation through the web site of the Working Group and that of UNESCO.</p> <p>Turkey: Establishment of Turkish Space Agency is still on development stage and waiting for approval at the Turkish Parliament.</p> <p>2007</p> <p>Pakistan:</p> <p>1. "World Space Week" is held every year and includes distribution of</p>	<p>UNESCO and Members of APRSAF Space Education and Awareness Working Group</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>booklets covering fundamentals of space sciences and conduction of quiz competition among students of various age groups for their awareness in the space science and technology.</p> <p>2. Distributed brochure about Telemedicine and pamphlet on Role of satellites in cartography, meteorology and disaster monitoring etc to general public.</p> <p>Thailand: - Basic Knowledge for kids: Space Technology and Geo-Informatics. This book describes the basics of remote sensing, GPS, and GIS for kids. It is an updated version of the book printed last year. For more details please access to website: www.gistda.or.th/wsw/wsw.html</p> <p><u>ASSESSMENT</u> On-going activities by the primary actors.</p>	
<p><i>Paragraph 308</i></p> <p><u>Action</u></p> <p>Organize a meeting of interested Member States and space agencies to identify parties willing to undertake actions in paragraphs above (301-307)</p> <p><u>Primary Actor(s)</u></p> <p>OOSA</p>	<p><u>2008</u> Chile: Chile is interested.</p> <p>FAO: Meetings have been organized but not specifically for addressing the above points.</p> <p><u>2007</u> Pakistan: Provide training and organize seminars in space application programs to participants from OIC member countries.</p> <p><u>ASSESSMENT</u> OOSA is working through several channels in implementing this recommendation. Meetings are held in cooperation with World Space Week Association during the annual International Astronautical Congress and on the margins of Committee Sessions. Activities with UNESCO and other UN entities are coordinated at the annual Sessions of the Inter-Agency Meeting on Outer Space Activities. As part of the United Nations Programme on Space Applications the Office is regularly addressing the actions in paragraphs 301-</p>	<p>SUPARCO</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>307. Space agencies have established their own coordination mechanism for education-related activities (Arrangement to establish the International Space Education Board (ISEB) signed on 17 October 2005).</p> <p><u>Could be considered implemented.</u></p>	
<p><i>Paragraph 309</i></p> <p><u>Action</u></p> <p>Distribute archived satellite images, upon request, free of charge or at the lowest possible cost, for use particularly by developing countries as basic material for space research and studies.</p> <p><u>Primary Actor(s)</u></p> <p>Countries with satellite-imaging techniques and possessing archives of satellite images</p>	<p><u>2010</u> FAO: through activities such as GLCN (www.glcn.org) and www.fao.org has a large outreach and dissemination programme, providing data (such as Landsat) to national and regional entities</p> <p><u>2008</u> Algeria: The archive ALSAT-1 images are provided free of cost to the student and researchers who use satellite images in their works.</p> <p>Argentina: Argentina's data policy for national space program missions is compatible with this request. Data accessible through CONAE's website.</p> <p>Turkey: TUBITAK Space Technologies Research Institute is Turkish Government entity and developing RASAT optical earth observation satellite for the scientific and civilian purposes. Estimated launch date is 3rd Q of 2009. Satellite is planned to have 7.5m panchromatic, 15m multispectral resolutions.</p> <p>FAO: through activities such as GLCN), has a large outreach and dissemination programme, providing data (such as Landsat) to national and regional entities.</p> <p><u>2007</u> Greece: This is done in the frame of bilateral scientific and technological cooperation programmes between Greece and several developing countries.</p> <p>Japan: JAXA completed the initial functional verification phase of the</p>	<p>Mainly UNEP and Governments of the Netherlands and Italy</p> <p>GSRT, NOA, HCMR, NAGREF, NCSR, Demokritos</p> <p>JAXA</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>Advanced Land Observing Satellite “Daichi” (ALOS) which was launched on January 24, 2006, from the Tanegashima Space Centre and moves to the operations phase from October 2006. Along with the start of the mission operation, observation data (called “ALOS data”) from the “Daichi” will become available to the public. In Japan, you can receive data from two Japanese organizations: The Remote Sensing Technology Centre of Japan (RESTEC), and the Earth Remote Sensing Data Analysis Centre (ERSDAC), and some overseas local organizations designated by ALOS node agencies*1 as they are ready to provide data. Some fees are required to receive the data. JAXA also started providing data to the Sentinel Asia, which JAXA and other related organizations are currently establishing as a disaster management support system in the Asia-Pacific region.</p> <p>*1The system to process and provide data in each region by dividing the world into four areas:</p> <ul style="list-style-type: none"> - Overseas Data Nodes and contact point: European Space Agency (ESA) for Europe and African regions; Alaska Satellite Facility (ASF), University of Alaska Fairbanks for North and South America regions; Geoscience Australia (GA) for Oceania regions; and Geo-Informatics and Space Technology Development Agency (GISTDA) for Asia regions (exclusively for Thailand). <p>Pakistan: SRS archived data is delivered to students of developing countries in the form of soft copies at the lowest costs for their research projects.</p> <p>Thailand: Geo-Informatics and Space Technology Development Agency – GISTDA, the core agency for Earth observation satellite and GIS activities in Thailand, has provided archived satellite images, upon request, free of charge and at the low cost for government agencies. For more information, please access to website: www.gistda.or.th</p> <p><u>ASSESSMENT</u> On-going activities by the primary actors.</p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
(d) Identifying sources of financing to support development activities with space applications		
<p><i>Paragraph 313</i></p> <p><u>Action</u></p> <p>Implement the following:</p> <p>(a) Organize workshops for experts in development banks and aid agencies to learn about possibilities offered by space applications;</p> <p>(b) Identify specific measures to promote inclusion of training components in projects to be funded and encourage formal commitment from Governments concerned to maintain structures developed and to retain personnel trained as a result of project;</p> <p>(c) Identify ways to promote inclusion of funds for necessary investment in specific budget and amortization of that investment in subsequent budgets, in order to allow for reimbursement of initial investment, and to provide guarantees for foreseeable internal return in projects in order to ensure their operational nature in long term.</p> <p><u>Primary Actor(s)</u> COPOUS through Action Team on Innovative Sources of Funding</p>	<p>2010 FAO: Numerous regional and national training activities have been undertaken, for details see: www.glcn.org</p> <p>INTERSPUTNIK: Intersputnik helps arrange debt financing of joint satellite projects increasing the probability of funding satellite manufacture and GSO launch projects by credit institutions.</p> <p>2008 Argentina: has been granted a credit from the Interamerican Development Bank to support the PROSAT Project that includes the development of the SAOCOM (SAR in L-Band) satellite mission and a capacity development program. To get the approval, CONAE had to establish the return of the investment by studying the impact that improving EO observation data such as Soil Moisture would have on socio-economic activities.</p> <p>Chile: We have taken note.</p> <p>FAO: Numerous regional and national training activities have been undertaken, for details see: www.glcn.org</p> <p>2007 Pakistan: - (b) Encourage the user organizations to include the training component and its financial aspects in their projects related to space technology applications.</p> <p>ASSESSMENT Final report of the Action Team on New and Innovative Sources of Funding (Action Team 32) (A/AC.105/L.246) addresses the actions. To review the existing best practices within other United Nations</p>	<p>Russian Satellite Communications Company (Russian Federation)</p> <p>SUPARCO</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
	<p>entities, OOSA has included an item on “Public-private partnerships and innovative funding approaches in the United Nations system to promote the use of space technology and its applications” on the agenda of the Twenty-eight Session of the Inter-Agency Meeting (IAM) on Outer Space Activities, held in January 2008. The Open Informal Session, immediately following the IAM, addressed the same topic and provided opportunities for discussions with Member States (see http://www.uncosa.unvienna.org/uncosa/en/iamos/index.html).</p> <p>A webpage has been set up on OOSA’s website providing a summary of its fund-raising related activities (http://www.unoosa.org/oosa/en/fundraising/index.html).</p> <p>The issue of developing a fund-raising strategy was part of the recommendations by the United Nations Office for Internal Oversight Services (OIOS) as a result of its inspection of the Office for Outer Space Affairs in late 2006. A fundraising strategy is under consideration by OOSA as part of its overall implementation of the recommendations by OIOS. <u>Could be considered implemented in the context of UNISPACE III.</u></p>	
<p>Paragraph 314</p> <p><u>Action</u></p> <p>(a) Consider placing a higher priority on capacity-building initiatives in fields of space science and technology; and</p> <p>(b) Use official development assistance funds to help achieve capacity-building goals.</p> <p><i>See also paras. 299-310</i></p> <p><u>Primary Actor(s)</u></p> <p>States that receive official development assistance funds</p> <p><u>Action</u></p>	<p>2010</p> <p>FAO: High priority is given to capacity building and it is encouraged that FAO projects contain such a component. When requested by countries, FAO tries to secure funds for assistance. Activities are usually undertaken with active participation of national partners.</p> <p>2008</p> <p>Chile: We have taken note.</p> <p>FAO: High priority is given to capacity building and it is encouraged that FAO projects contain such a component. When requested by countries, FAO tries to secure funds for assistance. Activities are usually undertaken with national partners.</p> <p>2007</p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p>Make efforts to build partnerships with countries requesting assistance and directly support their capacity-building through exchanges of information and experience</p> <p><u>Primary Actor(s)</u> Countries that provide official development assistance funds</p>	<p>Greece: There is a constant effort from Greece to provide official development assistance funds to support neighbouring countries for their capacity-building.</p> <p>Pakistan: SUPARCO is collaborating with OIC member countries by organizing training courses and seminars for capacity building in the field of space science, technology and its applications.</p> <p><u>ASSESSMENT</u> On-going activities by the primary actors.</p>	<p>Ministry for Foreign Affairs</p> <p>SUPARCO</p>
<p><i>Paragraph 315</i></p> <p><u>Action</u></p> <p>Increase number of donors contributing to the Trust Fund for the United Nations Programme on Space Applications (To increase predictability of voluntary contribution to support work of Office for Outer Space Affairs)</p> <p><i>See also operative paragraph 17 of General Assembly Resolution 59/2</i></p> <p><u>Primary Actor(s)</u> Member States/COPUOS</p>	<p><u>2009</u></p> <p><u>2008</u> Chile: Chile is a participant.</p> <p><u>ASSESSMENT</u> On-going activities by the primary actors. Member States and other entities are called upon at annual meetings of the Committee and its Subcommittees to contribute to the Trust Fund.</p>	

III. Actions contained in United Nations General Assembly resolution 59/2

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p><i>Operative Paragraph 5</i></p> <p><u>Action</u></p> <p>Carry out the actions contained in the Plan of Action on a priority basis for the further implementation of the recommendations of UNISPACE III, in particular its resolution entitled “The Space Millennium: Vienna Declaration on Space and Human Development”</p> <p><u>Primary Actor(s)</u></p> <p>All Governments, entities of the United Nations system as well as intergovernmental and non-governmental entities conducting space-related activities</p>	<p>2008</p> <p>Chile: Chile fully supports the Millennium Declaration, which forms part of the framework for the operation and development of its strategic plans and objectives, including those relating to the Chilean Space Agency.</p> <p>2007</p> <p>Greece: These actions are being taken into serious consideration and form the basis for further implementation.</p> <p>Pakistan: Celebrations of WSW for awareness of space related pursuits by students.</p> <p>ASSESSMENT</p> <p>Actions taken by primary actors as indicated in table above.</p>	<p>SUPARCO</p>
<p><i>Operative Paragraph 6</i></p> <p><u>Action</u></p> <p>Implement some of the actions contained in the Plan of Action through the consideration of items of the agendas of the Committee or its subsidiary bodies and through those action teams that will continue their work as endorsed by the Committee</p> <p><u>Primary Actor(s)</u></p> <p>COPUOS</p>	<p>2009</p> <p>Action Teams 1 and 6 have not yet formally concluded their work. Action Teams 11 and 14 will meet on the margins of the 46th Session of the Scientific and Technical Subcommittee, to be held from 9 to 20 February 2009.</p> <p>2008</p> <p>Chile: We have taken note.</p> <p>ASSESSMENT</p> <p>Actions taken by COPUOS and its subsidiary bodies as reflected in their agendas for 2005-2009.</p> <p>Final reports of the Action Teams can be found at http://www.unoosa.org/oosa/unisp-3/followup/index.html</p>	
<p><i>Operative Paragraph 7</i></p>	<p>2007</p> <p>Pakistan: SUPARCO can provide help in the field of RS/GIS technology.</p>	<p>SUPARCO</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p><u>Action</u></p> <p>Examine the contributions that could be made by space science and technology and their applications to one or more of the issues selected by the Commission on Sustainable Development as a thematic cluster and to provide substantive inputs for consideration by the Commission <i>See also paragraph 232 of Plan of Action as contained in A/59/174</i></p> <p><u>Primary Actor(s)</u> COPUOS</p>	<p><u>ASSESSMENT</u></p> <p>OOSA, in the framework of the Programme on Space Applications, organizes the annual United Nations/Austria/European Space Agency Symposium. The theme of the Symposium is synchronized with the thematic clusters of the CSD.</p> <p>The Committee contributed to the work of the Commission on Sustainable Development during the policy year for the thematic cluster 2006-2007 and 2008-2009 (A/AC.105/872, A/AC.105/892). See table above under paragraph 232.</p> <p><u>Could be considered implemented.</u></p>	
<p><i>Operative Paragraph 8</i></p> <p><u>Action</u></p> <p>Include items in the agendas of its future sessions, starting from its forty-ninth session, in 2006, to consider its contributions to the work of those entities that are responsible for convening United Nations conferences and/or for implementing their outcomes; <i>See also paragraph 289 of Plan of Action as contained in A/59/174</i></p> <p><u>Primary Actor(s)</u> COPUOS</p>	<p><u>ASSESSMENT</u></p> <p>At its forty-ninth session, the Committee considered an agenda item on the Recommendations of the World Summit on the Information Society (see A/61/20 (Supplement 20)). See also under paragraph 232 in table above regarding contribution by COPUOS to CSD thematic clusters.</p> <p><u>Could be considered implemented.</u></p>	
<p><i>Operative Paragraph 9</i></p> <p><u>Action</u></p> <p>Conduct study on the possibility of creating an international entity to provide for coordination and the means of realistically optimizing the effectiveness</p>	<p><u>2009</u></p> <p>Iran (Islamic Republic of):</p> <ul style="list-style-type: none"> - Iranian Space Agency has been actively cooperating in the study for creation of DMISCO which led to initiation of UN-SPIDER - Within the framework of the program SPIDER, Iranian Space Agency has been cooperating closely in the studies and meetings of the UN-SPIDER. 	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p>of space-based services for use in disaster management <i>See also paragraph 256 of Plan of Action as contained in A/59/174</i></p> <p><u>Primary Actor(s)</u> Ad hoc expert group, with experts to be provided by interested Member States and relevant international organizations</p> <p><u>Action</u> Review progress in the work of the ad hoc expert group, at its forty-eighth session, in 2005</p> <p><u>Primary Actor(s)</u> COPUOS</p>	<p>2007 Pakistan: SUPARCO carried out various studies, particularly in the disaster management, using satellite based information.</p> <p>ASSESSMENT The study was conducted and considered the Scientific and Technical Subcommittee, and subsequently by the Committee and resulted in the creation of UN-SPIDER.</p> <p><u>Could be considered implemented.</u></p>	<p>SUPARCO</p>
<p><i>Operative Paragraph 10</i></p> <p><u>Action</u> Make contributions to the Trust Fund for the United Nations Programme on Space Applications for preparing the study by the ad hoc expert group <i>See also paragraph 258 of Plan of Action as contained in A/59/174</i></p> <p><u>Primary Actor(s)</u> Member States</p>	<p>2008 Chile: We have taken note.</p> <p>2007 Greece: This can be considered since Greece has joined the European Space Agency.</p> <p>ASSESSMENT Resulted in the establishment of UN-SPIDER.</p> <p><u>Could be considered implemented.</u></p>	<p>Ministry of Foreign Affairs</p>
<p><i>Operative Paragraph 11</i></p> <p><u>Action</u> Establish an international committee on GNSS as proposed in the Plan of Action (In order to maximize the benefits of the use and applications of GNSS to support sustainable development.) <i>See also paragraph 267 of Plan of Action</i></p>	<p>ASSESSMENT The International Committee on GNSS (ICG) was established in December 2005.</p> <p><u>Could be considered implemented.</u></p>	

<i>Action and Primary Actor(s)</i>	Status of Implementation <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p><i>as contained in A/59/174</i></p> <p><u>Primary Actor(s)</u> Global Navigation Satellite System (GNSS) and augmentation providers</p>		
<p><i>Operative Paragraph 12</i></p> <p><u>Action</u> Provide support to implement the Space Programme of the World Meteorological Organization and its Long-term Strategy as proposed in the Plan of Action (In order to expand international cooperation in meteorological satellite applications to enhance weather and climate forecasting.) <i>See also paragraph 273 of Plan of Action as contained in A/59/174</i></p> <p><u>Primary Actor(s)</u> Member States</p>	<p>2010 FAO: continues collaboration with WMO on numerous activities, including areas related to meteorology and hydrology. For example, support is provided to GCOS and its implementation plan to support the UNFCCC (which contains a satellite component).</p> <p>2009 Iran (Islamic Republic of): Islamic Republic of Iran Meteorological Organization (IRIMO) has been collaborating with WMO in numerous activities and studies.</p> <p>2008 Chile: All the required support is provided by the Chilean Meteorological Office of the Civil Aeronautics Board.</p> <p>FAO: collaborates with WMO on numerous activities, including areas related to meteorology and hydrology. For example, support is provided to GCOS and its implementation plan to support the UNFCCC (which contains a satellite component).</p> <p>2007 Greece: There is an involvement and fruitful collaboration with WMO.</p> <p>Pakistan: Pakistan Meteorological Department is already participating in this regard.</p> <p>ASSESSMENT On-going activities by the primary actors.</p>	<p>National Meteorological Service, NOA, GSRT</p> <p>Pakistan Meteorological Department</p>

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p><i>Operative Paragraph 13</i> <u>Action</u> ... (a) ... (b) ... (c) Requests the Committee to undertake further implementation of UNISPACE III recommendations with a view to enhancing the capacity of developing countries to initiate space application programmes; <u>Primary Actor(s)</u> COPUOS</p>	<p><u>ASSESSMENT</u> On-going consideration by COPUOS.</p>	
<p><i>Operative Paragraph 14</i> <u>Action</u> Cluster, to extent feasible, activities of the United Nations Programme on Space Applications, to address a few priority themes to be selected by the Committee for each year <u>Primary Actor(s)</u> OOSA and COPUOS</p>	<p><u>ASSESSMENT</u> OOSA has identified priority themes as reflected in the annual reports by the Expert on Space Applications. <u>Could be considered implemented.</u></p>	
<p><i>Operative Paragraph 15</i> <u>Action</u> Review the activities that are included in the Plan of Action for implementation by the Office and submit a proposal to the Committee on how those activities could be included in its programme of work <i>See also paragraph 323 of Plan of Action as contained in A/59/174</i></p>	<p><u>ASSESSMENT</u> In accordance with paragraph 323 of A/59/174, the Office presented to the 48th session of the Committee the report: "Implementation of the Plan of Action of the Committee on the Peaceful Uses of Outer Space for the implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space: strategy of the Office for Outer Space Affairs" (A/AC.105/L.262).</p>	

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<u>Primary Actor(s)</u> OOSA	<u>Could be considered implemented.</u>	
<i>Operative Paragraph 16</i> <u>Action</u> Implement activities of the Office for Outer Space Affairs as contained in the Plan of Action and ensure that those activities are included in the programme of work for the biennium 2006–2007 <u>Primary Actor(s)</u> OOSA and Secretary-General	2008 Chile: We have taken note. <u>ASSESSMENT</u> See under paragraph 15 above. Activities identified for implementation by the Office in document L.262 that are still not implemented are being referred to under relevant recommendations as reflected in the table above. <u>Could be considered implemented.</u>	
<i>Operative Paragraph 17</i> <u>Action</u> Contribute to the Trust Fund for the United Nations Programme on Space Applications (To allow full flexibility for the Office for Outer Space Affairs to carry out the activities of the Programme in accordance with the priorities set by the Committee.) <i>See also paragraph 315 of Plan of Action as contained in A/59/174</i> <u>Primary Actor(s)</u> All Member States and space-related intergovernmental and non-governmental entities	2008 Chile: We have taken note. 2007 Greece: This has to be decided. <u>ASSESSMENT</u> On-going activities by the primary actors. Member States and other entities are called upon at annual meetings of the Committee and its Subcommittees to contribute to the Trust Fund.	Ministry of Foreign Affairs in cooperation with other competent authorities

<i>Action and Primary Actor(s)</i>	<i>Status of Implementation</i> <i>(Replies received by member States and international organizations)</i>	<i>Partners</i>
<p><i>Operative Paragraph 18</i></p> <p><u>Action</u> Continue considering in future sessions the implementation of the recommendations of UNISPACE III until the Committee considers that concrete results are achieved.</p> <p><u>Primary Actor(s)</u> COPUOS</p>	<p>2008</p> <p>Chile: We have taken note.</p> <p>FAO: will be considered.</p> <p>ASSESSMENT To be determined by the Committee.</p>	